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and EMILY LEPROUST

9 **SUPERIOR COURT OF THE STATE OF CALIFORNIA**

10 **COUNTY OF SANTA CLARA**

11
12 AGILENT TECHNOLOGIES, INC., a
Delaware Corporation,

13 Plaintiff,

14 v.

15 TWIST BIOSCIENCE CORP., a Delaware
Corporation; EMILY LEPROUST, an
Individual; SIYUAN CHEN, an Individual;
16 SOLANGE GLAIZE, an Individual; and DOES
1 through 20, inclusive,

17 Defendants.
18

19 -----
20 TWIST BIOSCIENCE CORP and EMILY
LEPROUST,

21 Cross-Complainants,

22 v.

23 AGILENT TECHNOLOGIES, INC., and
DOES 1 through 10, inclusive,

24 Cross-Defendants
25
26
27
28

Case No. 16-cv-291137

**DEFENDANTS TWIST BIOSCIENCE
CORPORATION AND EMILY
LEPROUST'S CROSS-COMPLAINT
AGAINST AGILENT TECHNOLOGIES,
INC. FOR DECLARATORY RELIEF
(CIV. PROC. CODE § 1060);
DEFAMATION (CIV. CODE § 44);
DEFAMATION PER SE; LIBEL (CIV.
CODE § 45); LIBEL PER SE (CIV. CODE
§ 45(A)); SLANDER (CIV. CODE § 46);
SLANDER PER SE; INTENTIONAL
INTERFERENCE WITH PROSPECTIVE
ECONOMIC ADVANTAGE; AND
UNLAWFUL, UNFAIR COMPETITION
(BUS. & PROF. CODE § 17200)**

JURY TRIAL DEMANDED

Action Filed: Feb. 3, 2016

Cross-
Complaint
Filed: Jan. 29, 2019

Judge: Hon. Brian C. Walsh
Location: Department 1

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PRAYER FOR RELIEF35

1 Under Code of Civil Procedure section 428.10, Defendants and Cross-Complainants Twist
2 Bioscience Corp. (“Twist”) and Emily Leproust (“Leproust” and together with Twist,
3 “Defendants”), hereby bring the following Cross-Complaint against Plaintiff and Cross-Defendant
4 Agilent Technologies, Inc. (“Agilent” or “Plaintiff”) and Does 1-10.

5 INTRODUCTION

6 1. This is a case not truly about any wrongdoing by Defendants Twist Bioscience and
7 its Chief Executive Officer, but rather about a company—Agilent—that is desperate to make up
8 for a series of poor business decisions and willing to misuse the legal system to do so. It is about
9 Agilent management’s need to save face and recoup money from having made a massive
10 investment in an outside company instead of developing synthetic biology technology in-house, a
11 losing bet which has left Agilent far behind in the now booming synthetic biology field and unable
12 to catch up. It is about shifting blame for these mistakes and for employee retention issues onto
13 those Agilent viewed as convenient scapegoats: its former employee Dr. Emily Leproust and
14 Twist Bioscience, the fledgling company she helped propel to the forefront of the synthetic
15 biology field.

16 2. The field of designing DNA and engineering biology, commonly known as
17 “synthetic biology,” is one of the key areas of growth and technological innovation in this century.
18 This revolutionary field has already enabled advancements in lifesaving pharmaceuticals and
19 therapeutics; as well as chemicals, biofuels, and agriculture. Based on current projections,
20 industry analysts expect this market could exceed \$38 billion by 2020.¹ Six years ago, however,
21 Agilent’s executives made decisions that cost Agilent a leading role in the synthetic biology
22 market, and it has been falling further and further behind ever since.

23 3. In 2013, Agilent’s management chose to take a shortcut by out-sourcing its
24 involvement with what was, back then, the nascent synthetic biology field through a 20+ million
25 dollar investment in an outside company, Gen9, Inc. (“Gen9”), instead of going all-in by devoting

26 ¹ See Exhibit 1, *Synthetic Biology Market to hit more than US\$ 38 Billion By 2020*
27 <[https://www.marketwatch.com/press-release/synthetic-biology-market-to-hit-more-than-us-38-
28 billion-by-2020-2018-11-16](https://www.marketwatch.com/press-release/synthetic-biology-market-to-hit-more-than-us-38-billion-by-2020-2018-11-16)> [as of January 25, 2019].

1 its considerable internal resources to developing synthetic biology technology internally.
2 Agilent’s management miscalculated the trajectory of Gen9, the amount of support that Agilent
3 would need to provide (support it ultimately failed to provide), and the rapid growth and needs of
4 the synthetic biology field, which Gen9 and Agilent could not meet. In trying to take a shortcut to
5 be a “player” in this field, Agilent has been all but left out of the game. Now Agilent is far behind
6 in the synthetic biology field while Twist continues to gain steam at the leading edge.

7 4. This lawsuit represents Agilent’s last, best hope at making up for lost time and
8 money, and covering up for its mistakes in 2013. This case is about classic corporate greed:
9 Agilent wants to control the market and squeeze out competitors through illicit means that have
10 nothing to do with providing superior value to customers. Agilent’s management is attempting to
11 save face and money, and is creating a sideshow to distract from their errors by blaming useful
12 scapegoats, rather than owning up to their mistakes and moving on from their self-inflicted losses.
13 What better scapegoats than those who succeeded where Agilent could not? Leproust, whose
14 tireless enthusiasm and inspiration made her a successful and instrumental employee at Agilent for
15 over a decade (but also caused her to become resented by senior leaders in Agilent’s Labs
16 Organization), and whose drive and motivation led her to outgrow the limited opportunities that
17 Agilent had for her. And Twist, which achieved great success in the synthetic biology market—
18 where Agilent could not—through the brilliant leadership of Leproust, the technical innovations of
19 Leproust’s co-founders, and the many other talented scientists and engineers who joined them.
20 This is why Agilent has sought to drag out this smear campaign at every step of the way and why
21 it has even resorted to spreading harmful falsehoods outside the context of the litigation—
22 including to the U.S. Securities and Exchange Commission (“SEC”) in connection with Twist’s
23 recent Initial Public Offering (“IPO”).

24 5. The facts show that Defendants have done nothing wrong: they have not
25 misappropriated any Agilent trade secrets nor misused any Agilent confidential or proprietary
26 information for their own benefit. Agilent is well-aware that its hundreds, if not thousands, of
27 patents, patent applications, and research publications describing the intimate details of its claimed
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1 “proprietary technology” belie any allegations of trade secret misappropriation. Agilent is also
2 fully aware that it is not the only company to synthesize oligonucleotides using phosphoramidite
3 chemistry or to perform oligo synthesis using ink-jet printing techniques, and moreover that
4 Agilent is not the only company to have researched assembling genes from synthesized
5 oligonucleotides. Agilent’s inability to identify even its own alleged trade secrets for nearly two
6 years and its continually shifting theories of its misappropriation claim speak volumes about that
7 claim’s lack of validity.

8 6. Likewise, contrary to Agilent’s scattershot allegations against her, Leproust has not
9 violated any valid and enforceable contract provision, nor engaged in any actions that breached
10 any duty she might have had to Agilent. Her actions before departing Agilent were, at most,
11 permissible preparations to compete, which under California law cannot form the basis for
12 liability, particularly where, as here, Agilent can make no credible claim to having been harmed by
13 Leproust’s actions or those of any other Twist employee. Agilent is well aware of this long-
14 standing California law and more generally of the protections departing employees are afforded in
15 this state—yet it refuses to drop its meritless claims.

16 7. Agilent’s lawsuit against Twist and Leproust attempts to stifle the legitimate and
17 innovative work of a burgeoning biotech company and its employees, including its top executive.
18 In particular, Agilent’s complaint wrongly tries to suffocate the creation of new synthetic biology
19 technology and solutions by a new business, and to diminish the freedom of innovators and
20 entrepreneurs to seek out more fulfilling work and succeed elsewhere in their chosen profession.
21 Agilent’s claims are motivated by corporate greed and are antithetical to California’s strong public
22 policy favoring employee mobility, an essential driver of technological progress in this state, and
23 the laws enacting that policy.

24 8. In addition to waging this baseless legal campaign against Defendants and
25 engaging in other anti-competitive conduct, Agilent has also made knowingly false and damaging
26 public statements about Twist and its employees, intending to injure Twist’s business and its
27 reputation in the marketplace, and to tarnish the careers of former Agilent employees who went to
28

1 Twist. Among other things, on the eve of Twist’s October 31, 2018 IPO, Agilent engaged in a
2 calculated and deliberate attempt to undermine the IPO and derail Twist’s attempt to raise
3 important funding. In particular, Agilent leaked inflammatory falsehoods about Twist and
4 Leproust to the press so they would be publicly disseminated, included them in a letter to the SEC
5 accusing Twist of violating securities law, and—to maximize public exposure of those
6 falsehoods—published the letter and those statements on its own website through a press release.

7 9. On information and belief, Agilent’s illicit actions caused millions in lost
8 investments, put an indelible black mark on the IPO, damaged the reputations of Twist and its
9 employees, and will continue to cause additional harm going forward, including by discouraging
10 future investors from purchasing Twist stock and distracting Twist and its employees from their
11 efforts to contribute to the growth of the synthetic biology field. Those actions serve as
12 confirmation and shed additional light on the improper, anti-competitive purposes underlying
13 Agilent’s now three-year old legal campaign against Twist and its employees.

14 10. The potential consequences of Agilent’s personally-motivated crusade against
15 Twist should not be underestimated. Twist’s customers—of which there are hundreds—are
16 changing the world for the better, including by performing research on cancer and other diseases,
17 developing drought-resistant crops, clean biofuels, and bioplastics, and creating life-saving
18 therapeutic drugs. Twist provides these companies and universities with a product—notably one
19 that others, including Agilent, have not offered: made-to-order synthetic DNA, ranging from genes
20 to complex genetic libraries at industry-leading low prices, fidelity, and turn-around times, without
21 which its customers would not have the tools they need to do their cutting-edge work. Twist’s
22 ability to offer these materials under commercially viable conditions is enabled by Twist’s unique,
23 semiconductor processing approach to DNA synthesis—which Agilent does not and cannot use.

24 11. More than a half decade ago, Agilent’s executives made decisions that caused
25 Agilent to be left far behind in the synthetic biology revolution—decisions they have come to
26 regret. With this lawsuit as its tool, Agilent hopes to shift the blame for its own poor decision-
27 making to Twist and Leproust, and to take what is rightfully Twist’s to advance its position in the
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1 synthetic biology field. But in doing so, Agilent seeks yet another shortcut to the top, and—
2 having not learned from history—is repeating the mistake that got it here in the first place. If
3 Twist’s ascendance is any indication, the key to success in synthetic biology is bringing together
4 the right people with the right vision, followed by hard work, perseverance, and dedication.
5 Agilent refuses to acknowledge this reality.

6 12. Instead Agilent has embarked on a self-serving campaign that seeks to deprive the
7 world and scientific community of Twist’s groundbreaking technologies—all under the false
8 pretense that Twist somehow stole them from Agilent. Agilent’s actions are not only illegal and
9 harmful to Twist and its employees, but also threaten to impede the advancement of the synthetic
10 biology field as a whole.

11 **FACTS SUPPORTING DEFENDANTS’ CROSS-CLAIMS**

12 **Twist’s Innovative Origins**

13 13. Twist originated as a collaboration between two engineers, Bill Banyai, Ph.D., and
14 Bill Peck, Ph.D., based on the idea that the synthetic DNA market could be revolutionized through
15 a novel technological approach to oligo synthesis and gene assembly. Applying their engineering
16 expertise, Drs. Banyai and Peck conceived of a new and innovative way to synthesize
17 oligonucleotides, which are short sequences of deoxyribonucleic acid (or “DNA”), and assemble
18 them into longer DNA constructs, such as genes, more effectively than existing technology
19 allowed.

20 14. Banyai and Peck met in 2008 while working at Complete Genomics, Inc., a DNA
21 sequencing company in Mountain View, California. Banyai is a former Stanford engineer with a
22 Ph.D. in optical science from the University of Arizona. He also previously worked as a physicist
23 at Lawrence Livermore National Laboratory in Livermore, California. Peck holds a Ph.D. in
24 mechanical engineering from the University of Alberta, and he completed a Stanford-sponsored
25 post-doctoral fellowship with the United States Government’s National Aeronautics and Space
26 Administration (“NASA”).
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1 15. In 2011, Banyai and Peck began independently developing their start-up idea that
2 would later serve as the foundation for Twist while working together at Complete Genomics,
3 which had long been using synthesized oligos to sequence human genomic DNA patterned on
4 silicon chips. Banyai was hired in 2006 to build Complete Genomics' DNA sequencing team and
5 technology from the ground up. Banyai recruited Peck to join his team in 2008. Banyai, Peck,
6 and Leproust left their respective jobs at Complete Genomics and Agilent in April 2013 to pursue
7 their start-up efforts in the form of Twist. Unlike Agilent, Complete Genomics never made any
8 claim to Banyai's and Peck's ideas for Twist, and in fact certified that their work was lawful.

9 16. Banyai and Peck conceived—and later refined through collaboration with other
10 brilliant and accomplished scientists and engineers—innovative silicon-based technologies and
11 other innovations for synthesizing custom, made-to-order oligos and assembling them into longer
12 synthetic DNA constructs, such as full-length genes. These innovations are the subject of multiple
13 patent applications filed by Twist. Ten of Twist's patent applications have already been granted
14 and issued as United States patents, having undergone examination by the USPTO, which deemed
15 Twist's innovations to be novel over older technology. Leproust, who has focused on the business
16 side of Twist, was not involved in inventing this intellectual property, and therefore is not named
17 on the applications. Significantly, although many of Twist's patents and applications manifest
18 innovations conceived and developed by Banyai and Peck, *not one* of them is in dispute in
19 Agilent's lawsuit. Nor does Agilent allege that Banyai and Peck incorporated Agilent's purported
20 trade secrets into those patents and applications.

21 17. Early on, Twist's founders approached venture capitalists with Banyai's and Peck's
22 ideas for revolutionizing the synthetic DNA industry through the use of silicon. Twist's
23 fundraising success eventually came, after many attempts, from showing investors how the
24 limitations of then-current technologies could likely be overcome if Twist were able to pursue its
25 silicon-based engineering solutions. With an early infusion of capital based on this potential,
26 Twist was able to quickly develop new, patentable technology, filing its first patent applications in
27 August 2013.

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1 18. Developing a working DNA writer prototype for synthesizing genes, however, took
2 much longer. The first year or so of research and development focused on demonstrating proof-
3 of-principle for Banyai's and Peck's gene synthesis ideas. Banyai and Peck worked closely on
4 these projects with former Complete Genomics colleagues who joined them at Twist, as well as
5 with third party contractors. Twist's initial development efforts involved thousands, if not tens of
6 thousands, of employee-hours as well as the expenditure of substantial funds. Twist has continued
7 to invest heavily in research and development, and continues to optimize its technology to this
8 day.

9 19. In its early stages, Twist did not have its own facilities and instead worked in
10 shared office space. Twist later rented lab space in San Francisco and did its silicon processing at
11 Stanford's Nanofabrication facility, where Banyai had developed silicon-based technologies in the
12 past. To accelerate its research and development, Twist purchased used hardware from companies
13 like Blue Lion Biotech and through equipment auctions, including an original Applied Biosystems
14 Synthesizer ABI 394 DNA Synthesizer from the 1990s, and a used Fujifilm Dimatix DMP 2800
15 inkjet printer.

16 20. By mid-to-late 2013, Twist was capable of printing liquid droplets on a silicon
17 wafer at approximately 100-micron feature spacing using its off-the-shelf printer and its bundled
18 software. In this early testing, the wafer was not chemically treated to functionalize it for oligo
19 synthesis, and was instead bare silicon. Twist's engineers also modified the used ABI synthesizer
20 with an external flowcell to demonstrate that phosphoramidite synthesis was possible on
21 functionalized silicon. The ABI synthesizer fit the bill perfectly for this kind of experiment, as it
22 is proven technology that been used for decades to perform phosphoramidite synthesis of oligos
23 using well-known chemical reagents.

24 21. It was not until December 2013 that the Twist team first showed genes could be
25 assembled from oligonucleotides in silicon reactors, which themselves were fashioned from
26 silicon wafers through conventional semiconductor processing techniques. Because Twist was
27 still developing its synthesis methods, Twist purchased the oligos used for these experiments from
28

1 a third party vendor.

2 22. To build its first DNA writer, Twist worked with a third-party contractor that
3 Banyai and Peck knew from their days at Complete Genomics. The prototype hardware shipped
4 to Twist in late May 2014, but it was not until after installation and three months of debugging and
5 tinkering, that the first oligos were synthesized during the week of August 24, 2014. Since this
6 first print job, Twist's engineers and scientists have continued to optimize and refine Twist's
7 processes and systems through extensive trial and error in order to arrive at the industry-leading
8 synthesis that Twist is capable of today.

9 23. To reach these milestones, Banyai, Peck, and their team relied on not just their own
10 general skills, knowledge, and training, but also publicly available sources including scientific
11 articles, academic papers, patents, and published patent applications that disclose, among other
12 things, the use of phosphoramidite inks and inkjet printing to perform oligo synthesis. These
13 materials included step-by-step instructions for building the piezoelectric oligonucleotide
14 synthesizer and microarrayer ("POSaM") platform published by Dr. Lee Hood's group at
15 University of Washington in 2004, as reflected in the following sources: *POSaM: a fast, flexible,*
16 *open-source, inkjet oligonucleotide synthesizer and microarrayer* (July 27, 2004) 5 *Genome*
17 *Biology* R.58.1-58.17² and *Assembly Manual for the POSaM: The ISB Piezoelectric[sic]*
18 *Oligonucleotide Synthesizer and Microarrayer v. 1.2*, (May 28, 2004).³ Another example is the
19 2001 Ph.D. thesis of then-Massachusetts Institute of Technology student Ivan H. Lee, entitled
20 *Covalent End-Immobilization Of Oligonucleotides Onto Solid Surfaces*, which described methods
21 for functionalizing silicon wafers for DNA.⁴ Similarly, at that time, Banyai, Peck, and their team
22 were well aware of numerous publicly known techniques for the assembly of synthesized oligos
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25 ² See Exhibit 2 <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC507883>> [as of Jan. 25,
26 2019].

27 ³ See Exhibit 3 <[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC507883/bin/gb-2004-5-8-
r58-s1.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC507883/bin/gb-2004-5-8-r58-s1.pdf)> [as of Jan. 25, 2019].

28 ⁴ See Exhibit 4 <<http://hdl.handle.net/1721.1/8202>> [as of Jan. 25, 2019].

1 into genes.⁵

2 24. From its modest beginnings in April 2013, Twist has now grown to over 360
3 employees, has facilities in three locations, and as of October 31, 2018 is a public company traded
4 on the NASDAQ under the ticker symbol “TWST”. Twist’s cutting edge, made-to-order synthetic
5 DNA is offered to researchers and companies for a wide range of uses, including personalized
6 medicine, pharmaceutical research, biodefense, genome engineering, and even digital data storage.
7 Twist’s silicon technology enables it to sell high quality DNA at an industry-leading price per
8 nucleotide base by, among other things, increasing the density of synthesized oligos, which leads
9 to a dramatic reduction in the cost of synthesis reagents. As a testament to how well regarded
10 Twist’s DNA is, many of Twist’s competitors are also its customers.

11 25. Numerous prospective employees have been drawn to Twist because of its proven
12 leadership, start-up atmosphere, and position at the leading edge of the synthetic DNA industry.
13 Twist’s employees have come from all over the industry and world, including many who followed
14 Banyai over the years from Complete Genomics, as well as Glimmerglass, the first company
15 Banyai founded. Other employees sought to continue working with Leproust, who had shown
16 herself to be an exceedingly capable leader and mentor during the more than a decade of her
17 career spent at Agilent.

18 **Leproust’s Loyalty To Agilent And Lawful Choice To Find New Employment**

19 26. Leproust earned a Ph.D. in Organic Chemistry in 2001 from the University of
20 Houston where she was published extensively for her research and development of novel DNA
21 microarray synthesis processes, including novel synthesis chemistry and microarray
22 characterization. Recognizing Leproust’s talent even then, Agilent hired her before she finished
23 her degree. For nearly 13 years, Leproust worked at Agilent, making important contributions to
24 Agilent’s research, development, and manufacturing of DNA microarray products and
25 applications, authoring and co-authoring numerous peer-reviewed papers, collaborating with
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27 ⁵ See Exhibit 5 <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4112592>> [as of Jan. 25,
28 2019].

1 researchers at public universities, and undertaking increased responsibilities.

2 27. For many years, Agilent recognized Leproust's efforts, enthusiasm, and work ethic,
3 conferring promotions, awards, and additional opportunities on her. Indeed, Leproust was
4 consistently ranked in the top 10% of employees every year she was evaluated from 2001 to 2012.
5 Based on her accomplishments, she was also selected in 2006 for the LEAD program, an internal,
6 year-long MBA-style business course where participants developed and presented competing
7 business plans. At the conclusion of the course, Leproust's team was selected by Agilent
8 management as "Best Team," and Leproust personally was voted as "Best Individual" out of all
9 participants in the program.

10 28. Starting in 2006, Leproust pioneered, architected, and championed a product for
11 Agilent called SureSelect, which launched in 2009 and became a major success for the Genomics
12 division. It also made Agilent a major player in the field of DNA sequencing despite Agilent not
13 offering a sequencing machine. To make SureSelect a success, Leproust spent an increasing and
14 significant portion of her time on business duties, such as assisting the marketing, sales, and
15 customer support departments, while still earning top marks for her R&D accomplishments. After
16 that experience, Leproust wanted to get involved full-time in a business role, but instead the
17 opposite happened. Leproust had her responsibilities reduced to R&D work of lesser importance,
18 even having her SureSelect responsibilities reassigned to others. By this time, while popular and
19 respected by the general workforce, Leproust's success had also made her a target of resentment,
20 particularly from more senior employees in the Labs division, which was responsible for
21 developing transformative new technologies but had been falling short on its mission.

22 29. Leproust nevertheless continued to loyally work full-time at Agilent until her last
23 day on April 12, 2013. Leproust faithfully performed her Agilent duties while employed there,
24 each year meeting, and exceeding, the goals set for her. Even after learning of Banyai's and
25 Peck's idea for the company that ultimately became Twist while searching for employment
26 outside of Agilent, her interactions with them prior to leaving Agilent did not encumber her work
27 in advancing Agilent's research nor divide her loyalties. Leproust, for example, developed the
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1 initial business plan for Twist during her winter holiday vacation in 2011 based on weekend
2 discussions about Banyai's and Peck's ideas at a San Francisco Starbucks.

3 30. Nothing about Leproust's efforts to get Twist off the ground before departing from
4 Agilent—such as registering website domains, developing a business plan, seeking funding from
5 potential investors, and eventually incorporating Twist in February 2013—was unlawful. On the
6 contrary, it is well-established that California law permits an employee to make preparations to
7 compete with its current employer, and even to organize and to incorporate a new competing
8 venture, while still employed. Leproust was entirely within her rights to take the steps she did to
9 launch Twist, and her conduct was fully protectable under the law—including because Twist was
10 focused on making custom genes for the synthetic biology market, which Agilent had opted out of.
11 Leproust likewise had no obligation to disclose to Agilent any new ideas she learned from Banyai
12 and Peck, nor could she: those ideas were Banyai's and Peck's intellectual property and not
13 Agilent's to take.

14 31. Upon Leproust's departure from Agilent in 2013, Twist hired her as its Chief
15 Executive Officer—a position she has held to this day. As Twist's first and only Chief Executive
16 Officer, Leproust has provided executive leadership, and led the charge on Twist's commercial
17 and fundraising efforts, including its recent IPO. Banyai and Peck have served as Chief Operating
18 Officer and Chief Technology Officer, respectively, since Twist's founding, leading the technical
19 work as well as Twist's tremendously gifted team of scientists and engineers, who are among the
20 hardest-working and most-accomplished in the business.

21 32. Even after Leproust left Agilent and joined Twist, Agilent continued to recognize
22 her as an asset, and sought to re-hire her in July 2013 by offering her a promotion to an R&D
23 leadership position previously occupied by her former manager, who was on his way out of
24 Agilent at the time. Leproust graciously declined this offer, and recommended former colleagues
25 for the job. As Agilent's actions would later reveal, it did not take this rejection well.

26 **Agilent's Opportunistic Lawsuit Against Leproust And Twist**

27 33. The timing of Agilent's lawsuit is telling—only after waiting and watching Twist's
28

1 success, and failing to perform in the marketplace on its own, has Agilent turned to litigation. In
2 April 2013, Agilent terminated a gene synthesis project that Leproust had been working on (using
3 technology unrelated to that which Banyai and Peck pioneered at Twist) and rejected her
4 suggestion that Agilent pursue that line of development. Though fully aware that it could try to
5 develop its own technology to compete with other companies already in the synthetic DNA
6 marketplace, Agilent decided to take a shortcut through a substantial investment in an outside
7 company called Gen9 already doing work in the field, placing its confidence in Gen9's gene
8 synthesis technology over its own in-house abilities—to the tune of 21 million dollars. Agilent
9 announced this investment around the same time it cancelled Leproust's gene assembly project,
10 publishing a story entitled "Agilent Makes Strategic Investment in Synthetic Biology" to its
11 internal blog on April 24, 2013.⁶ The story was picked up by the media at large that same day.

12 34. But Agilent's outside bet on synthetic biology did not pan out. Agilent failed to
13 provide Gen9 continued material support, either financially or through technology sharing, and the
14 company ultimately did not succeed as a commercial enterprise, as detailed for example in the
15 January 20, 2017 Boston Globe article "How a Biotech Firm Rose, Then Fell."⁷ Instead, after
16 trying to entice Leproust away from Twist by offering a promotion (though still not a business
17 role), Agilent sought to make up for its poor business decisions and monetary losses in not
18 pursuing synthetic biology in-house and instead investing in Gen9 by setting its sights on
19 litigation, with convenient scapegoats in mind—Leproust and her new employer, Twist.

20 35. In February 2014, Agilent had its attorneys send letters to Twist ostensibly to
21 remind Leproust of her purported obligations regarding use of Agilent trade secrets and
22 confidential information. Agilent admitted in those letters that it knew Twist was in the process of
23 developing product lines that allegedly would be likely to violate Leproust's purported obligations
24 to Agilent at the time, but took no legal action nor gave any indication it planned to file a lawsuit.

25 _____
26 ⁶ See Exhibit 6 <<https://blog.agilent.com/2013/04/24/agilent-makes-strategic-investment-in-synthetic-biology>> [as of Jan. 25, 2019].

27 ⁷ See Exhibit 7 <<https://www.bostonglobe.com/business/2017/01/20/how-biotech-startup-rose-and-then-fell/COwF4wwbUDPggyBe1mZMmN/story.html>> [as of Jan. 25, 2019].
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1 Agilent then sat idly for two years. Not until two years later in February 2016, after Twist had
2 done the hard work of establishing itself and its silicon-based technology as a game changer in the
3 synthetic DNA industry, did Agilent make any further moves. And this time, instead of
4 approaching Twist in any way, Agilent filed this lawsuit without any advance notice, falsely and
5 harmfully accusing Twist and Leproust of misconduct and also associating numerous other former
6 Agilent employees with that alleged misconduct by identifying them by name in the complaint.

7 36. Despite supposed concern that its trade secrets were being misused and its interests
8 irreparably harmed, Agilent waited years to file suit and only did so after the media publicly
9 reported an infusion of tens of millions of dollars of new investor capital in Twist. What's more,
10 Agilent has based this lawsuit on the misguided conceit that Agilent's way of printing DNA,
11 which was designed as an assembly line for glass-slide microarrays, is the only way Twist could
12 have achieved the results it did with synthesized oligos, and that Twist must therefore be using
13 Agilent's technology. Agilent fails to realize that Twist's technology, unlike Agilent's, was
14 purpose-built from the start for creating commercial synthetic genes, which allowed for
15 engineering trade-offs that Agilent did not consider or could not implement. Indeed,
16 conspicuously absent from Agilent's allegations are any evidence of *actual use* of Agilent
17 confidential materials, much less trade secrets, by Twist employees to build Twist's business or
18 develop its technology.

19 37. Through this lawsuit, Agilent attempts to circumvent hard work, innovation, and
20 competition in the marketplace by litigating its way into a share of Twist's hard-earned success.
21 The value of Twist and its technology, however, are based on the pioneering work of founders
22 Banyai and Peck, along with the business leadership of Leproust and the work of countless others
23 at Twist, most of whom have never spent any time at Agilent. These are valuable assets that
24 Agilent simply has no right to claim.

25 **Agilent's Illicit Public Campaign Against Twist and Its Employees**

26 38. Contrary to its allegations, Agilent's true motivation for filing this case is not to
27 remedy harms purportedly caused by Defendants. Rather, it has become clear Agilent filed this
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1 baseless lawsuit, and has taken other malicious and illicit actions, with the goals of making up for
2 its own poor business decisions, harming Twist’s business and reputation, and making an example
3 of Leproust. Agilent has at every turn sought to prolong this lawsuit—and the cloud of
4 uncertainty it creates—in order to do as much damage to Twist and its employees as possible,
5 going so far as to seek the most protracted trial date it thought it could get away with in order to
6 maximize this platform for mudslinging.

7 39. In furtherance of its vendetta against Twist and Leproust, Agilent has planned and
8 engaged in a calculated scheme to broadcast to the marketplace inflammatory and damaging
9 allegations which it knows to be false about Twist and certain of its top executives and scientists,
10 who are former Agilent employees. By these and other actions, Agilent has defamed and
11 disparaged Leproust and Twist and their accomplishments, and has engaged in acts of unfair
12 competition, and tortious interference, among other unlawful conduct, to harm Twist and Leproust
13 and to unjustly benefit and enrich itself. Agilent’s apparent hope is to intimidate and coerce Twist
14 and the former Agilent employees into making a payoff, and profit off of Twist’s hard-earned
15 independent accomplishments.

16 **Agilent’s Unlawful and Intentional Interference in Twist’s October 31, 2018 IPO, Including**
17 **Its Fraudulent SEC Letter and Dissemination of the Same**

18 40. Agilent’s carefully laid scheme to derail Twist’s October 31, 2018 IPO is a prime
19 example of the depths to which Agilent will stoop and the unlawful means it will employ to harm
20 Twist and its employees.

21 41. Last fall, Twist made plans to launch an IPO to raise important funding, filing a
22 Form S-1 Registration Statement with the SEC. (Exhibit 8.) On October 2, 2018, the Registration
23 Statement became public and announced that Twist’s IPO would be scheduled for “[a]s soon as
24 practicable after this Registration Statement becomes effective.” (*Id.* at 1.) The Statement
25 generated considerable press, with news outlets and industry websites like the San Francisco
26 Chronicle, San Francisco Business Times, Business Wire, Reuters, thestreet.com, and
27 GenomeWeb, among many others, all reporting on the announcement. The IPO was set for
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1 October 31, 2018, with shares to be traded on the NASDAQ.

2 42. On or around October 29, 2018, *just two days before the scheduled IPO and in the*
3 *midst of Twist’s IPO roadshow*, Agilent approached Axios, a widely read news website, and
4 leaked the story that it was going to send a letter to the SEC that same day “accusing Twist of
5 making several false and misleading statements in its IPO filing documents.”⁸ It was by then
6 already public knowledge that Twist was “expect[ing] to go public [that] week,” and that its stock
7 would be priced in the coming days. (*Ibid.*) Axios published its story that morning with the title:
8 “Twist Bioscience IPO faces challenge from Agilent.” (*Ibid.*)

9 43. Agilent stayed true to its threat, sending a letter to the Director of the Division of
10 Corporate Finance, William Hinman, of the SEC that day accusing Twist of making “false and/or
11 misleading statements” in its IPO filing.⁹ It was Agilent’s letter, however, that contained the
12 falsehoods, not Twist’s Registration Statement. Among them were Agilent’s knowingly false and
13 deliberately inflammatory statements that “Leproust admitted under oath that she accepted the
14 position as CEO of Twist in November 2011 while she was still employed at Agilent” and that
15 “Twist employees have admitted to taking and retaining hundreds of confidential Agilent
16 documents for years while developing the Twist technology”—including documents that allegedly
17 reflect “Agilent trade secrets.” (*Ibid.*)

18 44. Agilent doubled down on its SEC letter—which notably was not signed by anyone
19 at Agilent—by issuing a press release the same day that repeated, among other things, the false
20 accusation that “Ms. Leproust admitted under oath that she secretly became Twist’s CEO 17
21 months prior to leaving Agilent.” (Exhibit 10.) That press release was posted to Agilent’s
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24 _____
25 ⁸ See Exhibit 9, Primack, Twist Bioscience IPO faces challenge from Agilent (Oct. 29, 2018)
26 Axios <<https://www.axios.com/twist-ipo-agilent-sec-6f5dd7ae-11f4-404d-9e92-57db39b4ebf7.html>> [as of Jan. 25, 2019].

27 ⁹ See Exhibit 10, Agilent October 29, 2018 Letter to the United States Securities and
28 Exchange Commission <<https://www.agilent.com/about/newsroom/resources/2018/october-29-2018-letter-to-sec.pdf>> [as of Jan. 25, 2019].

1 website,¹⁰ and provided links to Agilent’s proposed second amended complaint and the SEC letter
2 in PDF form. On information and belief, the SEC letter was prepared, submitted, and publicized
3 at the direction and/or with the assistance of one or more of Agilent’s executives or directors.

4 45. All of the statements above were false, and Agilent knew they were false when it
5 made them. First, as for the timing of Leproust becoming CEO, Twist as a company *did not even*
6 *exist in 2011* (nor in 2012 for that matter), so there is no way she could have served as an officer
7 of Twist for 17 months prior to her departure from Agilent. Agilent knowingly and misleading
8 pulled the November 2011 date out of a confidential, non-public interrogatory response Twist
9 supplied to it during litigation indicating that this was the earliest that Leproust discussed with
10 Twist’s co-founders, Banyai and Peck, *the possibility* of their forming a company and that
11 Leproust could be a good candidate for CEO *in the future*. At the time of its false statements,
12 Agilent was well aware that Twist was not incorporated until more than a year later in February
13 2013 (as reflected in public documentation¹¹ and Agilent’s own complaint (SAC ¶ 42)), and that
14 Leproust did not assume the position of CEO until April 2013, after departing from Agilent (as
15 reflected in other discovery responses Agilent possessed).

16 46. Second, as Agilent also knew full well from discovery, there was no evidence of
17 “midnight downloads” or other *en masse* document heist, as its inflammatory allegations about
18 “taking” hundreds of documents was meant to convey. Though it was careful not to do so in its
19 SEC letter, Agilent makes repeated allegations of “theft” and “stealing” in its second amended
20 complaint. (SAC ¶¶ 1–3, 5–6, 13–15, 47, 55.) Agilent linked to its then-proposed second
21 amended complaint in its press release, and expressly referred to that pleading in its SEC letter.
22 (Exhibits 10–11.) The evidence shows, however, that Agilent-related documents were
23 inadvertently and passively retained by certain former Agilent employees from their time at

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25 ¹⁰ See Exhibit 11, <<https://www.agilent.com/about/newsroom/presrel/2018/29oct-gp18059.html>> [as of Jan. 25, 2019].

26 ¹¹ Twist’s date of incorporation can be confirmed on the California Secretary of State
27 business registration website. See Exhibit 12,
28 <<https://businesssearch.sos.ca.gov/Document/RetrievePDF?Id=03548142-16146455>> [as of Jan.
25, 2019].

1 Agilent, where these employees would download documents to their devices or send them in an
2 email to themselves so they could continue to do work *for Agilent* while they were at home on
3 nights and weekends. Moreover, Agilent is well aware that under California law, mere possession
4 of Agilent information (which, contrary to Agilent’s allegations, does not actually qualify as trade
5 secrets in any event) does not amount to wrongful *misappropriation* of the information as required
6 to prove Agilent’s trade secret misappropriation claims.

7 47. To maximize the harm from its accusations, Agilent intentionally omitted those
8 essential facts that it learned in discovery—including the lack of any evidence of *actual use* of any
9 Agilent proprietary documents or information by any Twist employee to, for example, develop
10 Twist technology. Agilent then perverted the facts from that discovery to publicly communicate a
11 damaging falsehood, that Leproust and others supposedly admitted to intentionally taking
12 confidential documents containing trade secrets when they left Agilent in order to use them to
13 develop Twist’s technology. That is dead wrong.

14 48. As was Agilent’s aim, the timing of its leak to Axios, its false and inflammatory
15 letter to the SEC, and its press release and web posting could not have been worse for Twist’s
16 IPO. The Axios article even acknowledged that by waiting to send the letter to the SEC just two
17 days before the IPO, Agilent made sure “there is no way for Twist to prove its case prior to
18 pricing.” Those actions, Axios observed, were perfectly consistent with the conclusion that
19 “Agilent is trying to disrupt [Twist’s] business.” (Exhibit 9.)

20 49. Fortunately, the SEC saw through Agilent’s machinations. Mr. Hinman, and the
21 SEC more generally, opted not to take any action against Twist, did not require that Twist make
22 any changes to its Registration Statement in response to the accusations in Agilent’s letter, and
23 permitted the IPO to proceed. However, the SEC did not make any statement to reflect its
24 decision prior to the IPO, and by that time the damage was already done.

25 50. In the two days before pricing for Twist’s IPO, Agilent’s letter and the falsehoods
26 in it became a major discussion point with potential investors. Twist’s IPO team had to scramble
27 to defuse the situation and address the confusion it injected into the process at the last
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1 minute. Agilent’s scheme had a powerful destabilizing effect at the worst possible time—the day
2 that Twist had been asking investors to put in their final orders—stunting momentum Twist had
3 been gaining through its roadshow and resulting in a hit rate that was considerably lower than
4 expected. Twist’s stock, which is traded under the ticker symbol TWST, priced at \$14, the lowest
5 end of the target range of \$14-16 for the IPO, as reported for example by Renaissance Capital,
6 “Twist Prices IPO At \$14, The Low End Of The Range.”¹² Twist’s stock actually opened for
7 trading nearly two dollars lower, at close to \$12.

8 51. Given that 5,000,000 shares were offered and sold in the IPO, each dollar decrease
9 in pricing led to 5 million fewer dollars in funds raised for Twist, less underwriting discounts and
10 commissions. Without Agilent’s calculated, last-minute interference, the high end of the target
11 range would likely have been met, if not exceeded.

12 52. Through discovery, Twist has sought to determine who at Agilent was responsible
13 for planning and carrying out the scheme to interfere with the IPO, but Agilent has stone-walled
14 each and every one of those efforts. Agilent plainly does not want to Twist to know who was
15 involved or to be forced to turn over evidence of the improper motives and unlawful acts behind
16 this eleventh-hour scheme.

17 **Agilent’s Unlawful and Unfair Practice of Enforcing Overly Restrictive Contract Provisions**
18 **That Violate California’s Law and Public Policy**

19 53. Through this lawsuit, Agilent also seeks to harm Leproust and other former Agilent
20 employees now at Twist by asserting and seeking to enforce purported contract provisions that
21 restrict those former employees’ from using their technical knowledge, training, and hard earned
22 skills for anyone other than Agilent. Agilent has additionally sought to enforce a now-expired
23 non-solicitation prohibition against Leproust, which would prevent her from performing her duties
24 as a CEO to recruit new talent for Twist.

25 54. These contract provisions—which purport to restrain not just former Agilent
26 employees at Twist but also countless others current and former employees—are void,

27 ¹² See Exhibit 13, <<https://www.nasdaq.com/article/twist-bioscience-prices-ipo-at-14-the-low-end-of-the-range-cm1046861>> [as of Jan. 25, 2019].

1 unenforceable, and abhorrent to California law and policy. By improperly seeking to impose such
2 restrictions on Leproust and others, Agilent has successfully deterred other possible employees
3 from seeking to work for Twist and has prevented Leproust and Twist from attracting and hiring
4 other talented scientists who are perfectly within their rights to work and prosper at Twist.

5 55. According to the SAC, when Agilent hired Leproust in 2000, it required her to sign
6 an Agreement Regarding Confidential Information and Proprietary Developments (“Agreement”).
7 The asserted Agreement prohibits Leproust from using any “Confidential Information” except in
8 the “performance of Agilent duties,” and from disclosing any such information “both during and
9 after [their] employment with Agilent.” (SAC ¶ 30.) “Confidential Information” is broadly
10 defined to include not only “trade secrets” but also “confidential business and technical
11 information” and the all-encompassing category of “know-how not generally known to the
12 public.” (*Id.* at ¶ 31.) And there is no time limit on these obligations. (*Ibid.*)

13 56. As Agilent is well aware, Leproust has earned multiple advanced degrees,
14 including a Master of Science in industrial chemistry from a leading French technical institution,
15 École Supérieure de Chimie Physique Électronique de Lyon, and a Ph.D. in organic chemistry
16 with a focus on the specialized field of nucleic acids chemistry from the University of Houston.
17 Additionally, Leproust has co-authored over 34 peer-reviewed papers, many involving the same
18 and similar technology to what is at issue here. Virtually all of Leproust’s academic training and
19 scientific research could be reasonably considered to represent “know-how not generally known to
20 the public.”

21 57. Leproust also has extensive management, business development, and marketing
22 experience. She is among a small group of Silicon Valley executives in the relatively new
23 synthetic DNA industry who have secured venture capital, created a business plan, launched a
24 company, and marketed its products. Virtually all of her business acumen and professional
25 experience could be considered to represent “know-how not generally known to the public,” as
26 well as “confidential business and technical information.” Particularly in light of Leproust’s
27 specialized knowledge and skills, and Agilent’s exceedingly broad allegations and claims in this
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1 lawsuit, the asserted Agreement effectively operates as a non-competition agreement, which is
2 void as a matter of law as against California public policy.

3 58. The asserted Agreement also purports to restrict Leproust from “soliciting or
4 recruiting [Agilent] employees for [herself] or others, both during [her] employment at Agilent
5 and for a period of two years following termination of [her] employment with Agilent.” (SAC
6 ¶ 35.) In purported violation of that contractual provision, Leproust is alleged to have “recruited
7 and solicited one or more Agilent employees [including named defendant Dr. Siyuan Chen] to
8 terminate their employment with Agilent within two years of Leproust’s resignation,” and thereby
9 “materially breached her agreements with Agilent.” (*Id.* at ¶¶ 51, 68, 69.) Agilent, in fact, is
10 requesting that the Court extend this restraint on Leproust by re-imposing the non-solicitation
11 provision for an additional two years. (*Id.* at ¶ 72.)

12 59. The asserted Agreement thus also explicitly contains a restraint on Leproust’s
13 ability to do her job in the form of its non-solicitation provision. A normal function of a CEO,
14 particularly in a startup company, is to recruit new talent for the business. And the asserted
15 Agreement has the ripple effect of limiting the mobility of other potential employees who
16 otherwise would have come to work for Twist and enhanced its business. This asserted provision,
17 like the alleged non-compete provision, is void as matter of law and contrary to public policy.

18 60. This lawsuit is not the first time Agilent has sought to enforce these unlawful
19 contract provisions. As early as February 19, 2014, almost a year after Leproust began working at
20 Twist, Agilent began sending threatening letters to her, warning her not to use any of her “know-
21 how” while working for Twist and not to solicit any Agilent employees, lest she risk violating the
22 supposed Agreement. (Exhibit E and H of “Declaration of Andrew J. Bramhall in Support of
23 Defendants’ Opposition to Agilent Technologies, Inc.’s Motion for Leave to Amend First
24 Amended Complaint,” executed and filed Nov. 11, 2018.) Agilent’s lawyers also directed legal
25 threats at Twist and “the product lines that [they] underst[oo]d Twist intends to or is in the process
26 of developing,” without giving any indication what product lines they meant. (See, e.g., Exhibits
27 F, G, and I-L of “Declaration of Andrew J. Bramhall in Support of Defendants’ Opposition to
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1 Agilent Technologies, Inc.’s Motion for Leave to Amend First Amended Complaint,” executed
2 and filed Nov. 11, 2018.)

3 61. Agilent’s attempts to unduly restrain Leproust as well as other Twist employees
4 from practicing their chosen professions have only escalated through this lawsuit. With respect to
5 Leproust specifically, Agilent seeks monetary damages and injunctive relief from Leproust for
6 allegedly breaching these unenforceable provisions, notwithstanding Agilent’s failure to allege
7 any actual damages resulting from those supposed breaches. It is obvious that Agilent seeks to
8 make an example of Leproust, to serve as a warning to other Agilent employees, both former and
9 current, that Agilent is not to be crossed. Agilent is doing so despite being well aware that
10 preparing for and taking a competing job within one’s profession of choice is legal and in fact
11 encouraged by California’s public policies promoting the freedom of employee mobility.
12 Agilent’s intimidation and bullying tactics constitute unfair competition and must be stopped.

13 **JURISDICTION AND VENUE**

14 62. Jurisdiction of this Court is founded upon Code of Civil Procedure section 410.10.

15 63. Venue is proper in Santa Clara County pursuant to Code of Civil Procedure section
16 395.5. The events, acts, and omissions giving rise to this Cross-Complaint occurred in substantial
17 part in the County of Santa Clara, California.

18 64. This Cross-Complaint arises in part out of the same underlying facts as those
19 alleged and at issue in Plaintiff’s Second Amended Complaint (“SAC”) deemed filed on
20 December 11, 2018.

21 65. The amount in controversy, exclusive of interest, costs, and attorney’s fees, exceeds
22 \$25,000.

23 66. An immediate, real, and justiciable controversy exists between the Cross-
24 Complainants and Agilent as to (1) whether the purported trade secrets alleged in Agilent’s SAC
25 and identified in Agilent’s Code of Civil Procedure section 2019.210 disclosure of trade secrets
26 are valid, protectable, existent, and have been misappropriated; (2) whether Leproust breached the
27 contract alleged in Agilent’s SAC, including whether that contract existed, was enforceable, and
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1 was breached; (3) whether Leproust breached the duty of loyalty alleged in Agilent's SAC,
2 including whether such a duty existed, was enforceable, and was breached; and (4) whether
3 Agilent is entitled to any relief based on its legal claims and underlying allegations.

4 **THE PARTIES**

5 67. Plaintiff and Cross-Defendant Agilent Technologies Inc. is a Delaware corporation
6 with its principal place of business in Santa Clara, California.

7 68. Cross-Complainant and Defendant Twist Bioscience Corporation is a Delaware
8 corporation with its principal place of business in San Francisco, California.

9 69. Cross-Complainant and Defendant Emily Leproust is a resident of San Francisco,
10 California.

11 **FIRST CAUSE OF ACTION**

12 (Declaration of No Trade Secret Misappropriation
by Twist and Leproust, Code Civ. Proc., §§ 1060 et. seq.)

13 70. Cross-Complainants repeat and restate each of the allegations contained in
14 preceding paragraphs 1 through 69 as though fully set forth herein.

15 71. Agilent claims to be the owner of at least 86 trade secrets identified in Agilent's
16 Sixth Amended Identification of Trade Secrets Pursuant to Cal. Civ. Proc. Code § 2019.210, dated
17 September 22, 2017. However, for nearly two years after filing this lawsuit, Agilent was unable to
18 articulate what its alleged trade secrets were with the particularity required by statute. Only after
19 *seven* attempts, and three separate motions, did the Court rule under Section 2019.210 that
20 discovery should commence. Since that time Agilent has continued to obscure the identity of its
21 alleged trade secrets, refusing to provide even the most basic fundamental information about them.

22 72. Most recently, Agilent sought to amend its Section 2019.210 disclosure yet again to
23 assert previously unidentified trade secrets, which it again has failed to identify using the requisite
24 particularity. Agilent's ever-shifting identification of its alleged trade secrets underscores the fact
25 that it is simply lobbing baseless allegations as part of a larger malicious smear campaign.

26 73. More generally, in this lawsuit Agilent has accused Twist and Leproust of
27 misappropriating its purported trade secrets, including by filing its SAC, and has created a
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1 substantial, immediate and real controversy as to whether the alleged trade secrets are valid,
2 protectable, and misappropriated.

3 74. Twist and Leproust deny all such allegations, including without limitation that any
4 of Agilent's purported trade secrets are valid, protectable, or have been misappropriated.

5 75. None of the asserted trade secrets qualify for protection under the California
6 Uniform Trade Secrets Act. (Civ. Code, § 3426 et seq.) Agilent's purported trade secrets, as
7 identified in Agilent's Sixth Amended Identification of Trade Secrets,¹³ among other things, are
8 the subject of public knowledge and/or known to those in the field (e.g., because they were
9 published in Agilent's own product literature, journal articles, patent applications, and patents);
10 were disclosed to others (either on purpose or through a failure to take reasonable measures to
11 protect them); do not derive independent economic value, actual or potential, from not being
12 generally known to the public or to other persons; are the subject of independent derivation; and/or
13 were readily ascertainable by others in the field.

14 76. Even if Agilent's alleged trade secrets had been protectable, they were not
15 misappropriated by Twist or Leproust, including without limitation because they were not
16 obtained and/or disclosed by any improper means, and Twist and its employees used independent
17 research and development, public knowledge, and their own innovations to create Twist's
18 business, technology, and products, including Twist's patented technology and products, to
19 achieve their success to date.

20 77. Nevertheless, Agilent continues to maintain its trade secret misappropriation claim
21 against Twist and Leproust and to knowingly and falsely accuse them, including in public
22 statements separate and apart from the litigation, of misappropriating Agilent trade secrets and
23 using those trade secrets to develop Twist's technology, and in doing so has caused, and continues
24 to cause, harm to them. Such harm includes monetary and/or personal harm, both compensable
25 and irreparable, including harm to reputation, lost or damaged business relationships, lost

26 ¹³ On January 16, 2018, Agilent served a "Seventh Amended Identification," but has not
27 sought leave from the Court to amend its trade secret identification, nor do Defendants believe
28 such leave should be permitted as Agilent has not demonstrated the required "good cause."

1 investors and investment capital, and/or expenditure of substantial time and resources defending
2 this litigation rather than devoting their time and resources to further developing Twist’s business
3 and technology, and Leproust’s career.

4 78. An actual controversy exists as to the purported existence, validity, enforceability,
5 and misappropriation of Agilent’s alleged trade secrets.

6 79. Twist and Leproust have an immediate need for declaratory relief to preserve their
7 rights, defend their good names, and to protect their respective business relationships.

8 **SECOND CAUSE OF ACTION**
9 (Declaration of No Breach of Contract
by Leproust, Code Civ. Proc., §§ 1060 et. seq.)

10 80. Cross-Complainants repeat and restate each of the allegations contained in
11 preceding paragraphs 1 through 79 as though fully set forth herein.

12 81. Agilent claims that one or more valid and enforceable contracts exists between it
13 and Leproust in connection with her employment at Agilent. (See SAC ¶¶ 61–70.)

14 82. Agilent accuses Leproust of breaching her contract terms when she allegedly
15 “downloaded, stole, and retained Agilent confidential information.” (SAC ¶ 63.) Agilent further
16 accuses Leproust of breaching her contract terms when she allegedly “failed to disclose to Agilent
17 her strategic plans for improvements on and new applications for Agilent’s oligo synthesis
18 technologies,” “recruited and solicited one or more Agilent employees to terminate their
19 employment with Agilent within two years of Leproust’s resignation,” and “used Agilent’s
20 Confidential Information and Proprietary Developments in her new venture at Twist.” (*Id.* at
21 ¶ 68.)

22 83. Leproust denies all such allegations, and any allegation underlying Agilent’s claim
23 that Leproust breached a valid and enforceable contract with Agilent. Leproust did not steal any
24 Agilent confidential information, nor did she download, retain, or disclose any Agilent
25 confidential information in any manner inconsistent with any valid or enforceable contract
26 between her and Agilent. Leproust also did not fail to disclose to Agilent any plans for
27 improvements on any new applications for Agilent’s oligo synthesis technologies. Leproust fully
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1 complied with any and all disclosure provisions relating to improvements on and new applications
2 for Agilent's technologies under any valid or enforceable contract she had with Agilent. In
3 addition, Leproust did not recruit or solicit any Agilent employees to terminate their employment
4 with Agilent within two years of Leproust's resignation from Agilent, nor did Leproust violate any
5 valid or enforceable non-solicitation provision of any valid or enforceable contract she had with
6 Agilent. Moreover, Leproust did not use any protectable Agilent Confidential Information or
7 Proprietary Developments at Twist in any manner that was unlawful or in violation of any valid or
8 enforceable contract between Leproust and Agilent. On the contrary, Twist's technology is the
9 result of independent research and development enabled by considerable funding and investment,
10 public knowledge, and their own innovations in connection with Twist's business and technology.

11 84. In addition, Agilent's purported contracts, referred to in the SAC as the
12 "Standards" and the "Confidentiality and Assignment Agreement," recite provisions that are void
13 and unenforceable under California law (Bus. & Prof. Code, § 16600), including an asserted non-
14 solicitation provision and a so-called confidentiality provision that both act as unenforceable non-
15 compete agreements.

16 85. Nevertheless, Agilent continues to maintain its breach of contract claim against
17 Leproust and in doing so has caused, and continues to cause, harm to her. Such harm includes
18 monetary and/or personal harm, both compensable and irreparable, including harm to reputation,
19 lost or damaged business relationships, lost investors and investment capital, and/or expenditure of
20 substantial time and resources defending this litigation rather than devoting her time and resources
21 to further developing Twist's business and technology, and her own career.

22 86. Agilent seeks relief in the form of monetary damages, a constructive trust, and an
23 injunction through its breach of contract claim, including to enjoin Leproust for an additional two
24 years from soliciting any Agilent employees.

25 87. Agilent's accusations have created a substantial, immediate and real controversy as
26 to the existence, enforceability, and performance of the purported agreements.

27 88. Leproust has an immediate need for a declaration that she did not breach any valid
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1 or enforceable contract to preserve her rights, defend her name, and to protect her business
2 relationships and reputation.

3 **THIRD CAUSE OF ACTION**
4 (Declaration of No Breach of the Duty of Loyalty
by Leproust, Code Civ. Proc., §§ 1060 et. seq.)

5 89. Cross-Complainants repeat and restate each of the allegations contained in
6 preceding paragraphs 1 through 88 as though fully set forth herein.

7 90. Agilent claims that Leproust, despite not being an officer or executive, owed a duty
8 of loyalty to Agilent from at least November 2011 to 2013 by virtue of her employment
9 relationship with Agilent. (SAC ¶ 75.)

10 91. Agilent accuses Leproust of breaching that purported duty of loyalty when she
11 allegedly “transferred her loyalty from Agilent to Twist at least as early as November 2011” and
12 allegedly “withheld from Agilent, and diverted to Twist, her strategic business and technological
13 plans for improving Agilent’s oligo-synthesis technology and applying it to gene assembly.”
14 (SAC ¶ 76.) Agilent further alleges that these purported actions were “proscribed both by the duty
15 of loyalty and Leproust’s obligations under the Standards and Confidentiality and Assignment
16 Agreement.” (*Ibid.*)

17 92. Leproust denies all such allegations, and any allegation underlying Agilent’s claim
18 that she violated a valid or enforceable duty of loyalty to Agilent. Leproust did not transfer her
19 loyalty from Agilent to Twist as early as November 2011, or at any time prior to resigning from
20 Agilent, in violation of any valid or enforceable duty of loyalty to Agilent. Leproust also did not
21 withhold from Agilent, or divert to Twist, any business or technological plans for improving
22 Agilent technology or newly applying it in violation of any valid or enforceable duty of loyalty to
23 Agilent.

24 93. Nevertheless, Agilent continues to maintain its breach of the duty of loyalty claim
25 against Leproust and in doing so has caused, and continues to cause, harm to her. Such harm
26 includes monetary and/or personal harm, both compensable and irreparable, including harm to
27 reputation, lost or damaged business relationships, lost investors and investment capital, and/or
28

1 expenditure of substantial time and resources defending this litigation rather than devoting her
2 time and resources to further developing Twist's business and technology, and her own career.

3 94. Agilent seeks relief in the form of compensatory and punitive damages through its
4 breach of the duty of loyalty claim.

5 95. Agilent's accusations have created a substantial, immediate and real controversy as
6 to the existence, enforceability, and performance of the purported duty of loyalty, as well as
7 whether the duty of loyalty claim is duplicative of the breach of contract claim against Leproust, in
8 violation of California law.

9 96. Leproust has an immediate need for a declaration that she did not breach any valid
10 or enforceable duty of loyalty to preserve her rights, defend her good name, and to protect her
11 business relationships and reputation.

12 **FOURTH CAUSE OF ACTION**

13 (Defamation, Defamation per se, Libel, Libel per se, Slander, and Slander per se by Twist and
14 Leproust, Civil Code §§ 44, 45, 45(A), 46)

15 97. Cross-Complainants repeat and restate each of the allegations contained in
16 preceding paragraphs 1 through 96 as though fully set forth herein.

17 98. On information and belief, Agilent, directly or through its agents and employees
18 acting in the scope of their duties, and with one or more of its executives or directors playing a
19 responsible part, made false public representations and caused false public representations to be
20 made about at least (i) Twist and its employees, including Leproust, allegedly engaging in
21 unlawful conduct and unethical business practices, including making false and/or deceptive
22 statements about supposed securities law violations to the SEC (and thus to the public at large,
23 including investors and potential investors) in connection with the October 31, 2018 IPO, and (ii)
24 the nature and origin of Twist's technology and products.

25 99. Agilent disseminated and/or caused the dissemination of these false public
26 representations in both written and oral statements, which include without limitation oral
27 communications with Axios, Axios's October 29, 2018 article (Exhibit 9), Agilent's October 29,
28 2018 press release (Exhibit 11), Agilent's letter to the SEC (Exhibit 10), related claims published

1 by numerous other press outlets (including by way of non-limiting example Exhibits 14-17),¹⁴
2 allegations that Leproust became the CEO of Twist 17 months before resigning from Agilent,
3 allegations that Leproust admitted under oath that she secretly became Twist's CEO 17 months
4 prior to leaving Agilent, allegations that Leproust and other Twist employees took and retained
5 hundreds of confidential documents containing alleged Agilent trade secrets and proprietary
6 information, allegations that Leproust raised money to start a competitive company that would
7 misappropriate Agilent's innovations of the past 20 years, allegations that Leproust poached
8 Agilent employees while at Twist, and allegations that from its inception Twist has competed in
9 the same markets with the same basic technology as Agilent.

10 100. On information and belief, Agilent, including the executives and/or directors who
11 played a responsible role, made the statements at issue with actual malice in that Agilent knew
12 these statements were false (or at a minimum intentionally deceptive) and/or made such statements
13 in reckless disregard of their truth, particularly in light of Agilent's industry position, its privity to
14 and knowledge of the allegedly taken and retained documents and forensic information regarding
15 them, its knowledge of Defendants' discovery responses in the instant litigation showing that the
16 statements were false and/or deceptive, and its failure to have conducted a proper investigation—
17 either before or during the litigation—to uncover the true facts relevant to its inflammatory
18 accusations against Twist and its employees.

19 101. Agilent's statements and misrepresentations have, by design, injured Twist and
20 Leproust with respect to their business and reputations by alleging that they have engaged in
21 deceptive, dishonest, fraudulent, and unlawful conduct.

22
23 ¹⁴ See Exhibit 14, Business Wire report <[https://www.businesswire.com/news/
home/20181029005588/en/Agilent-Sends-Letter-SEC-Material-Misstatements-Twist](https://www.businesswire.com/news/home/20181029005588/en/Agilent-Sends-Letter-SEC-Material-Misstatements-Twist)> [as of Jan.
24 28, 2019]; Exhibit 15, Chemical & Engineering News report <[https://cen.acs.
org/policy/intellectual-property/Agilent-contests-Twist-Biosciences-stock/96/i44](https://cen.acs.org/policy/intellectual-property/Agilent-contests-Twist-Biosciences-stock/96/i44)> [as of Jan. 28,
25 2019]; Exhibit 16, InvestingNote report <[https://www.investingnote.
com/posts/1088249](https://www.investingnote.com/posts/1088249)> [as of Jan. 28, 2019]; Exhibit 17, S&P Global Marketing Intelligence report
26 <[https://www.spglobal.com/marketintelligence/en/news-insights/trending/y0od9-
egkk48c3tb9s06ng2](https://www.spglobal.com/marketintelligence/en/news-insights/trending/y0od9-egkk48c3tb9s06ng2)> [as of Jan. 28, 2019].
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1 including because it has been monitoring Twist's investment activities.

2 110. On information and belief, Agilent, directly or through its agents and employees
3 acting in the scope of their duties, and with one or more of its executives or directors playing a
4 responsible part, made false public representations and caused false public representations to be
5 made about at least (i) Twist and its employees, including Leproust, allegedly engaging in
6 unlawful conduct and unethical business practices, including making false and/or deceptive
7 statements to the SEC (and thus the public at large, including investors and potential investors) in
8 connection with the October 31, 2018 IPO, and (ii) the nature and origin of Twist's technology
9 and products.

10 111. Agilent disseminated and/or caused the dissemination of these false public
11 representations in both written and oral statements, which include without limitation oral
12 communications with Axios, Axios's October 29, 2018 article (Exhibit 9), Agilent's October 29,
13 2018 press release (Exhibit 11), Agilent's letter to the SEC (Exhibit 10), related claims published
14 by numerous other press outlets (including by way of non-limiting example Exhibits 14-17),
15 allegations that Leproust became the CEO of Twist 17 months before resigning from Agilent,
16 allegations that Leproust admitted under oath that she secretly became Twist's CEO 17 months
17 prior to leaving Agilent, allegations that Leproust and other Twist employees took and retained
18 hundreds of confidential documents containing alleged Agilent trade secrets and proprietary
19 information, allegations that Leproust raised money to start a competitive company that would
20 misappropriate Agilent's innovations of the past 20 years, allegations that Leproust poached
21 Agilent employees while at Twist, and allegations that from its inception Twist has competed in
22 the same markets with the same basic technology as Agilent.

23 112. On information and belief, Agilent, including the executives and directors who
24 played a responsible role, made the statements at issue with actual malice in that Agilent knew
25 these statements were false and/or deceptive or made such statements in reckless disregard of their
26 truth, particularly in light of Agilent's industry position, its privity to and knowledge of the
27 allegedly taken and retained confidential documents and forensic information regarding them, its
28

1 knowledge of Defendants’ discovery responses in the instant litigation showing that the statements
2 were false and/or deceptive, and its failure to have conducted a proper investigation—either before
3 or during the litigation—to uncover the true facts relevant to its inflammatory accusations against
4 Twist and its employees.

5 113. Agilent made these statements and misrepresentations with the intent to disrupt
6 Twist’s economic relationships, including without limitation to negatively affect pricing for
7 Twist’s IPO, if not derail it altogether, and the economic returns that Twist was substantially
8 certain to receive from investors and potential investors in connection with the IPO. Furthermore,
9 Agilent knew that its actions were substantially certain to do so.

10 114. Agilent’s actions were independently wrongful, including under legal standards
11 such as (but not limited to) common law defamation, slander, and libel and Civil Code sections
12 45–47, and Business and Professions Code section 17200 et seq.

13 115. As a result of Agilent’s wrongful conduct, Twist has suffered and continues to
14 suffer economic losses and other general and specific damages, including without limitation lost
15 income, lost stock value, lost investments, lost revenue, lost profits, and lost business
16 opportunities. Agilent’s wrongful conduct was a substantial factor in causing this harm.

17 116. Twist is entitled to damages to compensate for all actual harm caused by Agilent in
18 an amount to be shown according to proof at the time of trial.

19 117. Agilent’s actions caused unjust enrichment to Agilent at the expense of Twist.
20 Twist is further entitled to disgorgement of all such gains.

21 118. The aforementioned acts of Agilent were done maliciously, oppressively, and/or
22 with intent to defraud under Civil Code section 3294, subdivision (a), and Twist is entitled to
23 punitive and exemplary damages in an amount to be shown according to proof at the time of trial.

24 **SIXTH CAUSE OF ACTION**
25 (Unlawful and Unfair Competition
26 by Twist and Leproust, Bus. & Prof. Code §§ 17200 et seq.)

27 119. Cross-Complainants repeat and restate each of the allegations contained in
28 preceding paragraphs 1 through 118 as though fully set forth herein.

1 120. The conduct of Agilent described in this Cross-Complaint violates the California
2 Unfair Competition Law, which prohibits, among other things, any unlawful or unfair business
3 acts or practices. This includes, but is not limited to, any conduct or statement related to the
4 operation of a business that is deceptive, untrue, misleading, and/or fraudulent. It also includes
5 any conduct that violates Business and Professions Code section 16600, which proscribes that
6 “[e]xcept as provided in this chapter, every contract by which anyone is restrained from engaging
7 in a lawful profession, trade, or business of any kind is to that extent void.”

8 121. Agilent has violated California unfair competition law by at a minimum
9 disseminating false and/or deceptive statements concerning Twist and Leproust, wrongfully
10 associating Twist and Leproust with unlawful conduct, attributing conduct to Twist and Leproust
11 that they did not engage in and which Agilent knows they did not engage in, using deceptive
12 means to gain competitive intelligence about Twist and its products, and intentionally interfering
13 with Twist’s prospective economic relationships (and/or causing any of the above statements,
14 associations, attributions, or interference).

15 122. Agilent disseminated and/or caused the dissemination of these false public
16 representations in both written and oral statements, which include without limitation oral
17 communications with Axios, Axios’s October 29, 2018 article (Exhibit 9), Agilent’s October 29,
18 2018 press release (Exhibit 11), Agilent’s letter to the SEC (Exhibit 10), related claims published
19 by numerous other press outlets (including by way of non-limiting example Exhibits 14-17),
20 allegations that Leproust became the CEO of Twist 17 months before resigning from Agilent,
21 allegations that Leproust admitted under oath that she secretly became Twist’s CEO 17 months
22 prior to leaving Agilent, allegations that Leproust and other Twist employees took and retained
23 hundreds of confidential documents containing alleged Agilent trade secrets and proprietary
24 information, allegations that Leproust raised money to start a competitive company that would
25 misappropriate Agilent’s innovations of the past 20 years, allegations that Leproust poached
26 Agilent employees while at Twist, and allegations that from its inception Twist has competed in
27 the same markets with the same basic technology as Agilent.

28

1 123. On information and belief, Agilent, including the executives and directors who
2 played a responsible role, made the statements at issue with actual malice in that Agilent knew
3 these statements were false and/or deceptive or made such statements in reckless disregard of their
4 truth, particularly in light of Agilent’s industry position, its privity to and knowledge of the
5 allegedly taken and retained confidential documents and forensic information regarding them, its
6 knowledge of Defendants’ discovery responses in the instant litigation showing that the statements
7 were false and/or deceptive, and its failure to have conducted a proper investigation—either before
8 or during the litigation—to uncover the true facts relevant to its inflammatory accusations against
9 Twist and its employees.

10 124. Agilent made these statements and misrepresentations with the intent to disrupt
11 Twist’s economic relationships, including without limitation to negatively affect pricing for
12 Twist’s IPO and the economic returns that Twist was substantially certain to receive from
13 investors and potential investors in connection with the IPO. Furthermore, Agilent knew that its
14 actions were substantially certain to do so.

15 125. Agilent also has engaged in unlawful and unfair business conduct by seeking to
16 enforce purported employment contract provisions against Leproust and other Twist employees
17 that are overly broad and restrictive, and that operate as non-compete and non-solicit agreements
18 in violation of Business and Professions Code section 16600.

19 126. This includes without limitation Agilent’s attempt to enforce a purported
20 Agreement Regarding Confidential Information and Proprietary Developments (“Agreement”), in
21 order to prohibit Leproust and other former Agilent employees from using any of their technical
22 knowledge and skills, such as “know-how not generally known to the public,” outside of Agilent,
23 even if the knowledge is not a protectable trade secret or proprietary to Agilent. Agilent’s
24 unlawful and unfair business conduct also includes (but is not limited to) Agilent’s attempt to
25 enforce an invalid non-solicitation agreement purporting to restrict Leproust from “soliciting or
26 recruiting [Agilent] employees for [herself] or others, both during [her] employment at Agilent
27 and for a period of two years following termination of [her] employment with Agilent.”

28

1 127. Agilent’s demand of acquiescence to these purported contractual obligations has
2 restrained Leproust and other former Agilent employees working at Twist from engaging without
3 restraint in their chosen lawful profession, trade, or business. Agilent’s attempts to enforce these
4 purported provisions is unlawful and unfair, and constitutes unlawful acts and/or practices as
5 defined by the California Unfair Competition Law because the asserted contractual obligations by
6 their plain terms violate Business and Professions Code section 16600. Agilent’s demand of
7 acquiescence to the purported contractual obligations is further unfair and unlawful because it also
8 contravenes California’s legislatively declared policies in favor of its citizens’ rights to pursue any
9 lawful employment and in favor of free, open, and unfettered competition.

10 128. Twist and Leproust have been injured because the purported contractual restraints
11 on trade that Agilent has sought to impose upon Leproust and other former Agilent employees
12 working at Twist have burdened their exercise of a fundamental liberty, have increased the risk
13 and costs of seeking employment in and practicing their chosen professions and business, and
14 have hampered their ability to compete with, and attract, the most talented and skilled potential
15 employees in their chosen professions.

16 129. Agilent has gained an economic benefit as a result of the unlawful and unfair
17 practices contained herein, including promotion of its own brand and products, and creation of a
18 false reputation as a company that can accurately identify and report fraud. Agilent has also
19 benefited from the negative effects its contractual barriers have imposed on its competitors and the
20 public at large, including by restraining hundreds if not thousands of its employees, both current
21 and former, from practicing their chosen professions and business.

22 130. Agilent’s conduct in violation of the Unfair Competition Law has resulted in
23 financial losses to Twist and Leproust, including without limitation lost income, lost investments,
24 lost revenue, lost profits, lost business opportunities, and/or lost business relationships. Agilent’s
25 conduct has also damaged Twist’s reputation in the marketplace, as well as the reputations of
26 certain of its employees, including Leproust. Agilent’s wrongful conduct was a substantial factor
27 in causing this harm. The harm Agilent has caused to Twist and Leproust outweighs any utility to
28

1 Agilent's business conduct.

2 131. Twist and Leproust are entitled to damages to compensate for all actual harm
3 caused by Agilent in an amount to be shown according to proof at the time of trial.

4 132. Agilent has also been unjustly enriched from its conduct. Accordingly, the Court
5 should order Agilent to disgorge all such gains.

6 133. Twist and Leproust are further entitled to recover costs and attorneys' fees pursuant
7 to the California Unfair Competition Law.

8 134. Twist and Leproust have suffered irreparable harm as a result of Agilent's conduct
9 and will continue to suffer irreparable injury that cannot be adequately remedied at law.

10 **DEMAND FOR JURY TRIAL**

11 Cross-Complainants Twist and Leproust hereby demand a jury trial on all issues so triable.

12 **PRAYER FOR RELIEF**

13 Wherefore, Cross-Complainants Twist and Leproust pray for judgment and relief as
14 follows:

15 1. That the Second Amended Complaint be dismissed with prejudice and that Plaintiff
16 take nothing thereby;

17 2. For Defendants' costs of suit, including reasonable attorneys' fees;

18 3. For attorneys' fees and costs pursuant to Civil Code section 3426.4;

19 4. For declaratory judgments against Cross-Defendant Agilent that: (a) Twist and
20 Leproust have not misappropriated any valid, protectable trade secret belonging to Agilent; (b)
21 Leproust has not breached any valid or enforceable contract with Agilent; (c) Leproust has not
22 violated any valid or enforceable duty of loyalty to Agilent; (d) the restraints of trade in Agilent's
23 purported contract(s), including its Agreement Regarding Confidential Information and
24 Proprietary Developments, are void and unenforceable; (e) Leproust and other Twist employees
25 may work in their chosen profession without restraint; and (f) Twist and Leproust have not
26 violated any contractual, statutory, or common law duty or obligation owed to Agilent;

27 5. For a permanent injunction enjoining Agilent from continuing to publish or
28

1 disseminate (or contributing to the publication or dissemination of) the false, defamatory, and
2 disparaging statements identified herein;

3 6. For a permanent injunction against Agilent, including its directors, officers,
4 employees, and agents, as well as those in active participation with them or with Agilent,
5 restraining and enjoining them from enforcing any purported contractual restraints of trade against
6 Leproust, Twist, any current or future employees of Twist, or anyone else;

7 7. For damages, including presumed, actual, compensatory, special, and consequential
8 damages in an amount to be proven at trial, as well as disgorgement of all benefits earned by
9 Agilent and/or Does 1–10 from their wrongful conduct;

10 8. For an order requiring Agilent and/or Does 1–10 to publicly correct the false,
11 defamatory, and disparaging statement identified herein;

12 9. For an award of punitive damages against Agilent and/or Does 1–10 to deter their
13 misconduct in the future, to the maximum extent permitted by law;

14 10. For pre-judgment interest; and

15 11. For such other and further relief as the Court may deem just and proper.

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DATED: January 29, 2019

Respectfully submitted,

By 

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EXHIBIT 1



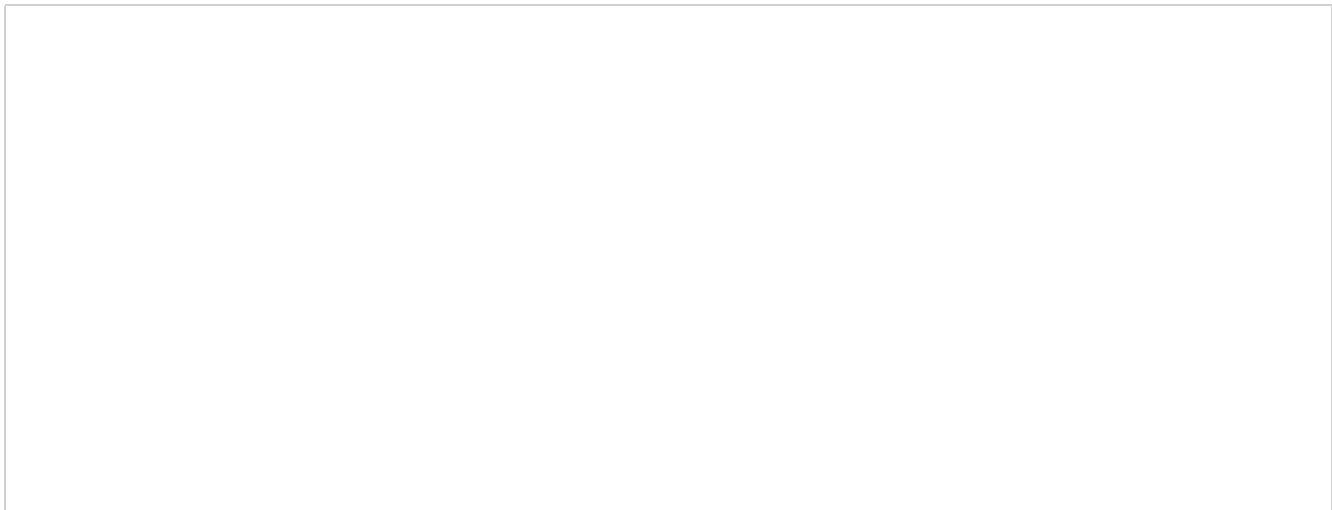
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PRESS RELEASE

Synthetic Biology Market to hit more than US\$ 38 Billion By 2020



By

Published: Nov 16, 2018 10:10 a.m. ET



Nov 16, 2018 (Heraldkeeper via COMTEX) -- New York, November 16, 2018: The **synthetic biology market** is expected to exceed more than US\$38 billion by 2020.

The report covers detailed competitive outlook including the market share and company profiles of the key participants operating in the global market. Key players profiled in the report include BASF, GEN9 Inc. , Algenol Biofuels , Codexis Inc. , GenScript Corporation , DuPont , Butamax



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TeselaGen Biotechnology , Editas Medicine, Inc. , Twist Bioscience , GeneWorks Pty Ltd. , Proterro, Inc. and Blue heron (OriGene technologies Inc.) . Company profile includes assign such as company summary, financial summary, business strategy and planning, SWOT analysis and current developments.

You Can Browse Full Report @: <https://www.marketresearchengine.com/reportdetails/synthetic-biology-market>

The enabling product is segmented into DNA synthesis and oligonucleotide synthesis. The synthetic biology is segmented on the lines of its technology like enabling technology and enabled technology. Under enabling technology it covers genome engineering, microfluidics technologies, DNA synthesis & sequencing technologies, bioinformatics technologies, biological components and integrated systems technologies. The enabled technology the market is segmented into pharmaceuticals, chemicals, biofuels and agriculture. Under application segmentation the market covered into research & development, chemicals, agriculture, pharmaceuticals & diagnostics, biofuels, environment, biotechnology and biomaterials.

The scope of the report includes a detailed study of global and regional markets for various types of synthetic biology with the reasons given for variations in the growth of the industry in certain regions.

The Synthetic biology Market has been segmented as below:

The Global Synthetic biology Market is segmented on the basis of Product Analysis, Technology Analysis, Application Analysis and Regional Analysis .

By Product Analysis this market is segmented on the basis of Enabling Products, DNA Synthesis, Oligonucleotide Synthesis, Enabled Products, Pharmaceuticals, Chemicals, Biofuels, Agriculture, Core Products, Synthetic DNA, Synthetic Genes, Synthetic Cells, XNA and Chassis Organisms. By Technology Analysis this market is segmented on the basis of Enabling Technology, Genome Engineering, Microfluidics technologies, DNA synthesis & sequencing technologies,



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Development, Chemicals, Agriculture, Pharmaceuticals & Diagnostics, Biofuels and Others (Environment, Biotechnology & Biomaterials, etc.). By Regional Analysis this market is segmented on the basis of North America, Europe, Asia-Pacific and Rest of the World.

The major driving factors of synthetic biology market are as follows:

- Financial support and assistance from government and private organizations.
- Increasing number of individual conducting research.
- Growing number of industries entering in the market.
- Declining price of DNA sequencing.

The restraints factors of synthetic biology market are as follows:

- Issue related bio-safety and bio-security
- Creation of strict regulatory bodies
- Formation of ethical challenges

This report provides:

- 1) An overview of the global market for synthetic biology and related technologies.
- 2) Analyses of global market trends, with data from 2013, estimates for 2014 and 2015, and projections of compound annual growth rates (CAGRs) through 2020.
- 3) Identifications of new market opportunities and targeted promotional plans for synthetic biology
- 4) Discussion of research and development, and the demand for new products and new applications.
- 5) Comprehensive company profiles of major players in the industry.



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The post **Synthetic Biology Market to hit more than US\$ 38 Billion By 2020** appeared first on **Herald Keeper**.

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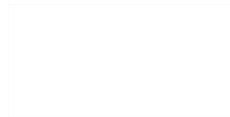
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EXHIBIT 2



Genome Biol. 2004; 5(8): R58.

PMCID: PMC507883

Published online 2004 Jul 27. doi: [10.1186/gb-2004-5-8-r58](https://doi.org/10.1186/gb-2004-5-8-r58)

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POSaM: a fast, flexible, open-source, inkjet oligonucleotide synthesizer and microarrayer

[Christopher Lausted](#),^{✉1} [Timothy Dahl](#),¹ [Charles Warren](#),¹ [Kimberly King](#),¹ [Kimberly Smith](#),¹ [Michael Johnson](#),¹ [Ramsey Saleem](#),¹ [John Aitchison](#),¹ [Lee Hood](#),¹ and [Stephen R Lasky](#)¹

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Abstract

DNA arrays are valuable tools in molecular biology laboratories. Their rapid acceptance was aided by the release of plans for a pin-spotting microarrayer by researchers at Stanford. Inkjet microarraying is a flexible, complementary technique that allows the synthesis of arrays of any oligonucleotide sequences *de novo*. We describe here an open-source inkjet arrayer capable of rapidly producing sets of unique 9,800-feature arrays.

Background

The DNA array is a powerful tool for the high-throughput identification and quantification of nucleic acids. Among other uses, array analysis has become a standard technique in the molecular biology laboratory for monitoring gene expression. Arrays can be made either by the mechanical spotting of presynthesized DNA products [1] or by the *de novo* synthesis of oligonucleotides on a solid substrate, usually a derivatized glass slide. As the sequences for *de novo* synthesized arrays are stored electronically rather than physically in frozen DNA libraries, the costs and the potential for errors in amplification, storage, and retrieval are eliminated.

Piezoelectric inkjet oligoarray synthesis as proposed by Blanchard and Hood [2] is a particularly flexible method that allows the rapid construction of oligonucleotide arrays containing any desired sequence. By dispensing DNA monomers from a multi-channel inkjet print head, large numbers of sequences can be chemically synthesized in parallel. Development of a prototype inkjet system began in our laboratory and was continued in the private sector [3,4]. Work by Rosetta Inpharmatics (Seattle, WA) and Agilent (Palo Alto, CA) resulted in an industrial-scale inkjet oligoarraying system and a

catalog of commercially available arrays. However, there has been virtually no access to the inkjet synthesis instrumentation in basic, academic research laboratories, and high set-up fees still deter the production of specialized arrays in small batches.

When compared to the rapid acceptance of the pin-spotting microarrays [5-8], the lack of access to oligonucleotide microarray synthesizers has hampered the development of new uses for this technology. The early release of the Stanford pin-spotting arrayer design [1] also spurred commercial development of high-quality microarrayers, which led to the availability of numerous models at competitive prices. Despite the problems and errors associated with collection of DNA libraries, the widespread availability of pin-spotted microarrays led to acceptance and standardization of protocols, terminology, data storage, and analysis techniques [9-11].

Several laboratories have modified commercial ink-on-paper printers for use in spotting microarrays. These printers were usually based on 'bubble jet' print heads containing tiny heating elements that rapidly vaporize a water-based solution in a capillary to eject a droplet containing protein or DNA, onto a solid support [12-14]. These printers, however, are difficult to clean and are not suitable for high-throughput production of oligoarrays or the parallel *de novo* synthesis of oligonucleotide arrays. Like pin-spotting microarrayers, they also require libraries of known nucleic acid reporters before arrays can be made.

The first successful technique for *de novo* oligonucleotide synthesis on a chip was developed by Affymetrix (Santa Clara, CA) using photolithographic techniques borrowed from the semiconductor industry. By using photomasks and UV-catalyzed base deprotection, large numbers of oligonucleotide arrays can be synthesized with a high feature density. Chips are now being made that contain all the genes predicted to be in the human genome. However, coupling chemistry using photolabile monomers is less efficient than standard phosphoramidite chemistries, resulting in arrays consisting of short oligonucleotides (25 mers) that require multiple features for the unambiguous identification of each gene. In addition, the design and construction of new arrays is slow and expensive because new masks need to be cut for each base changed in the array.

Recently, new photolithographic oligoarray synthesizers have been introduced that replace mask sets with a dynamic micro-mirror device (DMD) [15,16]. NimbleGen (Madison, WI) produces arrays with up to 390,000 features using Affymetrix-style chemistry. These arrays are not currently available for sale in the United States, but samples can be sent to Iceland for hybridization and scanning. Instead of deprotecting photolabile monomers, Xeotron (Houston, TX) uses the DMD to photo-generate detritylating acids. This has the advantage of better yields through higher coupling efficiency, but feature density is lower. Xeotron arrays currently contain about 8,000 features. Detailed descriptions of the DMD-based instruments are not publicly available.

De novo oligonucleotide synthesis using a piezoelectric inkjet oligoarray synthesizer overcomes several of the problems inherent in the pin-spotted arrays and the conventional photolithographic mask arrays. First, as soon as the genomic DNA or expressed sequence tag (EST) library is even partially sequenced, oligonucleotide reporters, including intergenic regions, can be designed and synthesized on arrays without having to clone and store large libraries. Second, the use of standard phosphoramidite chemistry for oligoarray synthesis allows longer reporters to be synthesized, decreasing the number of reporters required for confident identification of the target molecules. The POSaM (piezoelectric oligonucleotide synthesizer and microarrayer) platform described here utilizes a low-cost piezoelectric print head with six fluid channels; four channels deliver phosphoramidite precursors and one delivers an activator (ethylthiotetrazole), leaving one channel available for an optional linker or modified base. The piezoelectric jets can deliver a wide range of nonvolatile solvents in volumes as low as 6 pl. Piezoelectric jetting, high-quality motion controllers and standard phosphoramidite oligonucleotide

synthesis chemistry allow users to synthesize arrays of any nucleic-acid sequence at specific, closely spaced features on suitable solid substrates.

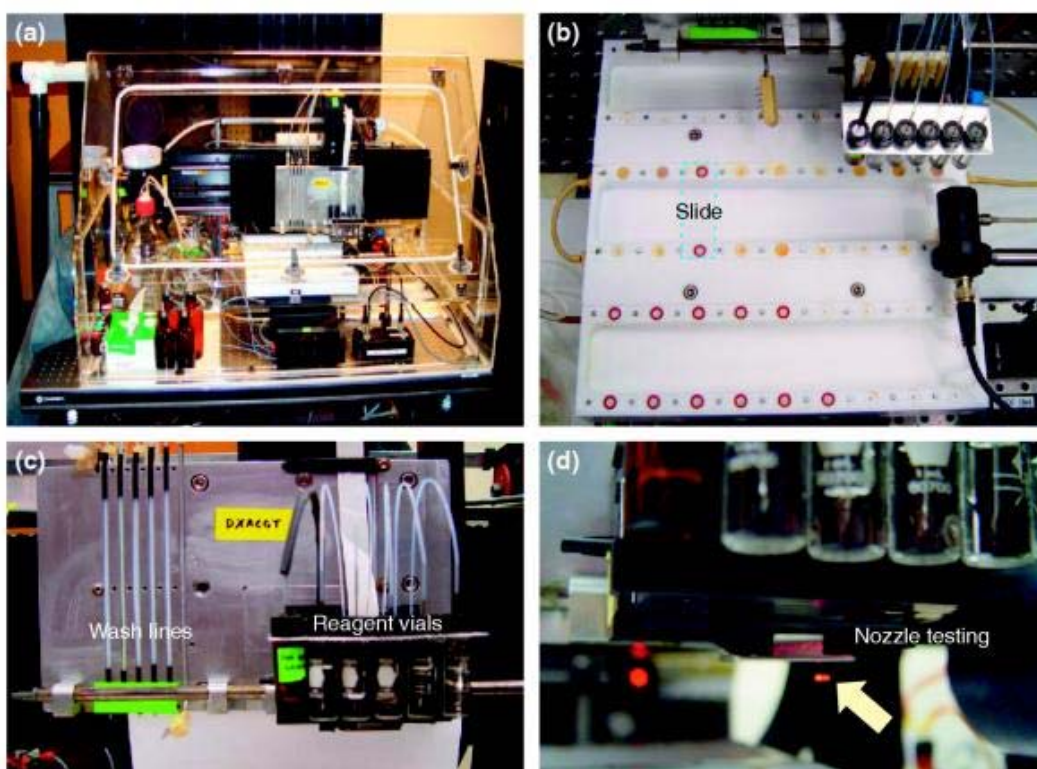
Results

We present here the description of a simple oligoarray synthesis platform along with the plans for its construction and a detailed user manual. The POSaM platform can produce multiple unique microarrays, each with 9,800 different reporter sequences, on modified glass microscope slides. Synthesis is inexpensive and rapid; new arrays can be ready for hybridization the same day that they are designed. These arrays are suitable for a wide range of biological investigations including the study of gene expression, alternative splicing, chromatin immunoprecipitation techniques (ChIP-to-Chip), and single-nucleotide polymorphism (SNP) detection. In addition, the covalent linkage of the oligonucleotides to the substrate is sufficiently robust to allow for re-use of individual oligoarrays without a detectable change in the signal-to-noise ratio.

Description of the instrument

Overview

Our goal was to construct an instrument that most molecular biology laboratories could assemble and operate (Figure [1](#)). The POSaM platform uses mostly commodity, off-the-shelf components, with only a small number of components and circuit boards requiring custom fabrication. Schematics for the custom components are included in Additional data files 1 and 2, which also include instructions for assembling the POSaM. The rest of the user manual, with instructions for use, is in Additional data file 2. (Mechanical drawings are AutoCADDWG format; layout files may be used to order printed circuit boards over the Internet.) Because high-quality and high-density cDNA and oligoarrays are available commercially, our goal was not to build a large, high-throughput machine. We intended to design a flexible instrument capable of producing a myriad of different oligoarrays quickly and inexpensively. To meet these goals, we constructed an instrument (Figure [1a](#)) that is capable of printing multiple slides in parallel, typically four to eight, but up to 27 slides with the current slide holder (Figure [1b](#)), each with 9,800 different reporters on 8 cm² of modified standard glass slides. Depending upon the surface chemistry of the substrate, the feature sizes range from 100 to 150 μm, with a center-to-center distance (pitch) of 280 μm. The system software, called Lombardi, controls the firing of the piezoelectric pumps, positions the print head, and dispenses the wash solutions. Normally four to six slides are printed at the same time. The cost for the reagents is low (less than US\$50 per slide, see Table [1](#)) as such tiny amounts of phosphoramidite and tetrazole are required.



[Figure 1](#)

The POSaM platform. **(a)** Overview. The complete inkjet printing system is enclosed in an air-tight acrylic cover, $61 \times 91 \times 122$ cm. **(b)** View from above showing the array holder. One slide is shown secured by the vacuum check with room for 26 additional slides. **(c)** Front view showing the print/wash head. Five PTFE wash lines deliver acetonitrile, oxidizer and deprotecting acid in bulk. Six vials supply tetrazole and phosphoramidites to the inkjet print head. **(d)** Lower-front view of the inkjet print head showing droplets passing through the QC laser beam. The presence of a droplet produces forward-scattered light, visible as bright red flashes (arrowed).

Table 1

Cost of materials required to make one inkjet oligonucleotide array

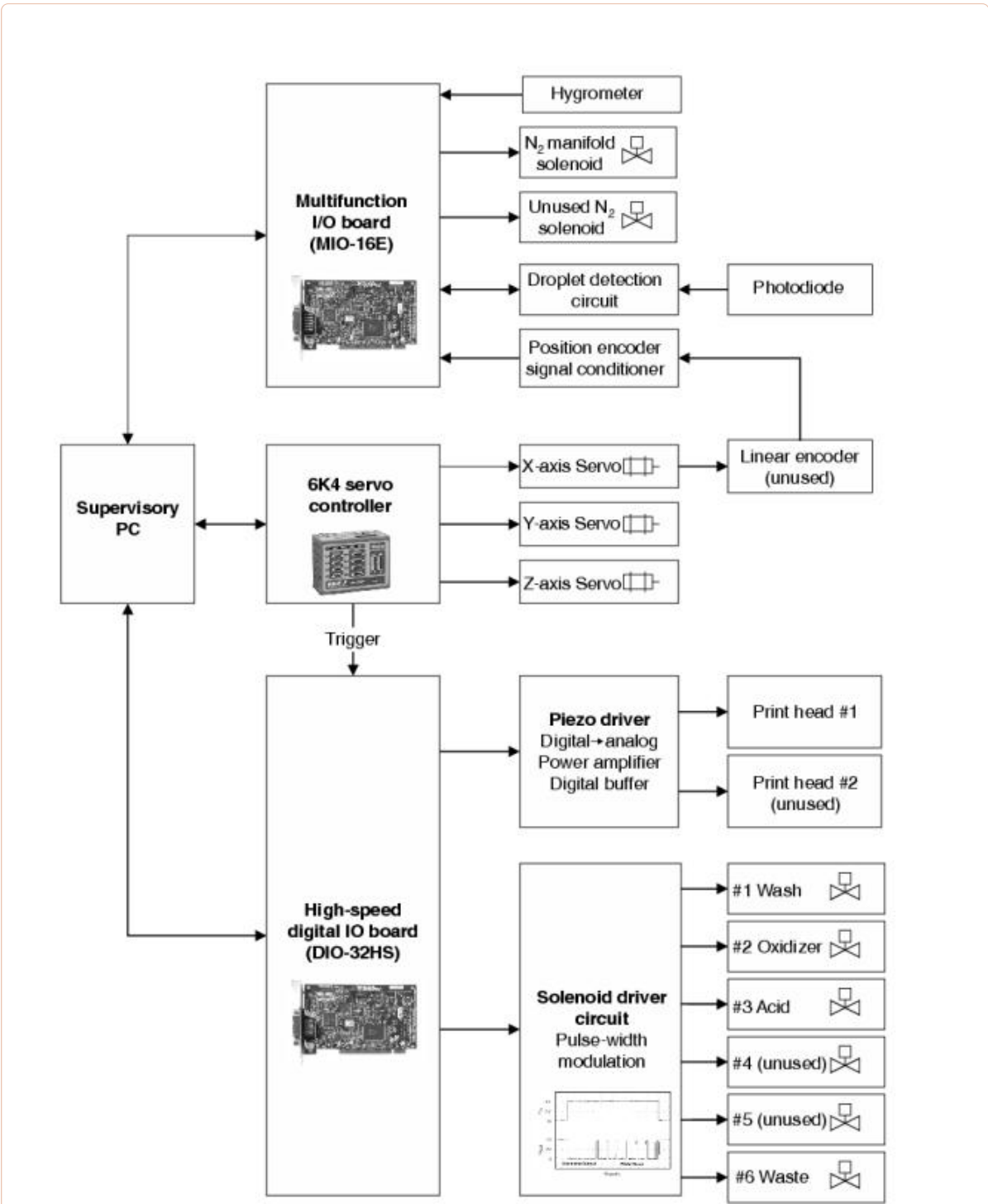
Item	Purchase	Unit	Price (\$)	Required	Unit	Line cost (\$)
Glass slides	140	each	20.85	1	each	0.15
Nano-Strip glass cleaner	3,800	ml	37.18	3.2	ml	0.03
Sodium hydroxide	1,000	g	43.15	1.25	g	0.05
Hydrochloric acid	2,500	ml	42.96	0.42	ml	0.01
Methanol	4,000	ml	18.53	6.4	ml	0.03
Epoxy silane	93	ml	21.90	0.06	ml	0.01
Rain-X silane solution	200	ml	4.00	11	ml	0.22
Isopropanol	4,000	ml	29.09	4	ml	0.03
Acetone	4,000	ml	30.69	4	ml	0.03
Slide derivatization subtotal						0.56
Nitrogen	4,000	scf	90.00	225	scf	5.06
Acetonitrile	1,000	ml	38.08	250	ml	9.52
0.02 M Iodine THF/Pyr/H ₂ O	450	ml	36.00	32	ml	2.56
2.5% DCA in DCM	450	ml	18.00	32	ml	1.28
dA-CE phosphoramidite	250	mg	3.50	14	mg	0.20
Ac-dC-CE phosphoramidite	250	mg	3.50	14	mg	0.20
dG-CE phosphoramidite	250	mg	3.50	14	mg	0.20
dT-CE phosphoramidite	250	mg	3.50	14	mg	0.20
Tetrazole	1,000	mg	35.00	56	mg	1.96
Ammonia	2,500	ml	37.67	8	ml	0.12
Methylamine	1,000	ml	23.05	8	ml	0.18
Ethanol	3,800	ml	41.70	11	ml	0.12
3-methoxypropionitrile	1,000	ml	41.90	1.5	ml	0.06
2-methyl glutaronitrile	1,000	ml	39.15	1.5	ml	0.06
Chemical synthesis subtotal						21.71
Lifterslip coverslips	40	each	38.65	1	each	0.97
DIG Easy-Hyb solution	600	ml	228.00	0.1	ml	0.04
Control oligo (Bodipy)	12,000	pmol	250.00	10	pmol	0.21
Wash buffers	-		-	-		0.05
Test hybridization subtotal						1.26
Septa	72	each	48.18	0.05	each	0.03
Drierite	2,000	g	82.53	14	g	0.58
Syringe, 1 ml	100	each	13.62	0.3	each	0.04
Syringe, 5 ml	100	each	12.74	0.3	each	0.04
26G needles	100	each	8.37	0.3	each	0.03
Molecular sieves	500	g	31.12	0.7	g	0.04
Inkjet head	1	each	85.00	0.003	each	0.26

Item	Purchase	Unit	Price (\$)	Required	Unit	Line cost (\$)
Exhaust filter cartridge	1	each	79.00	0.0015	each	0.12
Parafilm	250	ft	28.22	0.05	ft	0.01
Miscellaneous materials subtotal						1.14
Total						24.68

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Labor, safety equipment, and waste-disposal expenses are not included. Arrays printed on commercial epoxysilane slides require an additional \$7 to \$12.

The POSaM platform is built around a three-axis servo-positioning system mounted to a low-vibration optical table and enclosed within a sealed acrylic cover that maintains a dry, inert atmosphere (Figure [1a](#)). Array substrates (silanized glass slides) are vacuum-chucked into a PTFE (Teflon) slide holder mounted to the Y-axis stage. A piezoelectric print head and five valved wash nozzles are mounted to the X- and Z-axis stages, which move above the slide holder (Figure [1c](#)). Reagent and waste bottles remain inside the acrylic cover, producing a closed system where the atmosphere can be controlled. Servo amplifiers, controllers (6K4), power supplies, the supervisory computer (PC), and most electronics are packaged in a standard 19-inch (~48 centimeter) rack system. All processes of the arrayer are directly controlled by the PC running the Lombardi program except for the basic motion-control functions that are handled by the 6K4 stand-alone controller (Figure [2](#)).



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Figure 2

Diagram of the POSaM. The system uses two PCI-interface input/output boards (MIO-16E and DIO-32HS) and one ethernet-interface servo controller (6K4). Future software revisions will support a second print head, to provide more reagent channels, and the X-axis linear position encoder to increase printing speed.

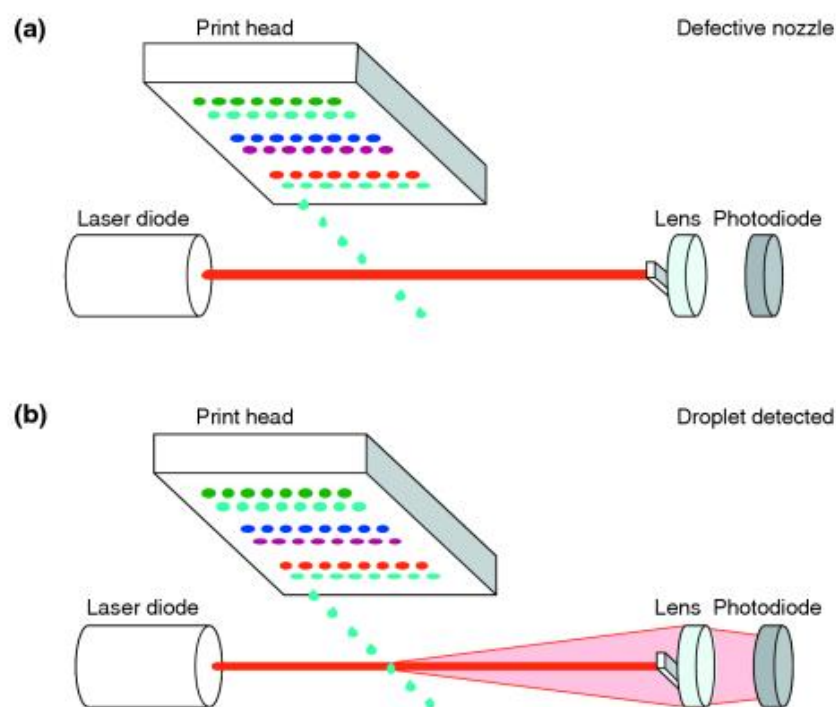
Motion control and printing

The three-axis positioning system utilizes Parker-Daedal 506-series ball screw linear actuators driven

by servo motors (Olympic Controls, Wilsonville, OR) that can move the print head over a wide range with 5 μm repeatability. The Epson F057020 six-color print head has six banks of 32 nozzles, or 192 individually addressable piezoelectric pumps. We purchased one complete Photo 700 printer (Epson America, Long Beach, CA) to obtain a print-head holder and ribbon cable, and subsequent print heads from Agson Electronics (Cherry Hill, NJ).

Droplet detection

Misfiring of one of the 192 pumps has little or no effect when printing a color photograph on paper. However, when carrying out sequential oligonucleotide polymerization reactions, failure to add the appropriate reagent at the right time would result in an incorrect oligonucleotide, potentially ruining the whole array. Therefore, proper function of each of the 192 piezoelectric nozzles is critical. On the POSaM platform, nozzle performance is verified using a laser droplet detection subsystem (Figures [1d](#), [3](#)). A red laser diode is mounted orthogonally to the direction of print-head motion such that the droplet stream of each bank of nozzles intersects the beam, causing the light to scatter if a droplet is present. Before each round of printing, nozzles are fired in series through the beam and the forward scattering of each droplet is detected by a red-sensitive photodiode. The output signal is amplified, differentiated and converted to a digital signal by threshold comparison. Nozzles failing to fire are taken off-line during synthesis. After each test, Lombardi calculates a printing strategy that minimizes the number of passes required by the print head to print all of the features scheduled for the array.



[Figure 3](#)

Design of quality-control droplet-detection subsystem. Before each cycle of synthesis the inkjet print head is moved over the light beam of a red diode such that the stream of droplets ejected from each pump intersects the beam at right angles. **(a)** If a nozzle is defective, there is no droplet ejected into the light beam, light is not scattered and the narrow beam is absorbed by a bar placed before the lens of the photomultiplier tube. **(b)** If the nozzle is functioning, a droplet intersects the light beam and scatters the light, which is then focused on the photomultiplier tube (PMT) to signal that the nozzle is functioning correctly. The state of the droplet is held by a D-type flip-flop. The circuit is reset just before droplet ejection and the state is read immediately after. If nozzle failures are detected, the software reschedules the motion and firing of the printing head so that the most efficient printing path is taken.

Reagent/solvent storage and delivery

Reagents and waste are stored in glass bottles with GL-45 screw-top caps. Amber 500 ml bottles hold oxidizer and deprotection acid, while clear 2 l bottles hold acetonitrile and waste. Pressurizing nitrogen enters the reagent and solvent bottles through PTFE check valves and the waste bottle is under vacuum. Six PTFE solenoid valves (Model 190224S30, Angar, Florham Park, NJ) are used to control the flow of acetonitrile, oxidizer, acid, waste and other reagents.

Solvents for piezoelectric oligonucleotide synthesis

Acetonitrile, the preferred solvent for automated phosphoramidite synthesis, is not suitable for inkjet printing due to its high volatility; droplets may even evaporate before contact with the slide surface. In addition, phosphoramidite precipitates can accumulate on the print head and clog the nozzles. Propylene carbonate is one less-volatile alternative that has been shown to produce coupling efficiency of 94-98% for inkjet synthesis [3]. After extensive investigation of the properties of different solvents, we found

that a 1:1 mixture of methyl glutaronitrile (MGN) and 3-methoxypropionitrile (3MP) had the most favorable combination of volatility, solubility, surface tension and synthesis parameters. The mixture readily dissolves phosphoramidite monomers at a concentration of 250 mM and produces coupling efficiencies similar to acetonitrile or propylene carbonate. Average stepwise coupling efficiencies were determined by trityl analysis during synthesis of three 20 mers on an ABI 392 synthesizer. Acetonitrile, 3MP, and propylene carbonate produced efficiencies of 97.2 ± 1.5 , 97.1 ± 1.2 , and $93.0 \pm 1.3\%$, respectively. MGN and 3MP/MGN mixtures could not be used with the ABI 392 owing to their high surface tension; however, comparison of the hybridization intensity of arrays made with propylene carbonate and with 1:1 MGN:3MP produced comparable results (data not shown). The 1:1 MGN:3MP mixture jets easily, evaporates slowly, and forms discrete 'virtual' reaction wells on epoxysilane-modified slides because of its favorable surface tension (Figure 4).

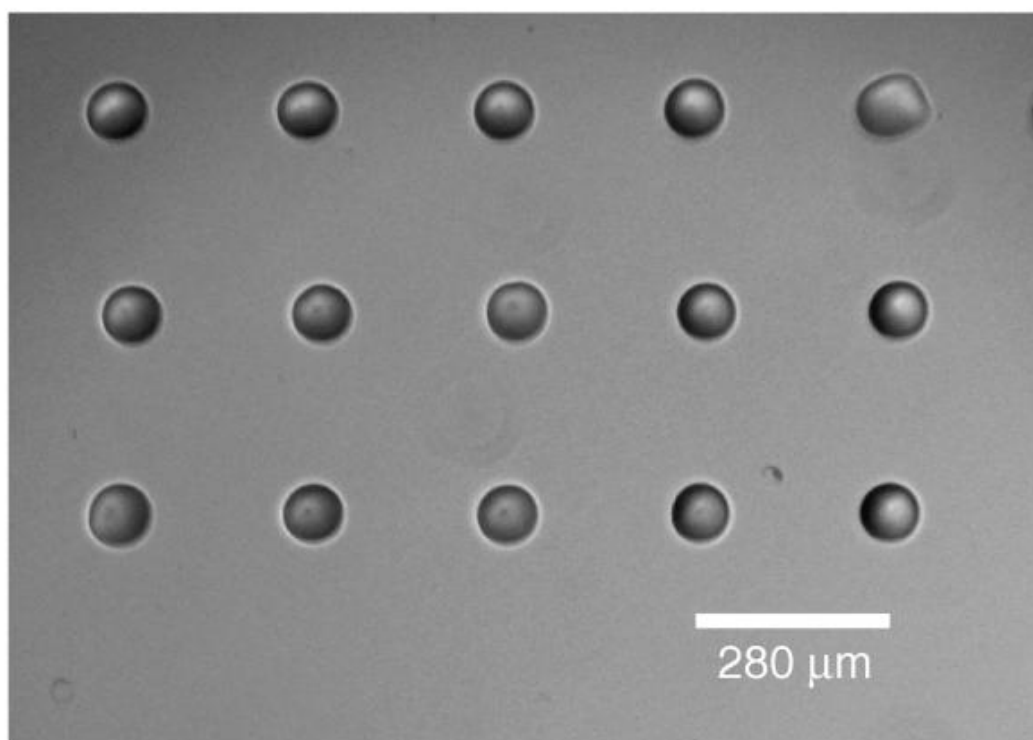


Figure 4

Photomicrograph of virtual reaction wells on silanized glass. Phosphoramidites and tetrazole dissolved in 1:1 3MP:MGN were printed onto a standard epoxysilane-modified slide surface. The slide was carefully removed from the POSaM instrument and a photomicrograph made using $50\times$ magnification of a light stereomicroscope with a cooled-CCD digital camera ($1,392 \times 1,040$ resolution). ImageJ was used to draw the scale line on the photomicrograph.

Inert gas supply and system enclosure

Inert gas and pressurization is supplied to the system by a liquid nitrogen dewar. The whole instrument is enclosed with a custom acrylic cover with an internal volume of approximately 510 l. The cover is transparent and airtight. It has a single latched access door and a glove panel that allows operators to work inside the enclosure without opening the access door. The inert gas flow is controlled by a 0-100

liters per minute valve/rotameter. This gas supply displaces the air inside the enclosure and powers the air amplifier that circulates the internal atmosphere through a series of activated charcoal and desiccant filters. The levels of moisture and oxygen, both toxic to phosphoramidite synthesis, must be minimized. Nitrogen is flushed continuously through the enclosure starting at least 40 minutes before synthesis and ending only after the last cycle. Humidity is logged automatically by the machine; oxygen levels are checked periodically by the operator. Levels are maintained below the instruments' limits of detection.

Slide holder

The slide holder (Figure [1b](#)) was machined from a solid block of PTFE with O-ring inserts so that 27 slides can be secured in place by a vacuum. Inclined troughs beneath the slides aid in collection and removal of waste reagents. New designs for the slide holder that improve printing and washing speed are currently being investigated.

System performance

The Lombardi software was designed to fire each piezoelectric pump on the fly as the print head passes over the slides. Before each round of printing the software examines the operation of each of the 192 pumps (see QC description above) and determines the optimal movement of the print head and firing order of the piezoelectric pumps. The time for array synthesis depends primarily on the length of the sequences being printed, and to a lesser degree on the number of slides being printed, the number of features on the chip, and the number of nozzle failures. Currently, the rate-limiting steps in oligoarray synthesis are the washing and drying of the slides. Nozzle failures can be minimized by flushing the print head with pure solvent immediately after completion of array synthesis. Nozzle failures have not been a significant problem using the 1:1 MGN:3MP solvent system. The median number of nozzle failures is 3 out of 192. As the print heads are very cheap, it is our practice to replace them every three months. This is more of a precautionary step rather than being required by an accumulation of nozzle failures; at three months it is unusual to have more than a few plugged nozzles.

Reporter spot diameter

The average diameter for each feature was determined by measuring the dimensions of 40 oligonucleotide features chosen at random from four arrays printed on Xenopore (Hawthorne, NJ) Xenoslide E epoxy slides. After printing and hybridization with a complementary, fluorescence-labeled oligonucleotide, the arrays were scanned with a confocal laser scanner and the diameters were determined using ImageJ software [[17](#)]. The slides produced a feature diameter of $156 \pm 16 \mu\text{m}$. Similar results were observed using Bioslide (Walnut, CA) Precision CT Epoxy slides. Most of the following data was obtained using Xenoslide E substrates; however, the primary source of array failure is due to inconsistencies in the slide surfaces, even within commercial slide lots. We have found that the most consistent slides, by far, are those produced by our liquid deposition protocol (described in Materials and methods). In addition, these slides are much cheaper than the commercial alternatives. This protocol was used in the yeast barcode experiment described below and is now part of our standard operating procedure.

Microarray performance

Virtual reaction wells The hydrophobic surface of the silanized glass slide causes droplets of oligonucleotide synthesis reagents to form discrete virtual reaction wells (Figure [4](#)). These picoliter-scale droplets should be perfectly round and approximately $150 \mu\text{m}$ in diameter with a contact angle of around 45° . However, as stated above, this has been the most problematic step in the POSaM system. Several types of virtual well problems have been observed (Figure [5](#)). On less hydrophobic surfaces, the

virtual well system can collapse (Figure 5b,d). In other cases the diameter remains reasonably small, but the virtual well shape is ragged rather than round (Figure 5b,e,f). If any of these problems occurs the slides must be discarded. However, a simple change, such as printing phosphoramidites before tetrazole, appears to help maintain virtual well integrity. Changing the solvent ratio (3MP:MGN) from 1:1 to 1:3 also improved the integrity of the wells; however, the solutes are less soluble in the 1:3 3MP:MGN solvent and were more likely to clog inkjet nozzles. While these changes improved printing characteristics, the failure rates were still as high as 50% when using commercially produced slides. Slides produced by the simplified surface-modification protocol described in Materials and methods improved our success rate to between 80-90%. This new modification process is reliable and trouble free, and is now the standard way we produce slides.

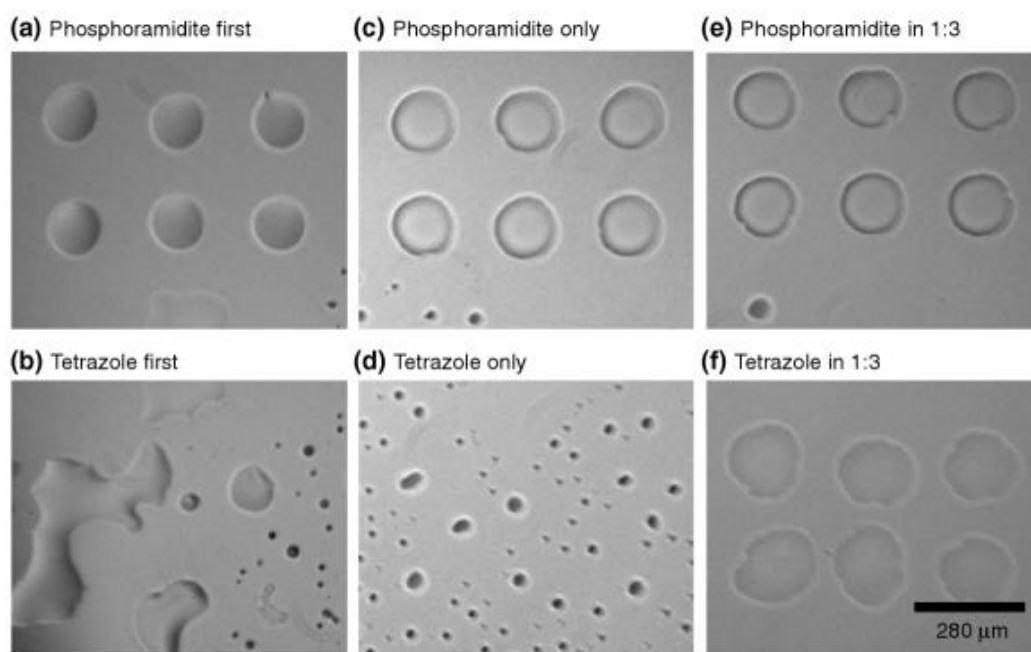
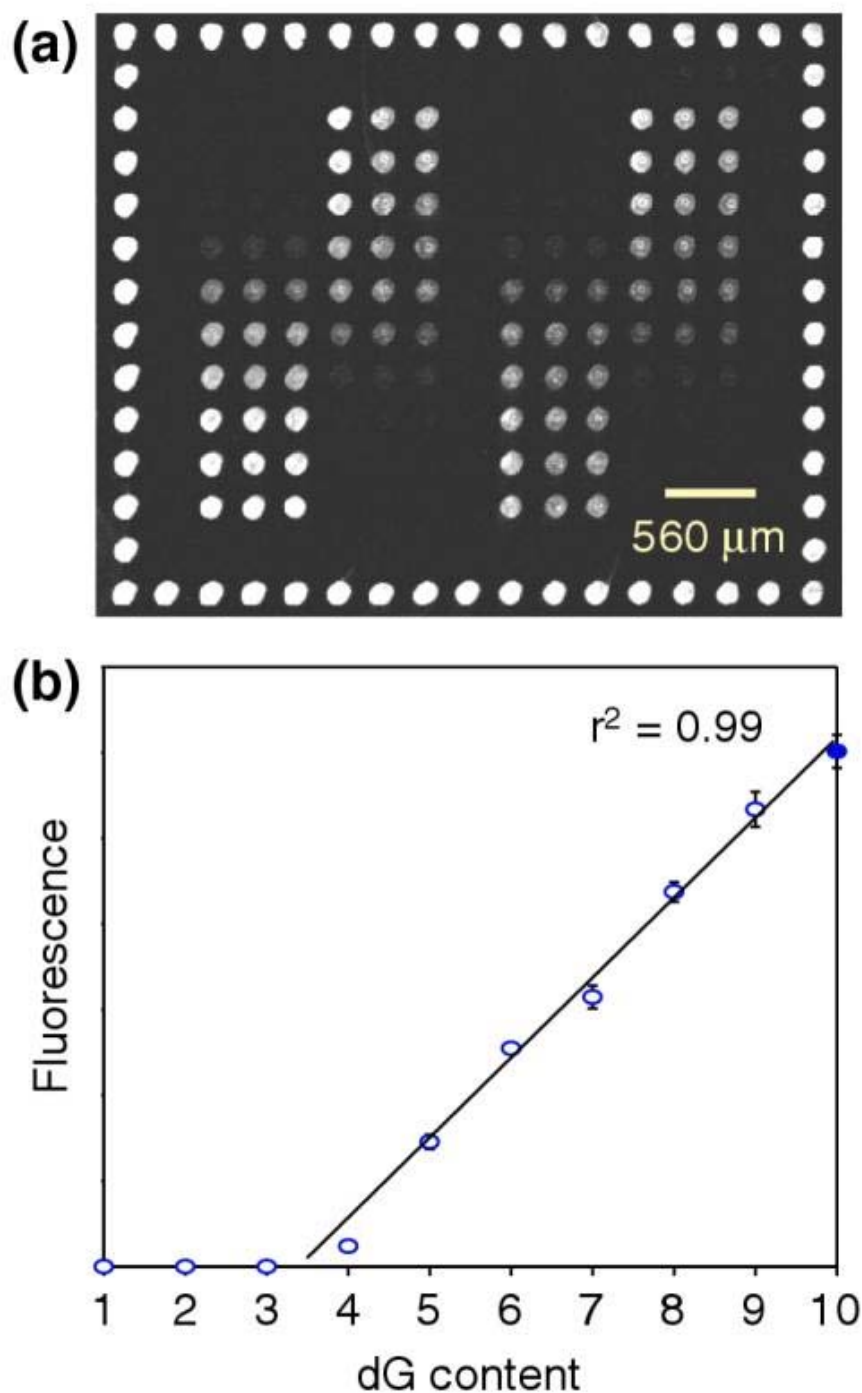


Figure 5

Photomicrographs of virtual well successes and failures. Slides were printed and photographed as stated in Figure 4 with the following modifications. **(a)** Virtual reaction wells are each formed by printing a droplet of phosphoramidite solution followed by a droplet of tetrazole solution using the standard 1:1 3MP:MGN. **(b)** Tetrazole droplets were printed before phosphoramidite droplets. Discrete virtual reaction wells fail to form. **(c)** Wells formed by printing two droplets of phosphoramidite solution. **(d)** Two droplets of tetrazole solution printed with no phosphoramidite. Virtual wells fail to form. **(e)** Phosphoramidite and tetrazole dissolved in 1:3 3MP:MGN and phosphoramidite printed first. Virtual wells form well. **(f)** Two droplets of tetrazole in 1:3 3MP:MGN solvent. Although not perfectly round, virtual wells do form.

Direct labeling of reporters The size, shape and composition of the array features were observed by chemically modifying the oligonucleotides with fluorophores after inkjet synthesis. Figure 6 shows arrays of 25-base oligonucleotides that were synthesized containing from 1 to 10 guanine bases. These oligonucleotides were directly labeled using the ULYSIS labeling kit (Molecular Probes, Eugene, OR) which covalently attaches Alexa-594 dye to the N-7 of guanine bases [18]. Figure 6b shows that the fluorescence intensities are linearly proportional to the guanine content of the sequence. The reporters

were found to be generally round and uniformly positioned. The features that form uniformly staining rows or columns around the outside of the array are 20 mers complementary to a standard, labeled control oligonucleotide that is used to judge the quality of the slide and aid in placing grids around the array for the spot-finding program.



[Open in a separate window](#)

Figure 6

Chemical labeling of an oligonucleotide array. Four sets of 25-base oligonucleotides were synthesized in triplicate on standard epoxysilane-modified glass slides using the 1:1 3MP:MGN solvent system, printing phosphoramidites before tetrazole. Each oligonucleotide contained from 1 to 10 guanosine residues. Alexa-594 dye was conjugated to the guanine bases using the instructions included in the ULYSIS kit (Molecular Probes), and the slide was scanned on the ScanArray using 10 μm resolution at standard laser and PMT settings. Fluorescence intensity was determined using the Dapple spot-finding program. (a) Laser scan of the array. The spots surrounding the experimental Alexa-labeled spots are standard gridding spots

that are prehybridized to a control Cy5-labeled oligonucleotide, and are included on all arrays to facilitate grid placement and as a check on virtual well formation. **(b)** Fluorescence intensity from Dapple output graphed against the number of dGMP residues in the molecule. A good linear fit is observed ($r^2 = 0.99$) and shows fluorescence intensity to be proportional to guanine content between four and 10 bases.

Hybridization specificity Hybridization specificity was assessed by synthesizing reporters with transitions and transversions in relation to the target sequences (Table 2). Figure 7 shows that mismatched bases result in decreases in hybridization intensity from 25% to more than 90%, confirming that oligoarrays can be used for SNP detection. Figure 8a shows that transitions or transversions that substitute a guanine for another base were slightly less destabilizing than substitutions to other bases. Figure 8b shows that mismatches at the ends of the reporters were less destabilizing than mismatches in the center of the molecule, as expected [19-21].

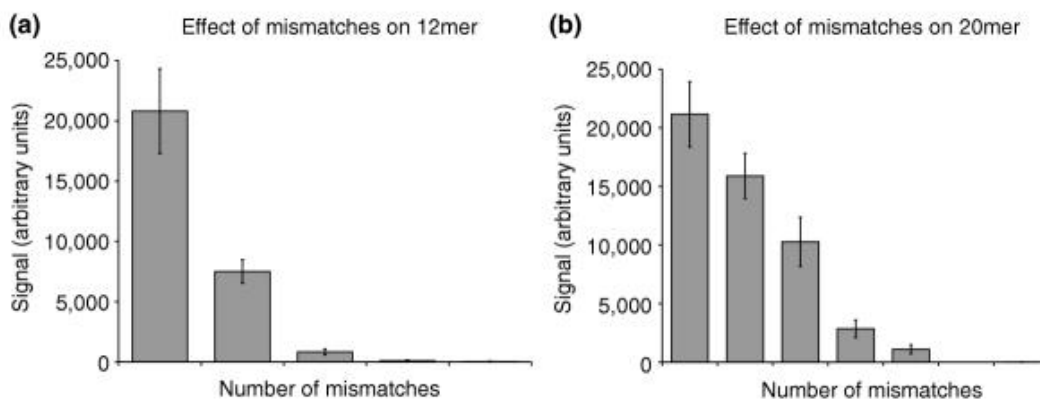
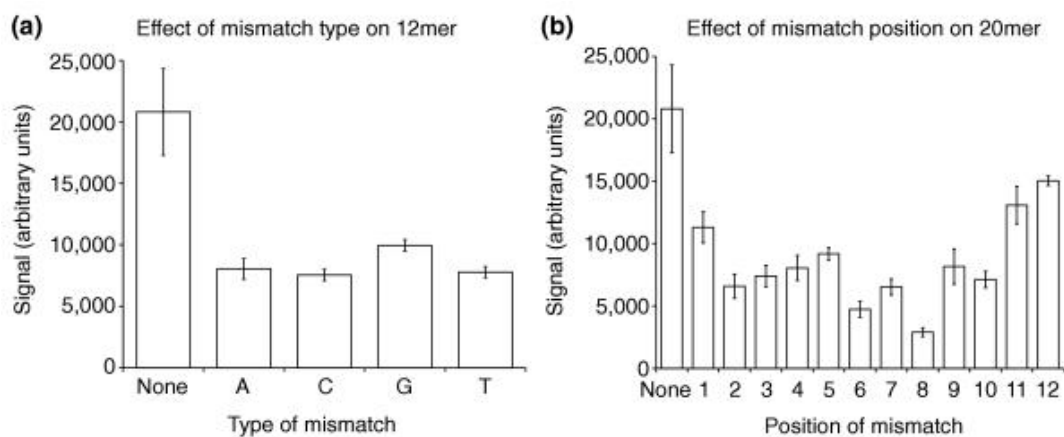


Figure 7

Sensitivity of mismatch detection. Slides were printed and fluorescence measured using the standard methods described in Materials and methods. **(a)** Fluorescence from reporters containing from zero to four mismatches to the target 12 mer (5'-Cy5-GCG **TTG** GCA CTG). Mismatched bases are in bold. **(b)** Fluorescence from reporters containing from zero to six mismatches to the target 20 mer (5'-Bodipy-GAC **CTC** CCG GAC ACG CAC CT). A single mismatch reduces the binding of the 12 mers by 64% and of the 20 mers by 25%. Mismatched positions are in bold.



[Figure 8](#)

Effects of mismatch type and position on inkjet oligonucleotide hybridization. Slides were printed using standard conditions described in Materials and methods. Reporter sequences representing all possible single-base mismatches in a 12 mer duplex were used. **(a)** The substitution of a non-guanine with a guanine (G) within the probe sequence was slightly, but significantly, less destabilizing than the other types of substitutions. **(b)** The destabilizing effect of the mismatch was less at the very ends of the probes than in the central positions. Position 1 is closest to the substrate; position 12 is furthest away.

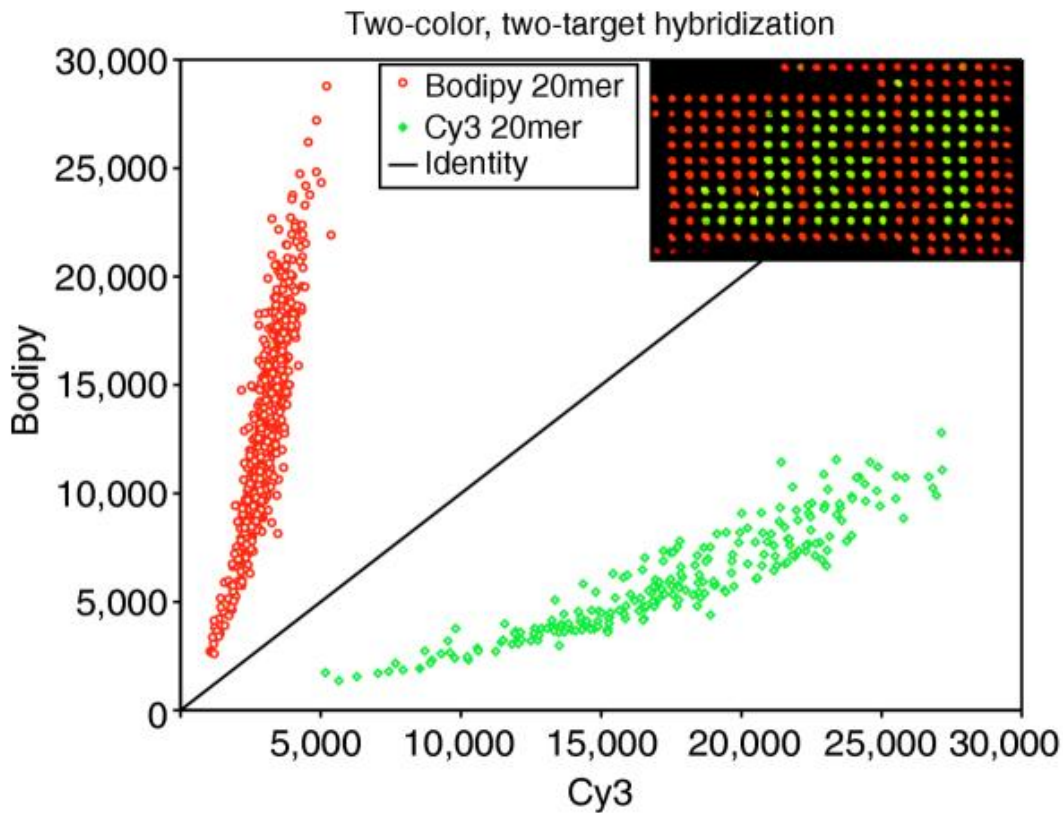
Table 2

Partial list of sequences arrayed in hybridization experiments

Description	Sequence
T20g' perfect match	5'-AGGTGCGTGAGCGGGAGGTCttatt-substrate
T20r' perfect match	5'-AGGTGCGGTGCCGGGAGGTCttatt-substrate
T20r' - 1 mismatch	5'-AGGTGCGGTGCCCGGAGGTCttatt-substrate
T20r' - 2 mismatch	5'-AGGTGCGGTGCCCGCAGGTCttatt-substrate
T20r' - 3 mismatch	5'-AGGTGCGTGACCCGCAGGTCttatt-substrate
T20r' - 4 mismatch	5'-AGGTGCGTGACCCGCACGTCttatt-substrate
T20r' - 5 mismatch	5'-AGGTGCGAGACCCGCACGTCttatt-substrate
T12r' perfect match	5'-ttattattCAGTGCCAACGCttatt-substrate
T12r' 1 mismatch	5'-ttattattCACTGCCAACGCttatt-substrate
T12r' 2 mismatch	5'-ttattattCACTTCCAACGCttatt-substrate
T12r' 3 mismatch	5'-ttattattCACTTCTAACGCttatt-substrate
T12r' 4 mismatch	5'-ttattattCACTTCTATCGCttatt-substrate
YPL110C match	5'-ATCCATGCGTGTAAGGCGCCGTACGCTGCAGGTCGAC-substrate
YPL110C mismatch	5'-ATCCATTTCGTGTAATGGCGCCGAACGCTGCTGGTCGAC-substrate
YPL111W match	5'-ATATACGAGACACGTCGCGCCGTACGCTGCAGGTCGAC-substrate
YPL111W mismatch	5'-ATATACTAGACACGACGCGCCGAACGCTGCTGGTCGAC-substrate
YPL112C match	5'-GATAGTTACACAGCTCGCGCCGTACGCTGCAGGTCGAC-substrate
YPL112C mismatch	5'-GATAGTAAACACAGCACGCGCCGAACGCTGCTGGTCGAC-substrate

The lowercase letters represent nonspecific sequence that serves as a spacer or to extend the oligonucleotide to a certain length.

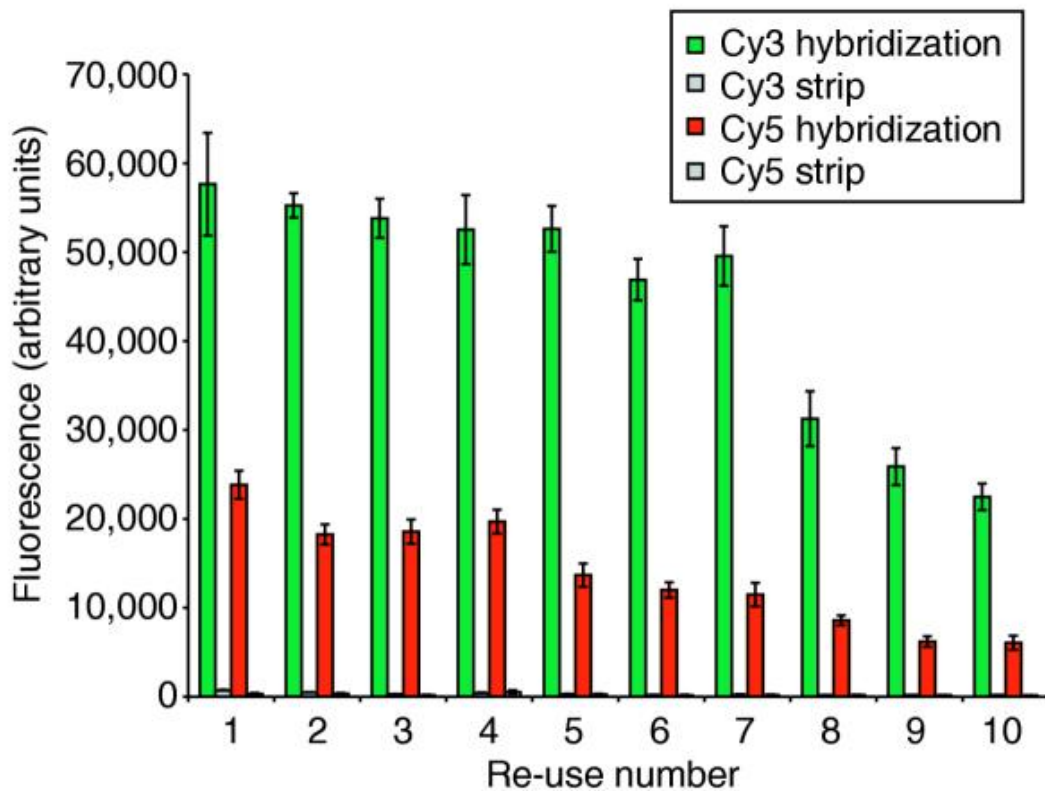
Comparisons of the absolute intensity of fluorescence signals between features is always difficult because of variation in DNA concentration, labeling efficiencies, and background signal; therefore, most array experiments use two-color competitive hybridizations. Reference and experimental samples are labeled with different fluorophores and hybridized to the same reporters. The ratio of the two colors (for example, green and red) hybridizing to one reporter provides an indication of changes in gene expression. Using this approach, the hybridization specificity of POSaM reporters was measured using labeled targets that differ by only two bases (T20r and T20g of Table 2). The green/red ratios of the complementary features were 3.12 ± 0.57 ($N = 230$) and 0.25 ± 0.05 ($N = 660$), respectively (Figure 9). Good ratio uniformity, small standard errors, and excellent discrimination by the two reporter sequences were observed. The insert in Figure 9 shows that the specificity is easily observed visually, when the different sequences are printed in an obvious pattern (see the word 'JET' formed by T20r targets).



[Figure 9](#)

Sensitivity to mismatches as demonstrated by two-color hybridization. An array was synthesized containing reporters complementary to targets 5'-Cy3-GAC CTC CCG **CTC** ACG CAC CT (green) and 5'-Bodipy-GAC CTC CCG **GAC** ACG CAC CT (red), using standard conditions described in Materials and methods. The bases in bold are different in the two reporter:target molecules. The slide was hybridized with an equimolar mixture of the two labeled target oligonucleotides and the fluorescence intensity determined on the ScanArray 5000 using the Dapple spot-finding program. The green/red ratios of the green- and red-complementary features were 3.12 ± 0.57 ($N = 230$) and 0.25 ± 0.05 ($N = 660$), respectively. Graphing Cy3 intensity vs Bodipy intensity shows excellent separation between signals and the insert shows that the effects of two base changes are clearly distinguishable by eye.

Array re-use As the substrate modification must be sufficiently robust to withstand multiple cycles of oligonucleotide synthesis, it stands to reason that the inkjet arrays could be regenerated and re-used. Figure 10 shows the effects of repeated hybridization followed by the stripping of target DNA with a 20 mM NaOH solution. Arrays were washed and rehybridized 10 times without a serious loss of signal-to-noise or specificity from reporters for T20r and T20g. In this case, each wash cycle resulted in an average signal attenuation of less than 11%, although in other cases signal attenuation was greater. Background levels did not increase. Fluorescence intensity between base washing and repeated hybridization was reduced by 99%. It was observed that rehybridization was less successful if stripping was not performed within two days after the initial use (data not shown).



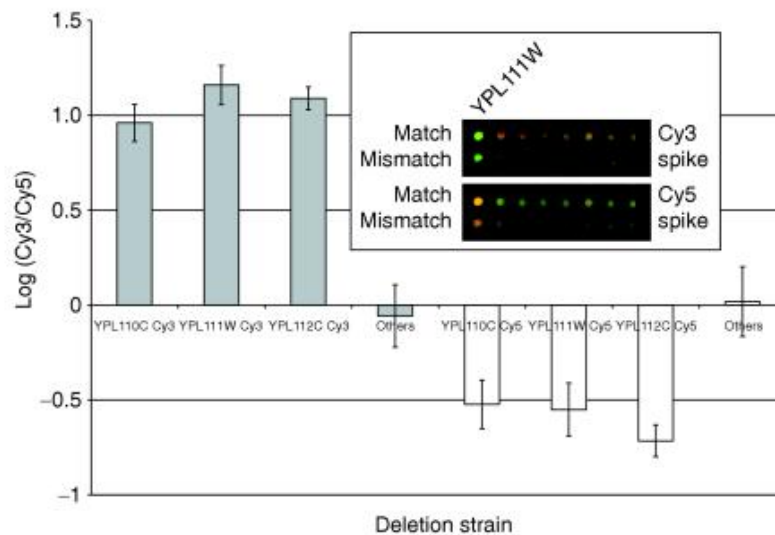
[Figure 10](#)

POSaM oligoarray re-use. Arrays of our 20 mer gridding sequences were synthesized as described in Materials and methods. The arrays were then hybridized to Cy3- or Cy5-labeled complementary target molecules and the fluorescence intensity determined as described above. Intensities were recorded and the slides were stripped of target DNA by incubation in 20 mM NaOH for 2 min at room temperature. The fluorescence intensity of the stripped slides was measured and the slides were rehybridized using the same targets as before. These hybridizations, intensity measurements, stripping, intensity measurements, and rehybridizations were repeated at least 10 times. Stripping reduced fluorescence by an average of 99%. Signal intensity and specificity appears unchanged during the first four cycles of use. The sequences used are identical to those in Figure 8: Cy3-labeled targets are perfectly complementary; Cy5 differ by two adjacent mismatches.

Hybridization with deletion-strain barcodes With the specificity and re-usability of inkjet arrays validated by hybridization with oligonucleotide targets, we tested arrays with a complex sample of PCR products prepared from the genomic DNA of 94 yeast gene-deletion strains. Accurate oligoarray measurement of deletion barcodes will greatly simplify the analysis of growth phenotypes. For example, a competitive growth condition may be applied to a pooled culture containing equal proportions of each strain. The oligoarray can measure changes in the quantity of each barcode strain and, therefore, the change in each population from initial to final culture [22,23].

In this experiment, 94 different barcoded yeast deletion strains were grown together in rich medium. Three additional strains, YPL110C, YPL111W, or YPL112C, were grown in separate cultures. Genomic DNA was isolated from the mixed strains and three individually grown strains, and barcode tags were

amplified and Cy5-labeled by PCR using 1 μ g genomic DNA. To simulate increased growth of three strains, barcode tags were amplified and Cy3-labeled by PCR using 1 μ g DNA from the first culture plus 100 ng DNA from each of the three additional cultures. The two labeled samples were mixed and hybridized to an inkjet array containing reporter sequences complementary to the barcodes. As expected, the fluorescence signal detected from Cy3 was approximately 10-fold stronger than Cy5 for strains YPL110C, YPL111W, and YPL112C, whose DNAs were spiked into the hybridization. The Cy3/Cy5 ratios were between 10:1 to 14:1 ($N = 4$), respectively, compared to approximately 1:1 for the unenriched strains. After scanning, the microarray was stripped with 0.2 N NaOH and reused for a dye flip (the Cy3 and Cy5 dyes reversed) experiment. Again, enriching the Cy5 signal by spiking the three strains greatly increased that signal (Figure 11). The Cy3/Cy5 ratios were 0.1:1 to 0.3:1, respectively, compared to 1:1 for the unenriched strains.



[Figure 11](#)

Detection of yeast deletion-strain barcodes from genomic DNA. Barcodes from 94 strains were PCR amplified and labeled with Cy3 and with Cy5, combined, and hybridized to an inkjet array. Approximately 10-fold additional genomic DNA from YPL110C, YPL111W and YPL112C was spiked into the Cy3 PCR, resulting in a 10-fold increase in Cy3 fluorescence from the corresponding reporters (gray bars). The array was stripped and the experiment was repeated, spiking the three strains into the Cy5 PCR. This resulted in a four- to fivefold increase in Cy5 fluorescence from the corresponding reporters (white bars). The laser-scan images in the inset show the increased Cy3 (green) signal from the YPL111W spike reporter in the first hybridization and increased Cy5 (red) signal from the YPL111 W spike reporter in the second hybridization. Signal is detected from the mismatch reporter as well, but at a greatly attenuated level. The slides used as substrate in this experiment have been modified using our own method as described in Materials and methods.

Discussion

A major drawback of conventional microarray fabrication is the time and cost required to develop a new array. When a new genome is sequenced, when additional expressed genes are identified, or when polymorphisms are discovered, a great deal of time and money is required to create a new microarray.

The photolithographic technique, such as that used by Affymetrix [24], requires the fabrication of up to 100 chrome/glass masks for *de novo* synthesis of a new 25 mer oligonucleotide array. Spotted arrays can only be fabricated after the characterization of thousands of DNA fragments is completed, and the reporters have to be replicated, cataloged, and stored. New POSaM arrays, however, can be designed, synthesized, hybridized and scanned in a single day.

Key properties of the POSaM platform is that fabrication of a new array is flexible and rapid, and cost is practically independent of the number of sequences or the number of different arrays to be synthesized. Once the inkjet is running, it does not matter if the arrays contain 100 reporters or the current maximum of 9,800 features; there is no additional set-up cost for a new design other than the time it takes for the reporter selection process. The cycle times for covalent attachment of each base in a reporter ranges from 11 minutes for one array to 20 minutes for eight arrays. Six arrays of 40 mers can be produced in about 13 hours. As each oligonucleotide reporter can be of a different length, it is possible, by varying the length of the reporter, to design arrays where all the theoretical melting temperatures are very similar. Inkjet oligoarray synthesis uses highly efficient, well characterized phosphoramidite chemistry with sequences that are stored in a database rather than in a freezer. This eliminates the cost of amplification, replication, storage and retrieval of the reporters, as well as minimizing the errors that are generated when cataloging many large DNA libraries.

Inkjet arrays are particularly well suited for applications where small numbers of arrays are required or where rapid reporter redesign is likely. A prime example is validation of reporters used for gene-expression arrays. Despite continual efforts to determine the definitive computational algorithms for designing unique oligonucleotide sequences that will specifically identify and quantify the amount of mRNA present in a given sample, many of the reporters predicted by these programs do not work. Ultimately, final reporter selection usually requires investigators to determine empirically which reporters work with the different samples used. It is desirable to know that a reporter set has sufficient specificity and sensitivity to detect genes of interest before many weeks of time and thousands of dollars are invested in large-scale synthesis and purification of the DNAs or fabrication of the masks needed for photolithographic synthesis. As the turnaround time for new arrays is so fast and the cost of printing 9,800 reporters is so small with the POSaM platform, many different oligonucleotide sequences can be tested to optimize the sensitivity and specificity of the reporters. We estimate that it costs (including labor) approximately \$300 to synthesize a set of six arrays (the number of arrays that is easily produced in a single day). Material costs are itemized in Table 1. These arrays could be identical or contain completely different reporters, as the number of different sequences printed does not change the cost or speed of synthesis.

The fact that the arrays may be stripped and re-used will be very helpful for optimizing hybridization conditions. Specificity and sensitivity can be measured under different buffer and temperature conditions on the same array to reduce cost. Because the same sample would be applied in every condition, residual signal of less than a few percent would not be a problem. In theory, other types of arrays that use covalent linkers should also be re-usable. It has recently been reported that some UV-crosslinked cDNA arrays can also be reused [25].

The discovery and development of chip-based oligoarray applications other than the regulation of gene expression can benefit from the flexibility inherent in POSaM oligoarray synthesis. We show here that POSaM-based arrays can be useful for identifying changes in the population fraction of barcoded yeast deletion mutants placed under selective growth conditions. In designing the chips for this experiment, we found that the thermodynamic stability and the intensity of the signal of the duplexes was enhanced by including 15 bases from the regions flanking the 20-base barcode, but that only a little specificity was lost by including these complementary regions, although this could account for the low background

of binding seen in the mismatched barcodes. For most purposes, reporters of length 30 to 35 nucleotides provides an optimum combination of sensitivity and specificity [26].

In addition, analysis of protein-binding sites in native chromatin, using ChIP-to-Chip methods [27] or DamID [28] assays require reporter sequences that include the noncoding regions of genomic DNA. Few commercial microarrays are available containing these intergenic regions because the cost of synthesizing or cloning every noncoding region in a genome is exorbitant. Inkjet arrays have been designed and printed with the POSaM platform where reporters tile across putative regulatory regions from -1,000 to +200, relative to the site of transcription initiation, with a step size as small as one base. Because the immunoprecipitated chromatin can be chemically or physically sheared into smaller fragments, the sequences complementary to the binding sites can be narrowed down to a much smaller region using arrays made on the POSaM platform (data not shown). This experimental data can supplement computational techniques to determine novel *cis*-acting binding sites and is currently being tested using the well defined yeast galactose utilization pathway, a model system used in our laboratory.

We are also expanding upon the methods of Bulyk *et al.* [29] by using the POSaM platform to synthesize 40-50-base double-stranded (ds) DNA oligonucleotides that contain a common primer sequence as well as potential *cis*-acting protein-binding motifs. The standard single-stranded (ss) DNA arrays can be converted into dsDNA arrays using primer extension reactions, and these unique dsDNA chips, which tile across putative regulatory regions, can be used to detect protein binding from nuclear extracts. With the availability of specific antibodies against most known transcription factors and with advances in surface plasmon resonance (SPR), atomic force microscopy (AFM), and MALDI-TOF tandem mass spectrometry (MS/MS) techniques, it should be possible to identify the proteins and protein complexes bound to the dsDNA arrays.

In a separate project, we designed and constructed a temperature-ramping microarray scanner that, when used with POSaM produced slides, can monitor the dissociation kinetics of each reporter/target on the array, achieving single-base mismatch resolution. Besides the obvious use for SNP detection, the ability to synthesize any sequence of DNA and determine the apparent dissociation constant make it possible to test the algorithms and heuristics used to select reporters, thereby increasing our understanding of how nucleic acids interact.

There are several areas where the design can be improved. First, since the QC testing of the print head with the laser droplet detector cannot take place during actual printing, intermittent nozzle failures may go undetected. Our current solution is to double-print each slide under the assumption that random nozzle failures are less likely to occur and go undetected at the same nozzle twice in a row. A more elegant solution, which we are in the process of adding, is to incorporate a real-time visual monitoring system that detects the presence or absence of droplets as well as whether the droplets are the correct shape and in the correct position. The total cost for the assembly of the POSaM platform is currently about \$34,000. The real-time image analysis system that we are testing increases the cost by about \$4,000. Second, the Epson Photo 700 printer has been discontinued. While new replacement print heads are still available, it is inevitable that they will become scarcer and more expensive. Fortunately, the electrical interface changes very little with each new model. We are redesigning the print head assembly to make it easier to adapt the POSaM to future print-head models. Third, the washing and drying steps are array synthesis bottlenecks. New slide-holder designs, along with modifications to the software, are being considered. Fourth, with improvements to the slide surface chemistry, it may be possible to greatly increase feature density. These are projects that we are currently investigating and that can benefit from the open-source process. We are also sure that new POSaM users will suggest additional improvements.

Conclusions

While *de novo* synthesized oligonucleotide arrays are starting to become available commercially, there remains a need for an open-source version of the inkjet oligonucleotide arrayer in the spirit of the pin-spotting instrument and software first released by the Brown and DeRisi laboratories in 1998. This open-source instrument accelerated the growth of the array field by allowing early adoption of the technology by laboratories with the desire and technical ability to construct their own instrument, provided a standard design that both laboratories and public-sector manufacturers could use to improve the instruments and methods, and it also allowed end users to take control of microarray design and decide what arrays would be available. A shared, non-proprietary arrayer allows end users to tinker freely with the design and make improvements as needed. Thus, we believe that making the POSaM platform freely available to academic laboratories will accelerate the development of better instruments. In addition, the selection of reporter sequences could be standardized, oligoarray chip applications expanded, and science would be accelerated in a positive, productive manner.

We believe that POSaM-like inkjet systems can be constructed by most well equipped molecular biology laboratories with modest organic chemistry and engineering expertise. The most unfamiliar step in the construction of the POSaM platform was the construction of circuit boards; however, once the boards in the present platform were designed, they were soldered and tested by undergraduates in our laboratory. While the surface chemistry of the substrate is still somewhat problematic, the development of the new modification protocol described in the Materials and methods brings the success rate to an acceptable 80-90% and the release of this instrument into the public domain should facilitate the development of the instrument, protocols and new uses for oligonucleotide arrays.

Materials and methods

Substrate preparation

Substrates were prepared by derivatizing clean microscope slides with 3-glycidoxypropyltrimethoxysilane (GPTMS). GPTMS was obtained from Acros Organics USA (Morris Plains, NJ). Fisher Scientific (Pittsburgh, PA) 'Premium' 25 × 76 mm microscope slides were cleaned by immersion in Nano-Strip cleaner (Cyantek, Freemont, CA) at room temperature for 30 min, followed by five rinses of 5 min each in de-ionized water. The slides were incubated overnight in 10% NaOH at room temperature and were again rinsed with de-ionized water (5 × 5 min). The slides were soaked in 1% HCl solution for 1 min at room temperature followed by rinsing in de-ionized water (2 × 5 min). The slides were oven-dried at 150°C for 90 min and cooled to room temperature under a stream of nitrogen. For liquid deposition, slides were immersed in a solution of 2.5% GPTMS in Rain-X (SOPUS Products, Houston, TX) and sonicated for 2 min. Following sonication, slides were cleaned by immersion in 100% ethanol for 2 min, de-ionized water for 5 min, and dehydrated in 100% acetone for 5 min. On removal from acetone, the slides were immediately spun dry at 1,000g and stored in a desiccating cabinet until use.

Just before arraying, the silanized substrates were washed in 100% methanol (10 min, room temperature), rinsed in de-ionized water, and rapidly dried under a stream of nitrogen. The printing area, approximately 25 mm × 25 mm in the center of the slide, was marked on the underside with a pen and the margins of the slides are treated with Rain-X to increase the hydrophobicity of the bounding regions. The highly hydrophobic margins serve to constrain the bulk washes to the active area of the slide, reducing reagent use, and aiding reagent removal.

Synthesizer operation

The inkjet oligonucleotide synthesis process uses standard phosphoramidite chemistry as described by [30], and modified for use in automated oligonucleotide synthesizers by [31]. Nucleoside phosphoramidites (^{bz}dAMP, ^{Ac}dCMP, ^{ibu}dGMP, dTMP), 5-ethylthio-1H-tetrazole, and oxidizer (0.02 M iodine in pyridine/tetrahydrofuran/water) were purchased from Glen Research (Sterling, VA). Phosphoramidites and 5-ethylthio-1H-tetrazole were dissolved at 0.25 M in a mixture of 50% 3-methoxypropionitrile and 50% glutaronitrile (Sigma, St. Louis, MO). The solvents were dried for two days on molecular sieves before use. Synthesis-grade anhydrous acetonitrile and high-purity dichloromethane and dichloroacetic acid were purchased from Sigma. The detritylation solution used was 2.5% dichloroacetic acid in dichloromethane. Only 6 μ l of phosphoramidite monomers and tetrazole were spotted on the slide using the inkjet print head; all other reagents were added 1 ml at a time using PTFE solenoid valves.

The internal atmosphere of the platform was flushed with dry nitrogen for 30 min at 60 l/min before synthesis is initiated. Humidity was monitored using a capacitance hygrometer (Model 4187, Control Company, Friendswood, TX) and oxygen was measured using an Oxy-Plus electrochemical device (Brandt Instruments, Slidell, LA). The nitrogen stream continued at 35 l/min until synthesis was complete. Slides were washed three times with acetonitrile. The reagents were blown off the edge of the slide with a reciprocating motion from a manifold of nitrogen jets.

Each cycle of synthesis includes (1) printing, (2) washing, (3) oxidation, (4) washing, (5) detritylation, and (6) washing. The first step of the reaction consists of phosphoramidite monomer printing followed by tetrazole printing, followed by a 2 min incubation. This first 3' base was reprinted to ensure a high density of oligonucleotide synthesis. Oxidization and detritylation steps were also carried out for 2 min each.

Deprotection

After reporter synthesis was completed, the microarray slides were removed from their slide holder and rinsed with acetonitrile and then 95% ethanol. The base-protecting groups were removed by a 105 min incubation in an aqueous solution of 13% ammonium hydroxide and 20% methylamine in a sealed container at room temperature. The deprotected slides were rinsed five times with de-ionized water, dried, and stored in a desiccator.

Images of droplets

Images were acquired using a Zeiss Axiophot stereomicroscope equipped with a 5 \times Plan-Neofluor objective and standard 10 \times planar eyepieces, connected to a Roper Scientific cooled-CCD digital camera (1,392 \times 1,040 resolution, pixel size 6.45 \times 6.45 μ m, firmware revision 8.69).

RS Image Acquisition settings were as follows: exposure type, normal; exposure mode, timed; automatic exposure with intensity target of 2,000 and upper limit exposure time of 1 sec; full-CCD mode with speed 20,000 kHz; gain equal to 1; no shutter delay; neutral brightness, contrast, and gamma, with white auto balance and 5%-95% scaling.

Hybridization

Hybridizations were carried out using labeled targets listed in Table 1, purchased from IDT (Coralville, IA), and diluted to a 100 nM final concentration with DIG Easy Hyb buffer (Roche Molecular Biochemicals, Indianapolis, IN). Forty microliters of hybridization solution was placed on the microarray and a coverslip carefully applied. The slide was placed in a hybridization chamber and incubated for 1 h incubation at temperatures indicated in the figure legends. The coverslips were removed and the microarrays were washed for 15 min in 1 \times SSC + 0.5 % SDS buffer followed by a

5-sec wash in $0.1 \times \text{SSC} + 0.1\% \text{SDS}$ at room temperature. The microarrays were dried under a nitrogen stream. Microarray images were collected using $10 \mu\text{m}$ resolution, 60-90% laser power, and 80-90% PMT gain on a ScanArray 5000 laser scanner (Packard BioScience, Meriden, CT) and saved as 16-bit TIFF images. The excitation/emission filter settings used were 532 nm/546 nm for measuring Cy3 and 633 nm/670 nm for Cy5 and Bodipy. The fluorescence intensities were determined using Dapple image-analysis software [32]. Dapple output files, annotated with feature names and sequences, can be found in Additional data file 3. Microarrays were stripped by washing in 20 mM sodium hydroxide for 2 min, followed by five washes in de-ionized water.

Labeling and quantification of targets

Nucleic acid and fluorophore dye concentrations were determined by spectrophotometric measurement of absorbance at $\lambda = 260 \text{ nm}$ for nucleic acid and at the excitation peak $\lambda = 550 \text{ nm}$ for Cy3, $\lambda = 650 \text{ nm}$ for Cy5) for the dye reporter. Concentrations were calculated using appropriate extinction coefficients ($A_{260} = 50 \mu\text{g/ml}$ dsDNA at 1 OD, $A_{260} = 33 \mu\text{g/ml}$ ssDNA at 1 OD, $A_{550} = 150,000 \text{ M}$ Cy3, $A_{550} = 250,000 \text{ M}$ Cy5), and samples were normalized for each hybridization to provide equimolar amounts of each fluorophore.

Direct chemical labeling

Oligoarrays of 20 mers were printed as described in the synthesis section of the Materials and methods, except that reporters contained from 0 to 10 dGMP moieties distributed along the length of the molecule. The position of reporters containing different numbers of dGMPs were randomized before printing. ULYSIS nucleic acid labeling kit (Molecular Probes) was used to label the N-7 position of the dGMPs by a modification of the instructions recommended by the manufacturer: $70 \mu\text{l}$ of degassed Universal Labeling System (ULS) reagent containing AlexaFluor-647 with DMSO was diluted 1:100 in Component C buffer. The reaction mixture was placed on top of the reporters on the oligoarray slide and incubated under a coverslip at 80°C for 15 min. After incubation, the coverslip was removed and the slide was incubated in $2 \times \text{SSC}$, 0.2% SDS for 10 min. Slides were thoroughly washed with de-ionized water, blown dry with compressed nitrogen, and scanned on a ScanArray 5000 microarray scanner using laser power and PMT gain settings of between 65% and 85%.

Preparation of genomic DNA

Ninety-four different barcoded yeast deletion strains were grown in rich medium containing 100 mg/L G418 (geneticin) at 30°C . Three additional cultures containing only strain YPL110C, YPL111W or YPL112C were grown using identical conditions. After 4 h, the cell density was determined by the OD_{600} . Two milliliters (approximately 5×10^7 cells) of each population were used to extract genomic DNA.

Each set of cells was pelleted, washed with diH_2O , pelleted again and resuspended in $200 \mu\text{l}$ breaking buffer (2% Triton X-100, 1% SDS, 100 mM NaCl, 10 mM Tris pH 8, 1 mM EDTA pH 8). Two hundred microliters of 24:1 phenol:chloroform and $200 \mu\text{l}$ siliconized glass beads were added, and the cells were lysed by agitation. Two hundred microliters of TE buffer (10 mM Tris-Cl, 1 mM EDTA, pH 7.5) was added and cell debris removed by centrifugation at $13,000 g$ for 5 min. The aqueous phase was collected and nucleic acids were precipitated by the addition of 1 ml 100% ethanol at room temperature followed by three minutes of centrifugation at $13,000 g$. The pellet was resuspended in $400 \mu\text{l}$ TE. Contaminating RNA was hydrolyzed in the presence of $30 \mu\text{g}$ RNase A for 5 min at 37°C . Genomic DNAs were precipitated by the addition of $10 \mu\text{l}$ 4 M ammonium acetate and 1 ml 100% ethanol at room temperature. After centrifugation, the DNA pellets were resuspended in $100 \mu\text{l}$ of TE and the concentration determined by absorbance at 260 nm/280 nm.

PCR amplification

Barcode tags from the genomic DNA were amplified and labeled by PCR. Reactions were 100 μ l in scale and contained 20 mM dNTPs, 150 mM MgCl₂, 1 \times Fermentas *Taq* DNA polymerase buffer, 100 μ M each of Cy3 or Cy5 conjugated forward and reverse primers, 1 μ g of the genomic DNA and 3.75 units of *Taq* DNA polymerase. The enrichment reactions were spiked with 100 ng each of DNA from barcode strains YPL110C, YPL111W and YPL112C. Mixes were heated to 94°C for 3 min, followed by 30 cycles of 94°C for 15 sec, 50°C for 15 sec, and 72°C for 30 sec. Reactions were finished by a final incubation at 72°C for 3 min. PCR products were purified using the Qiagen nucleotide removal kit following the manufacturers' recommended protocol.

POSaM barcode oligoarrays

Each barcode array slide contained a grid of registration features containing sequences complementary to a labeled 20-base control oligonucleotide. Their hybridization is used to verify feature size, shape and uniformity, as well as to aid in the registration of grids used by the spot-finding program, Dapple. No cross-hybridization was observed between the barcode reporter sequences and the control oligonucleotide. The barcode reporters consisted of 38-base inkjet synthesized oligonucleotides. The 'perfect match' reporters contain 20 bases complementary to either the Watson or Crick strands of the identifying barcode plus 18 bases of primer sequence. 'Mismatch' reporters were also synthesized, containing four evenly spaced mutations. Each sequence was represented in quadruplicate in the array; thus each barcode PCR product could hybridize to eight perfect-match reporters.

Probing of POSaM barcode oligoarrays

The purified Cy3/Cy5-labeled PCR products were quantified at OD₅₅₀ (Cy3) or OD₆₅₀ (Cy5) and 7 pmol of each labeled PCR product was used to probe the barcode oligoarrays. The PCR products were combined as in a 'dye-flip' experiment: one solution combining Cy3 reference reaction with Cy5 enrichment reaction and the other solution combining Cy5 reference reaction with Cy3 enrichment reaction. The solutions were concentrated by precipitation and resuspended in 47 μ l 1 \times DIG Easy Hyb buffer (Roche), 3 μ l yeast tRNA (10 mg/ml), and 10 μ l sheared salmon sperm DNA (10 mg/ml). The resulting mix was heated to 90°C for 1 min, placed on ice for 1 min, and kept at 42°C until use.

POSaM oligoarray slides were prehybridized in a 3 \times SSC (450 mM sodium chloride, 45 mM sodium citrate), 0.1% SDS, 0.1 mg/ml sheared salmon sperm DNA for 30 min at room temperature. The oligoarrays were washed in diH₂O, dried, and hybridized with the labeled probe mixes for 1 h at room temperature. Hybridized slides were then washed with increasing stringency: first with 1 \times SSC (150 mM sodium chloride, 15 mM sodium citrate), 0.2% SDS at 55°C for 5 min, then with 0.1 \times SSC, 0.2% SDS at room temperature for 5 min, then with 0.5 \times SSC at 45°C for 5 min, and finally with two washes of 0.1 \times SSC at room temperature. Slides were dried with compressed air and scanned on a ScanArray 5000 with laser power and photomultiplier gain settings at 85%.

Additional data files

Additional data available with the online version of this article consists of PDF files containing instructions for assembling (Additional data file [1](#)) and using (Additional data file [2](#)) the POSaM and a zip file (Additional data file [3](#)) that contains the raw microarray fluorescence data used to generate the results shown in Figures [6](#), [7](#), [8](#), [9](#), [10](#), [11](#).

Supplementary Material

Additional data file 1:

Instructions for assembling the POSaM

[Click here for additional data file](#) (1.6M, pdf)

Additional data file 2:

Instructions for using the POSaM

[Click here for additional data file](#) (385K, pdf)

Additional data file 3:

The raw microarray fluorescence data used to generate the results shown in Figures [6](#), [7](#), [8](#), [9](#), [10](#), [11](#)

[Click here for additional data file](#) (2.7M, zip)

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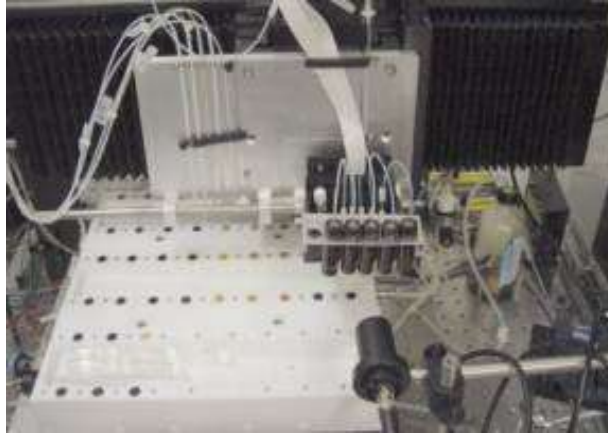
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EXHIBIT 3

**Assembly manual for the POSaM:
THE ISB Piezoelectric Oligonucleotide
Synthesizer and Microarrayer**



Version 1.2
28 May 2004
The Institute for Systems Biology © 2004
1441 North 34th Street
Seattle, WA 98103-8904

The Hood Laboratory “Beta Group”

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INTRODUCTION

We all know that, despite their inherent problems, microarrays have become an important tool in any lab that wants to do cutting edge molecular biology. If you didn't think that the technology was important, you wouldn't be reading this, so we'll try to keep the rhetoric to a minimum and just tell you what you need to know to build and run the instrument we call POSaM, the Piezoelectric Oligonucleotide Synthesizer and Microarrayer. We will try to give you a bit of the history of how the instrument came to be, and how it turned out the way it is at this time. Hopefully, those descriptions can be helpful and maybe even amusing. We also hope that those of you who actually build one of these will take part in the development of a better instrument and new methods to take advantage of its speed and flexibility. In this respect, we are following in the steps of Brown, DeRisi, and their co-workers at Stanford, who made their pin-spotting device available to the scientific public back in the 90s. We feel that the early release of these plans helped speed the development the instruments and methods that are now used, and that de novo synthesized array development has suffered by not having an open source model to build on.

Currently microarrays come in several flavors: cDNA arrays, PCR DNA arrays, BAC arrays, and oligonucleotide arrays that are constructed using pre-existing libraries of characterized DNA molecules. These are usually pin spotted onto glass slides or membranes, although some non-contact printing systems are available. One of the problems with these arrays is that you have to collect all those clones, amplify them, and store them in freezers where they can be collected by a dedicated grad student, technician, or post-doc before they can be printed onto the glass slides. That means that you have to have a complete library for every organism you want to study stored in a freezer somewhere in your lab area, and then you have to keep track of where every clone is in that library. If you want to expand the array to include new genes, you first have to acquire physical copies of those genes. Any of you involved in the Human Genome Project know that this is really a nightmare of book keeping and lots of mistakes can happen as you are getting that well-characterized clone onto a microarray in the spots you want it in. (SPOTS, not singular, you want replicates. You need replicates. The more replicates the better, both of the specific gene and the experiment itself.) There is also a fair amount of cost, both initial and continuing, that goes along with acquiring, replicating, storing and retrieving these libraries.

Wouldn't it be nice to be able to do without them? Of course. That's one of the reasons that Affymetrix started making in situ synthesized oligonucleotide arrays. They could store all their sequences in a computer file, and we all know that computer storage has come down in cost faster than the processors have gone up in speed. It costs essentially nothing to store and recall a virtual library of sequences from the RW memory of a computer. Of course this has some problems as well, particularly in designing the appropriate reporter to unambiguously identify each of the genes you want to measure, but we'll get to those. Affymetrix has now had more than 10 years to develop their product and they haven't been sitting still on their technology. There have been lots of reviews and comparisons of Affy arrays and others [Islam et al., 2002; Kuo et al. 2002; Li et al., 2002; Relogio et al., 2002; Rogina et al., 2003;] and you should read some of them. But one of the problems, in our eyes anyway, is that the chemistry used by Affy (photocleavage of the protecting groups on the dNTP monomers), is not all that efficient, so the oligos that can be synthesized are relatively short—20 to 25 bases at the maximum. It turns out that it takes several to many 25 mers to unambiguously identify any specific gene, which means that instead of 30K -40K reporters to cover the genome, it takes 10 to 20 times more reporters or 300 to 600 thousand different reporters to identify all the genes expressed in a genome. Until recently, even the photolithographic technology used by Affy could not put that many features on a single slide. Their new masking technologies may be able to put a whole genome on a slide now, however, since you have to make 4 new masks for every position in an oligonucleotide, it gets very expensive to change an array, and it also takes time to design and manufacture these new masks. That really takes this technology out of the reach of most academic labs (Xeotron and Nimblegen are now using dynamic micromirror displays for maskless photolithographic oligoarray synthesis, but these are also unavailable to most labs).

Back in the 1990's, Blanchard and Hood demonstrated at the University of Washington that off-the-shelf inkjet parts might be used to deliver standard phosphoramidite chemistries to the

modified surface of a slide in order to synthesize new oligoarrays very rapidly and inexpensively. Blanchard and Hood actually put together a prototype inkjet arrayer that was used as an asset during the formation of Rosetta Inpharmatics. Rosetta (and then Agilent) went forward and developed an elegant inkjet array synthesizer based on these original plans, but, because this is a commercial instrument, it isn't simple enough to be constructed or maintained by a regular molecular biology lab. In addition, it has taken more than 5 years of development to get a catalog of inkjet arrays to the end-user. This, we feel, has held up development of new methods that can take advantage of the speed and flexibility inherent in this design. So we (the Hood Laboratory, now at the ISB) decided to develop an inkjet arrayer that almost anybody can build and operate. That is where the POSaM platform came from. We were not trying to compete with the throughput of the industrial-size Agilent/Rosetta arrayer. It would cost too much to build that into a machine for the end users (at this stage at least). We just wanted to make an instrument that could be built and used by anybody interested so that new methods and designs could be investigated to make better in situ synthesis arrays—much as the release of the plans for the pin-spotter did for more traditional arrays.

We are not guaranteeing this instrument or the arrays it makes. It is an academic instrument that works fairly well. It is good for prototyping arrays and designing and testing reporters. You might want to start the design for your arrays on this machine and, when they work the way you want, have Agilent or Nimblegen or Xeotron or Affymetrix make them for you in large enough quantities and in high enough quality that you can do all your experiments. You could also use the arrays from the POSaM platform itself and not order commercially made arrays. That is up to you and how comfortable you feel with the results you have gotten. Presently, we feel most array results need to be confirmed using different methods anyway. The bottom line is that you (any good molecular biology lab with some organic chemistry experience and a little engineering help) can build and run this instrument. You can make arrays and test methods. And you can do it fast and inexpensively. We generally make 4 to 6 10K feature arrays of 40mer oligos overnight, deprotect them the next morning, hybridize, wash and scan them during the day, and have some results within 24 hours of putting the slides on the machine. We figure the cost is less than \$80 dollars per slide, including labor costs. That's quick and cheap, and quickness and cheapness are good when you are designing something new. You can test lots of different reporters and protocols and not bust your budget or have to wait weeks or months to do it. You need to keep in mind that the printing element used in the POSaM was developed for the low-cost commercial color printing market where 100% reliability is not expected, therefore the matter of quality control is very important.

This is the technical and operational manual for the POSaM inkjet oligonucleotide synthesizer. POSaM is open source and licensed under GNU type licenses. The idea is for the community to help make a better machine and better methods by working together using a design funded by the NIH, and therefore the public and we believe that instruments developed with public funds should be available to the public. If you have questions or problems, call us at 206-732-1276 or email us at posam@systemsbiology.org. We actually have some funds for user support and will be happy to try to answer your questions so we can make a better machine together. Note that this is the first edition of the user manuals and—while it makes perfect sense to us—we are familiar with the instrument. It is possible that some of the instructions are really as clear as mud to everybody else; we are counting on your input to make this a better document.

SYSTEM OVERVIEW

Here is a quick overview of how we built the arrayer. We tried to use off-the-shelf components wherever possible and we tried to keep the size reasonably compact. As a very rough estimate, it can take one person three months to assemble this machine. This is based on the time spent by students here on our second machine and includes purchasing lead time.

Overview of the arrayer.

The arrayer is built around a three-axis servo positioning system mounted to an 89x119cm optical table and enclosed within a sealed acrylic cover. Array substrates are chucked into a Teflon slide holder mounted to the Y-axis stage. A piezoelectric print head and six valved wash

nozzles are mounted to the X- and Z-axis stages which move above the slide holder. Reagent and waste bottles also remain inside the cover. Servo amplifiers, the servo controller (6K4), power supplies, the supervisory computer (PC), and most electronics are packaged in a 19" rack outside the cover. All processes of the arrayer are directly controlled by the PC except the basic motion control functions that are handled by the 6K4.

The Epson™ F057020 print head (available from Agson Electronics, Cherry Hill, NJ) print head is uniquely suited to inkjet microarraying. It contains six fluid channels that can hold the four standard monomers, the catalyst, and still accept a modified monomer, monomer mixture, or preformed linker. It contains 192 total nozzles. The droplet size quoted by the manufacturer is a mere 6 pL. Droplet size varies with viscosity and surface tension, and consequently temperature, but based on solvent consumption for the work described here, our droplet sizes are closer to 10 pL. The newer Epson print heads actually have more nozzles that squirt smaller volumes (4 pL). More nozzles can result in faster synthesis. These tiny droplet volumes (4-10 pL) enable high spot densities and make consumption of reagents hard to measure, but that keeps the costs down.

Most importantly, the F057020 is a piezoelectric print head so it can dispense a fairly wide range of solvents. A charge applied across a lead-zirconia-titanate (PZT) crystal deforms the crystal and bends a zirconia diaphragm near the nozzle orifice (Le, 1999). The action of the diaphragm ejects a droplet from the nozzle. Solvents of almost any boiling point can be ejected. Oligo synthesis requires a solvent of very low volatility so that the coupling step can complete before significant evaporation occurs. The thermal print head used in bubble jet printers is more popular in the home/office printer, however, it is only suitable for fairly volatile solvents. It uses a small heating element in the capillary to vaporize solvent and create a bubble. The rapid expansion of the bubble ejects a droplet. Although they are unsuitable for de novo array synthesis, thermal or "bubble" jets have been used successfully to deliver aqueous solutions of oligonucleotide and of protein for microarraying (Stimpson et al., 1998; Roda et al., 2000).

Servo control.

The three-axis positioning system utilizes Parker-Daedal™ 506-series ball screw linear actuators driven by NEMA SM23 servo motors. The motors are, in turn, powered by GV digital servo amplifiers on command from a 6K4 multi-axis motion controller. The controller interfaces to the PC by Ethernet triggers the actual jetting through one of its eight digital output lines. This system can move the print head over a wide 50x60 cm range with 5 micron repeatability.

Microarrayer electronics.

Circuit schematics for the print head, solenoid, and droplet detection interfaces appear in Figure 3. Two PCI interface boards, the DIO-32HS and the MIO-16E are used (National Instruments, Austin, TX).

The F057020 print head requires three data, one clock, one latch, and one piezoelectric drive signals. Each of the three data lines programs two banks of 32 nozzles. Data is sent serially in 64-bit words to the nozzle selection register and latched with a single pulse of the latch signal. The clocking frequency used here is 500 kHz, though 3 MHz is possible. Digital signals are TTL-compatible and active high. The piezoelectric drive signal resembles a trapezoidal waveform, rising from 0V to 28V in 5µs, holding at 28V for 5µs, stepping up to 30V for 10µs, and falling back to 0V linearly over 20µs. Each waveform pulse results in the ejection of one droplet from each selected nozzle. Pulse frequencies as high as 14.4 kHz may be used. The digital signals are transmitted directly from DIO-32HS output port D. Unused digital lines in port D allow for an additional print head to be added, if needed. The waveform output is provided by output port C and converted to analog by the DAC0802 integrated circuit (IC). These two 8-bit ports are configured as a single 16-bit output port referred to, in software, as Group 1.

The six PTFE solenoid valves (Model 190224S30, Angar, Florham Park, NJ) used to control reagent flow are normally closed and require 24V to open. Three digital output lines of DIO-32HS port B are used to select the active solenoid via the 3-to-8 decoder IC. The solenoid driver DRV101 is a low-side power switch employing a pulse-width modulated (PWM) output. The driver provides a strong initial 100 ms pulse to open the solenoid valve, followed by a PWM square wave

with a 20% duty cycle to hold the solenoid open without generating significant heat. During oligo synthesis, only one solenoid need be open at any given time. The two solenoid valves (Model ET-2-6-H, Airtronics, Bellevue, WA) controlling nitrogen flow are normally closed and require 3V to open. Two output lines of the MIO-16E digital port are used to activate the two TTL-compatible relays that power the solenoids.

Proper function of each of the 192 piezoelectric nozzles is verified by the laser droplet detection subsystem. A red laser diode is mounted orthogonally to the direction of print head motion such that the droplet stream of each bank of nozzles can intersect the beam. The print head is positioned 10 mm above the beam. Nozzles are fired in series through the beam and the forward scattering of each droplet is detected by the photodiode. A red bandpass filter is used with the photodiode. The output signal is amplified, highpass filtered, and converted to a digital signal by threshold comparison. Nozzles fail due to bubbles or plugging and are taken offline during synthesis. The 10 mm distance is chosen so that partial nozzle occlusion, which deflects droplet trajectory, also registers as a nozzle failure.

Phosphoramidite delivery.

The six fluid channels of the inkjet print head each contain a needle inlet, a filter, an ink cavity, and a nozzle plate. The needle inlet normally punctures a protective membrane beneath the ink cartridges. The volume between the inlet and the nozzle is approximately 25 μ L. In the design presented here, two multi-well ink cartridges are replaced by six glass vials. The vials are 1 mL, clear, conical Reacti-vials, and capped with silicone/Teflon septa. Thick-wall Teflon tubing, 15 cm in length, conducts the phosphoramidite or tetrazole solutions from the vials to the needle inlets. The tubing connects to the needle inlets with 1.6 mm I.D. PharMed[®] tubing and to the vials with 20 gauge non-coring stainless steel needles, 5 cm in length. The vials are at neutral pressure during printing.

Reagent/solvent storage

Reagents and solvents are stored in 500 mL glass bottles with GL45 screw-top caps, except for the 2 L acetonitrile and waste bottles. All tubing and bottle cap surfaces exposed to chemical vapors or liquid are Teflon. Pressurizing nitrogen enters the reagent and solvent bottles through PTFE check valves (Vari-bore type, Omnifit, Rockville Centre, NY) that have a 5 torr (0.1 psi) cracking pressure. The waste bottle is negatively pressurized with 380 – 650 torr (15 – 25 inHg) vacuum.

Nitrogen supply and system enclosure.

Inert gas and pressurization is supplied to the system by a liquid nitrogen dewar. Regulators are set to 50 psi for the inert atmosphere supply, to 30 psi for the slide drying jet, and to 3 psi for the reagent/solvent reservoirs. The microarray area is enclosed with a custom acrylic cover with a 89 x 104 cm footprint and an internal volume of approximately 510 liters. The cover is transparent and airtight. It has a single access door providing a 40 x 70 cm opening. A glove panel also allows the operator to work inside the enclosure without opening the access door. The high pressure inert gas is controlled by a 0-100 lpm valve/rotameter (Mini-Master type, Dwyer, Michigan City, IN). This gas supply serves dual roles: it displaces the air inside the enclosure and it powers the "air amplifier," (1.5" Conveyvac, ARTX, Cincinnati, OH) our internal circulation apparatus. The apparatus circulates the internal atmosphere through a series of activated charcoal and desiccant filters.

The system is flushed with nitrogen at a 40 lpm flow rate for 40 minutes prior to oligo synthesis. Assuming good mixing of inert gas with air, the time constant (τ) for the flushing process would be approximate 7.9 minutes. The observed τ is slightly shorter, τ = 5.6 minutes for oxygen depletion because much of the internal volume of the enclosure is occupied by hardware. The air amplifier circulates gas in a horizontal loop. The nitrogen fills the enclosure from bottom to top. Drying takes a little more time than oxygen depletion, τ = 6.8 minutes. While the use of desiccant accelerates the process, much water is adsorbed to the surface of the hardware if the enclosure door has been open for a significant period of time. Relative humidity was measured using a capacitance hygrometer (Model 4187, Control Company, Friendswood, TX; this has since

been replaced by the smaller Humirel HM1520) and oxygen was measured using an Oxy-Plus electrochemical device (Brandt Instruments, Slidell, LA).

Slide holder.

The slide holder was custom machined from solid 30 x 30 x 5 cm block of PTFE. Slides are arranged in three rows of nine with a center-to-center spacing of 31.75 mm (1.25"). The slides are secured by vacuum. Two 9.52 mm (0.375") O-rings form a gas-tight contact the bottom surface at the ends of the slides. Three inclined channels underneath the slides collect the reagent wash waste. (While this design works for us, it could be improved. We rarely synthesize more than eight microarrays at a time. A redesign of the slide holder is planned for the near future.)

GETTING STARTED

BEFORE BEGINNING ASSEMBLY, CONSIDER THE LOCATION OF THE ARRAY MACHINE. ALTHOUGH WE HAVE ATTEMPTED TO KEEP THE PHYSICAL DIMENSIONS OF THE MACHINE REASONABLE, IT REQUIRES A FAIR BIT OF OPEN FLOOR SPACE. TO BE ACCESSIBLE FROM ALL SIDES, PROVIDE AN AREA AT LEAST 7 FEET BY 9 FEET. THE MAIN TABLE IS AN OPTICAL BREADBOARD 4 FEET WIDE BY 3 FEET DEEP. WE PACKAGED THE ELECTRONICS AND THE SUPERVISORY PC IN A 19-INCH FREE STANDING RACK ABOUT 2 FEET WIDE AND 2 FEET DEEP.

Consult with your facility manager about providing electricity, high-purity nitrogen, vacuum, and fume ventilation. The electrical needs are easily met with a 120 volt, 15 amp connection. A nitrogen dewar may be placed adjacent to the POSaM, but that requires additional floor space. We recommend placing two or more nitrogen dewars in a separate room and plumbing the inert gas into the arraying room. The dewars can be connected by a manifold which will automatically switch between tanks, minimizing waste. Our facility-wide vacuum system provides a reliable 15-20 inches of water negative pressure. If this is unavailable to you, consider a dedicated vacuum system. It is also useful to locate the POSaM near a fume hood, but the POSaM requires its own ventilation plumbing. Provide a 1.5 inch exhaust ventilation pipe and set the flow rate above 80 liters per minute.

Numerous small tools and fittings are required by this project. While we have tried to be detailed in our parts listings, it is likely that some small items are not listed but are commonly available around the laboratory or at the local hardware store. Useful tools include adjustable wrenches, combination wrenches, metric and English hex drivers, slotted and Phillips drivers, a hack saw, a file, a "Dremel" -style rotary tool, a sheet metal nibbler, a drill, a level, soldering irons of 15 and 35 watt size, and a multimeter. Useful supplies include wire (14 gauge, single and multiple strand), heat-shrinkable tubing, wire labels, drill bits, cap screws (1/4 inch with 20 threads per inch, or "quarter twenties" of various length), a screw kit of various sizes between #4 and #8, and corresponding washers and nuts.

We have attempted to use commercial, off-the-shelf, components wherever possible. Nevertheless, some of the components must be custom-fabricated. For the print head bracket and the slide holder, this requires the services of a machine shop. For the cover, we use the services of Clear Cut Plastics of Seattle, Washington, although any local plastic fabrication shop should work. CAD drawings are available for downloading. For the printing of the three circuit boards, we use the services of ExpressPCB (www.expresspcb.com). These boards may be purchased online and delivered within the week, ready for soldering.

ASSEMBLING THE ARRAYER

[1] Assemble the table

Unpack and assemble the leveling stand. Set the optical breadboard on the stand. (This will require at least two people.) Place a level along the long direction of the table (from this point on,

the “X” axis) and adjust the leveling screws. Place the level along the short direction of the table (the “Y” axis) and, again, adjust. Place the electronics rack next to the table, preferably to its right. (We previously had a short electronics rack that fit underneath the arrayer. The PC sat on a table nearby.)



Figure 1. We recommend placing the electronics rack to the right of the table. This allows the operator to access the front door and the gloves on the left.

[2] Place servo positioners

Place the servo positioners on the table using the coordinates given in Figure 2. First, mount the two vertical brackets using four screws in positions A-D. Fasten the Y axis positioner (the 24-inch stage) to the brackets with four screws. Attach the Z axis positioner to the moving face of the Y axis positioner with four screws. This will require turning the Z axis lead screw by hand a few times each direction to expose the mounting holes. The motor mount of the Z axis positioner points upward. Place the X axis positioner (the 20-inch stage) on the table underneath the YZ axis assembly. Elevate the positioner one inch above the table surface using eight one-inch aluminum spacer bushings. Fasten the positioner down with eight screws. Attach the SM23 servo motors to the positioners according to the manufacturer's instructions.

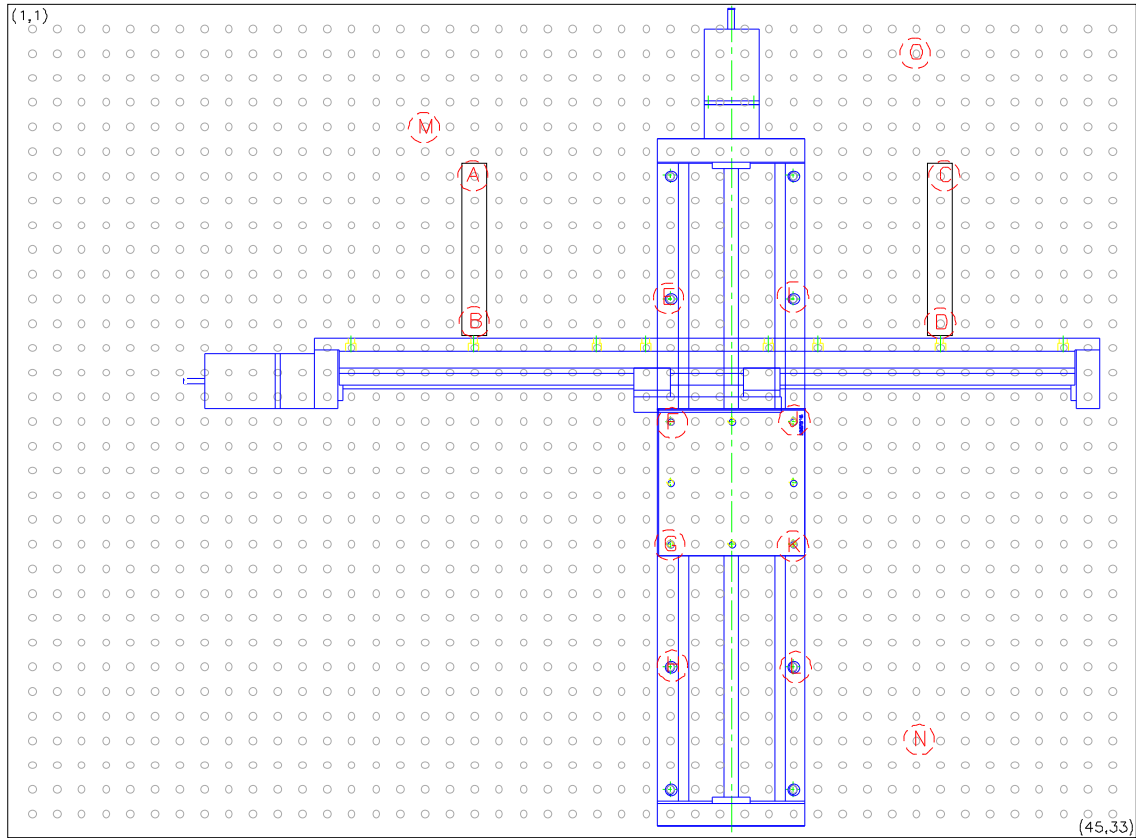


Figure 2. Layout of the servopositioners and other components on the optical table. The coordinates of the left-rear mounting hole are (1,1) and right-front are (45,33). These threaded holes are on a one-inch grid.

Point	What	Coordinates
A	Screw point for XZ axis support bracket	(19,7)
B	Screw point for XZ axis support bracket	(19,13)
C	Screw point for XZ axis support bracket	(38,7)
D	Screw point for XZ axis support bracket	(38,13)
E	Screw point for Y axis	(27,12)
F	Screw point for Y axis	(27,17)
G	Screw point for Y axis	(27,22)
H	Screw point for Y axis	(27,27)
I	Screw point for Y axis	(32,12)
J	Screw point for Y axis	(32,17)
K	Screw point for Y axis	(32,22)
K	Screw point for Y axis	(32,27)
M	Solenoid tower	(17,5)
N	Photodiode post	(37,28)
O	Laser post	(37,2)

Table 1. Coordinates of mounting screws on the optical table given in 1-inch units.

[3] Place servo controller and digital servo amplifiers

Mount the 6K4 servo controller and its 24VDC power supply inside the electronics rack and connect the power supply wires according to the manufacturer's instructions. We cut 18 inches of aluminum DIN mounting rail and fastened it near the inside top of the rack with self-tapping screws. The controller and the power supply both clip onto the rail. We placed an inline fuse holder between the power supply and the controller. Place a rack-mount shelf one foot below the rail to hold the supervisory PC.

Mount and wire the three GV servo amplifiers according to the manufacturer's instructions. Mount them to a large 19" rack panel that can accommodate the amplifiers, an emergency shutoff switch, two panel-mount fuse holders, and an optional neon power indicator lamp. Place the panel near the bottom of the rack. Connect the servo amplifiers to the servo controller. It is convenient to place a rack-mount 120V outlet power strip and surge protector just below this panel.

[4] Connect PC and configure servo system

Prepare the supervisory PC. First, install Windows 2000, if necessary. Install the National Instruments PCI-DIO-32HS and the PCI-MIO-16E cards and the supporting Ni-daq software according to the manufacturer's instructions. Configure the PCI-DIO-32HS as device number 1 and the PCI-MIO-16E as device number 2. Install and configure two ethernet interfaces. *(Yes, this open-source project requires some proprietary elements! This decision was made early in the project to take advantage of the drivers and setup tools from National Instruments and Compumotor. There probably wouldn't be any serious problems converting to all open-source elements. The OS could be Linux and the interface cards could now use the Comedi drivers. The servo controller has standard ethernet and RS-232 interfaces. Lombardi could be ported to C++ or Java with a Java Native Interface. Of course, this might take some time.)*

Configure the three servo amplifiers according to the manufacturer's instructions. Install Compumotor Motion Planner Software on the PC. One at a time, connect the PC to the servo amplifiers using a crossover RS-232 cable. Download the configuration script using Motion Planner. A suitable configuration script can be found in the appendix.

[5] Assemble printed circuit board 1501

The smallest circuit board, 1501, is an adapter to connect a DB25 cable to the flexible flat cables of the Epson print head. This circuit board is mounted on the back of the X-axis positioner and the flexible cable stretches to the print head. (Perhaps it would be better to mount it right next to the print head.)

Download ExpressPCB software from <http://www.expresspcb.com> and the latest circuit board files (1501.pcb, 1501.sch, 1804.pcb, 1804.sch, 1901.pcb, and 1901.sch) from the ISB website (<http://projects.systemsbiology.net/inkjet>). Order two replicates of each board online with ExpressPCB. Order the necessary components for all three boards from a vendor such as DigiKey.

Assemble the circuit board using the layout information in the 1501 schematic (.sch) and circuit board (.pcb) files. First, screw four stand-offs into the corners of the board. Second, insert the components and check that everything fits properly. Third, solder the components in place. Use a solder iron of smaller wattage with a fine tip.

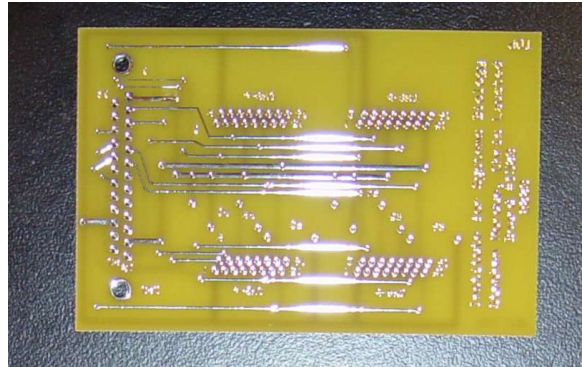


Figure 3. Top view of the 1501 board as it arrives in the mail.

Note that there are 16 holes for the small, white 15-pin flexible cable connectors. While there are probably lots of errors and omissions yet in the manual, this isn't one of them! At one time, only 16-pin connectors were available in the U.S, and that is what we used. We simply inserted a 15-conductor cable into the first 15 positions of the 16-conductor connector. You may solder the 15-pin connector into the 16-hole position. Also note that there are four such connectors when only two are needed. The second pair of connectors are reserved for the future use of a second print head. As shown in the photo below, you do not need to insert the second pair of connectors.

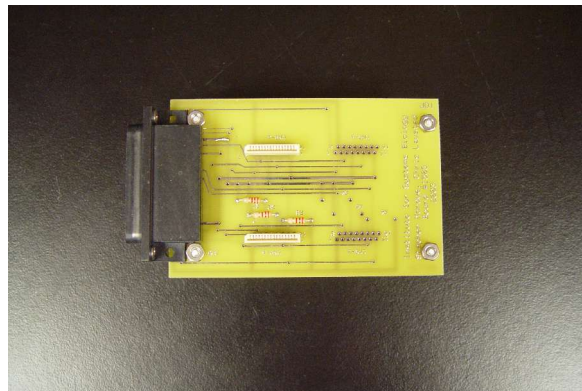


Figure 4. Top view of the 1501 board after assembly. Note that only the two necessary Molex connectors have been installed.

[6] Assemble printed circuit board 1804

In the same manner as the previous step, assemble the circuit board using the layout information in the 1804 schematic (.sch) and circuit board (.pcb) files. This board connects to the PCI-DIO-32HS board and contains the piezoelectric driver circuit, the solenoid driver circuits, and an optoisolator for the jetting trigger signal. There is a large empty area of solder pads at the upper right corner available for prototyping.

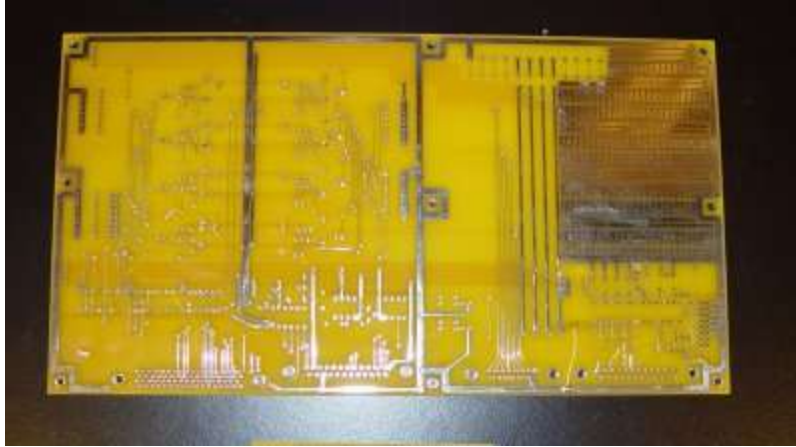


Figure 5. Top view of the 1804 board as it arrives in the mail.

This board is considerably larger and so it has holes for attaching nine stand-off posts. Be careful when attaching the cable connectors at the bottom edge of the board. The high-density 68-pin connector has a conducting metal shell that should not touch the copper pads and tracings of the circuit board's top layer. Separate this connector and the three "D" style connectors from the board by using nylon washers as spacers between the mounting screw holes. This will hold the connectors up off the board. Do not solder ICs, resistor arrays, or fuses directly to the board. Use sockets instead. After testing the board for printing errors and short circuits with a multimeter, insert these components into the sockets.

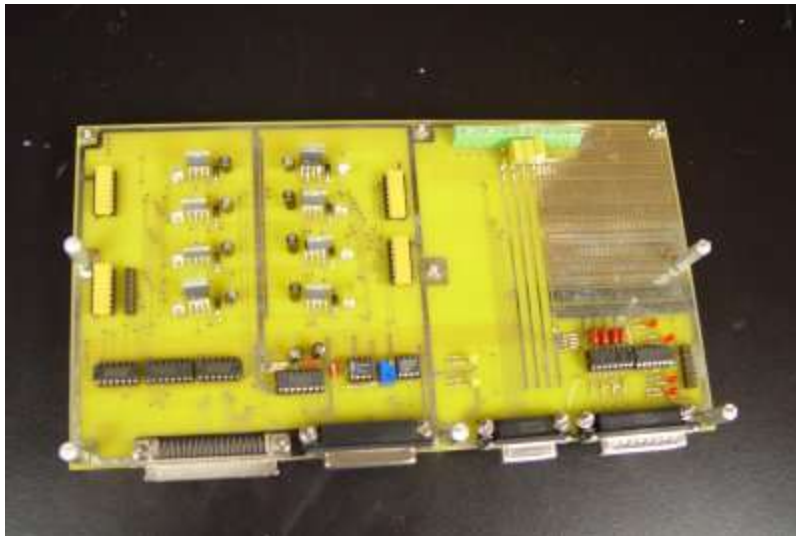


Figure 6. Top view of the 1804 board after assembly.

[7] Assemble electronics box 1

Package board 1804 into an aluminum rack-mount enclosure. First, drill or punch holes in the front panel for the 120V power switch and three power indicator LEDs. Optionally, punch two holes for BNC outputs, eight holes for solenoid indicator LEDs, and three holes for signal indicator LEDs. Next, punch holes for the three "D" style connectors of the circuit board. Cut square holes for the 68-pin connector of the circuit board and the 120V combination receptacle/fuse holder. Drill mounting holes for the circuit board, for the +/-5VDC power supply, and for the +30VDC power supply. Mount the circuit board, power supplies, DPDT power switch, LEDs and BNCs.

The photo below shows the circuit board alone mounted in place. Also shown are the cables connecting the board to the 1501 and the print head.

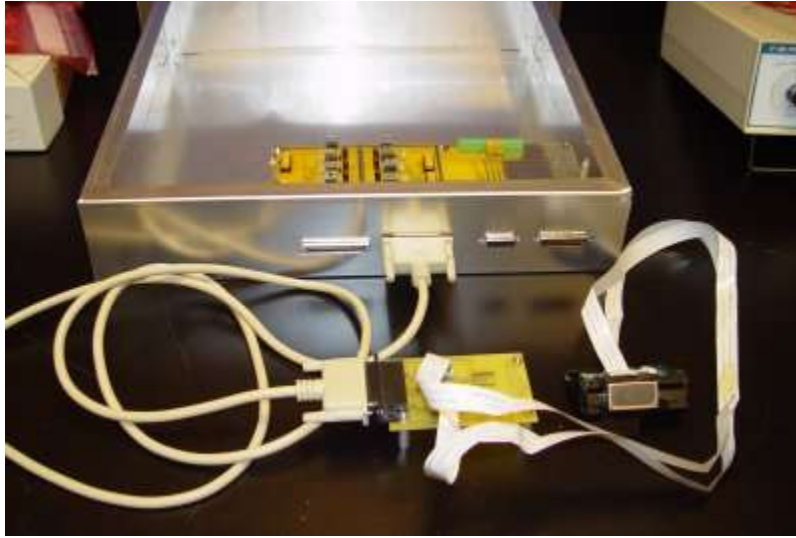


Figure 7. View of the 1804 board installed in a 19" rack, before installation of the power supply, power connectors, switch, and front panel diodes. The 120VAC receptacle, the power supplies, and the front panel parts are not yet installed.

Next, finish the internal connections. This will take a bit of soldering. Connect the 120VAC socket neutral terminal to the neutral posts of the power supplies using 18 gauge stranded wire. Connect the 120VAC receptacle live terminal to the live posts of the power supplies via the DPDT power switch. For the other connections, smaller wire gauges (22-26) may be used. Connect the +5, -5, and +30VDC power supply output posts to the appropriate circuit board screw terminals. The -30VDC screw terminal is unused. Connect the +5VDC and -5VDC indicator LEDs to the +5VDC and -5VDC power supply output terminals through ~1k current limiting resistors. Connect the +30VDC indicator LED to the +30VDC power supply output terminals through a ~6k current limiting resistor.

The other LEDs are connected to the circuit board without using any extra current limiting resistors. Connect the eight solenoid indicator LEDs to connector CN6. The BNCs and the other LEDs may be connected to various optional points in the circuit board such as screw terminal position 3 (piezoelectric pulse) and CN7 (6K4 outputs, printhead signals), respectively.

Insert the box into the electronics rack between the PC shelf and the servo amplifier panel.

[8] Assemble printed circuit board 1901

In the same manner that board 1804 was finished, assemble the circuit board using the layout information in the 1901 schematic (.sch) and circuit board (.pcb) files. This board connects to the PCI-MIO-16E multifunction board and contains the droplet detection circuit, an encoder signal conditioning circuit, and a set of relays. Although it is large in size, there isn't much on it. It primarily provides input/output connections and a lot of prototyping area. The encoder signal conditioning circuit is not required by the current Lombardi software. Screw terminals allow additional voltage signals to be connected to the POSaM. This board uses two +5VDC power supplies. Most components use the +5V supplied by the PC. The droplet detection circuit uses a separate +5VDC supply.

[9] Assemble electronics box 2

Package board 1901 into an aluminum rack-mount enclosure. As with the previous box, drill or punch holes first, insert the board, insert sockets, LEDs, and the power switch, and make the internal connections.

The inside of the box contains only the circuit board, a 5VDC power supply, and two solid-state relays. Mount the relays to the side wall of the box and make a thermal connection with heat-conducting grease. Connect the relay to screw terminals 4 & 5 (signal inputs) and 3 & 6 (signal ground). Connect the 120VAC output sockets to the 120VAC receptacle via the solid-state relays. The front panel requires a SPST 120VAC power switch and a power indicator LED. The back of the box requires the following holes for the 1901 board: two “D” connectors, a 68-pin connector, a BNC, and two round sockets. The box requires holes for the 120VAC input receptacle/fuse holder and two 120VAC solid-state relay output sockets. A connector for the droplet detector laser 5VDC supply is also useful. (The photo below shows all of the connectors at the rear, although some placement has changed with the current board, 1901.)

Insert the box into the electronics rack between the PC shelf and the servo amplifier panel.



Figure 8. View of the rear of the rack-mount enclosure housing the predecessor of the 1901 board. From the left: one 120VAC receptacle, two 120VAC sockets, hygrometer “D” connector, Unused “D” connector, gas solenoid power jacks, 5VDC supply for the droplet detector laser, 5VDC BNC for the the droplet detector photodiode, and 68-pin interface board connector.

[10] Place reagent solenoids.

Construct a the solenoid tower and place at position M: coordinates (17,5) of Figure 2. To construct the tower, cut a 12 inch length of 1 inch square aluminum tubing. Using the base of an Angar teflon solenoid as the template, drill and tap #4-40 threads for mounting holes. Mount six solenoids with #4-40 screws. Cut a 14 inch length of ¼-20 threaded rod. Use the rod, a 1½ inch fender washer, and a ¼-20 nut to fasten the tower in place.

[11] Place gas solenoids

Make a 2”x6” mounting plate for the ET-2? solenoids from ¼” thick PVC sheet. Drill and counterbore four mounting holes for the two solenoids in the plate. Drill two ¼” holes 5 inches

apart for mounting the plate to the optical table. Mount the two solenoids to the plate. Fasten the plate to the left rear corner of the optical table, outside the area enclosed by the acrylic cover.

[12] Place slide holder

Mount the slide holder to the Y-axis positioner using four 2 ½" long ¼-20 screws. Use four spacer bushings (½" thick, ¼" hole) between the positioner and the holder. This gap will allow the bellows of the Y-axis positioner to flex without touching the holder. Orient the slide holder so that the waste liquid will drain from right to left.

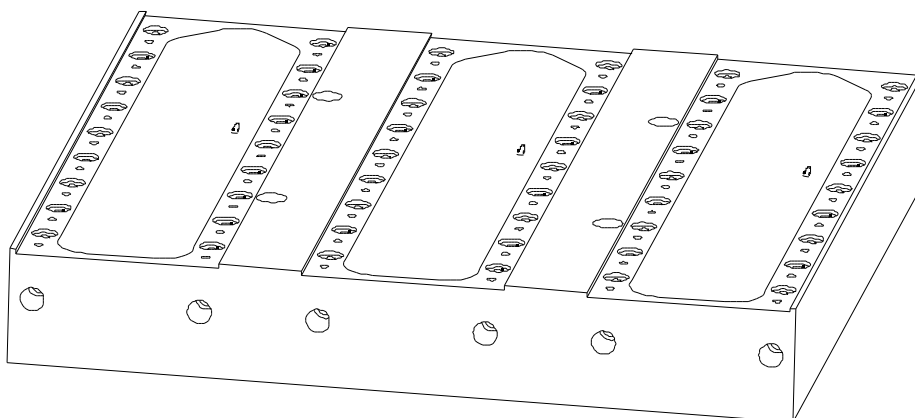


Figure 9. Teflon slide holder. The slide holder is mounted on the X axis positioner.

[13] Install print head brackets

Use four ¾ " long ¼-20 screws to mount the left and right printhead bracket pieces to the Z-axis positioner.

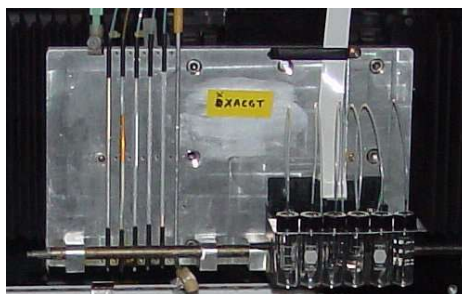


Figure 10. Print head brackets shown with inkjet, vials, slider rod, and teflon tubing installed.

[14] Install print head and phosphoramidite vials

Extract the black plastic print-head/ink-cartridge holder from an Epson Stylus Photo 700 printer. Also extract the stainless steel slider rod from the printer. Insert the holder between the mounting holes of the right printhead bracket piece. Insert the slider rod through all four mounting holes of the left and right printhead brackets, passing through the holder. Secure the rod with two set screws. Cut six 1" lengths of flexible 3/16" OD Pharmed tubing. Attach them to the inkjet inlet spikes. Cut six 7" lengths of 1/16" OD thick-wall teflon tubing. Insert them in the Pharmed tubing. Cut the luer ends off six 20 gauge non-coring 4" needles, leaving the needle 3"

in length. Deburr the needles and wash in an ultrasonic bath. Insert the cut end of the needles into the teflon tubing. Carefully insert the needles into the phosphoramidite vials. In the illustration below, we have made a reagent rack from a sheet of aluminum. The vials may also be placed in the ink holder.

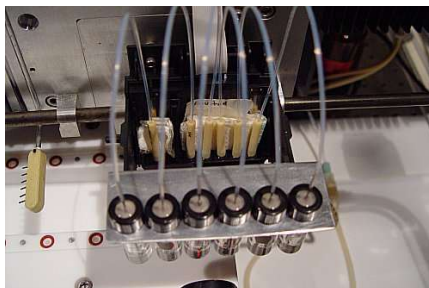


Figure 11. Phosphoramidite is fed from the vials through 20 gauge needles and teflon tubing to the inkjet. Pharmed tubing is used to attach the teflon tubing to the inkjet.

[15] Assemble pressurized gas and liquid plumbing

Gather together the components needed to complete the POSaM fluid system diagrammed below. Most of the components are listed in Appendix C6 but part numbers for metal and plastic tubing, fittings, connectors, and adapters will vary between hardware stores. (We purchased an assortment of 1/4 and 1/8 NPT brass fittings, “T” connectors, adapters, hose barb connectors, compression fittings, and quick-disconnect couplings from our local Mom-and-Pop hardware store. It’s useful to have extra supplies. We took 100 feet of 3/8” O.D. polyethylene tubing rated with a working pressure of 87 psi. We also got our 1.5” I.D. flexible tubing there—for use as an exhaust hose and as cable conduit.)

[15a] Install pressure regulator and rotameter

The POSaM requires a high-purity inert gas source capable of providing 30 psi of pressure at flow rates of at least 40 lpm. We recommend installing a pair of liquid nitrogen dewars connected by an automatically switched manifold in a separate room. This allows the gas provider to replace an empty dewar without interrupting DNA synthesis. The output of the manifold is regulated at 60 psi. Copper pipe carries to gas to a wall-mounted, valved outlet in our array room. Mount a regulator (MG06) to the breadboard stand (PR13) and connect its input port to the nitrogen supply. Set the regulator to 30 psi. Alternatively, a single dewar can be placed next to the POSaM and regulated to 30 psi. Connect a “T” to the regulator output. Mount the 120VAC solenoid (MG07) on the breadboard stand. We also attached a heatsink to the solenoid with thermoconducting grease. Mount the rotameter to the breadboard stand and connect its input to an output from the “T” via the solenoid. Run a length of 3/8” O.D. tubing from the rotameter output to the left-read corner of the breadboard. This tube will be used to fill the working area of the POSaM with inert gas.

[15b] Install the air amplifier

The inert gas enters the POSaM cover through the air amplifier (MG11). The air amplifier is a flow-powered blower that uses the inflow of fresh gas to recirculate the POSaM atmosphere through a filter of calcium sulfate and activated charcoal. Our home-built filter tower is constructed from three black ABS plastic 1½” pipe pieces: a “T” (MG13), a 4” adapter (MG14), and an end cap (MG15). The ABS pieces fit together with friction. The air amplifier needs a rubber seal to friction-fit into the “T”. We pour Drierite dessicant and pet-store variety charcoal

into low-resistance porous filter bags and pack the bags into the top funnel of the filter tower. Place the tower in the left-rear corner of the breadboard and connect the 3/8" gas supply tube to the small barbed inlet of the air amplifier. When gas flows into the barbed inlet at 10 lpm, gas circulates through the tower at rates up to 100 lpm.

[15c] Connect reagent bottles

Reagents are delivered to the print head assembly by gas pressure of 3 psi. Add a second "T" to the outlet of the 30 psi regulator and feed this pressure into the 3 psi regulator (MG04). We mounted this regulator at the exposed breadboard top at the left rear edge of the table. Connect five check valves (MG05) to the 3 psi pressure outlet using flexible 3/16" OD tubing and nylon hose barb fittings and connectors. The check valves prevent reagent fumes from reaching other bottles or reaching the regulator. Place four 500mL bottles (MR02) and one 2L bottle (MR03) in the front-left corner of the POSaM. We place them inside a polypropylene tray to prevent any spillage from falling into the screw-holes of the breadboard. Fit the bottles with 3-port GL45 caps (MR01). Use 1/8" OD teflon tubes to deliver pressure to the bottles. Connect the bottles to teflon solenoids (MR09) numbers 1 to 5 using 1/16" OD teflon tubing. Be sure that the tubing reaches to the bottoms of the bottles.

Run approximately 2 meters of 1/16" OD tubing from the five solenoids to the print head assembly. Use a 1 meter length of flexible 1/2" flexible tubing as conduit to hold the cabling to the print head assembly as well as the bundle of reagent tubes. Label all five tubes where they emerge from the conduit. Insert the tubes into sleeves of 1/16" ID (1/8" OD) flexible tubing. Press the sleeves into the left five grooves of the print head assembly. Hold the sleeved tubing in place with #4-40 screws and washers.

The solenoids may now be connected to board 1804. Solder a 10-conductor cable approximately 3m in length to pins 1-9 of a DB15 connector (PLUG06). Pins 2 through 6 will connect to reagent solenoids 1-5. Pin 7 will connect to waste solenoid 5. Pins 1 and 8 are currently unused. Pin 9 is common (ground) to all solenoids.

[15d] Install the slide dryer

Microarray slides are blown dry during synthesis by a six-jet nitrogen manifold (MG10). Bend a 90° angle in a 12" long aluminum tube (MG09) using a tubing bender to avoid kinking. The bend should be 1.25" from the end of the tube with a radius of about 1/2". Insert the tube into the sixth groove of the print head assembly. The bend should be orthogonal to the print head assembly. Coat the inlet tube (the large one) of the manifold with flexible silicone sealant or another viscous, weak glue. Insert the inlet into the bottom of tube MG09. Angle the manifold jets (outlet tubes) downward at 45°.

Mount two solenoids (MG03) near the 3 psi solenoid (MG04). Feed 30 psi pressure into the solenoids. The second solenoid is reserved for future use. The first is used to control the slide dryer. Connect the solenoid output to the top of tube MG09 using 3/16" OD flexible tubing. Route the tubing through the conduit, as in the previous step.

Make two two-conductor cables to connect the solenoids to connectors 7 & 8 of board #1901. Use two 1mm power plugs (PLUG03).

[16] Connect the vacuum components

Vacuum is used both to chuck the slides into the slide holder and to suck waste from the bottom of the slide holder. This requires the use of teflon tubing and fittings, a 2L liquid waste bottle (MR03), a 500mL trap (MR02), and a charcoal filter cartridge (MM10). We monitor vacuum visually with a dial gauge (MG02). (A voltage-output pressure transducer is planned for the future.)

[17] Install hygrometer

Connect the Humirel hygrometer (HU1) to a DB9 connector (PLUG02) via a 2m length of shielded cable. Connect wire 1 (white) to pin 2 (ground), wire 2 (blue) to pin 3 (voltage source), and wire 3 (yellow) to pin 1 (humidity signal). Mount the hygrometer on the XZ axis vertical bracket (PR10) near the slide holder. Plug the sensor in to board 1901.

[18] Install droplet detection laser and photodiode

The droplet detection laser sends a beam from behind the print head to the photodiode detector in front of the print head. The beam is aligned so that all droplets fired downward from the 32 nozzles in any one bank will intersect the beam. Light from the beam is normally blocked from reaching the photodiode by a black tape blocking strip. Light refracted by the droplets passes around the strip and reaches the detector.

Place a post mount (PO03) to support the photodiode at Position N of Figure 2: coordinates (37,28). Insert a 8" post (PO12) and attach a right angle clamp (PO06). Attach a ring clamp (PO09) to the end of a 4" post (PO11) and insert the post in the clamp. Insert the photodiode (PO07) into the bottom of the 1" SM1 barrel (PO10) and secure it with a ring nut (PO08). Use a pair of ring nuts to secure the red filter (PO01) in the middle of the barrel. Use another pair of ring nuts to secure the lens (PO02) at the end of the barrel. Since a large area photodiode is used, precision focusing and alignment is not necessary. Cut a strip of electrical tape 6mm thick and 50mm long. Place the strip on the end of the SM1 tube barrel as shown below. Place the barrel in the ring clamp and tighten the clamp. The lens faces the rear of the POSaM.

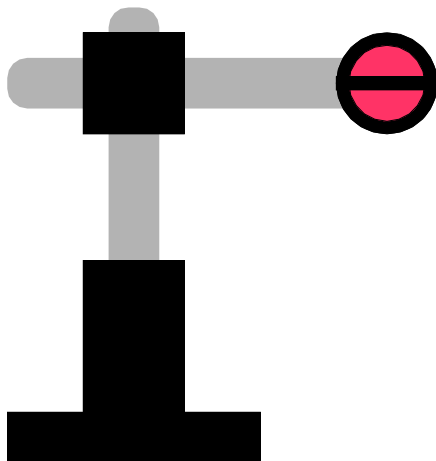


Figure 12. Droplet detection photodiode assembly as seen by the laser.

In the same manner, mount the laser diode at the rear of the POSaM at Position O of Figure 2: coordinates (37,2). Attach the laser to a 5VDC power supply. Align the laser with a bank of 32 nozzles. The laser needs to point at the center of the blocking strip. Focus the laser just below the print head nozzles. The laser elevation should be close to 7.5 inches.

[19] Install cover

The custom plexiglas (acrylic glass) cover is delivered in four pieces: the main body, the front panel door, the left panel (with glove holes) and the right panel. Installation of the cover involves making a seal to match the main body base, placing the main body, making panel seals, attaching the panels, and attaching gloves.

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The main body has a footprint 41 inches wide and 35 inches deep, compared with the optical table dimensions of 47 inches wide and 35 inches deep. The cover and the table are aligned on their right edges, leaving 6 inches of table width exposed on the left side. Prepare the seal between the table and the cover. Attach two continuous strips of 5/16" thick weatherstrip foam (MC06) to the table top to match the flanged base of the cover main body. On the right rear corner of the table where the cables are routed, use polymer clay instead of weatherstrip to form the seal. On the left rear corner of the table, or where-ever gas tubing or other wires are routed, also use polymer clay. Carefully set the main body on the weatherstrip surface. Holes in the flanged base match the 1 inch grid pattern of the optical table. Gently fasten down the main body using 1/4-20 screws and 1 inch fender washers (MC04). Only tighten the screws finger-tight to avoid damaging the flange.

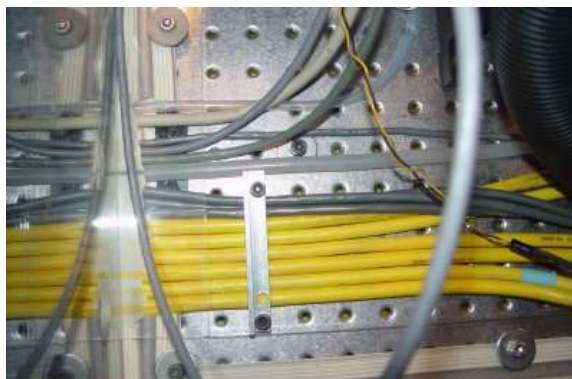


Figure 13. All wires between the rack and the POSaM interior are routed underneath the lower right rear corner of the cover (shown here as the lower left corner of the picture).

Next, attach the panels. Apply two strips of "D" profile weatherstrip (MC07) around the perimeter of the three holes in the main body. Attach the left (glove hole) and right (no glove holes) panels with 3/4" long #6 screws. Seal the screw holes by covering them (inside the main body) with polyethylene tape (MC09). The front panel door attaches with three hinges on the top and has five latches around the sides and bottom. Attach the hinges (MC03) and latches (MC01) with more #6 screws (from MC02) and seal the screw holes with polyethylene tape.

Last, attach gloves and the exhaust valve. Attach the gloves (MC08) to the left panel with large worm-screw clamps (large versions of those used for automotive radiator hose clamps). A very low resistance valve (MC10) is needed for the exhaust port at the upper left corner of the cover. We extracted ours from a dust mask sold by the local hardware store. It is 30mm in diameter and fits tightly inside the cover exhaust port tube. The mask comes with three such valves. We replace them every three months.

[20] Connect fume exhaust hose

Connect the exhaust port at the upper left corner of the cover to your fume exhaust system using flexible conduit (MM01). Overlap the exhaust tube with about 30 mm of conduit and fasten with a worm-screw hose clamp. Cut a hole 20mm in diameter in the conduit immediately next to the exhaust port tube. This leak prevents your building's exhaust system from creating a vacuum inside the POSaM cover. Place a cork in the inlet port at the lower left-rear corner of the cover. (To rapidly remove fumes from inside the cover, open the inlet port and close the leak hole.)

THE SOFTWARE

Two software tools can be used to run the inkjet arrayer: Arrayer and Lombardi. Both require two types of input data files to work. A *Lineup* file describes the DNA sequences to be printed on

the slide. A *Playbook* file is used to describe the procedure used to synthesize the DNA. Both programs were developed in Visual Basic 6.0 on Windows NT 4.0 (And we've recently started using it on Windows 2000) Both require that Compumotor's Motion Planner and National Instruments NIDAQ (Nidaq32.dll, specifically) be installed. A Pentium III 500 MHz with 256MB RAM is sufficient.

Using Lombardi

Lombardi, currently on version 0.7.3, is intended for the routine production of microarrays. Its main advantages are a simple playbook language and the ability to print different sequences on each slide. It can print up to 9800 spots (70 by 140) in 90 DPI mode. We don't recommend trying 180, 270, or 360 DPI mode. (We do not yet have a substrate that allows us to use 180 or more DPI. We once tried a set of amino slides with 180 DPI density but it resulted in about 20% malformed features.) Since the print head has 32 rows of nozzles, choose a number of rows that is equal to, or slightly less, than a multiple of 32. For example, 70 by 64 or 70 by 128 are recommended for faster cycle times.

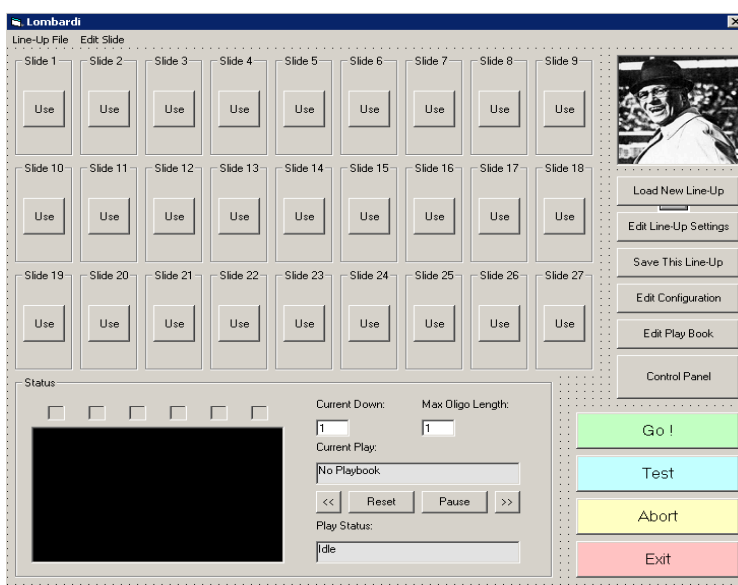


Figure 14. The Lombardi main panel. Clicking one of the 27 slide buttons brings forth a display of the array contents. Clicking the “Go” button starts synthesis.

Upon startup of the software, the main panel pictured here is displayed. The user should first open a lineup (*.lnp) file with the “Load New Line Up” button. A Lombardi lineup file also contains information about which bank each phosphoramidite or catalyst is loaded into (required) and which wash channel each large-volume reagent is loaded into (optional). The first letter of each phosphoramidite is used as a unique designator. The catalyst, tetrazole, is usually designated with an X. An unused bank is usually designated with a U. The six boxes in the lower left corner of the panel indicate the bank assignments. If bank one is unused, bank two holds tetrazole, and the remaining four banks hold the phosphoramidites, then the boxes will read U, X, A, C, G, and T, respectively. The black rectangle below the boxes will indicate which nozzles are believed to be functional with colored dots. If all nozzles are working, 192 (6 columns by 32 rows) dots will be displayed.

The user will next load a playbook (*.plb) file. A playbook can be created or loaded and edited by using the “Edit Play Book” button. The buttons and text boxes in the lower center of the panel can be used to view each command in the playbook file. They are also used to set the starting point of synthesis when the “Go” button is clicked. Usually, the synthesis will begin from the first “play” of the first “down”. They play is the command indicated on a line in the playbook file, such

as “PRINT” or “WASH.” The down refers to which base (monomer) is being synthesized. The first, or 3’, base is coupled on first down. The second base is coupled on second down. A 25-mer oligo will require 25 downs. (The sports analogy breaks down here.) Synthesis can be paused by using the “Abort” button. Synthesis can be resumed because the last down and the last play are remembered. If synthesis is to be restarted from the beginning, the current down and the current play must be manually reset by the user.

Buttons representing each of the 27 slide positions occupy most of the space on this panel. Clicking on a button will open the slide editor. This is mostly used to view the slide and ensure that the correct lineup file has been selected. The user also has the ability to edit the contents of a slide. Each spot, or feature of the slide, can be selected and the sequence modified. The slide editor also shows the spot density chosen. This is usually 90 DPI. The higher resolutions have not been well tested and should be avoided.

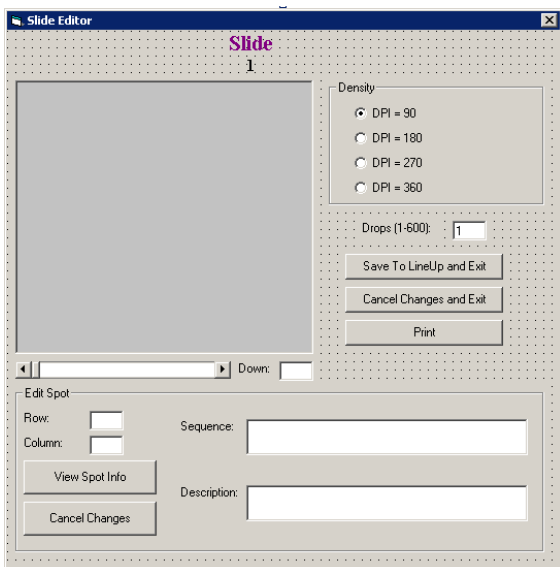


Figure 15. The slide viewer and editor.

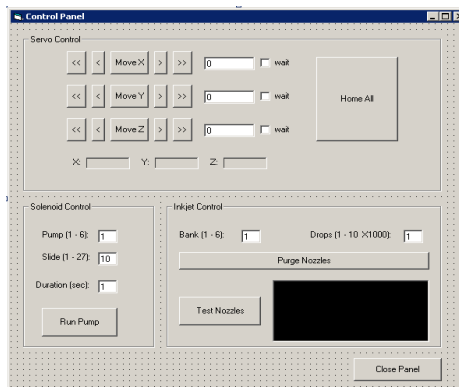


Figure 16. The Lombardi control panel allows robot movement, reagent delivery, and nozzle testing.

The control panel is used to manually jog the print head and slide holder. No damage can be done in the X, Y, or +Z (up) directions. **WARNING:** It is possible to crash the print head into the slide holder with the -Z (down) control. The control panel is also used to purge air out of the Teflon nozzles when reagents have been changed. Dispense liquid for about 4 seconds to completely change the volume in the tubes. The solenoids are identified by number only. Usually, 1-3 correspond to acetonitrile, oxidizer, and dichloroacetic acid, respectively. Solenoids 4 and 5 are intended for capping reagents. Solenoid 6 is treated differently by the control panel. It doesn't move the solenoid's dispensing nozzle to the specified slide location because it is used for vacuuming waste from the slide holder. The control panel can also be used to purge thousands of droplets from the piezoelectric nozzles. When the “Purge Nozzles” button is clicked, the entire bank ejects droplets through the laser beam. This is also a way to check the proper operation of the nozzles and the alignment of the laser.

Lombardi File Formats

The following example lineup file has the required information to make an array with four features (2 spots by 2 spots). Comment lines start with the “#” symbol. The six banks of the piezoelectric are next assigned their reagent. “XTetrazole” indicates the position of the catalyst. (If an “X” appears in a sequence, two drops of tetrazole will be delivered, but no base.) The slide printed will be in position 12. This is the position third from the left, in the middle row. The spot density is 90 DPI. Rows “1a” and “2a” contain oligo sequences. Rows “1b” and “2b” contain the corresponding descriptions of the sequences. The “b” rows are optional. As many as 27 slides

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may be included in a file. (In the future, we will be using a format interchangeable with our generic array data processing pipeline described at <http://db.systemsbiology.net/software/ArrayProcess/index.html>.)

```
# This is an example lineup file.
BANK1=Unused
BANK2=XTetrazole
BANK3=Adenine
BANK4=Cytosine
BANK5=Guanine
BANK6=Thymine

SLIDE12
DPI=90
1a:TTTTTCTGGAGGGCCTGTGCGTGAA,TTTTTCTGGAGGGCCTGTGCGTGGA
1b:Gene001,Gene002
2a:TTTTTCTGGAGGGCCTGGGCGTGGA,TTTTTCTGGAGGGAATGTGCGTGGA
2b:Gene003,Gene004
# End of file.
```

The following playbook file describes the standard synthesis procedure. Comments, again, begin with the “#” symbol. Lombardi has the habit of stripping off the comments when the file is opened and re-saved with the playbook editor. Using “##” prevents this. The first command, “WASH,” dispenses acetonitrile from nozzle 1 for 0.7 seconds. It executes this action over slide 15, then 14, then 13, then 12. The next command, “DRY” uses the blower to remove the liquid from the same slides. The “PRINT” command takes no parameters. The “WAIT” command takes a time parameter in units of seconds. This procedure is repeated N times to make an N-mer.

```
# This is an example playbook file.
##WASH WITH ACETONITRILE
WASH 1, 0.7, 15, 14, 13, 12
DRY 15, 14, 13, 12
##PRINT
PRINT
WAIT 50
##WASH WITH ACETONITRILE
WASH 1, 0.7, 15, 14, 13, 12
WAIT 2
DRY 15, 14, 13, 12
##DOUBLE PRINT
PRINT
WAIT 50
##WASH WITH ACETONITRILE
WASH 1, 0.7, 15, 14, 13, 12
WAIT 2
DRY 15, 14, 13, 12
##OXIDIZE
WASH 2, 1.2, 15, 14, 13, 12
WAIT 30
DRY 15, 14, 13, 12
##WASH WITH ACETONITRILE
WASH 1, 0.7, 15, 14, 13, 12
DRY 15, 14, 13, 12
##DEPROTECT
WASH 3, 0.9, 15, 14, 13, 12
WAIT 30
DRY 15, 14, 13, 12
##WASH WITH ACETONITRILE
WASH 1, 0.7, 15, 14, 13, 12
DRY 15, 14, 13, 12
```

Using Arrayer

Arrayer, currently on version 0.9.0, is a more flexible controller intended for testing improvements to the machine. Its main advantage is the greater control offered by its playbook language. It can print up to 9800 spots (70 by 140). It also has a tool for finding the center of the laser beam used in droplet detection.

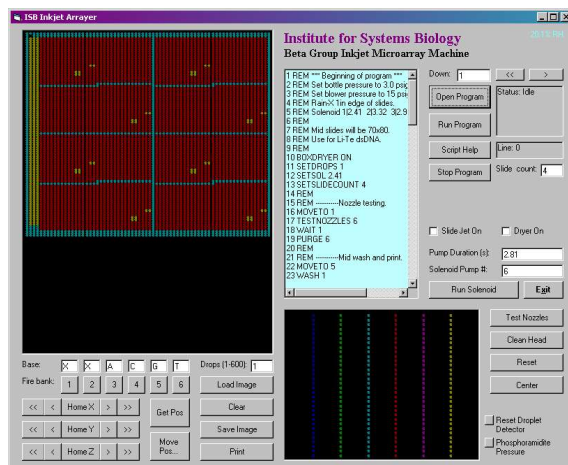


Figure 17. Main panel of Arrayer v.0.9 software.

The main panel pictured above is displayed at start-up. The left side of the panel contains printing functions. The large black box displays the image currently available for printing. The servo jog buttons are below. The center of the panel contains the playbook functions. The program, or playbook file, can be viewed here. Oligo synthesis programs can be started and stopped with these buttons. The right side contains droplet detection and reagent dispensing functions.

The user should first open a lineup file with the “Load Image” button. The user can edit the image displayed in the large black box by clicking. A left-click increments the bank number used to hit that spot. For example, a spot that had contained an A from bank 2 will be changed to a B from bank 3. A right-click resets the spot to zero, or no drop. The user must check that each bank is assigned a letter. In the example above, banks 123456 are assigned letters MACGTN. The letters used in the lineup file must all be from this set of six letters. It does not matter which symbol corresponds to the catalyst. The printing of tetrazole is done explicitly in the playbook using the bank number. The user can position the print head over a slide by using the jog buttons. The “<< >>” buttons move the servos farther than the “< >” buttons. The three axes can be homed individually by using the “Home*” buttons. Once the print head is over a slide, the user may click “Print” to print the image currently displayed. The number of drops printed is adjustable. If the number specified is one drop, then fast “fire-on-the-fly” printing is used. The image displayed is a snapshot of the lineup at a given down. To look at the bases deposited on a different down, the user can change the value in the “Down” text box.

Since the jog buttons can be very tedious, eight frequently used positions can be saved in the “Important Coordinates” dialog box. The first three positions have fixed definitions. The droplet detector position (1) must be located where droplets pass through the laser beam. The purging area (2) must be chosen to avoid piezojetting onto a slide. The cleaning start point (3) is currently not used. The other five points are user defined. Positions 4-6 should correspond to the right-most slides in each row. When synthesizing more than one slide, operations can be performed on a row of slides, from right to left. Before using these coordinates, the servos must be homed. Homing is not done automatically. The Arrayer software may be exited and restarted without re-homing.

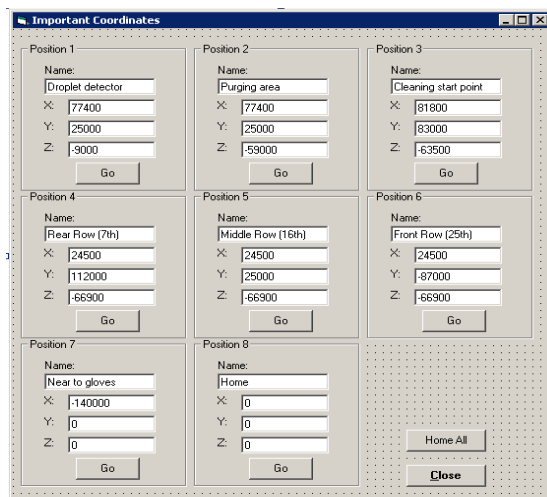


Figure 18. This dialog, activated by the "Move Pos..." button, allows the user to rapidly move the print head to saved coordinates.

Arrayer File Formats

The file formats used by Arrayer are not compatible with those used by Lombardi. The lineup file is a simple file of comma-separated values (.CSV). This file must contain 70 (or fewer) columns and 140 (or fewer) rows of oligo sequence text.

A sample playbook and a table of commands follow below. The Arrayer playbook language is very primitive. Each line contains exactly one command and exactly one parameter. There is one looping command which must be used in oligo synthesis. The LOOP command increments the Down number and restarts execution of the program until the down number exceeds the LOOP count parameter. In this example, five slides are synthesized. They have been placed all in the same row. Position 5 has been defined with the coordinates of the right-most slide. An ftp script has been written to upload the error log to an http server.

```

REM *** Beginning of program ***
REM Set bottle pressure to 3.0 psig.
REM Set blower pressure to 15 psig.
REM Rain-X lin edge of slides.
REM Solenoid 1|0.71 2|0.15 3|1.13 4|1.04 5|0.15
REM
REM Slides will be 32x50. Hyb to our 12mer and H. influenza.
REM File InkjetErrorLog.txt gets uploaded via ftp. Be sure FtpScript.txt exists.
REM
SETDROPS 4
SETSOL 0.71
SETSLIDECOUNT 5
REM
REM -----Nozzle testing.
MOVETO 1
TESTNOZZLES 6
WAIT 1
PURGE 6
REM
REM -----Wash and print.
MOVETO 5
WASH 1
DRY 0
PUMP 6
WAIT 1
MOVEABSZ -69500
PRINT Bank1
PRINT Default
MOVEABSZ -66000
    
```

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```
WAIT 60
REM
REM -----REPEAT
REM -----Nozzle testing.
MOVETO 1
TESTNOZZLES 6
WAIT 1
PURGE 6
REM -----Wash and print.
MOVETO 5
WASH 1
DRY 0
PUMP 6
WAIT 1
MOVEABSZ -69500
PRINT Bank1
PRINT Default
MOVEABSZ -66000
WAIT 60
REM -----Oxidize.
MOVETO 5
SETSOL 1.13
WASH 2
MOVEY 25000
WAIT 25
REM -----Wash and acid.
MOVETO 5
DRY 0
SETSOL 0.71
WASH 1
DRY 0
SETSOL 2.06
PUMP 6
SETSOL 1.04
WASH 3
MOVEY 25000
WAIT 25
REM -----Extra wash.
MOVETO 5
DRY 0
SETSOL 0.71
WASH 1
DRY 0
SETSOL 2.06
PUMP 6
SETSOL 0.71
REM
REM -----FTP the error log.
REM
SHELL ftp -s:FtpScript.txt
REM
REM -----Looping.
REM
LOOP 25
REM
REM -----Extra wash at end.
REM -----Mid wash.
MOVETO 5
DRY 0
SETSOL 0.71
WASH 1
DRY 0
SETSOL 2.06
PUMP 6
SETSOL 0.71
REM -----Maintenance every 20 min.
MOVEX 25000
MOVEY -10000
PURGE 0
WAIT 1200
PURGE 0
WAIT 1200
PURGE 0
WAIT 1200
```

The contents of FtpScript.txt:

```
open ftp.mywebsite.org
myname
mypassword
cd public_html
put InkjetErrorLog.txt
bye
```

Command	Parameter	Acceptable values
PRINT	catalyst bank	1, 2, 3, 4, 5, 6, or 16
PRINT	current image	Default
LOADIMAGE	filename	*.csv
WASH	pump number	1, 2, 3, 4, 5, or 6
DRY	use manifold (0) or point (1)	0 or 1
WAIT	duration	real number
SETDROPS	number of inkjet drops	0..600, integer
SETSOL	solenoid on duration in seconds	0..15, real number
SETSLIDECOUNT	number of slides	0..9, integer
BLOW	on or off	ON or OFF
MESSAGE	text to display	string
MOVEX	relative distance	integer
MOVEY	relative distance	integer
MOVEZ	relative distance	integer
MOVEABSX	absolute position	integer
MOVEABSY	absolute position	integer
MOVEABSZ	absolute position	integer
HOME	Axis	X, Y, or Z
PUMP	pump number	1, 2, 3, 4, 5, or 6
PURGE	number of banks	1, 2, 3, 4, 5, or 6
SPEED	change servo velocity	1..25 or 0=default (10)
LOOP	number of downs to loop	integer
REM	comment text	string
IFFSKIP	If no new nozzle failures, skip this number of lines	integer
TESTNOZZLES	number of banks to test	1, 2, 3, 4, 5, or 6
SHELL	DOS shell command	string
CHECKHEAD	(deprecated function)	1, 2, 3, 4, 5, or 6

Table 2. Commands used by the Arrayer script. Each command takes exactly one argument.

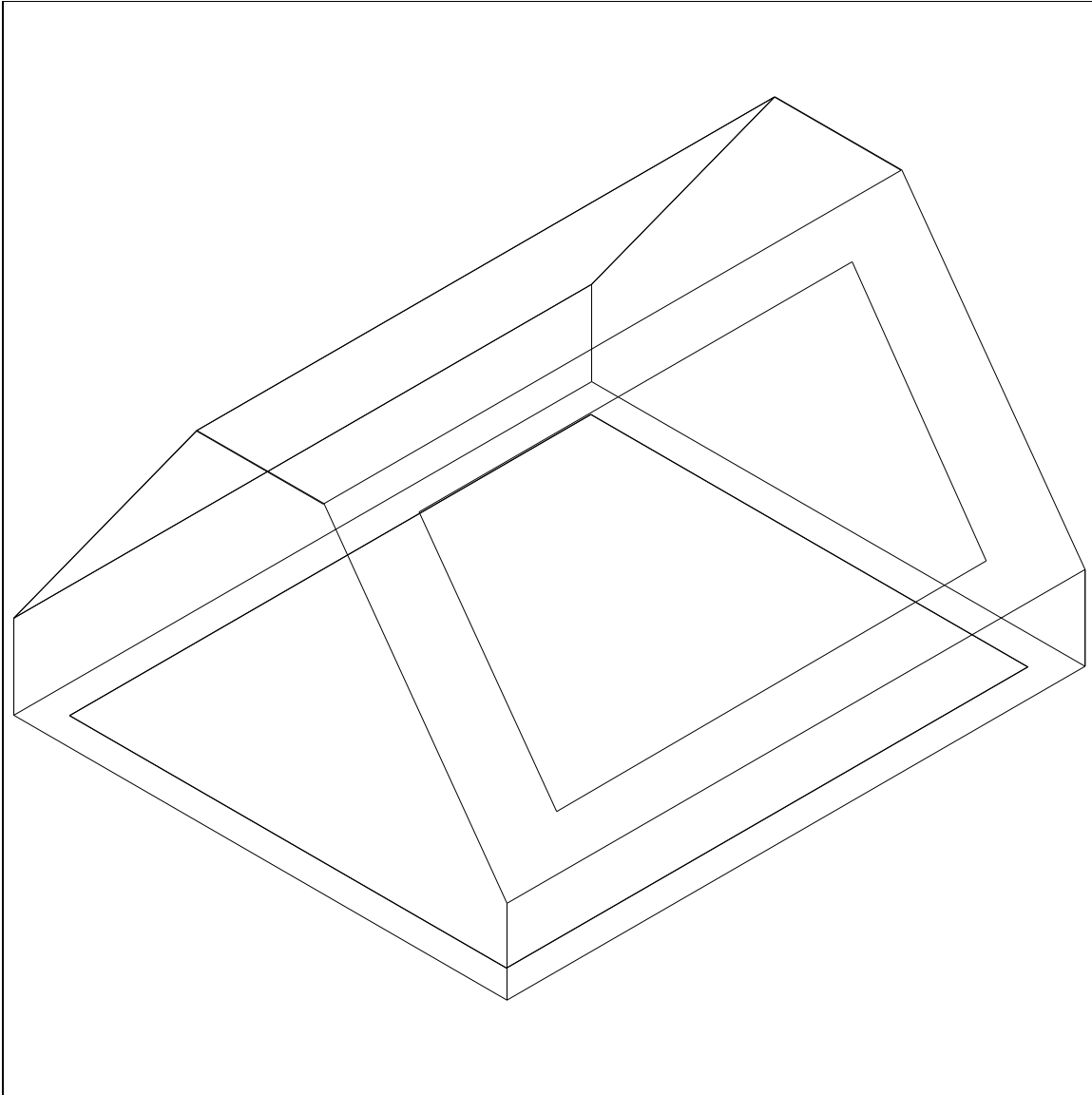
WHAT'S NEXT?

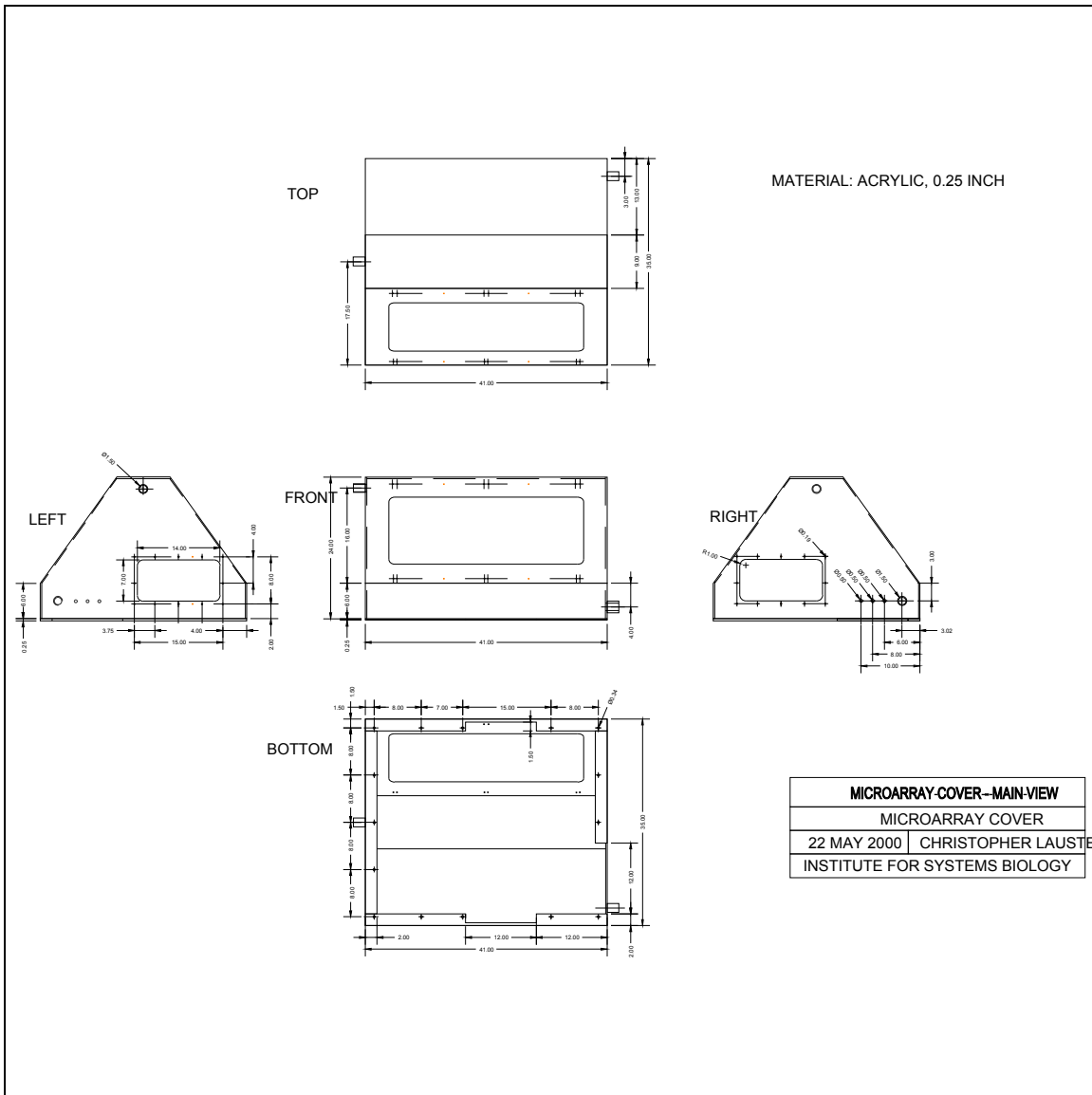
Improvements to the POSaM hardware and software are underway. We are currently adding a new quality control measure to the print head. As you may have noted, the droplet detector checks which nozzles are working before every round of printing. It isn't yet possible to track at what exact instant a nozzle fails. So for now, we always need to double-print. Better droplet monitoring could eliminate this need. We are also planning a new slide holder and wash area. Our current design holds more slides than we need, and the wash/dry steps are not as fast as we would like. We are working on a new design that might only hold eight slides, but will significantly speed washing and drying. Changes in the control software are underway. The code for Lombardi and Arrayer is—let's be honest—somewhat ugly. Also, some routing actions are cumbersome. For example, swapping different microarray designs in and out of a Lombardi lineup is slow. The scripting language could use some new features. We will soon be unveiling a new control program called “Pogo.” Pogo will be faster, easier to use, and it will understand our upcoming hardware changes. So before you build, be sure to check out our website for the latest versions of the documentation, the schematics, and the software.

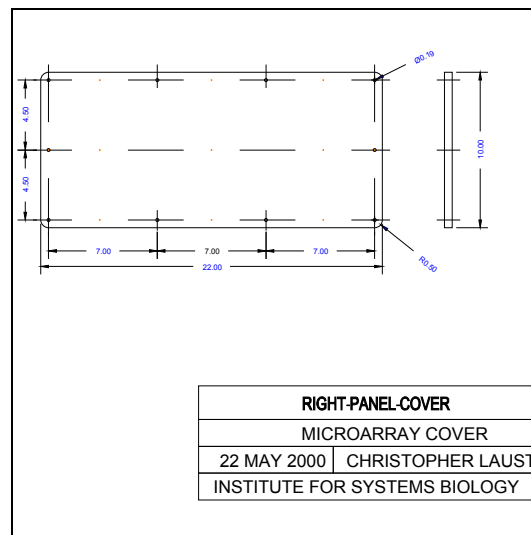
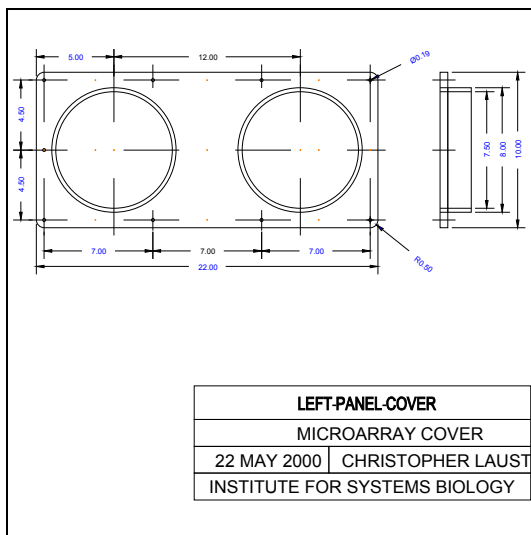
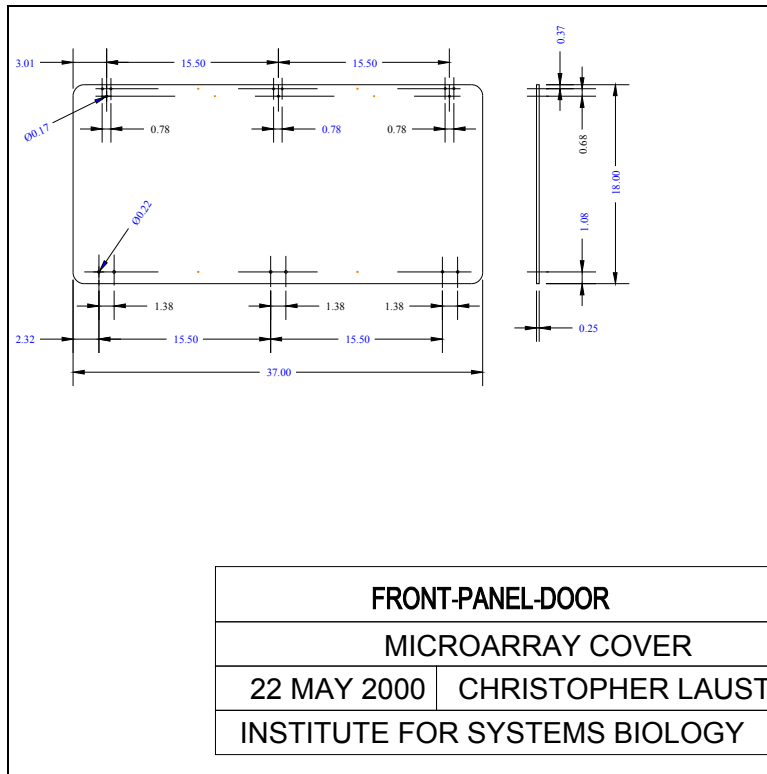
APPENDIX A: MECHANICAL DRAWINGS

[A1] Array Cover

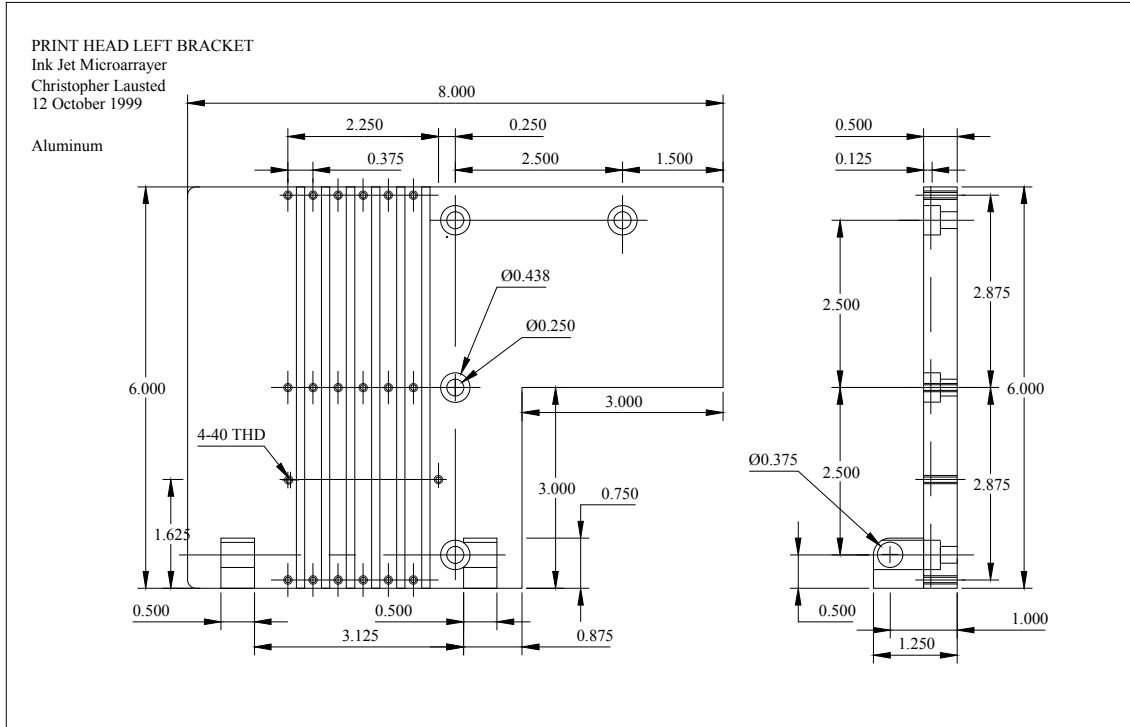
Not shown: Front door, exhaust port (top left, 1.5" dia.), inlet port (bottom rear, 1.5" dia.), removable glove panels (left and right sides).

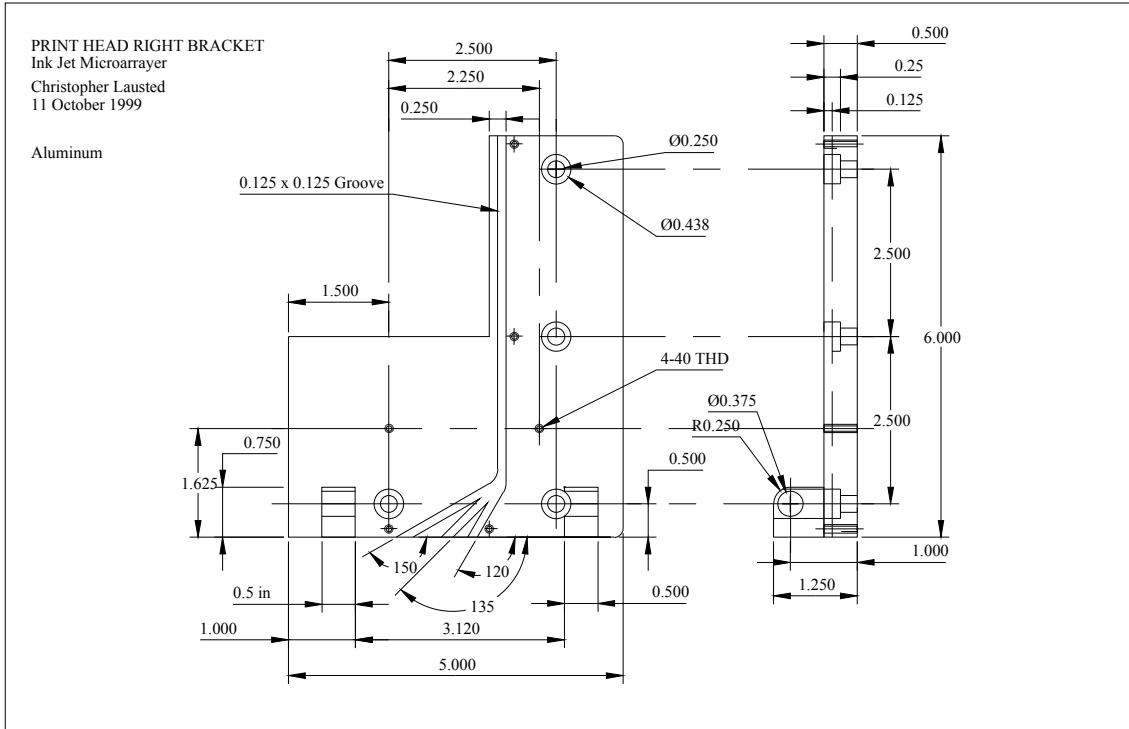




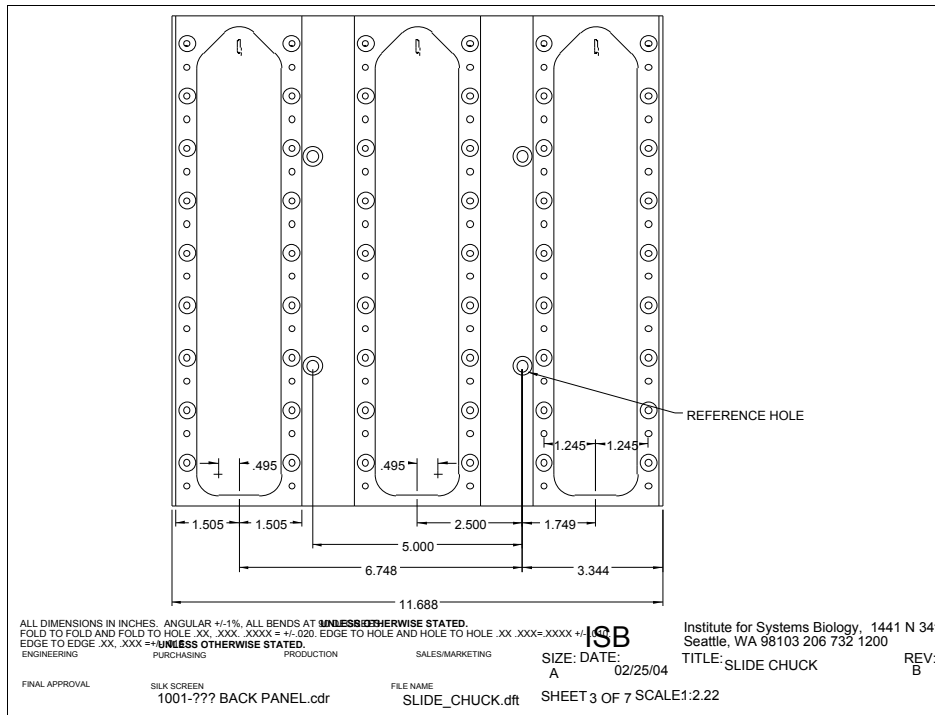
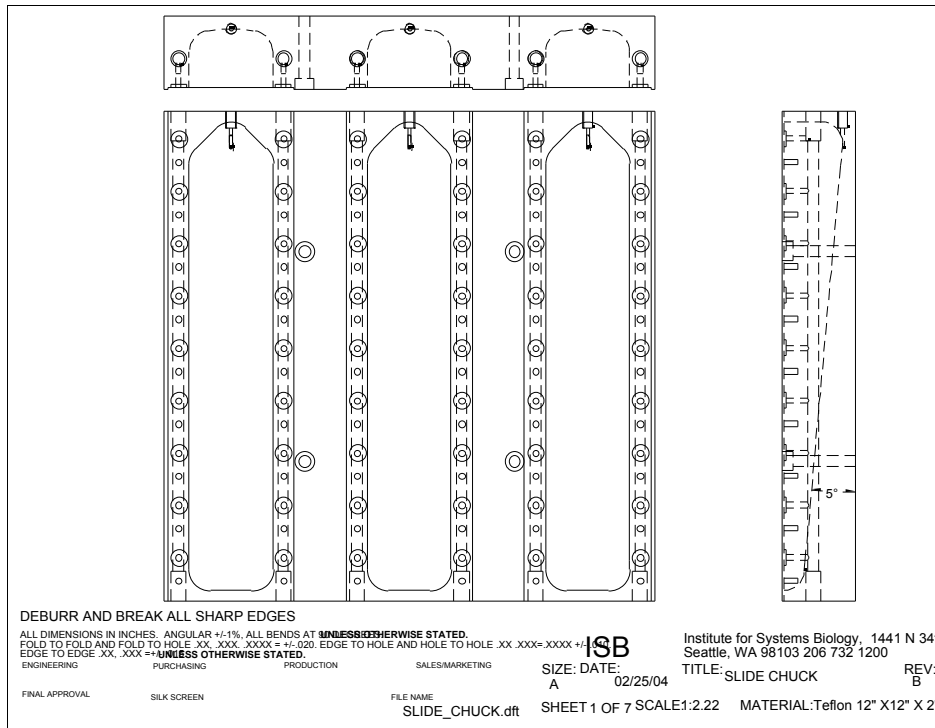


[A2] Print Head Mounting Brackets

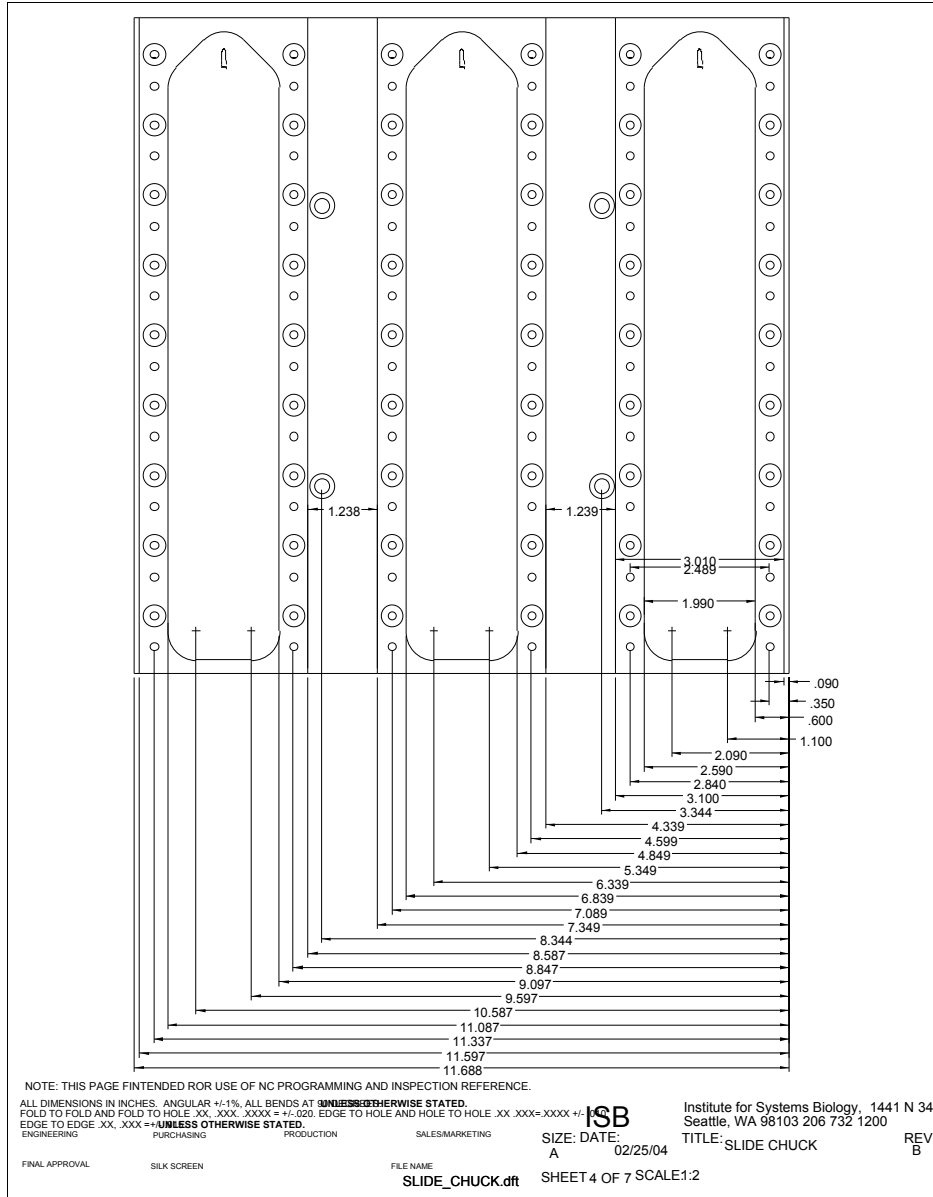




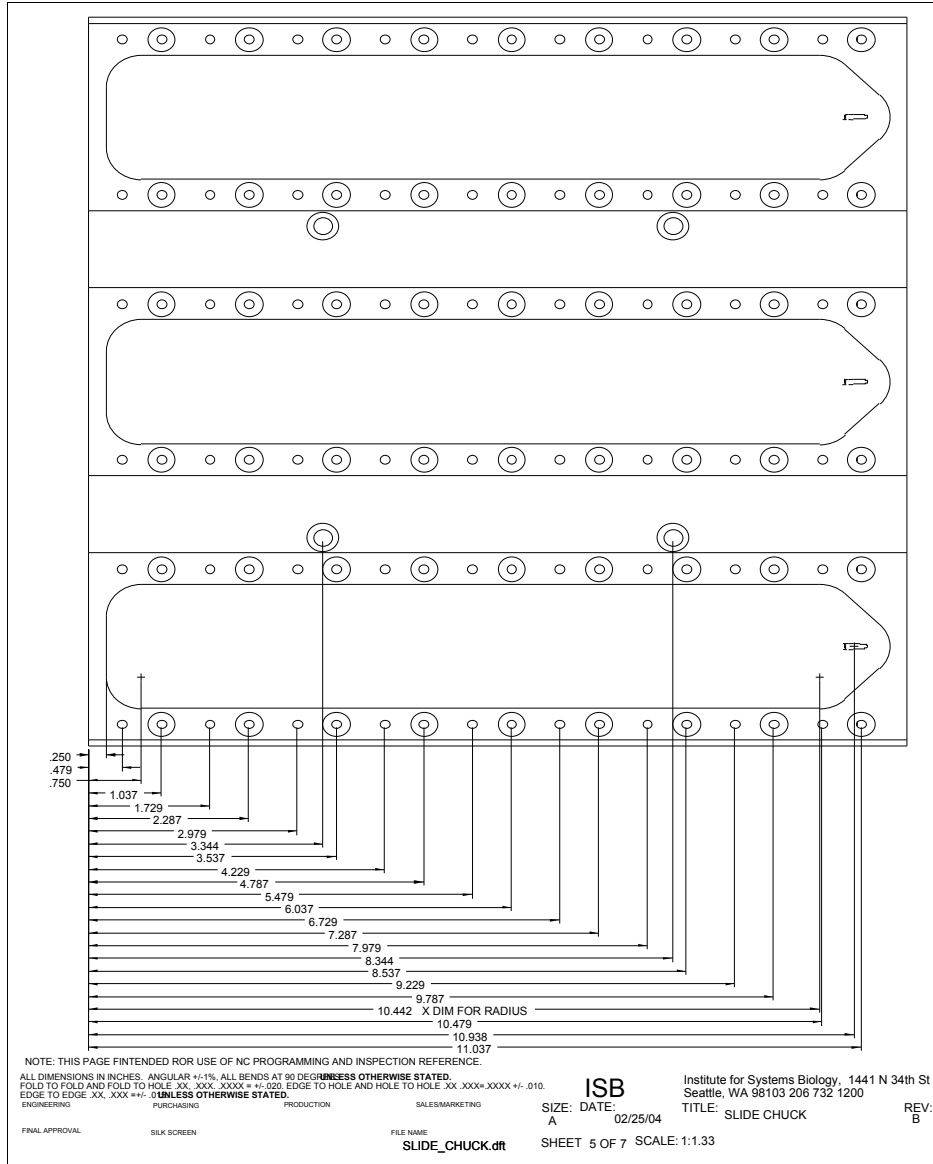
[A3] Slide Holder



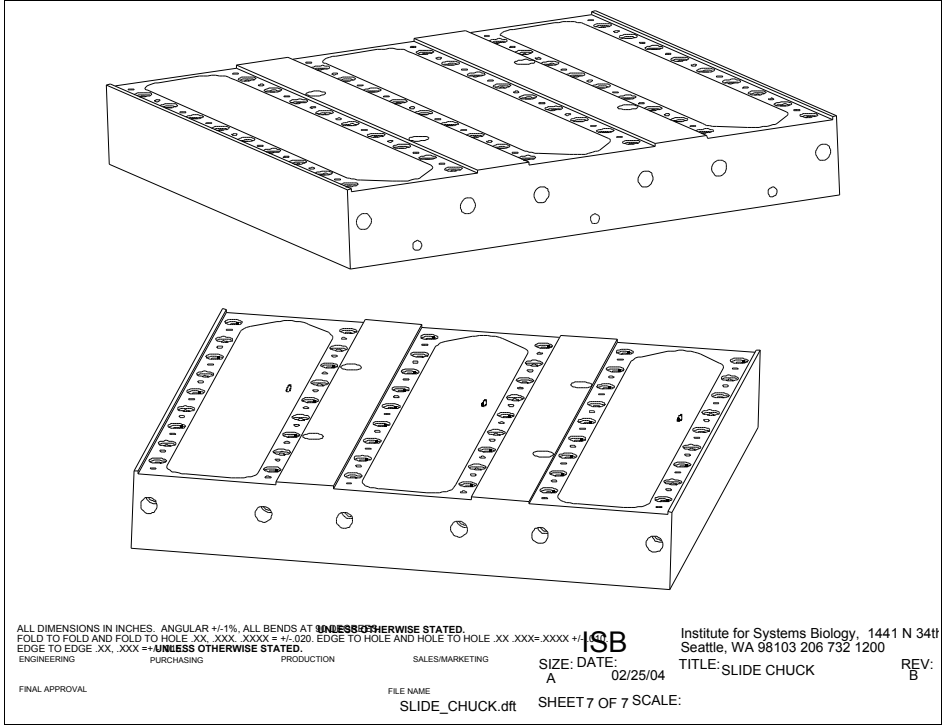
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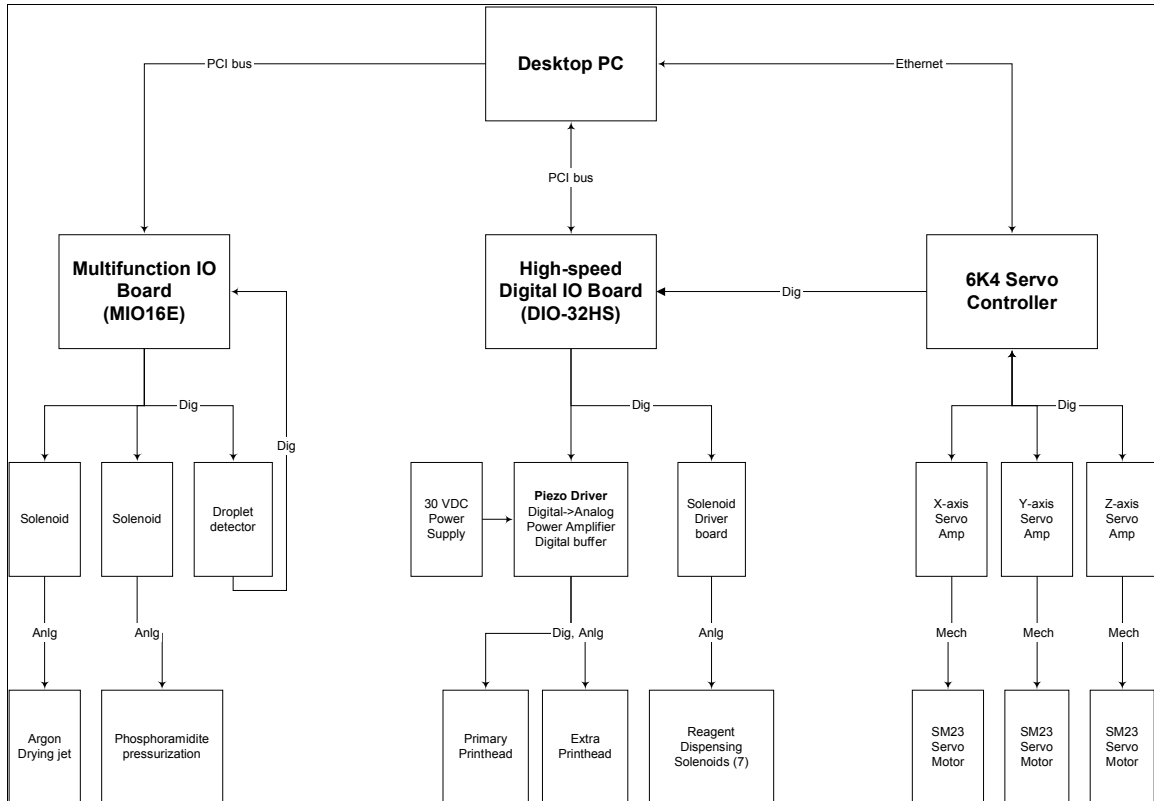
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APPENDIX B: ELECTRICAL

[B1] Electronics Overview

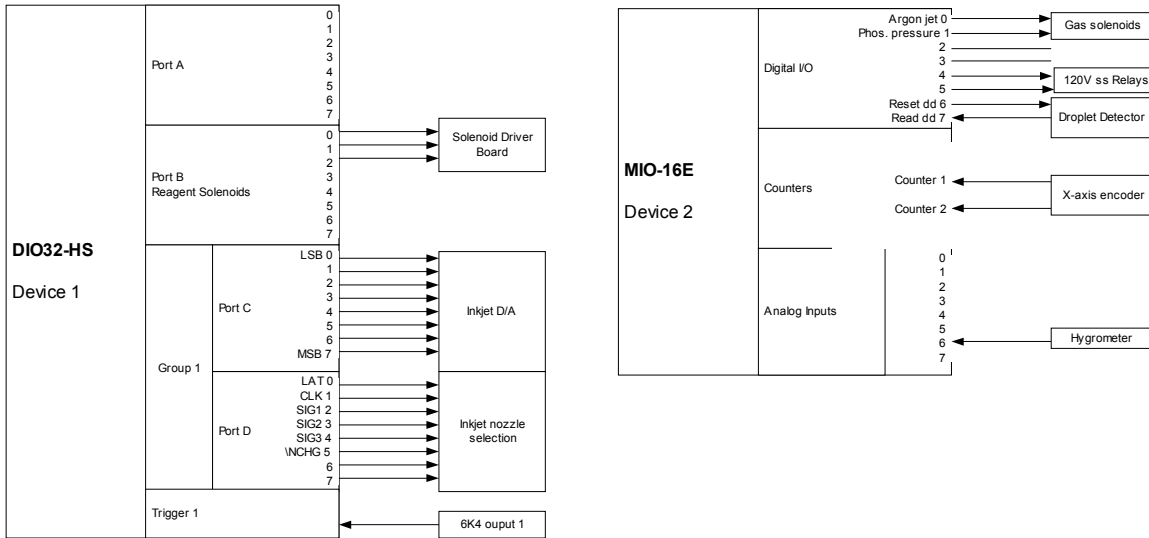
The diagram below provides an overview of the various POSaM electrical interfaces. The supervisory computer controls the piezoelectric printhead, the solenoid valves, and the droplet detection system via two PCI bus interface cards (DIO-32HS and MIO-16E). The computer commands the three-axis positioning system via Ethernet connection to the servo controller (6K4). Trigger positions are programmed in to the 6K4 and piezoelectric pulsing is triggered by digital signaling from the 6K4 to the DIO-32HS. (The solenoid labeled “phosphoramidite presssurization” is currently unused.)



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[B2] PCI Card Interfaces

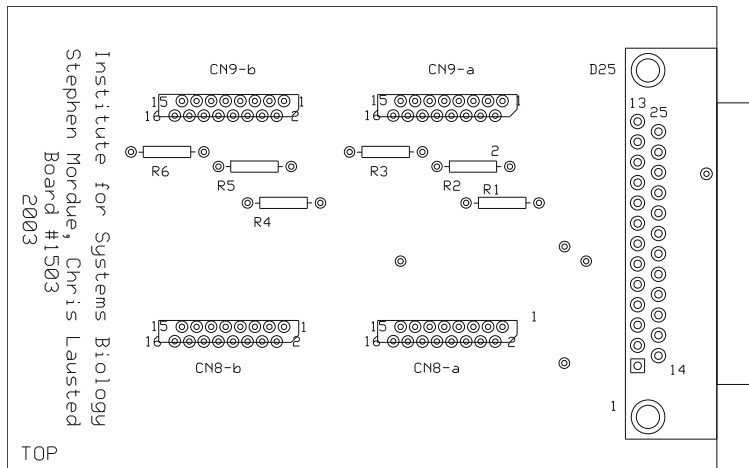
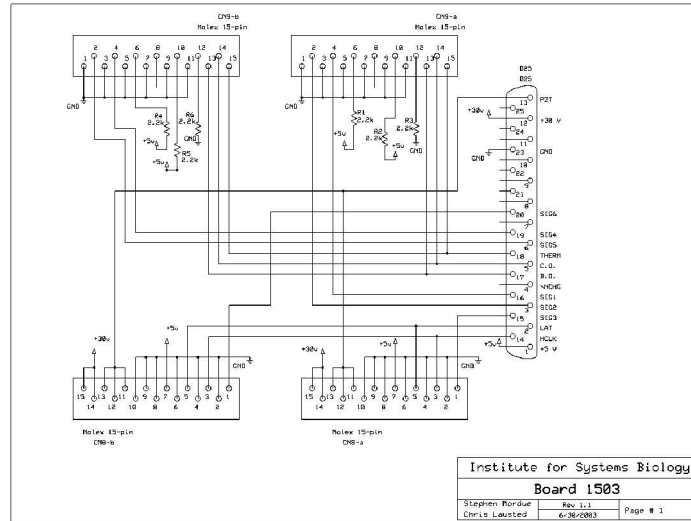
Two National Instruments interface cards are installed in the PCI slots of the PC. The high-speed digital card (DIO32-HS) controls the inkjet print head and eight 24VDC solenoids. (Six Argon solenoids are actually used.) It also receives a digital trigger signal from the 6K4 motion controller. This signal is used to trigger a piezo jet event. Thirteen digital lines remain available for future use. The multipurpose card (MIO-16E) connects to the nitrogen solenoids, the 120VAC solid-state relays, the droplet detector, and the X-axis precision linear encoder. It monitors analog voltage levels from the hygrometer and the droplet detector power supply. Four digital lines and six analog inputs remain available for future use. We intend to use the additional analog inputs to monitor pressure levels at the source dewar, the reagent bottles, and the vacuum.



[B3] Board 1503

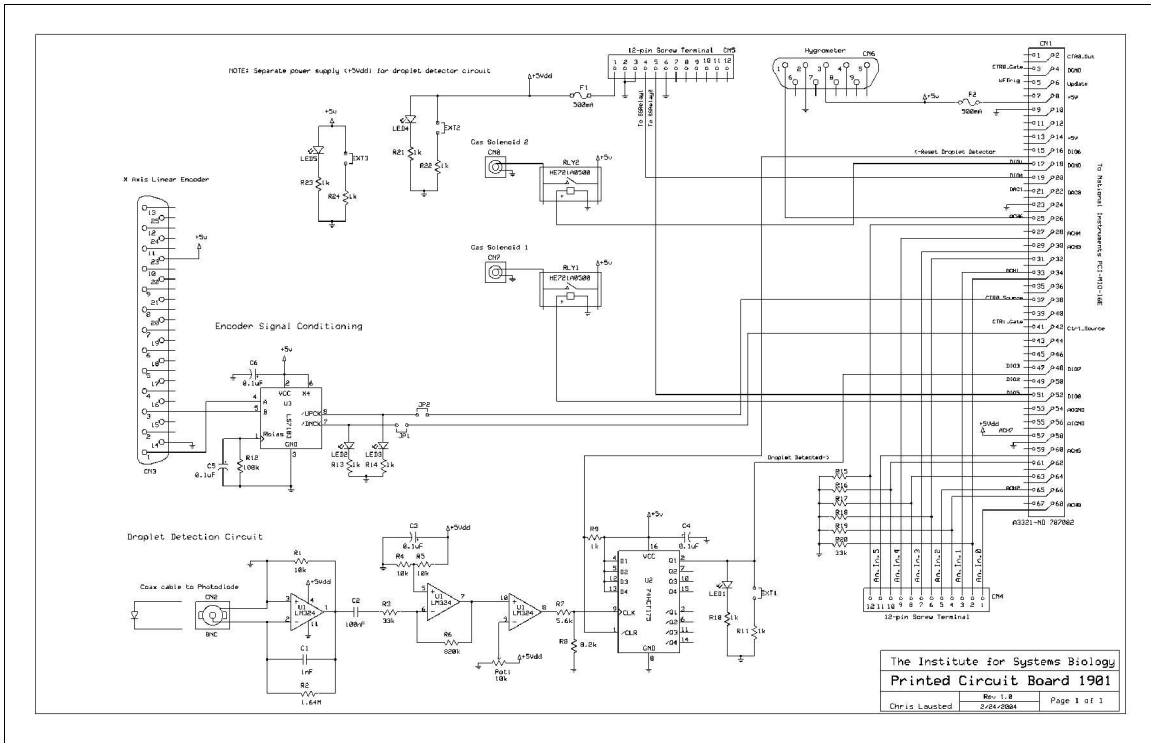
Circuit schematic

Top view of circuit board

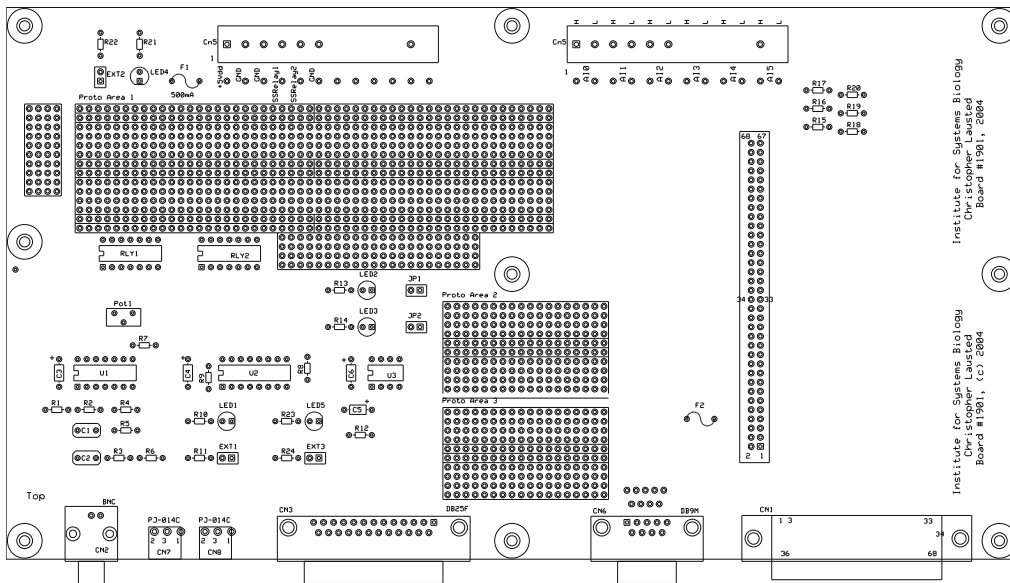


[B5] Board 1901

Circuit schematic

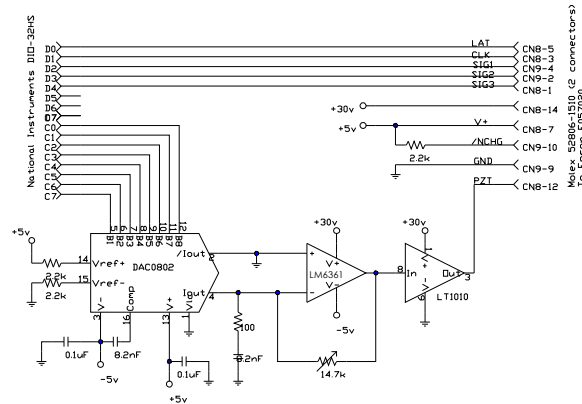


Top view of circuit board



[B6] More circuit information for boards 1804 and 1901

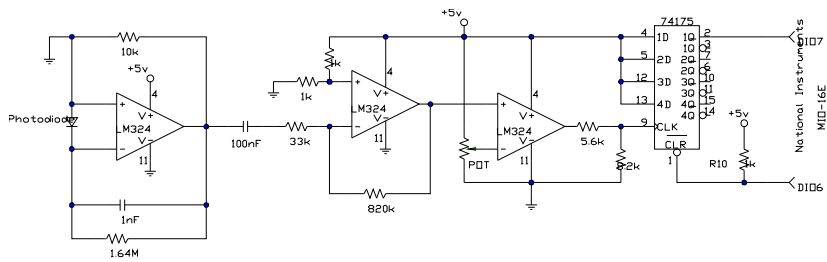
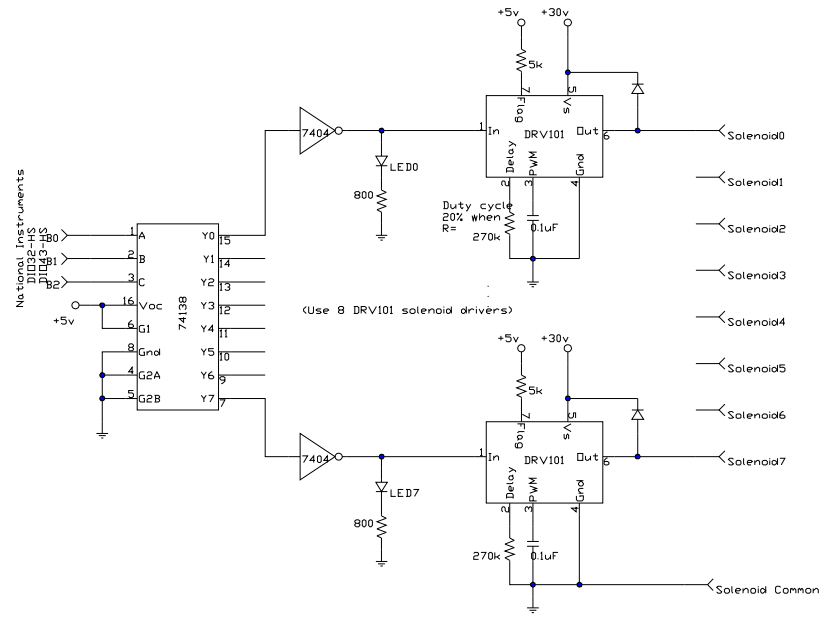
The print head drive circuit resides on board 1804. It uses two 8-bit ports of the DIO-32HS interface board. The lower eight bits connect to a high speed D/A converter (DAC0802, settling time of 100ns) which provides the piezoelectric pulsing voltage (0-30V). Current is boosted by a 150mA power buffer (LT1010). The higher bits provide the clock, latch and signal inputs to the print head.



The drive circuit for the teflon reagent solenoids resides also on board 1804. It uses three digital output lines to activate the seven solenoid valves which deliver washes, reagents, and vacuum to the arrayer work area. The driver IC (DRV101) provides a strong initial 100 ms pulse to open the solenoid valve, followed by a 24 kHz square wave with a 20% duty cycle.

The droplet detection circuit resides on board 1901. Droplet verification uses the high-frequency flash of forward-scattered laser light to indicate the presence of an ejected droplet. The output signal if the photodiode is amplified, high-pass filtered, and converted to a digital signal by threshold comparison. The state of the droplet detection is held in a D-type flip-flop. The circuit is reset just prior to droplet ejection and the state is read immediately after ejection.

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[B7] Configuration file for Gemini drives

Download and install this file to all three Gemini digital servo amplifiers using Motion Planner or a serial terminal communication program. This requires an RS-232 cable to be connected, one at a time, to each amplifier.

```

;Gemini GV Servo Drive Setup
;File name 'Gemini_GV_SM231AE_config.prg'
;Motor Setup
DMTR 1303 ;Motor ID (SM/SE231AE)
DMTIC 1.98 ;Continuous Current (Amps-RMS)
DMTICD 22.90 ;Continuous Current Derating (% derating at rated speed)
DMTKE 17.7 ;Motor Ke (Volts (0-to-peak)/krpm)
DMTRES 5.22 ;Motor Winding Resistance (Ohm)
DMTJ 51.970 ;Motor Rotor Inertia (kg*m*m*10e-6)
DPOLE 2 ;Number of Motor Pole Pairs
DMTW 100.0 ;Motor Rated Speed (rev/sec)
DMTIP 5.94 ;Peak Current (Amps-RMS)
DMTLMN 2.2 ;Minimum Motor Inductance (mH)
DMTLMX 2.9 ;Maximum Motor Inductance (mH)
DMTD 0.000017 ;Motor Damping (Nm/rad/sec)
DMTRWC 0.85 ;Motor Thermal Resistance (degrees Celsius/Watt)
DMTTCM 20.0 ;Motor Thermal Time Constant (minutes)
DMTTCW 0.33 ;Motor Winding Time Constant (minutes)
DMTAMB 40.00 ;Motor Ambient Temperature (degrees Celsius)
DMTMAX 125.00 ;Maximum Motor Winding Temperature (degrees Celsius)
;Drive Setup
DMODE 2 ;Drive Control Mode
DRES 4000 ;Drive Resolution (counts/rev)
DPWM 0 ;Drive PWM Frequency (kHz)
ERES 4000 ;Encoder Resolution (counts/rev)
ORES 4000 ;Encoder Output Resolution (counts/rev)
DMEPIT 0.00 ;Electrical Pitch (mm)
DMTLIM 1.2 ;Torque Limit (Nm)
DMTSCL 1.2 ;Torque Scaling (Nm)
DMVLIM 100.000000 ;Velocity Limit (rev/sec)
DMVSCL 100.000000 ;Velocity Scaling (rev/sec)
;Load Setup
LJRAT 0.0 ;Load-to-Rotor Inertia Ratio
LDAMP 0.0000 ;Load Damping (Nm/rad/sec)
;Fault Setup
FLTSTP 1 ;Fault on Startup Indexer Pulses Enable
FLTDSB 1 ;Fault on Drive Disable Enable
SMPER 4000 ;Maximum Allowable Position Error (counts)
SMVER 0.000000 ;Maximum Allowable Velocity Error (rev/sec)
DIFOLD 0 ;Current Foldback Enable
;Digital Input Setup
LH 0 ;Hardware EOT Limits Enable
INLVL 11000000 ;Input Active Level
INDEB 50 ;Input Debounce Time (milliseconds)
;Digital Output Setup
OUTLVL 0000000 ;Output Active Level
;Analog Monitor Setup
DMONAV 0 ;Analog Monitor A Variable
DMONAS 100 ;Analog Monitor A Scaling (% of full scale output)
DMONBV 0 ;Analog Monitor B Variable
DMONBS 100 ;Analog Monitor B Scaling (% of full scale output)
;Servo Tuning
DIBW 1000 ;Current Loop Bandwidth (Hz)
DVBW 100 ;Velocity Loop Bandwidth (Hz)
DPBW 25.00 ;Position Loop Bandwidth (Hz)
SGPSIG 1.000 ;Velocity/Position Bandwidth Ratio
SGIRAT 1.000 ;Current Damping Ratio
SGVRAT 1.000 ;Velocity Damping Ratio
SGPRAT 1.000 ;Position Damping Ratio
DNOTAF 0 ;Notch Filter A Frequency (Hz)
DNOTAQ 1.0 ;Notch Filter A Quality Factor
DNOTAD 0.0000 ;Notch Filter A Depth
DNOTBF 0 ;Notch Filter B Frequency (Hz)
DNOTBQ 1.0 ;Notch Filter B Quality Factor
DNOTBD 0.0000 ;Notch Filter B Depth
DNOTLG 0 ;Notch Lag Filter Break Frequency (Hz)
DNOTLD 0 ;Notch Lead Filter Break Frequency (Hz)
SGINTE 1 ;Integrator Enable

```

APPENDIX C: LISTS OF COMPONENTS

[C1] Robotics

Components necessary for POSAM robotics

Total: \$23,206.00

Label	Component	Description	Supplier	Part no.	No.	Cost Ea.	Cost
PR01	Motion controller, 4-axis	Compumotor 6K	Olympic contr	6K4	1	\$2595.0000	\$2,595.00
PR02	Servo drive, digital	Compumotor GV	Olympic contr	GV-L3E	3	\$845.0000	\$2,535.00
PR03	Servo motor, NEMA 1-stack	SM23	Olympic contr	SM231-AE-NGSN	3	\$732.0000	\$2,196.00
PR04	Cables, drive to motor	Yellow	Olympic contr	23GS-CABLE10	3	\$313.0000	\$939.00
PR05	Cables, controller to drive	Black	Olympic contr	71-016987-10	3	\$150.0000	\$450.00
PR06	Power supply, 24VDC, 2.5A	24V	Olympic contr	PS60W	1	\$250.0000	\$250.00
PR07	Motion table, 24 inch	Daedal 506	Olympic contr	506024ST-ES-D2L2C5M2E3	1	\$4533.0000	\$4,533.00
PR08	Motion table, 20 inch	Daedal 506	Olympic contr	506020ST-ES-D2L2C5M2E3	1	\$4372.0000	\$4,372.00
PR09	Motion table, 4 inch	Daedal 105	Olympic contr	106004BT-ES-D2L2C5M1E1	1	\$1724.0000	\$1,724.00
PR10	Brackets, vertical mounting	Anodized aluminum	Olympic contr	4990-08	2	\$250.0000	\$500.00
PR11	Personal computer, Pentium III	256MB RAM, 4 PCI slots	various	various	1	\$1000.0000	\$1,000.00
PR12	Optical Breadboard, 35x47x2 inch	Lightweight	Coherent	61-9312	1	\$1089.0000	\$1,089.00
PR13	Breadboard stand	Leveling adjustment	Coherent	54-0930	1	\$1023.0000	\$1,023.00

[C2] Optical Mechanical

Droplet detector opto/mechanical parts

Total: \$583.04

Label	Component	Description	Supplier	Part no.	No.	Cost Ea.	Cost
PO01	Filter, red glass	RG	Edmond Industrial Opti	K32-755	1	\$19.0000	\$19.00
PO02	Convex lens, 50 mm f.l.	1" dia	Edmond Industrial Opti	K32-478	1	\$21.9000	\$21.90
PO03	Post holder	½" dia	Edmond Industrial Opti	K02-656	2	\$26.0000	\$52.00
PO04	Laser LED, 670 nm, 3 mW	Red	Edmond Industrial Opti	K38-922	1	\$175.0000	\$175.00
PO05	Laser diode mount		Edmond Industrial Opti	K53-264	1	\$90.0000	\$90.00
PO06	Post clamp, right angle	½" dia	Edmond Industrial Opti	K53-357	2	\$19.8500	\$39.70
PO07	Photodiode, 1cm x 1cm square area		Edmond Industrial Opti	K53-373	1	\$98.0000	\$98.00
PO08	Ring nuts, 1"	1" dia	Thor Labs	SM1RR	3	\$5.0000	\$15.00
PO09	Mounting ring clamp, SM1 style	1" dia	Thor Labs	SMR1	1	\$16.0000	\$16.00
PO10	Barrel, SM1 style	1" dia	Thor Labs	SM1L20	1	\$18.0000	\$18.00
PO11	Post, 4" long	½" dia	Thor Labs	TR4	2	\$6.5000	\$13.00
PO12	Post, 8" long	½" dia	Thor Labs	TR8	2	\$8.0000	\$16.00
PO13	BNC cable		Digi-Key	290-1024-ND	1	\$9.44	\$9.44

[C3] PCB 1503

Components for printed circuit board 1503

Total: \$86.52

Label	Component	Description	Supplier	Part no.	No.	Cost Ea.	Cost
-	Circuit board 1503	File 1503.pcb	Express PCB	File 1503.pcb	3	\$20.6667	\$62.00
--	Aluminum stand-off	#4-40, 1" long, threaded	Digi-Key	8405K-ND	8	\$0.4850	\$3.88
--	Aluminum stand-off	#4-40, 1" long, threaded	Digi-Key	8405K-ND	8	\$0.4850	\$3.88
CN8a, CN8b,	Molex micro connector, 15 conductor	15 pin	Mouser	538-52806-151	8	\$0.7100	\$5.68
D25	D-SUB 25-pin connector plug - male	D25	Digi-Key	A2098	2	\$4.8400	\$9.68
R1-R6	resistor	2.2 kOhm 1/8W	Digi-Key	2.2KQBK-ND	25	\$0.0560	\$1.40

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[C4] PCB 1804

Components for printed circuit board 1804

Total: \$703.03

Label	Component	Description	Supplier	Part no.	No.	Cost Ea.	Cost
-	Circuit board 1804	File 1804.pcb	Express PCB	File 1804.pcb	2	\$88.6500	\$177.30
-	Aluminum stand-off	#4-40, 1" long, threaded	Digi-Key	8405K-ND	27	\$0.4850	\$13.10
-	LED, Nice panel mount 3mm green	Threaded	Digi-Key	67-1148-ND	10	\$0.8000	\$8.00
-	LED, Nice panel mount 3mm red	Threaded	Digi-Key	67-1147-ND	10	\$0.8000	\$8.00
C13-C16	plastic film capacitor	1.5 nF	Digi-Key	PS1H152J-ND	8	\$0.3500	\$2.80
C1-C8 C10 C12	aluminum electrolytic capacitor	0.1 uF	Digi-Key	P5559-ND	20	\$0.1520	\$3.04
C9 C11	plastic film capacitor	8.2 nF	Digi-Key	PS1H822J-ND	4	\$0.3700	\$1.48
CN1	D-SUB 25-pin connector receptacle - female	Pzt Head	Digi-Key	182-825F-ND	2	\$2.8700	\$5.74
PLUG04	D-SUB 25-pin connector -male	Matches CN1	Digi-Key	1125M-ND	2	\$3.6400	\$7.28
CN2	D-SUB 25-pin connector plug - male	6k4 Trigger	Digi-Key	A2098	2	\$4.8400	\$9.68
PLUG05	D-SUB 25-pin connector - female	Matches CN2	Digi-Key	1125F-ND	2	\$4.7600	\$9.52
CN3	D-SUB 15-pin connector receptacle - female	Solenoid Out	Digi-Key	A2101	2	\$2.8900	\$5.78
PLUG06	D-SUB 15-pin connector - male	Matches CN3	Digi-Key	2215M-ND	2	\$1.9100	\$3.82
Cn4	Amp 68-pin connector, male	Amp #. 2-174225-5	Digi-Key	A29093-ND	2	\$20.1900	\$40.38
Cn5	12-pin Screw Terminal	Screw Terminal	Digi-Key	277-1257-ND	2	\$4.3600	\$8.72
D1-D8	diode	1N4007	Digi-Key	1N4007DICT-ND	16	\$0.1360	\$2.18
F1-F4	Fuse	Fuse	Digi-Key	283-2111-ND	16	\$1.7300	\$27.68
H1-H2	Breakaway header mounts	16-pin Header mount	Digi-Key	WM6880-ND	4	\$4.4300	\$17.72
IC1	Digital to analog converter	DAC0802	Digi-Key	DAC0802LCN-ND	2	\$1.5800	\$3.16
IC15-IC16	NOT gate, hex	7404	Digi-Key	296-1605-5-ND	4	\$0.4400	\$1.76
IC2	Op amp	LM6361	Digi-Key	LM6361N-ND	2	\$2.9800	\$5.96
IC3	Follower	LT1010	Digi-Key	LT1010CN8	2	\$4.3800	\$8.76
IC4	Optoisolation, quad, darlington	PS2502	Digi-Key	PS2502-4	2	\$21.5000	\$43.00
IC5	AND gate, quad	7408	Digi-Key	DM74LS08N	2	\$0.6000	\$1.20
IC6	Decoder	74138	Digi-Key	SN74HC138N	2	\$0.4500	\$0.90
IC7-IC14	Solenoid driver	DRV101T	Digi-Key	DRV101T-ND	16	\$7.7000	\$123.20
L17, L19 L21, L23 L25, L27	LED	LED RED T1-3/4 W/STD	Digi-Key	HLMP3750ACM-ND	12	\$0.3500	\$4.20
L18, L20 L22, L24 L26, L28	LED	LED 3MM FLUSH YELL	Digi-Key	67-1149-ND	12	\$0.8000	\$9.60
L1-L8	LED	LED GREEN HI-BRITE T	Digi-Key	P461-ND	16	\$0.2750	\$4.40
L9-L16	LED	LED 3MM FLUSH GREE	Digi-Key	67-1148-ND	16	\$0.8000	\$12.80
PS1	+/- 5V Power Supply	Linear Dual 5V @1.5 A	Digi-Key	271-2010-ND	1	\$54.8100	\$54.81
PS2	+/- 30V Power Supply	Linear Single 28V@1A	Digi-Key	271-2017-ND	1	\$37.0300	\$37.03
R1	potentiometer	~4.7k Ohms	Digi-Key	3214J-103ECT-ND	2	\$3.2200	\$6.44
R10-R13	resistor	5.6 kOhm 1/8W	Digi-Key	5.6KEBK-ND	25	\$0.0560	\$1.40
R14-R25	resistor	1 kOhm 1/8W	Digi-Key	1.0KEBK-ND	25	\$0.0560	\$1.40
R2	resistor	10k Ohms 1/8W	Digi-Key	10KEBK-ND	25	\$0.0560	\$1.40
R3	resistor	100 Ohm 1/8W	Digi-Key	100EBK-ND	25	\$0.0560	\$1.40
R4-R5	resistor	2.2 kOhm 1/8W	Digi-Key	2.2KEBK-ND	25	\$0.0560	\$1.40
R6-R9	resistor	1.1 kOhm 1/8W	Digi-Key	1.1KEBK-ND	25	\$0.0560	\$1.40
RA1	resistor array	4.7 kOhms	Digi-Key	4116R-1-472-ND	2	\$0.6000	\$1.20
RA2	resistor array	270 kOhms	Digi-Key	4116R-1-274-ND	2	\$0.6000	\$1.20
RA3-RA4	resistor array	820 Ohms	Digi-Key	4116R-1-821-ND	4	\$0.6000	\$2.40
S1 S4 S6 S17-S20	Socket	16-pin Socket	Digi-Key	A9416-ND	14	\$0.8700	\$12.18
S2-S3	Socket	8-pin Socket	Digi-Key	A9408-ND	4	\$0.5700	\$2.28
S5 S15-S16	Socket	14-pin Socket	Digi-Key	A9414-ND	6	\$0.9900	\$5.94

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[C5] PCB 1901

Components for printed circuit board 1901

Total: \$482.08

Label	Component	Description	Supplier	Part no.	No.	Cost Ea	Cost
-	Circuit board 1901	File 1901.pcb	Express PCB	File 1901.pcb	2	\$89.2000	\$178.40
-	Aluminum stand-off	#4-40, 1" long, threaded	Digi-Key	8405K-ND	27	\$0.4850	\$13.10
-	LED, Nice panel mount 3mm green	Threaded	Digi-Key	67-1148-ND	10	\$0.8000	\$8.00
-	LED, Nice panel mount 3mm red	Threaded	Digi-Key	67-1147-ND	10	\$0.8000	\$8.00
-	LED	LED 3MM FLUSH GREEN	Digi-Key	67-1148-ND	10	\$0.8000	\$8.00
-	LED	LED 3MM FLUSH YELLOW	Digi-Key	67-1149-ND	10	\$0.8000	\$8.00
C1	Ceramic Disc Capacitor (0.25in)	1nF	Digi-Key	P10461-ND	10	\$0.3000	\$3.00
C2	Radial Leaded Capacitor (0.2in)	100nF	Digi-Key	399-2143-ND	10	\$0.1210	\$1.21
C3-6	Electrolytic Capacitor (0.3in)	0.1uF, 50V	Digi-Key	P10967-ND	10	\$0.3600	\$3.60
CN1	Amp 68-pin connector, male	Amp # 2-174225-5	Digi-Key	A29093-ND	2	\$20.1900	\$40.38
CN2	BNC connector	Amphenol 31-5431-2010	Digi-Key	ARF1065NW-ND	2	\$7.5800	\$15.16
CN3	D-SUB 25-pin connector receptacle-female	DB25 PCB mount	Digi-Key	182-825F-ND	2	\$2.8700	\$5.74
PLUG01	D-SUB 25-pin connector receptacle-male	DB25 solder	Digi-Key	1125M-ND	2	\$3.4500	\$6.90
CN4-5	12 pin Screw Terminal	Screw Terminal	Digi-Key	277-1257-ND	2	\$4.3600	\$8.72
CN6	D-SUB 9-pin connector plug-male	DB9 PC mount	Digi-Key	182-809M-ND	2	\$1.8300	\$3.66
PLUG02	D-SUB 9-pin connector plug-female	DB9 solder	Digi-Key	2209F-ND	2	\$1.6200	\$3.24
CN7-8	Connector power jack 1mm	CUI part # PJ-014C	Digi-Key	CP-014C-ND	4	\$0.4100	\$1.64
PLUG03	Connector power plug 1mm	Matches CN7 and CN8	Radio Shack	NA	4	\$0.4900	\$1.96
F1-2	Fuse(0.2in)	500mA, 250V	Digi-Key	283-2111-ND	10	\$1.7300	\$17.30
H1-5	Breakaway square header (80pin)	0.1inch	Digi-Key	WM6880-ND	2	\$4.4300	\$8.86
JP1-2	Closed end shorting jumper	0.1inch	Digi-Key	S9001-ND	10	\$0.1160	\$1.16
LED1-3	LED	LED GREEN HI-BRITE T	Digi-Key	P461-ND	10	\$0.2750	\$2.75
LED4-5	LED	LED RED T1-3/4 W/STD	Digi-Key	HLMF3750ACM-ND	10	\$0.3500	\$3.50
Pot1	Potentiometer	3386H series 10k	Digi-Key	3386H-103-ND	2	\$1.2900	\$2.58
R1, 4-5	Carbon Film 1/8W (0.25in)	10kOhm	Digi-Key	10kEBK-ND	10	\$0.0560	\$0.56
R12	Carbon Film 1/8W (0.25in)	100kOhm	Digi-Key	100kEBK-ND	10	\$0.0560	\$0.56
R13-14	Carbon Film 1/8W (0.25in)	1kOhm	Digi-Key	1.0kEBK-ND	10	\$0.0560	\$0.56
R15-20	Carbon Film 1/8W (0.25in)	33kOhm	Digi-Key	33kEBK-ND	10	\$0.0560	\$0.56
R2	Carbon Film 1/8W (0.25in)	1.64MOhm	Digi-Key	1.6MEBK-ND	10	\$0.0560	\$0.56
R21-24	Carbon Film 1/8W (0.25in)	1kOhm	Digi-Key	1.0kEBK-ND	10	\$0.0560	\$0.56
R3	Carbon Film 1/8W (0.25in)	33kOhm	Digi-Key	33kEBK-ND	10	\$0.0560	\$0.56
R6	Carbon Film 1/8W (0.25in)	820kOhm	Digi-Key	820kEBK-ND	10	\$0.0560	\$0.56
R7	Carbon Film 1/8W (0.25in)	5.6kOhm	Digi-Key	5.6kEBK-ND	10	\$0.0560	\$0.56
R8	Carbon Film 1/8W (0.25in)	8.2kOhm	Digi-Key	8.2kEBK-ND	10	\$0.0560	\$0.56
R9-11	Carbon Film 1/8W (0.25in)	1kOhm	Digi-Key	1.0kEBK-ND	10	\$0.0560	\$0.56
RLY1-2	Relay		Digi-Key	HE 100-ND	4	\$1.5900	\$6.36
SO1-2	Socket (14-pin)	0.3inch	Digi-Key	A9414-ND	8	\$0.7920	\$6.34
SO3	Socket (8-pin)	0.3inch	Digi-Key	A9408-ND	4	\$0.5700	\$2.28
U1	Op amp, quad	LM324N	Digi-Key	296-1391-5-ND	1	\$0.4900	\$0.49
U2	D flip-flop, quad	74HCT175	Digi-Key	296-2101-5-ND	1	\$0.5000	\$0.50
U3	Encoder signal conditioner	LS7183	usdigital.com	LS7183	2	\$3.0500	\$6.10
HU1	Humidity Sensor	HM1520	Digi-Key	HM1520-ND	2	\$49.5000	\$99.00

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[C6] Other Parts

Miscellaneous POSaM components

Total: \$8,663.05

Label	Component	Description	Supplier	Part no.	No.	Cost Ea.	Cost
ME01	Rack mountable case, 19"	Electronics rack	Mouser (Manfield, TX)	63-CH-14404	2	\$78.8000	\$157.60
ME02	Chassis cover, 19"	Electronics rack	Mouser (Manfield, TX)	563-C-14432	2	\$26.4000	\$52.80
ME03	AC power inlet with fuse holder	Electronics rack	Mouser (Manfield, TX)	161-0717-187	4	\$2.0900	\$8.36
ME04	Power switch – SPST	Electronics rack	Mouser (Manfield, TX)	642-631H2	4	\$5.0800	\$20.32
ME05	Fuse 5x20mm 5A 250V	Electronics rack	Digi-Key (Thief River Fa)	F952	10	\$0.2300	\$2.30
ME06	DIN rail	Electronics rack	Mouser (Manfield, TX)	651-5602100	1	\$8.9100	\$8.91
ME07	Power strip and surge protector, rack mount	Electronics rack	Mouser (Manfield, TX)	563-POS-1295-S	1	\$49.5000	\$49.50
ME08	Shelf, 19"	Electronics rack	Mouser (Manfield, TX)	563-SA1278-BT	1	\$82.8000	\$82.80
ME09	Panel, 19"	Electronics rack	Mouser (Manfield, TX)	546-PBPA19014BK2	1	\$40.9900	\$40.99
ME10	Connector, DB-25M	Electronics rack	Digi-Key (Thief River Fa)	F1125M-ND	2	\$3.2500	\$6.50
ME11	Hood, DB-25 connector	Electronics rack	Digi-Key (Thief River Fa)	970-25MP-ND	2	\$5.8600	\$11.72
ME12	Digital I/O board (PCI-6533 a.k.a. DIO-32HS)	Electronics rack	National Instruments	(A777314-01	1	\$995.00	\$995.00
ME13	Multi I/O board, (PCI-6040E a.k.a. MIO-16E)	Electronics rack	National Instruments	(A777383-01	1	\$845.00	\$845.00
ME14	Cable, 68 pin, for PCI-MIO-16E	Electronics rack	National Instruments	(A184749-01	1	\$95.00	\$95.00
ME15	Cable, 68 pin, for PCI-DIO-32HS	Electronics rack	National Instruments	(A183432-01	1	\$125.00	\$125.00
MC01	Draw Latch, Type 304 SS	Cover	Small Parts (Miami Lak)	B-LD-1	6	\$6.6000	\$39.60
MC02	Hardware, stainless steel	Cover	Digi-Key (Thief River Fa)	1607-KIT-ND	1	\$39.9500	\$39.95
MC03	Hinges	Cover			3		\$0.00
MC04	Fender washers, 1" dia, ¼" hole, 25/pk	Cover	Small Parts (Miami Lak)	B-WXF-1/4	1	\$5.2000	\$5.20
MC05	Fender washers, 1½" dia, 25/pk	Cover	Small Parts (Miami Lak)	B-WXF-3/8	1	\$6.9500	\$6.95
MC06	Weather seal, 5/16" thick, 19/32" wide	Cover	Hardware store	#63669 M+D Building Products	4	\$5.0000	\$20.00
MC07	Weather seal, 5/16" thick, "D" profile	Cover	Hardware store	M+D Building Products or equi	4	\$5.0000	\$20.00
MC08	Box gloves and fastening clamps	Cover	VWR	56223-154	1	\$100.5000	\$100.50
MC09	Polyethylene tape, 18m roll 2" wide	Cover	Small Parts (Miami Lak)	B-HTT-190532	1	\$33.6500	\$33.65
MC10	Valve, low resistance air, 22-30mm diameter	Cover	Instrumentation Industr	BE 131 or similar	10	\$15.0000	\$150.00
MC11	(Shop to fabricate cover)	Cover	Clear Cut Plastics (See	Contact: Dave Ryan	1	\$800.0000	\$800.00
-	Tubing, 3/8" OD, Polyethylene or copper	Gas pressure	Hardware store	Hardware store	1	\$10.0000	\$10.00
-	Misc. brass fittings, "T" connectors, and adapte	Gas pressure	Hardware store	Hardware store	1	\$100.0000	\$100.00
MG01	Nylon fittings	Gas pressure	Small Parts (Miami Lak)	B-TCNY-K5	1	\$98.5000	\$98.50
MG02	Vacuum gauge, 0-30inHg range.	Gas pressure	Various	Ashcroft or equivalent	1		\$0.00
MG03	Solenoid, ET-2, 6Volt	Gas pressure	Airtronics of Bellevue, W	ET-2-6-L	2	\$12.0000	\$24.00
MG04	Pressure regulator, 0-10psi range	Gas pressure	Various	8067 or equivalent	2		\$0.00
MG05	Check valves, 0.1psi cracking pressure	Gas pressure	Omnifit	11340	6	\$20.0000	\$120.00
MG06	Regulator, 0-200psi	Gas pressure	Various	Controls Corp. 2023301-580M c	1	\$120.0000	\$120.00
MG07	Solenoid valve, large, 120VAC	Gas pressure	iprocessmart.com	Burkert 450914V	1	\$68.0000	\$68.00
MG08	Rotameter/valve 0-100 liters per minute	Gas pressure	Dwyer (Michigan City, I	VFA-27-BV	1	\$26.2500	\$26.25
MG09	Aluminum tubing 1/8" OD, 12" long	Gas pressure	Hardware store	NA	1	\$4.0000	\$4.00
MG10	Manifold	Gas pressure	Small Parts (Miami Lak)	B-TCM-13-20/6	2	\$10.8500	\$21.70
MG11	Tube clamp valve for flexible tubing, 10/pk	Gas pressure	Small Parts (Miami Lak)	B-DC-1-4	1	\$3.7500	\$3.75
MG12	Air amplifier (Blower)	Gas circulation	ARTX	Hardware store	1	\$250.0000	\$250.00
MG13	"T" joint, ABS plastic, 1½" size	Gas circulation	Hardware store	NA	1	\$2.0000	\$2.00
MG14	Adaptor, ABS plastic, 4" to 1½" size	Gas circulation	Hardware store	NA	1	\$2.0000	\$2.00
MG15	End cap, ABS plastic, 1½" size	Gas circulation	Hardware store	NA	1	\$1.0000	\$1.00
MR01	GL-45 ported caps	Reagent handling	Western Analytical	BC-1-72-24	6	\$19.5000	\$117.00
MR02	Bottle, GL45 cap, 500mL, case	Reagent handling	VWR	16157-169	1	\$98.1200	\$98.12
MR03	Bottle, GL45 cap, 2L, case	Reagent handling	VWR	16157-227	1	\$317.4300	\$317.43
MR04	1/8 OD Teflon tubing 50ft and fittings	Reagent handling	Upchurch Scientific	1509L	1	\$147.0000	\$147.00
MR05	Teflon fitting nuts, 10 pack	Reagent handling	Upchurch Scientific	P-306x	3	\$10.0000	\$30.00
MR06	Ferrules, 10 pack.	Reagent handling	Upchurch Scientific	P-300x	3	\$10.0000	\$30.00
MR07	1/16" OD Teflon tubing, 20ft	Reagent handling	Upchurch Scientific	1548	3	\$40.0000	\$120.00
MR08	Tefzel fitting nuts, 10 pack	Reagent handling	Upchurch Scientific	P-215RX	3	\$10.0000	\$30.00
MR09	Solenoid valve, Teflon, 14VDC	Reagent handling	Angar	190057	6	\$325.0000	\$1,950.00
MP01	Epson Stylus Photo 700 printer	Print head	Epson or Ebay	Photo 700	1	\$100.0000	\$100.00
MP01a	Cable, 15 cond flexible flat	Print head	Epson	Extract from Epson Stylus Pho	2	\$0.0000	\$0.00
MP01b	Print head & ink holder, black	Print head	Epson	Extract from Epson Stylus Pho	1	\$0.0000	\$0.00
MP01c	Print head slide, silver	Print head	Epson	Extract from Epson Stylus Pho	1	\$0.0000	\$0.00
MP02	Vial, 1mL clear, conical bottom, 12/pk	Print head	Fisher	06-444B	1	\$57.5700	\$57.57
MP03	Septa, Pierce "Tuf-bond" 72/pack	Print head	Fisher	P112712	2	\$47.0000	\$94.00
MP04	Needles, non-coring, #20 x 4 inches	Print head	Fisher	14-825-15AD	1	\$87.0000	\$87.00
MP05	Piezoelectric print head	Print head	Agson	F057020	5	\$85.0900	\$425.45
MM01	Flexible conduit, 1½" I.D., 25ft length	Conduit	Hardware store	NA	1	\$10.0000	\$10.00
MM02	Aluminum tubing, square, 1" wide, 12" long	Solenoid tower	Hardware store	e.g. Small Parts LSAT-063/16-	1	\$2.5000	\$2.50
MM03	Threaded rod, ¼-20, 14-inches long	Solenoid tower	Hardware store	e.g. Small Parts B-TRX-1420	1	\$12.0000	\$12.00
MM04	Bushing, ¼" ID, 1" long	Spacer	Hardware store	e.g. Small Parts B-RSA-14/16	16	\$1.7350	\$27.76
MM05	Bushing, ¼" ID, ½" long	Spacer	Hardware store	e.g. Small Parts B-RSA-14/8	8	\$1.2950	\$10.36
MM06	Teflon block 12x12x2" (raw material for machine	Slide holder	Port Plastics	28000190	1	\$321.0000	\$321.00
MM07	O-rings, 3/8" OD, 1/4" ID	Slide holder	Small Parts (Miami Lak)	B-ORS-010	100	\$0.1800	\$18.00
MM08	Machine shop fabrication, slide holder	Labor					
MM09	Machine shop fabrication, print head holder	Labor					
MM10	Punch, arch, 3/8 inch	Tool	Small Parts (Miami Lak)	B-ARCH-6	1	\$9.9100	\$9.91
MM11	Filter, Whatman P/N 6704-1500, a "Carbon Cap	Fume filter	Fisher	09-744-37	1	\$79.1000	\$79.10

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EXHIBIT 4

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Covalent end-immobilization of oligonucleotides onto solid surfaces

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Covalent end-immobilization of oligonucleotides onto solid surfaces

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Author: Lee, Ivan H. (Ivan Hao), 1967-

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Advisor: Paul E. Laibinis.

Department: Massachusetts Institute of Technology. Dept. of Chemical Engineering.

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Abstract:

With the completion of the Human Genome Project, the focus of genetics research has shifted towards functional genomics, with emphasis on gene expression and polymorphism studies. To this end, there is rapidly increasing interest in solid-phase, high-throughput, combinatorial microarrays for DNA assays. For this purpose I synthesized oligonucleotides (oligos) stepwise onto derivatized SiO₂ surfaces. Then double-stranded (ds)DNA molecules with "dangling end" oligo overhangs were immobilized onto the oligo surface by hybridization. Photolysis of psoralen crosslinkers covalently immobilized the dsDNA molecules to the oligo surface. The covalently end-attached dsDNA formed brush-like structures where the dsDNA strand could react under conditions resembling the natural solution-state found in vivo. This method minimized the possibility of nonspecific surface interactions, and could be developed for site-specific segregation of mixed dsDNA sequences from solution onto surface microarrays. Oligo surfaces with different densities were synthesized to determine the conditions that optimize dsDNA hybridization. The oligo surface density was controlled by derivatizing the SiO₂ surface with mixed compositions of alkylsilane molecules (X-(CH₂)₁₁-SiCl₃, X= OH or CH₃). X-ray photoelectron spectroscopy was used in conjunction with commercially available iodine-labeled nucleotides for quantifying oligo surface densities and stepwise reaction (coupling) efficiencies.(cont.) ³²P-radiolabeled complementary oligos and dangling-end dsDNA sequences also were used to determine hybridization yields and efficiencies. The experimental results clearly indicated that oligo coupling efficiency increased with

decreasing oligo surface density, and also with increased coupling time. Consequently, I maximized the yield of full-length surface oligos by manipulating these reaction conditions. In addition, hybridization efficiency was inversely related to oligo surface density, and total hybridization yield was achieved at an oligo surface density of between 2 and 4×10^{-13} moles/cm². The oligo surfaces were found to be thermally stable and reusable for performing multiple hybridization experiments on glass slides. dsDNA with 5' oligo overhangs were generated by PCR with a customized oligo primer. The dsDNA molecules were successfully immobilized onto oligo surfaces, at surface densities of approximately 2×10^{-13} moles/cm². The spatial addressability of patterned oligo surfaces was demonstrated. Psoralen crosslinking was observed to proceed at 30-80% efficiency, compared to optimal 50% efficiency in solution phase. Upon heating the end-immobilized dsDNA unraveled to form covalently end-immobilized ssDNA probes with sequence lengths up to 390 bp that were employed in hybridization studies.

Description:

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Gene Assembly from Chip-Synthesized Oligonucleotides

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Abstract

De novo synthesis of long double-stranded DNA constructs has a myriad of applications in biology and biological engineering. However, its widespread adoption has been hindered by high costs. Cost can be significantly reduced by using oligonucleotides synthesized on high-density DNA chips. However, most methods for using off-chip DNA for gene synthesis have failed to scale due to the high error rates, low yields, and high chemical complexity of the chip-synthesized oligonucleotides. We have recently demonstrated that some commercial DNA chip manufacturers have improved error rates, and that the issues of chemical complexity and low yields can be solved by using barcoded primers to accurately and efficiently amplify subpools of oligonucleotides. This article includes protocols for computationally designing the DNA chip, amplifying the oligonucleotide subpools, and assembling 500-800 basepair (bp) constructs.

Keywords: oligonucleotide, gene synthesis, nucleic acids, synthetic biology

INTRODUCTION

Gene synthesis has been used in applications as diverse as decoding the genetic code ([Nirenberg and Matthaei, 1961](#)), screening industrially useful enzymes discovered through environmental metagenomic sequencing ([Bayer et al, 2009](#)), and building custom pathways and genomes ([Tian et al., 2004](#); [Ro et al., 2006](#); [Hanai et al, 2007](#); [Gibson et al., 2008](#)). Unfortunately, despite the rapid decrease in the cost synthesizing short single-stranded oligonucleotides, synthesis of double-stranded gene-sized fragments remains too expensive for ubiquitous adoption by academic laboratories ([Carr and Church, 2009](#)). To make large-scale synthesis cheaper, we have recently developed a set of techniques to allow assembly of DNA from commercially available high-density oligonucleotide chips into gene-sized 500-800 bp

fragments ([Kosuri et. al, 2010](#)). Specifically, we showed that PCR could be used to separate the DNA synthesized on a chip into subsets (or, as we will refer to them from here on, subpools) consisting of only the oligonucleotide species necessary to build one particular gene-sized fragment. These methods use inexpensive sources of DNA and require no specialized instrumentation or expertise that cannot be found in a typical molecular biology laboratory.

The major stages of our synthesis pipeline are computational design, chip synthesis, serial PCRs that isolate the oligonucleotides necessary to build each construct, and assembly of the constructs. The key principle is that well-designed primers can amplify a desired subset of oligonucleotides and, thereby, dilute the undesired DNA to the point where it does not interfere with the downstream gene assembly reaction. An off-chip pool (see [Table 1](#) for nomenclature) consists of oligos with a gene-coding region flanked by nested subpool-specific sequences and a restriction enzyme recognition site for removing the priming sequences ([Figure 1](#)). The subpool-specific sequences act as barcodes for selecting subsets of oligos. Each pair of assembly-specific priming sites is shared by all the oligonucleotide needed to build a particular construct; in turn, each pair of plate-specific subpool priming sites is shared by all the oligos necessary to build 96 constructs. Another pair of primers - the construction primers - are used to amplify the full-length construct.



[Figure 1](#)

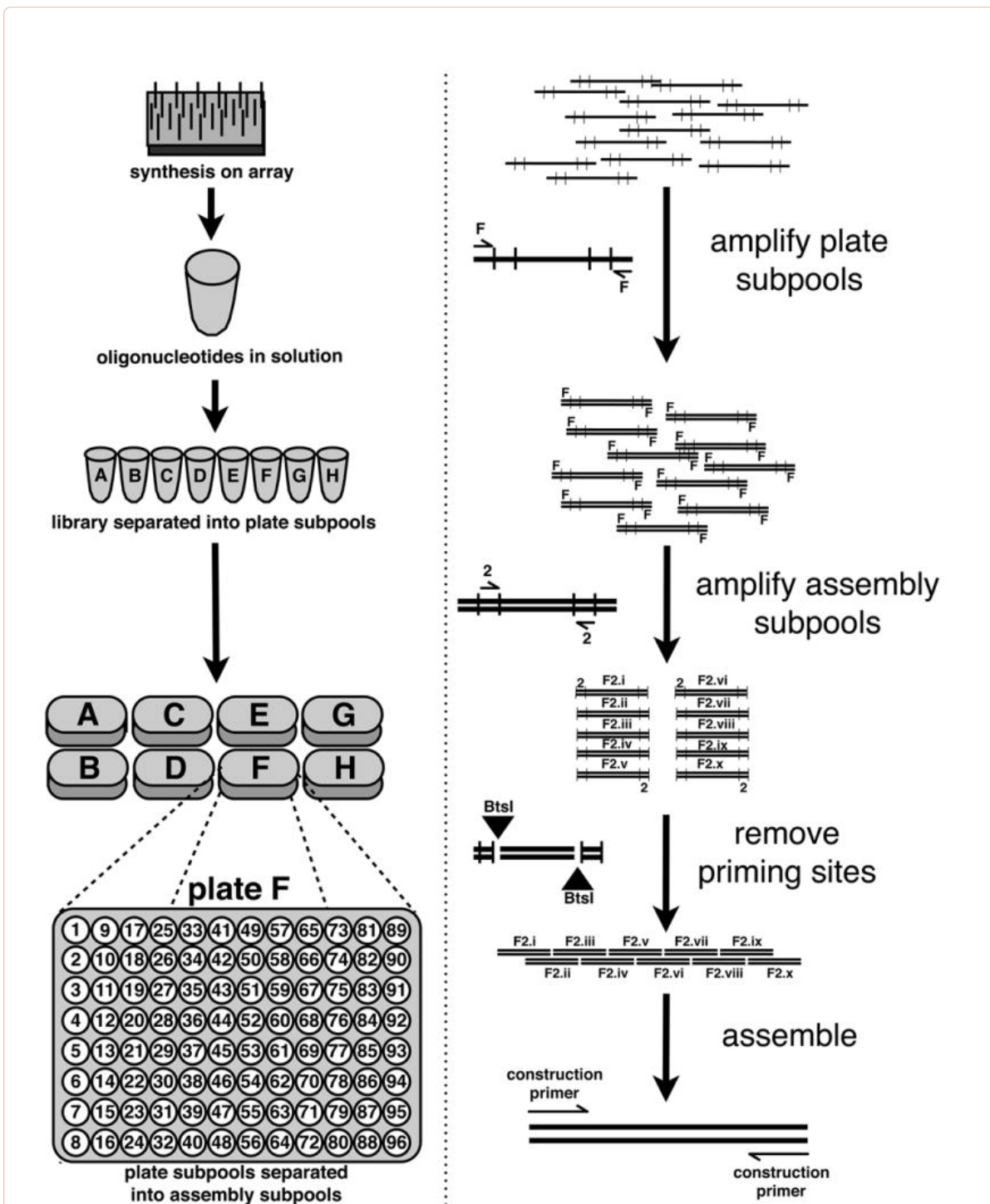
A schematic of the features present on each off-chip oligonucleotide. The gene-coding regions of the oligonucleotides within each assembly subpool partially overlap, allowing them to be assembled into the full-length construct using a high-fidelity polymerase. The gene-coding region is flanked by BtsI cut sites that permit enzymatic removal of the subpool-specific priming sites. The gene-coding region is also flanked by a pair of assembly-specific priming sites, which are shared by all the oligonucleotides within a particular assembly subpool. The assembly-specific priming sites are, in turn, flanked by a pair of plate-specific priming sites common to all the oligonucleotides within a particular plate-specific subpool.

Table 1

The nomenclature used to describe the synthesis protocol.

Term	Definition	Source
off-chip pool	The pool of oligonucleotides cleaved from the DNA microchip	Synthesized on a DNA chip
plate subpool	The subset of the off-chip pool necessary to build 96 assemblies.	Amplified from off-chip pool
plate subpool-specific primers	A pair of PCR primers that bind to sites shared by all members of a plate subpool	Traditional (not chip) synthesis
assembly subpool	The subset of a plate subpool necessary to build 1 assembly.	Amplified from plate subpool
assembly subpool-specific primers	A pair of PCR primers that bind to sites shared by all members of an assembly subpool.	Traditional (not chip) synthesis
construction primers	A pair of PCR primers used to assemble one or more assembly subpools	Traditional (not chip) synthesis
assembly	A 500-800 bp dsDNA construct built from an assembly subpool using a pair of construction primers.	Built from assembly subpool

We have developed software tool called GASP (Gene Assembly by Subpool PCR) that deconstructs a given set of genes to generate the sequences of oligonucleotides for synthesis on a chip. Using GASP for chip design is described in Basic Protocol 1. Once the oligonucleotides have been designed, synthesized, and cleaved off the chip surface, the off-chip pool is aliquoted among plate subpool amplification reactions ([Figure 2](#)). After the PCR, each plate subpool is aliquoted into a 96-well plate. Following the addition of assembly-specific primers another amplification is performed, at which point a restriction enzyme is used to cleave off the priming sites. Basic Protocol 2 provides directions for amplifying the plate and assembly subpools, and Basic Protocol 3 describes the enzymatic removal of priming sites. A polymerase is used to assemble the oligos into the full-length construct, and the assemblies are amplified using the construction primers (which are not necessarily unique for the assembly subpool), as described in Basic Protocol 4.



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Figure 2

A schematic of the gene synthesis workflow's liquid handling steps (left) and the oligonucleotide processing steps (right). In the left half of the schematic, each off-chip oligonucleotide is drawn as a horizontal line with vertical lines used to indicate the plate and assembly subpool-specific priming sites. After the DNA chip has been synthesized and the oligonucleotides have been cleaved off the array surface, plate subpool-specific primers are used to amplify only the oligonucleotides needed to build 96 assemblies. In the drawing, the primer pair "F" amplifies all the oligonucleotides that make up plate subpool "F". The plate subpool is then aliquoted among the wells of a 96-well plate. Assembly subpools are amplified with assembly-specific primers. In the figure, assembly-specific primers "2" amplify subpool F2, which consists

of 10 double-stranded fragments (F2.i – F2.x). The assembly subpool-specific priming sites are removed via a restriction digest, and a polymerase assembles the overlapping fragments into full-length constructs. Last, full-length constructs are amplified by a pair of construction primers.

BASIC PROTOCOL 1: OLIGONUCLEOTIDE DESIGN AND SYNTHESIS

Each construct to be built must be split up into short overlapping fragments. Each fragment must, in turn, be flanked by the assembly- and plate-specific subpool priming sequences as well as restriction sites for removing the priming sequences ([Figure 1](#)). We have automated these design steps with Biopython scripts ([Cock et al, 2009](#)). This software can be either run from a server (<http://synbiosis.med.harvard.edu:8080/gaspserver.rpy>) or as a script on any computer that has the Biopython package installed (current and all future versions can be found at <https://bitbucket.org/skosuri/gasp/overview>). The protocol below describes using the server version.

Materials

- a computer with a web-browser
- a list of sequences to be built (in FASTA format)

Setting up the parameters

1. Open <http://synbiosis.med.harvard.edu:8080/gaspserver.rpy> with a browser.
2. Enter your name, email address, and the location of your input file (the FASTA file with a list of genes you want built).
3. The parameter configuration text box will contain the following text:

```
"initialPlateNum": 2,
"RESpacing": [
2,
5,
4
],
"REVector": [
"BtsI",
"BsmBI",
"BspQI"
],
"SearchForRE": "True",
"REToUse": "BtsI",
"avgoverlapsize": 20,
"deltaGThresholdForOverlaps": -3,
"selfDimersThreshold": 3,
"lengthleeway": 10,
"positionleeway": 10,
"oligoSizeMax": 200,
"seqsToAvoidInOverlapRegions": [],
"skip": []
```

Change the SearchForRE parameter to "False". The parameters, which are described in detail below, may have to be further adjusted if the DNA will be processed using methods which deviate from the workflow described in this paper.

initialPlaneNum: 96-well plates of assemblies will be numbered sequentially initiating at this

value. This should never be set to 1, as plate #1 is reserved for construction primers.

RESpacing: The distance between the end of the recognition site to the cut location for the enzymes listed in REVector setting. The values should be separated by a comma, and be in the same order as the enzymes in the REVector setting For example, the RESpacing for BtsI should be set to 2 because the enzyme nicks 2 bp away from its binding site (such that the full recognition site is GCAGTGN₂). Similarly, the recognition site for BsmBI is CGTCTCN₅, so its RESpacing should be set to 5. Therefore, if “REVector”: [“BtsI”, “BsmBI”), then “RESpacing”: [2,5]. Can be left blank if SearchForRE is False..

REVector: List of type IIS restriction enzymes to use for removing the subpool-specific amplification priming sites. The software will attempt to find an enzyme from this list that does not cut each particular construct, starting with the first enzyme listed. In other words, each assembly subpool will be processed using just one of the enzymes from this list. The enzyme names should be properly capitalized, placed between double quotes, and separated by a comma (for example - “REVector”: [“BtsI”, “BsmBI”). The parameter accepts enzymes defined by the Bio.Restriction module of Biopython (for the latest list see <http://www.biopython.org/DIST/docs/api/Bio.Restriction.Restriction-module.html>) Can be left blank if SearchForRE is False.

SearchForRE: Set to True if you wish to specify a list of restriction enzymes within the REVector setting. This should be done in applications in which it is impossible to eliminate a single type IIS enzyme cut site from all constructs. Set to False to use the enzyme listed in REToUse to process all the assembly subpools.

REToUse: Restriction enzyme to use if SearchForRE is set to False. Can be left blank if SearchForRE is True.

avgoverlapsize: Each construct will be broken up into assembly oligos that will be fused using a polymerase. The fusion reaction requires priming through overlaps between neighboring oligos. This setting specifies the mean length of the overlap region.

deltaGThresholdForOverlaps: Rejects any overlaps with a secondary structure that has a hybridization free energy less than the value specified (in units of kcal/mol).

selfDimerThreshold: Rejects assembly oligos that have any self-dimerization configurations with a hybridization free energy less than the value specified (arbitrary units).

lengthleeway: Sets allowable variation in the length of the overlap regions.

positionleeway: Sets allowable variation in the assembly oligo junction position. Increasing this value results in a less constrained search space but increases the computation time and increases variation in synthesized oligonucleotides' lengths.

oligoSizeMax: The maximum oligo size that will be designed. This includes the full-length oligos that include the coding region, the restriction enzyme processing site, and the assembly-specific and plate-specific priming sites. This value should typically be constrained by the commercial synthesis platform used. Note that many of the oligos will be shorter than this maximum value.

seqsToAvoidInOverlapRegion: Specifies positions to be avoided in the overlap between neighboring assembly oligos. This should usually be left blank, but can be used in specialized applications such as constructing proteins with known repeated regions.

skip: Specifies names of constructs that the algorithm should skip from the design process. This option is used in specialized cases and is normally left blank.

- 4 Click Submit. An email will be sent to the provided email confirming initiation of the run. Once the run is complete two more emails should arrive. The first one will contain a report that contains: (1) The sequences to be synthesized on the DNA chip in FASTA format; (2) The plate-specific, position-specific, and construction primers needed to build the set of assemblies; (3) The plate-specific, position-specific, and construction primers that correlate with each individual

assembly. The second email will contain a FASTA file that contains the sequences that should be synthesized on the DNA chip.

Ordering DNA

1. Synthesize a DNA chip using the chip oligonucleotide sequences designed by GASP.

We have validated and extended this protocol using Agilent's Oligo Library Synthesis (OLS) platform (Leproust et al., 2010), though we have also been able to build genes using DNA from LC Sciences (Borovkov et al., 2010) and CustomArray (Liu et al., 2006).

2. Order the plate-specific, position-specific, and construction primers listed in the output email from a commercial vendor. If the chip has been designed for more than 48 assemblies it is usually convenient to synthesize the oligos in a 96-well format. If that is the case, each century of oligos should be synthesized in a separate plate. For instance, skpp-101, skpp-102, skpp-103, ..., should be synthesized in separate wells of a single plate.

The primers are named with the following format: skpp-#-F/R. The F and R indicate forward and reverse primers, respectively. The numbering scheme assigns the first numbers to plate-specific primers (skpp-1, skpp-2, ...). If initialPlateNum was set to 2 then the first plate of assembly subpool-specific primers is numbered skpp-201, skpp-202..., the second plate is numbered skpp-301, skpp-302 ..., and so forth. The oligos numbered in the 100's are the construction primers. Each pair of construction primers assembles one assembly subpool in each plate. Specifically, skpp-101 assembles assembly subpool generated with skpp-201, skpp-301, skpp-401, and so on.

BASIC PROTOCOL 2: PCR AMPLIFICATION OF OLIGONUCLEOTIDE SUBPOOLS

This set of protocols describes going from a pool of off-chip oligonucleotides to 96-well plates containing a different assembly subpool in each well. We have found that while the experimental procedures are technically simple, the logistics can sometimes present a challenge. We highly recommend that each researcher thoroughly understand the logic behind the subpool amplification scheme (as shown in [Figure 2](#)) before starting the procedure. The quantities provided in the protocol are enough to go from an off-chip pool to one plate-subpool, and then from that one subpool to 96 assembly subpools. The volumes used should be scaled in accordance with the actual number of assemblies being built.

Subpool amplification and assembly steps are punctuated with numerous reaction cleanup steps. Their primary purpose is remove enzymes, unused primers, dNTPs, and salts. In some points of the protocol they have the additional role of concentrating the DNA. Since the protocol necessitates handling 96-well plates of reactions it practical to use vacuum manifold-driven 96-well column plates. Although not described in this paper, we are currently working integrating the less expensive magnetic bead-based cleanups into our workflow ([Hawkins et al., 1994](#); [Rudi et al., 1997](#); [Wiley et al., 2009](#)).

Materials

array-synthesized library

plate subpool-specific primers

assembly subpool-specific primers

Galaxy Mini Centrifuge with 1.5/2.0 mL and 0.2 mL tube adapters (VWR 37000-700)

Vortex Mixer (VWR International 58816-121)

100x TE buffer (Sigma-Aldrich T9285)

2 ml PCR Tubes with Flat Caps (BioRad TFI-0201)
Phusion High-Fidelity DNA Polymerase (New England Biolabs M0530L)
dNTP Solution Mix (Enzymatics N205L)
UltraPure DNase/RNase-Free Distilled Water (Invitrogen 10977-023)
96-reaction thermocycler (BioRad 186-1096)
Microseal 96-Well Skirted Low-Profile PCR Plates (BioRad MSP-9601)
Optical Flat 8-Cap Strips (BioRad TCS-0803)
QIAquick 96 PCR Purification Kit (QIAGEN 28183)
QIAvac 96 (QIAGEN 19504)

DNA resuspension and dilution

1. DNA synthesized on Agilent OLS arrays is shipped lyophilized in a microcentrifuge tube. Before opening the tube, centrifuge it for 1 min. at the highest speed of a microcentrifuge.

Using qPCR we have estimated that an OLS chip with 13,000 130-mers yields 1 pmol of DNA (or approximately 0.1 fmol per oligo species).

2. Add 500 μ L 1x TE buffer to the lyophilized DNA. Vortex thoroughly, then briefly centrifuge to spin down liquid.
3. Make mixes of primers by diluting the appropriate plate and assembly subpool specific primer pairs to 5 μ M in water.

We recommend first making primer storage stocks by diluting each primer to 100 μ M in 1x TE buffer. Note that high concentrations of EDTA in the working stocks may inhibit PCR and other enzymatic reactions.

Plate subpool amplification

- 4 Working on ice mix the following reagents in 0.2 mL PCR tube for each plate subpool to be amplified:

33.1 μ L distilled water
10 μ L Phusion HF Reaction Buffer (5x)
0.4 μ L dNTPs (25 mM each deoxynucleotide)
5 μ L plate subpool-specific primer mix (5 μ M each primer)
1 μ L array-synthesized library
0.5 μ L Phusion polymerase (2 U/ μ L)

Vortex thoroughly, then briefly centrifuge to spin down liquid.

If more than one plate subpool will be amplified, then it is convenient to make a common master mix which contains everything except for the subpool-specific primers. The primers should be added once the master mix has been split among the appropriate number of 45 μ L aliquots. The volume of the master mix should be in slight excess of how much is needed for the amplifications. For example, if 8 plate subpools are to be amplified, an 8.5 reaction 382.5 μ L reaction mix should be made. Be sure to vortex the mix thoroughly prior to aliquoting.

- 5 Place the samples in a thermocycler and run the following program:

98 $^{\circ}$ C – 30 s.

25 cycles of:

98 $^{\circ}$ C – 5 s.

65 $^{\circ}$ C – 10 s.

72 $^{\circ}$ C – 10 s.

72 $^{\circ}$ C – 5 min.

4 °C – forever

To minimize sample loss and increase reproducibility either use a thermocycler with a heated lid or add a few drops of mineral oil (Sigma-Aldrich M8662) to the top of each reaction. Amplified DNA can be stored at 4 °C for less than a month, or at -20 °C indefinitely.

At this stage it is prudent to quantify yield and ensure proper amplification by running 1-10 μ L of each of the amplified products on an agarose or acrylamide gel. A double-stranded DNA stain such as ethidium bromide should reveal a band for each oligo of a distinct size in the plate subpool.

Assembly subpool amplification

- 6 Working on ice make the following master mix for each plate subpool amplified:

11,636 μ L distilled water
4 μ L plate subpool amplification reaction products
4000 μ L Phusion HF Reaction Buffer (5x)
160 μ L dNTPs (25 mM each)
200 μ L Phusion polymerase (2 U/ μ L)

Vortex thoroughly, then briefly centrifuge to spin down liquid.

- 7 Working on ice, add 160 μ L of the mix to each well of a 96-well.

While an ice-bucket will suffice for keeping the 96-well plates cold, we have found 96-well coolers (Eppendorf 022510525) to be a convenient alternative. Also, depending on the thermocycler and plates used, we routinely split the 200 μ L reaction into 50-100 μ L across multiple plates.

- 8 Add 40 of appropriate primer mix (forward and reverse assembly-specific primers at 5 μ M each) to each well of the 96-well plate that contains the master mix aliquots. Cover the wells with plate sealer.

- 9 Place the plate in a thermocycler and run the following program:

98 °C – 30 s.
30 cycles of:
 98 °C – 5 s.
 65 °C – 10 s.
 72 °C – 10 s.
72 °C – 5 min.
4 °C – forever

Reaction cleanup

- 10 Following the manufacturer's instructions, bind the DNA from a 96-well assembly amplification to QIAquick 96 PCR Purification Kit column. Elute the DNA on each column into 60 μ L EB buffer (10 mM Tris-Cl, pH 8.5).

BASIC PROTOCOL 3 : ENZYMATIC REMOVAL OF PRIMING SITES

After the second amplification the subpools still have their subpool-specific priming sites. These must be removed before assemblies can be built. It is for this purpose that each oligo contains a BtsI recognition sequence (GCAGTG) between the assembly subpool priming site and the coding region. BtsI, like other member of the type IIs family of restriction enzymes, cuts both strands completely outside of its recognition site ([Pingoud and Jeltsch, 2001](#)). Consequently, processing with BtsI places no sequence restriction on the coding portion of the oligos. Other type IIs restriction enzyme sites may be used by adjusting the design parameters set in Basic Protocol 1.

Materials

Seal-Rite 1.5 mL microcentrifuge tubes (USA Scientific 1615-5500)
BtsI (New England Biolabs R0614L)
96-reaction thermocycler (BioRad 186-1096)
Galaxy Mini Centrifuge with 1.5/2.0 mL and 0.2 mL tube adapters (VWR 37000-700)
Vortex Mixer (VWR International 58816-121)
UltraPure DNase/RNase-Free Distilled Water (Invitrogen 10977-023)
MinElute 96 UF PCR Purification Kit (QIAGEN 28051)
QIAvac 96 (QIAGEN 19504)

BtsI digest

1. For each 96-well plate of cleaned-up assembly subpools to be processed, make the following master mix in a 1.5 mL tube:
 - 145 μ L distilled water
 - 700 μ L NEBuffer 4 (10x)
 - 70 μ L BSA (10 μ g/ μ L)
 - 85 μ L BtsI (10 units/ μ L)Vortex thoroughly, then briefly centrifuge to spin down liquid.
2. Add 10 μ L of the master mix to each well of the 96-well plate containing the assembly subpools. Cover the wells with plate sealer.
3. Heat the plate to 55 °C for 2 h.

Reaction cleanup

- 4 Following the manufacturer's instructions, cleanup each 96-well of BtsI-digested assembly subpools with a MinElute 96 UF PCR Purification Kit. Elute the DNA bound to each column into 15 μ L EB buffer

We highly recommend quantifying the DNA concentration with a spectrophotometer and/or running the samples out on a gel. The total DNA concentration should be 30-300 ng/ μ L. If all of the oligos in a subpool are the same length, then a gel with sufficient resolution should reveal four bands: 1) the properly processed oligos lacking the two priming sites; 2) the oligos cut on only one side; 3) the uncut oligos; and 4) the cut-off pieces containing the priming sites.

BASIC PROTOCOL 4: ASSEMBLY OF PROCESSED SUBPOOLS INTO FULL-LENGTH CONSTRUCTS

Full-length assemblies are built from assembly subpools in two steps - assembly and amplification. The assembly stage consists of 15 thermal cycles with an annealing step consisting of a thermal ramp from 70 °C to 50 °C. The full-length assemblies are then selected by adding the appropriate construction primers and performing a 25-cycle PCR. In our experience, the more assembly subpool DNA in the assembly reaction, the more likely a full-length product is formed.

Materials

construction primers
UltraPure DNase/RNase-Free Distilled Water (Invitrogen 10977-023)
Seal-Rite 1.5 mL microcentrifuge tubes (USA Scientific 1615-5500)
Galaxy Mini Centrifuge with 1.5/2.0 mL and 0.2 mL tube adapters (VWR 37000-700)

Vortex Mixer (VWR International 58816-121)
96-reaction thermocycler (BioRad 186-1096)
Microseal 96-Well Skirted Low-Profile PCR Plates (BioRad MSP-9601)
Phusion High-Fidelity DNA Polymerase (New England Biolabs M0530L)
dNTP Solution Mix (Enzymatics N205L)
QIAquick 96 PCR Purification Kit (QIAGEN 28183)
QIAvac 96 (QIAGEN 19504)

Assembly

1. Mix the forward and reverse construction primer pairs to 5 μM of each primer in water.
As with the subpool-specific primers, it is a good practice to first make primer storage stocks by diluting each primer to 100 μM in 1x TE buffer.
2. Working on ice, make the following master mix for each 96-well plate of assembly subpools in a 1.5 mL tube:
 - 164 μL distilled water
 - 400 μL Phusion HF Reaction Buffer (5x)
 - 16 μL dNTPs (25 mM each)
 - 20 μL Phusion polymerase (2 U/ μL)Vortex thoroughly, then briefly centrifuge to spin down liquid.
We have also successfully used KOD Polymerase (EMD 71085-3) in place of Phusion.
3. Aliquot 6 μL master mix per well of a new 96-well PCR plate.
4. Add 14 μL of each assembly subpool to each well of the PCR plate containing the master mix.
Cover the wells with plate sealer.
14 μL corresponds to 420 ng of assembly subpool DNA at the lowest expected concentration (30 ng/ μL). If the concentration has been measured using a spectrophotometer or gel electrophoresis then all subpools can be diluted to 30 ng/ μL for maximum reproducibility, although we have not observed higher concentrations inhibiting the assembly reaction.
5. Place the 96-well plate in a thermocycler and run the following program:
 - 95 $^{\circ}\text{C}$ – 2 min
 - 15 cycles of:
 - 95 $^{\circ}\text{C}$ – 20 s.
 - 70 $^{\circ}\text{C}$ – 1 s.
 - cool to 50 $^{\circ}\text{C}$ at 0.5 $^{\circ}\text{C}/\text{sec}$.
 - 50 $^{\circ}\text{C}$ – 30 s.
 - 72 $^{\circ}\text{C}$ – 20 s.
 - 72 $^{\circ}\text{C}$ – 5 min.
 - 4 $^{\circ}\text{C}$ – forever

Assembly amplification

- 6 Working on ice, make the following master mix for each 96-well plate of assembly subpools in a 5 mL tube:
 - 3.31 mL distilled water
 - 1 mL Phusion HF Reaction Buffer (5X)
 - 40 μL dNTPs (25 mM each)
 - 50 μL Phusion polymerase (2 U/ μL)Vortex thoroughly, then briefly centrifuge to spin down liquid.

- 7 Aliquot 44 μL of the master mix per well of a new 96-well plate.
- 8 For each plate of assemblies, add 198 μL distilled water to a fresh 96-well plate.
- 9 Dilute the assembly reactions 1:100 by adding 2 μL of the assembly reaction to each well of the PCR plate with water.
- 10 To each well of the PCR plate containing the amplification master mix, add 5 μL of the appropriate construction primer mix (5 μM each forward and reverse primers) and 1 μL of the 1:100 dilution of the appropriate assembly reaction. Cover the wells with plate sealer.
- 11 Place the samples in a thermocycler and run the following program:
 - 98 $^{\circ}\text{C}$ – 30 s.
 - 25 cycles of:
 - 98 $^{\circ}\text{C}$ – 5 s.
 - 62 $^{\circ}\text{C}$ – 10 s.
 - 72 $^{\circ}\text{C}$ – 20 s.
 - 72 $^{\circ}\text{C}$ – 5 min.
 - 4 $^{\circ}\text{C}$ – forever

Reaction cleanup

- 12 Following the manufacturer's instructions, bind the DNA from a 96-well assembly amplification to QIAquick 96 PCR Purification Kit column.

SUPPORT PROTOCOL: GEL-STAB PCR

Assembly amplification, particularly that of GC-rich or repetitive constructs, sometime results in side-products of the wrong size (typically smaller than the construct). If there is substantial yield of the full-length assembly, then it can be purified using agarose gel isolation. However, in rare cases the full-length assembly forms only a faint band on an agarose gel. This protocol describes a simple technique for selectively re-amplifying the correct assembly product from a large background of incorrect assemblies.

Materials

- 2% E-Gel EX Gel (Invitrogen G4020-02)
- E-Gel iBase Power System (Invitrogen G6400)
- 1 Kb Plus DNA Ladder (Invitrogen 10787-018)
- Safe Imager 2.0 Blue Light Transilluminator (Invitrogen G6600)
- UltraPure DNase/RNase-Free Distilled Water (Invitrogen 10977-023)
- Seal-Rite 1.5 mL microcentrifuge tubes (USA Scientific 1615-5500)
- 0.2 ml PCR Tubes with Flat Caps (BioRad TFI-0201)
- Galaxy Mini Centrifuge with 1.5/2.0 mL and 0.2 mL tube adapters (VWR 37000-700)
- Vortex Mixer (VWR International 58816-121)
- QIAquick PCR Purification Kit (QIAGEN 28104)
- microcentrifuge with fixed-angle rotor for 1.5-2 mL tubes (Eppendorf 5415)

Gel-stab

1. Following the manufacturer's instructions, load 1-5 μL of the assembly amplification product and 5 μL of the 1 Kb Plus ladder in separate wells of a 2% E-Gel EX and run on the E-Gel base.

Traditional agarose gels work as well as the pre-cast gels, but the amount of DNA loaded may have to be adjusted to account for the differences in gel geometry and the dye used.

- Using a thin metal edge or an E-Gel opener (Invitrogen G5300-01) carefully remove the top plastic cover of the gel cassette.
- Place the gel on a blue light transilluminator. Add 20 μL water to a 1.5 mL tube. Stab the band that corresponds to the desired assembly product with a sterile 10 or 20 μL pipette tip. Look at the tip to make sure a small slice of the gel is stuck in the tip. Pipette up and down in the water using the same pipette tip. Look at the tip again to make sure that the gel that was stuck there is gone.

Amplification

- Heat the water containing the gel slice to 65 $^{\circ}\text{C}$ for 15-30 min.
- Combine the following in a 0.2 mL PCR tube:
 - 4.6 μL water
 - 1 μL water containing the gel isolate
 - 2 μL appropriate construction primers (5 μM each primer)
 - 4 μL Phusion HF Reaction Buffer (5X)
 - 0.2 μL dNTPs (25 mM each)
 - 0.2 μL Phusion polymerase (2 U/ μL)Vortex thoroughly, then briefly centrifuge to spin down liquid.
- Place the samples in a thermocycler and run the following program:
 - 98 $^{\circ}\text{C}$ – 30 s.
 - 30 cycles of:
 - 98 $^{\circ}\text{C}$ – 5 s.
 - 62 $^{\circ}\text{C}$ – 10 s.
 - 72 $^{\circ}\text{C}$ – 20 s.
 - 72 $^{\circ}\text{C}$ – 5 min.
 - 4 $^{\circ}\text{C}$ – forever

Reaction cleanup

- Cleanup the reaction using a QIAquick kit following the manufacturer's instructions.

COMMENTARY

Background Information

There is a large and fairly mature set of techniques for building genetic constructs without relying on a pre-existing template, including methods for chemically synthesizing short oligonucleotides ([Michelson and Todd, 1955](#); [Letsinger and Mahadevan, 1965](#); [Brown, 1993](#)), for using enzymes to fuse the oligonucleotides into long double-stranded fragments ([Agarwal et al., 1970](#); [Rossi et al., 1982](#); [Li and Elledge, 2007](#); [Gibson et al., 2009](#)), and for performing in vivo assembly of genome-scale fragments in recombinogenic organisms such as *S. cerevisiae* ([Shao and Zhao, 2009](#); [Gibson, 2009](#)). Unfortunately, high costs hinder the widespread adoption of de novo synthesis, primary among them the cost of chemically synthesizing single-stranded oligonucleotides. The maturation a number of technologies that allow parallel synthesis of thousands or millions of oligonucleotide on solid surfaces (DNA chips) has reduced oligonucleotide cost more than 100-fold over the past decade ([Carlson, 2003](#); [Carr and Church, 2009](#)). Contrary to the expectations of many, and despite a number of proof-of-concept publication ([Tian et al., 2004](#); [Zhou et al., 2004](#); [Binkowski et al., 2005](#)), the advent of commercially-available DNA chips did not catalyze a widespread drop in the cost of synthesizing of double-stranded gene-length fragments.

The three factors that until recently inhibited the adoption of DNA off chips for gene synthesis were the high chemical complexity of the resulting DNA pool, the oligonucleotide error rates, and the low synthesis yields. Chemical complexity refers to the fact that while tens of thousands of oligonucleotide species are synthesized in parallel on the same surface, only 5-50 are needed to build any particular gene-sized double-stranded fragment. At typical DNA chip synthesis scales performing enzymatic assembly of a subset of oligonucleotides in the presence of the unrelated species is difficult or impossible ([Borovkov et al., 2010](#)). Physical separation of DNA off a chip into subsets of oligonucleotides has recently been achieved using microfluidics ([Zhou et al., 2004](#); [Lee et al., 2010](#); [Quan et al., 2011](#)), beads in picotiter plates ([Matzas et al., 2010](#)), and barcode PCR ([Kosuri et al., 2010](#)). The second problem, high error rates, is important because having more errors raises costs by increasing the amount of screening needed to isolate error-free constructs. Off-chip oligonucleotides typically have an error rate of 1/25 - 1/50 errors/bases, while low-throughput synthesis on controlled pore glass beads results in an error rate of 1/200-1/500. Here, too, there has been much recent progress, including improvements in the chemical synthesis process ([Leproust et al., 2010](#)), advances in enzyme-mediated error depletion ([Carr et al., 2004](#); [Binkowski et al., 2005](#); [Fuhrmann et al., 2005](#); [Bang and Church, 2007](#); [Kosuri et al., 2010](#); [Quan et al., 2011](#)), and the integration of high throughput sequencing and synthesis for direct error screening ([Matzas et al., 2010](#)). The last challenge has been the low yields achieved with on-chip synthesis, which make it difficult to assemble the synthesized oligonucleotides into gene-length fragments. The microfluidic-based methods described above solve this problem by increasing the DNA concentration through low assembly reaction volumes. In contrast, our subpool-based technique achieves high concentrations through selective PCR amplification.

The workflow we presented in this set of protocols relies on the ability to PCR amplify a small subset of oligonucleotides out of a large background of DNA. To prevent hybridization of primers to the wrong priming sites we designed a set of 3,000 orthogonal primer pairs ([Kosuri et al., 2010](#)). The method, in brief, was as follows: first, we searched the set of 240,000 orthogonal 25-mers designed by Xu et al. ([Xu et al., 2009](#)) for 20 base windows that lack commonly used restriction enzyme sites and have a melting temperature of 60-64 °C ([SantaLucia, 1998](#); [SantaLucia and Hicks, 2004](#)). The resulting sequences were culled of any pairs that cross-hybridize using a modified version of the AutoDimer tool, a library-on-library BLAT search, and, finally, a BLAST-based network elimination algorithm ([Kent, 2002](#); [Vallone and Butler, 2004](#); [Xu et al., 2009](#)). Next, we used UNAFold to select only the sequences with a secondary structure with a $\Delta G \leq -2$ ([Markham and Zuker, 2008](#)). The selected sequences were clustered using ClustalW2, and 6,000 sequences were selected such that they were maximally spread out on the resulting phylogenetic tree ([Larkin et al., 2007](#)). Finally, 3,000 primer pairs were generated by matching the sequences on their melting temperature and propensity to form primer-dimers.

Critical Parameters

DNA synthesis A number of manufacturers sell custom DNA microarrays, and differences between their synthesis methodologies results in differences in the oligo error rates. The error rate affects two key aspects of the gene synthesis process. First, a high error rate means a larger fraction of the synthesized genes will have an error. This directly increases the cost, as constructs must be screened by low-throughput sequencing until a perfect clone is found. A high error rate also makes it more difficult to synthesize longer oligos. Longer oligos are advantageous, as they reduce the complexity of the synthesis reaction by reducing the number of individual DNA pieces that must be put together in order to build a gene of a particular size. Most of our experience with the set of protocols provided in this paper comes from working with Agilent Technologies' Oligo Library Synthesis (OLS) platform, which can synthesize oligonucleotide 100-200 bp in length with an error rate on the order of 1/500 errors/bp ([Leproust et al., 2010](#); [Kosuri et al., 2010](#)). Because the OLS platform is still under development OLS

pools are not yet widely sold. However, laboratories can gain access to them by signing a material transfer agreement with Agilent Technologies. The protocols we describe should be applicable to all other array platforms, although if the DNA chip has a high error then error correction may be necessary. Similarly, if the off-chip oligonucleotides are shorter than 120 bases then different DNA cleanup steps may have to be used, as the QIAGEN columns used in the protocols do not recover fragments shorter than 40 bp.

It is useful to keep in mind that DNA from microarrays is one of the cheapest reagents in the synthesis process. Therefore, in the interest of rapid prototyping it often makes sense to waste synthesis capacity rather than trying to design enough constructs to fill up all features on the chip. Unfortunately, subpool-specific and construction primers are expensive because they must be synthesized using low-throughput methods. However, primer synthesis yields are typically in excess of what is needed to process a single set of assemblies, so the primers can be used to process multiple DNA chips.

Construct design If the constructs being built encode proteins, then there are many possible ways to reverse-translate the amino acid sequence (Welch et al., 2009b). One consideration when choosing among synonymous codons is the natural codon bias within the genome of organism that will express the protein (Gustafsson et al., 2004). Similarly, studies in *Escherichia coli* revealed that using codons that are most highly charged during amino acid starvation leads to significantly higher levels of protein expression (Welch et al., 2009a). The second variable to take into account when designing constructs is the propensity of the resulting DNA to form secondary structures that interfere with polymerase-based assembly methods. Despite our efforts to optimize the robustness of our assembly protocol, the reaction will fail often if the construct being built is highly GC-rich or repetitive. We recommend GeneDesign, a web-based sequence manipulation environment that allows facile manipulation of codon usage, GC-bias, restriction site placement, and other design parameters (Richardson et al., 2010).

Downstream processing An assembly reaction produces a heterogeneous population of molecules, some of which contain point mutations or structural rearrangements such as large deletions or insertions. If error-free constructs are needed then the assemblies must be cloned and screened by sequencing. If the constructs are to be used in a screen or selection, then it may be possible to use the heterogeneous assembly products directly. Error rates can be reduced by creating mismatches by melting and re-annealing the assemblies and depleting heteroduplexes by a MutS pulldown (Carr et al., 2004; Binkowski et al., 2005) or cleavage with resolvases (Fuhrmann et al., 2005; Bang and Church, 2007). Assemblies with frame-shift mutations can be screened for by cloning them in-frame to a downstream lacZ fragment or fluorescent protein (Cronan and Narasimhan, 1988; Kim et al., 2010). Error rates can be estimated by building control fluorescent protein assemblies, which allow the error rate to be estimated by counting colonies or performing flow cytometry. Such protein function assays give an accurate error rate estimate if most errors are deletions and insertions. However, due to the degeneracy of the genetic code and the stability of protein function in the face of some residue substitutions, function-based screens underestimate the error rate if there are many transitions and transversions.

Troubleshooting

No assembly products or products that are too short Assembly of GC-rich or repetitive sequences sometimes proves challenging. We have found that most of the time this problem can be solved by increasing the amount of processed assembly subpool DNA added to the assembly reaction. At 5-20 ng/μL, the highest assembly subpool concentrations tested, we were able to get a correctly sized band for approximately 95% of the difficult templates tested (Kosuri et al., 2010). Assembly reactions can be further optimized by introducing PCR additives that increase specificity and reduce DNA secondary structure, such as betaine and dimethyl sulfoxide (DMSO) (Winship, 1989; Henke et al., 1997).

Similarly, varying annealing temperature or the concentrations of magnesium ions and deoxynucleotides may alter PCR performance ([Cobb and Clarkson, 1994](#); [Roux, 1995](#)).

Assembly results in short side-products Gel-isolate the band of the correct size and re-amplify using the appropriate construction primers (see Supplementary Protocol 1).

Assembly results in high molecular weight smears This is typically caused by “over-amplifying” the template, which happens when PCR primers run out, causing the amplicon molecules to generate long fusions by mis-priming off each other ([Bell and DeMarini, 1991](#)). This can be avoided by decreasing the number of amplification cycles, increasing the concentration of construction primers, decreasing the amount of post-assembly DNA added to the assembly amplification reaction, shortening extension times, or optimizing PCR specificity as described in the section on troubleshooting a lack of assembly products.

Synthesized genes have high error rates Errors can be introduced during the chemical synthesis of DNA on a chip or at any of the subsequent enzymatic steps. Sequencing at various points of the synthesis workflow may help detect the processes that introduce the most error. Error detection or depletion techniques can be introduced after the assembly amplification step, some of which are described in greater detail within Strategic Considerations.

Loss of DNA during reaction cleanups Our protocols rely on using QIAGEN’s column-based PCR cleanups that have reduced recovery of double-stranded DNA shorter than 100 bp, and no recovery of DNA shorter than 40 bp. It is important to keep track of how the DNA length changes at each step of the protocol, as it decreases after both the assembly subpool amplification and the BtsI digest. If DNA is lost during cleanups in a size-dependent manner than it is best to switch to either a different column-based cleanup kit or to use alternative methods such as magnetic beads ([Hawkins et al., 1994](#); [Rudi et al., 1997](#); [Wiley et al., 2009](#)).

Anticipated Results

Basic Protocol 1 will generate a FASTA file with the sequences of the oligonucleotides that need to be synthesized on the DNA chip. After the oligonucleotides have been synthesized and cleaved off the array surface, they will be amplified first into plate subpool and then into assembly subpools, as described in Basic Protocol 2. Running each sample out on an agarose or a polyacrylamide gel should result only bands that correspond to the expected lengths of the DNA species in each subpool. Note assembly subpools will be shorter than the plate subpools because plate-specific priming sites flank the assembly-specific priming sites. Basic Protocol 3 will result in the removal of the assembly-specific priming sites. Gel electrophoresis will reveal bands corresponding to the cleaved-off priming sites, the members of the assembly subpool with the priming sites removed, and partially-digested DNA cut on just one of the two sides. Basic Protocol 4 should result in full-length assemblies, some of which may have to be gel-isolated or, if the assembly amplification yields were low, re-amplified from a gel-isolated sample. The constructs are ready to be used for downstream applications once they produce a single band of the expected size when resolved by gel electrophoresis.

Time Considerations

Going from a list of sequences to be built to a chip design should take a couple of hours. Once both the DNA chip and the amplification primers have been synthesized, the synthesis process should take 1-2 days, though assembling a large number of constructs will increase the amount of time spent setting up reactions (and, conversely, automation will reduce it significantly). Post-assembly gel-isolation and re-amplification typically add an additional day of work.

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EXHIBIT 6

Agilent Makes Strategic Investment in Synthetic Biology

April 24, 2013 by news@agilent

Agilent has completed a \$21 million strategic investment in Gen9, a Cambridge, Mass based privately-held company that has pioneered the development of scalable technologies for synthesizing genes. The funds will be used to further invest in product development and to expand the commercial infrastructure for Gen9's synthetic biology business.

Gen9's portfolio of next-generation gene synthesis technologies form the foundation of the Gen9 BioFab® platform, which has the capacity to synthesize tens of thousands of gene fragments in just a few square feet of laboratory space.

Agilent's partnership with Gen9 complements the company's existing investments in synthetic biology, gene synthesis and assembly, including further generations of its oligo synthesis technology. Agilent currently produces the highest-quality long DNA compared to that of any commercially available source.

For more information go to:

[Gen9 Receives \\$21 Million Strategic Investment from Agilent Technologies](#)

[Agilent Microarray Technology](#)

EXHIBIT 7



SCOTT KIRSNER | INNOVATION ECONOMY

How a biotech startup rose, and then fell



CHARLIE MAHONEY FOR THE BOSTON GLOBE/FILE

In 2012, lab technician Sherri Wang worked at Gen9, which produced a gene printer that could produce large quantities of genes and nucleic acids.

By [Scott Kirsner](#) | GLOBE CORRESPONDENT JANUARY 20, 2017

On a Tuesday evening in mid-December, a small group of software developers and sales and marketing staffers gathered for drinks at [Beat Brasserie](#) in Harvard Square. It was during that week when office holiday parties were at full boil, and year-end bonuses were being doled out. But this was a more subdued affair. Everyone present had been laid off from a Cambridge [biotech company called Gen9](#) the previous week.

Startup shutdowns are far from rare. But the story of Gen9, founded by a trio of researchers from Harvard, MIT, and Stanford, illuminates how difficult it can be to turn bleeding-edge science into a sustainable business, even with \$50 million from investors to help get things off the ground.

This story is about a relatively new field called synthetic biology, which involves treating the genetic code in living cells like software code — something that can be written from scratch to achieve a desired end, like producing a new kind of drug, or an artificial version of a naturally occurring substance. (One dream is a fuel that would be less environmentally damaging than oil.)

The story begins — sort of — in 2009, when Gen9 was started in Cambridge. But in some ways, the company was a reboot of an earlier Cambridge outfit, Codon Devices, founded in 2005. It shared several of the same scientific founders and acquired some of the patents from the earlier venture. Codon raised and spent \$44 million before shutting down in 2009.

The vision of both gene-making companies was, as venture capitalist David Berry puts it, to “be the proverbial blue jeans supplier for the gold rush” that was happening. If you needed custom-crafted DNA for your project in a university or pharmaceutical lab, you would simply send the genetic code over the Internet — a string of As, Gs, Ts, and Cs representing the chemical composition — and you’d get a box packed with the DNA you needed via FedEx.

If successful, Gen9 could become the Levi Strauss & Co. of this new realm — a dominant and enduring brand known the world over. The company developed some amazing equipment to manufacture custom strands of DNA, starting with a device called the gene printer, which worked a bit like an inkjet printer. Gen9 received its first order from a paying customer in March 2012.

It eventually grew to about 40 people in an office building overlooking the Charles

River. Gen9 attracted funding from the [Kraft Group](#), the investing arm of the family that owns the New England Patriots. Its website bubbled about “the limitless possibilities of synthetic biology” in designing pest-resistant crops or cutting the costs of paper manufacturing — a big business for the Krafts. And last June, the company said it had landed the biggest contract in its short history, and one of the biggest deals ever for the synthetic biology business. A Boston company called [Ginkgo Bioworks](#) would buy 300 million “base pairs” of DNA from Gen9 — a seven-figure contract, according to Gen9’s former chief executive, Kevin Munnely. Ginkgo had just raised \$100 million; it would use the DNA from Gen9 to reprogram yeast, for example, to produce an artificial version of rose oil for a perfume company, rather than gathering tons of rose petals.

The deal felt like an enormous victory for Gen9, which set about doubling its production capacity.

But in the process of scaling up, the company ran into manufacturing issues. There were problems with the raw materials coming in the door at Gen9, former employee Carlos Bonilla says. “We had trouble building and fulfilling the orders — it was rough,” he says. Pamela Silver, a Gen9 customer who runs a research lab at Harvard, says she was happy with the product and customer service she received. But last August, they didn’t make good on an order she had placed. “When they failed to deliver,” she says, “we assumed it meant they were getting a lot of errors, or just couldn’t make it.”

Munnely, the company’s former chief executive, says that in the latter half of 2016, he was exploring either raising more venture capital funds to keep the company going, or selling it. He noticed there was more investor interest in companies that were using synthetic biology to make a product, like a drug, than a “picks and shovels company” like Gen9, supplying the DNA. Employees thought new money would come in in July, then August, then September, Bonilla says. “You started getting worried when it didn’t happen in November,” he says.

By that month, the company was telling its outside contractors to stop working. In December, when the first round of layoffs happened, Gen9 also began discussions with its largest customer, Ginkgo, about the possibility of buying the company. An agreement was completed Wednesday. Ginkgo chief executive Jason Kelly says it will be a combination of cash and Ginkgo stock (both companies are privately held), but he wouldn't disclose the amount. Ginkgo will bring on just 10 of Gen9's former employees — not including Munnely or Bonilla — and acquire the company's production equipment.

As Ginkgo grows, it will use the capabilities that Gen9 developed for its own purposes. One benefit, Kelly says, will be speeding up Ginkgo's work — rather than waiting four to six weeks for an outside supplier like Gen9 or Twist Bioscience, a San Francisco-based rival, to crank out the genes it needs.

Gen9 never attained profitability, and one contributing factor might have been that customer demand — separate from the one major order from Ginkgo — wasn't picking up as fast as the price of the DNA was dropping in the market. Competing gene vendors, explains Rob Carlson, an investor at Bioeconomy Capital in Seattle, "have been burning cash to collect market share with artificially low prices." That's one reason that Carlson's firm hasn't invested in companies like Gen9 or Twist. "I identified long ago that it was a race to the bottom based on screwy economics," he writes via e-mail. "I am perfectly happy to be wrong about that hypothesis, but the data seems to be bearing it out."

Berry, a partner at [Flagship Pioneering](#) in Cambridge, has a similar take: Just because scientists figure out how to do something dazzling doesn't mean a business can be built upon it. Unlike the microchip industry, where lots of people figured out things to make and sell as chips got less expensive, "the knowledge of what to do with cheaper and cheaper genes is not there," Berry says.

As with all new breakthroughs, the temptation is always to say, "Not there . . . yet?"

Scott Kirsner can be reached at kirsner@pobox.com. Follow him on Twitter [@ScottKirsner](https://twitter.com/ScottKirsner).

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EXHIBIT 8

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-1
REGISTRATION STATEMENT
Under
The Securities Act of 1933

AGILENT TECHNOLOGIES, INC.
(Exact name of Registrant as specified in its charter)

Delaware
(State or other
jurisdiction of
incorporation or
organization)

3825
(Primary Standard Industrial
Classification Code Number)

77-0518772
(I.R.S. Employer
Identification Number)

3000 Hanover Street
Palo Alto, California 94304
(650) 857-1501
(Address, including zip code, and telephone number, including area code, of
Registrant's principal executive offices)

Edward W. Barnholt
President and Chief Executive Officer
Agilent Technologies, Inc.
3000 Hanover Street
Palo Alto, California 94304
(650) 857-1501
(Name, address, including zip code, and telephone number, including area code,
of agent for service)

Copies to:

Larry W. Sonsini, Esq. Donna M. Petkanics, Esq. Wilson Sonsini Goodrich & Rosati Professional Corporation 650 Page Mill Road Palo Alto, California 94304 (650) 493-9300	D. Craig Nordlund, Esq. Marie Oh Huber, Esq. Agilent Technologies, Inc. 3000 Hanover Street Palo Alto, California 94304 (650) 857-1501	William H. Hinman, Jr., Esq. Shearman & Sterling 1550 El Camino Real Menlo Park, California 94025 (650) 330-2200
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Approximate date of commencement of proposed sale to the public: As soon as
practicable after the effective date of this Registration Statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the same offering.

If delivery of the prospectus is expected to be made pursuant to Rule 434, check the following box.

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
-----	-----	-----
Common Stock, par value \$0.01 per share.....	\$100,000,000	\$27,800

(1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) promulgated under the Securities Act of 1933, as amended.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effectiveness until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

EXPLANATORY NOTE

This registration statement contains two separate prospectuses. The first prospectus relates to a public offering in the United States and Canada of an aggregate of _____ shares of common stock. The second prospectus relates to a concurrent offering outside the United States and Canada of an aggregate of _____ shares of common stock. The two prospectuses for inside and outside the United States and Canada will be identical with the exception of an alternate front cover page for the offering outside the United States and Canada. The alternate page appears in this registration statement immediately following the complete prospectus for the offering in the United States and Canada.

+++++
 +The information in this prospectus is not complete and may be changed. We may +
 +not sell these securities until the registration statement filed with the +
 +Securities and Exchange Commission is effective. This prospectus is not an +
 +offer to sell securities and we are not soliciting offers to buy these +
 +securities in any state where the offer or sale is not permitted. +
 +++++
 PROSPECTUS (Subject to Completion)
 Issued August 16, 1999

Shares
 [Agilent Technologies, Inc. Logo]
 COMMON STOCK

Agilent Technologies, Inc. is offering shares of common stock. This is our initial public offering and no public market currently exists for our shares. We anticipate that the initial public offering price will be between \$ and \$ per share.

After the offering, Hewlett-Packard will own approximately % of our common stock, assuming no exercise of the underwriters' over-allotment option. Hewlett-Packard has announced that it plans to complete its divestiture of Agilent Technologies by the middle of calendar year 2000 by distributing all of the shares of our common stock owned by Hewlett-Packard to holders of Hewlett-Packard's common stock. See "Arrangements Between Agilent Technologies and Hewlett-Packard."

Application has been made for listing of our common stock on [the New York Stock Exchange/the Nasdaq Stock Market] under the trading symbol " ".

Investing in our common stock involves risks. See "Risk Factors" beginning on page 9.

PRICE \$ A SHARE

	Price to Public	Underwriting Discounts and Commissions	Proceeds to Agilent Technologies
	-----	-----	-----
Per Share.....	\$	\$	\$
Total.....	\$	\$	\$

The Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Agilent Technologies, Inc. has granted the U.S. underwriters the right to purchase up to an additional shares of common stock to cover over-allotments. Morgan Stanley & Co. Incorporated expects to deliver the shares of common stock to purchasers on , 1999.

MORGAN STANLEY DEAN WITTER

GOLDMAN, SACHS & CO.

, 1999

Inside Front Cover

The following captions appear in the inside front cover:

"Agilent Technologies

Yesterday

A 60-year heritage of
innovation, contribution and
success at Hewlett-Packard

Today

Broad market leadership, rich technology
portfolio, global reach

Tomorrow

Focus, speed and agility,
opportunities in communications and
life sciences"

Three photographs, each one corresponds to descriptive material for Yesterday, Today and Tomorrow: First photograph (Yesterday) depicts two male scientists working in a laboratory setting, circa 1950; Second photograph shows a female laboratory technician performing analysis using Agilent test equipment and recording her findings in a notebook, circa 1999; Third photograph (Tomorrow) is a montage print showing the Earth from the perspective of outer space: a satellite and a cellular telephone radiate from the Earth; beneath them, in relief, a photograph of a computer network appears.

Foldout, Page One

The following captions appear on the foldout, page one:

"Enabling Next-Generation Communications

Test and Measurement

Semiconductor Products

Our Business

We help our customers design and deploy new technologies with our advanced test, measurement and monitoring solutions.

We are a leading supplier of components, modules and assemblies to leaders in high speed communications and computing.

Market Leadership

Number one position in 25 product categories in the test and measurement market.

Leading provider of fiber optic transceiver modules; Fibre Channel protocol integrated circuits; infrared components; optoelectronic components and displays.

Growth Opportunities

Next generation communications

High speed communications networks and

networks and devices.

wireless communications."

One banner-type photograph atop narrative material below. The photograph is rectangular in shape and is a montage. From left to right, the montage comprises a cellular telephone, a computer screen displaying a communications systems diagram and three light-emitting diodes against a colored background. The title "Enabling Next Generation Communications" appears across the entire photograph.

Foldout, Page Two

The following captions appear on the foldout, page two:

"Our Business

We are a worldwide leader in clinical measurement and diagnostic solutions for the healthcare marketplace.

We enable customers to identify, quantify, analyze and test the chemical and biological properties of thousands of substances and products.

Market Leadership

Patient monitoring systems; cardiovascular ultrasound imaging systems; automatic external defibrillators.

Gas chromatography and liquid chromatography instruments and systems.

Growth Opportunities

Healthcare beyond the hospital, including in small clinics, doctors' offices and in patients' homes.

Drug development based on genetic origins of disease, microfluidics and other advanced pharmaceutical technologies."

One banner-type photograph atop narrative material. The photograph is rectangular in shape and is a montage. From left to right, the montage comprises a chemical analysis measurement device, a black-and-white photograph of a female scientist working in a laboratory and three chemical flasks in a foreground against a background of a (different) female scientist analyzing a test tube sample.

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You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of common stock. In this prospectus, "Agilent Technologies," "we," "us" and "our" each refers to Agilent Technologies, Inc. and its subsidiaries, and not the underwriters or Hewlett-Packard Company, and "Hewlett-Packard" refers to Hewlett-Packard Company and its subsidiaries.

Until _____, 1999 (25 days after the date of this prospectus), all dealers that buy, sell or trade our common stock, whether or not participating in this offering, may be required to deliver a prospectus. This delivery requirement is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

PROSPECTUS SUMMARY

You should read the following summary together with the more detailed information regarding our company and the common stock being sold in this offering and our historical consolidated financial statements and notes thereto included elsewhere in this prospectus.

AGILENT TECHNOLOGIES, INC.

Agilent Technologies is a diversified technology company that provides enabling solutions to high growth markets within the communications, electronics, life sciences and healthcare industries. Our broad technology portfolio and our experience in working with market-leading customers around the world have allowed us to establish and continue to expand our leadership across multiple markets.

We are a global leader in designing and manufacturing test, measurement and monitoring instruments, systems and solutions and semiconductors and optical components. Agilent Technologies includes the following businesses:

- . test and measurement, which had fiscal 1998 revenue of \$4.1 billion, provides test instruments, standard and customized test, measurement and monitoring systems for the design, manufacture and support of electronic and communication devices, and software for the design of high-frequency electronic and communication devices;
- . semiconductor products, which had fiscal 1998 revenue of \$1.6 billion, provides fiber optic communications devices and assemblies, integrated

circuits for wireless applications, application-specific integrated circuits (ASICs), optoelectronics and image sensors;

- . healthcare solutions, which had fiscal 1998 revenue of \$1.3 billion, provides patient monitoring, ultrasound imaging and cardiology products and systems; and
- . chemical analysis, which had fiscal 1998 revenue of \$938 million, provides analytical instruments, systems and services for chromatography, spectroscopy and bio-instrumentation.

Agilent Technologies' ability to succeed is based on two fundamental attributes. First, we have a broad and deep portfolio of technology expertise in electronics, communications, medical and chemical measurement, biotechnology, photonics, solid-state materials and components and measurement systems and solutions. This expertise is driven by the research and development efforts within our businesses and by the activities of Agilent Technologies Laboratories, one of the world's leading industrial research and development organizations. Each of our businesses takes advantage of the technology advances developed by our central laboratories, often using common technology in different applications within their specific business.

Our second core attribute is our close relationships with our customers and our comprehensive insight into the worldwide markets in which we sell our products and services. Our businesses have developed these relationships and insights over our 60 year history. During this time, our businesses have worked with thousands of customers worldwide as technologies, business needs and global economic conditions have undergone dramatic changes.

Our businesses share important characteristics and resources that we believe contribute significantly to our competitive success. Our test and measurement, healthcare solutions and chemical analysis businesses are built around our excellence in applying measurement technologies to the development of products that sense, analyze and display data required by the end-user. Our test and measurement and semiconductor businesses share focus on growth opportunities in the communications sector, while our healthcare and chemical analysis businesses share focus on growth opportunities in healthcare and life sciences. Our global infrastructure enables our businesses to move our products from initial commercialization to worldwide availability rapidly and efficiently and to provide localized service and support.

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We provide the world's broadest range of test and measurement solutions to customers in the communications, electronics and semiconductor industries. We are also a leading supplier of:

- . semiconductor and fiber optic components to the communications and computer industries;
- . modules and assemblies to the communications and electronics industries;
- . patient monitoring and ultrasound imaging equipment and automatic external defibrillators to the healthcare industry; and
- . chemical measurement instruments and systems to the hydrocarbon processing, environmental and pharmaceutical industries.

We serve customers in more than 120 countries, and we have major research and development and manufacturing facilities around the world.

STRATEGY

Our business strategy is designed to take advantage of our competitive strengths, leading market positions and global presence to capitalize on emerging trends in the communications, electronics, healthcare and life

sciences industries. The key elements of our strategy are to:

- . Focus on High Growth Market Opportunities. Our strategy is to use our strengths as a diversified technology company to enter new markets through internal development, strategic partnerships and acquisitions. To achieve this objective, we work closely with our customers' research and development teams to understand emerging markets, technologies and standards and we invest accordingly in our own development of enabling solutions in those areas. We intend to use strategic partnerships and make tactical acquisitions to develop advanced systems that complement our existing technologies and products to accelerate our entry into high-growth markets.
- . Continue to Innovate Technologically. Agilent Technologies and Agilent Technologies Laboratories have a long legacy of technological innovation and product generation as part of Hewlett-Packard. We will continue to invest in and build research and development expertise. Our centralized laboratories focus on fundamental technology and process developments and utilize innovations from our four businesses to develop products that address high growth market segments.
- . Maximize the Benefits of our Scale and Global Presence. We believe our scale and global presence provide us with a competitive advantage across multiple industries. In many of our targeted markets and in many of the countries in which we operate, we are the largest industry participant and possess greater resources for research and development and service and support than any competitor. Our global direct sales force gathers valuable insights into emerging industry trends around the world and provides us an effective means of bringing new products to market rapidly. In addition, we believe our customers value our ability to provide more complete solutions with our training, systems integration, and project management programs. We intend to continually enhance overall customer satisfaction by remaining focused on providing effective service and support.

BENEFITS OF OUR SEPARATION FROM HEWLETT-PACKARD

Our company comprises businesses that will be separated from Hewlett-Packard's other operations prior to this offering. We believe that we will realize benefits from our complete separation from Hewlett-Packard, including the following:

- . Greater Strategic Focus. As a result of having our own board of directors and separate management team, we expect to have a sharper focus on the Agilent Technologies business and strategic opportunities. We will also have greater ability to modify business processes to better fit the needs of our customers, business units and employees.

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- . Increased Speed and Responsiveness. As a company significantly smaller than Hewlett-Packard, we expect to be able to make decisions more quickly, deploy resources more rapidly and efficiently and operate with more agility than when we were a part of a larger organization. In addition, we expect to enhance our responsiveness to customers and partners.
- . Better Incentives for Employees and Greater Accountability. We expect that the motivation of our employees and the focus of our management will be strengthened by incentive compensation programs tied to the market performance of our common stock. The separation will enable us to offer our employees compensation directly linked to the performance of the Agilent Technologies business, which we expect to enhance our ability to attract and retain qualified personnel.

- . More Direct Access to Capital Markets. As a separate company, we will have more direct access to the capital markets to issue debt or equity securities and to grow through acquisitions.

OUR RELATIONSHIP WITH HEWLETT-PACKARD

We are currently a wholly owned subsidiary of Hewlett-Packard. After the completion of this offering, Hewlett-Packard will own approximately % of the outstanding shares of our common stock, or approximately % if the U.S. underwriters exercise their over-allotment option in full. Hewlett-Packard has announced that it currently plans to complete its divestiture of Agilent Technologies by the middle of calendar year 2000 by distributing all of the shares of Agilent Technologies common stock owned by Hewlett-Packard to the holders of Hewlett-Packard's common stock. However, Hewlett-Packard is not obligated to complete the distribution, and the distribution may not occur by the contemplated time or at all.

Hewlett-Packard will determine the timing, structure and all terms of its distribution of our common stock in its sole discretion. Hewlett-Packard has received a private letter ruling from the Internal Revenue Service that the distribution of its shares of Agilent Technologies common stock to the holders of Hewlett-Packard common stock will be tax-free to Hewlett-Packard and its stockholders for United States federal income tax purposes. For a discussion of the risks associated with Hewlett-Packard not completing the distribution, see "Risk Factors--Risks Related To Our Separation From Hewlett-Packard--Our business may suffer if Hewlett-Packard does not complete its distribution of our common stock."

We have entered into agreements with Hewlett-Packard that provide for the separation of our business operations from Hewlett-Packard. These agreements are not conditioned on the distribution. They provide for, among other things, the transfer from Hewlett-Packard to us of assets and the assumption by us of liabilities relating to our business. For more information regarding the assets and liabilities to be transferred to us, see our consolidated financial statements and notes thereto that are included elsewhere in this prospectus. In November 1999, Hewlett-Packard will make a \$ cash payment to us in connection with our planned initial funding. We have also entered into agreements with Hewlett-Packard regarding the transfer and licensing to us of intellectual property related to the business of Agilent Technologies. Substantially all of these transfers will be completed prior to the closing of this offering.

The agreements between Hewlett-Packard and us also govern our various interim and ongoing relationships. All of the agreements providing for our separation from Hewlett-Packard were made in the context of a parent-subsidiary relationship and were negotiated in the overall context of our separation from Hewlett-Packard. The terms of these agreements may be more or less favorable to us than if they had been negotiated with unaffiliated third parties. See "Risk Factors--Risks Related To Our Separation From Hewlett-Packard" and "Arrangements between Agilent Technologies and Hewlett-Packard."

THE OFFERING

Common stock offered:	
In the United States and Canada.....	shares
Outside the United States and Canada...	shares
Total.....	shares
Common stock to be outstanding immediately after this offering.....	shares
Common stock to be held by Hewlett-Packard immediately after this offering.....	shares
Use of proceeds.....	We estimate that our net proceeds

from this offering will be \$, based on an assumed initial public offering price of \$ per share. The net proceeds of this offering (including proceeds received from any exercise of the U.S. underwriters' over-allotment option) will be paid to Hewlett-Packard as a dividend to be declared prior to the offering.

Proposed [New York Stock Exchange/
Nasdaq Stock Market] symbol.....

This information is based on shares outstanding as of , 1999, all of which are owned by Hewlett-Packard. We will declare a -for-one stock split to increase the amount of outstanding shares of our common stock to shares prior to this offering. Unless we specifically state otherwise, the information in this prospectus does not take into account the issuance of up to shares of common stock that the U.S. underwriters have the option to purchase solely to cover over-allotments. If the U.S. underwriters exercise their over-allotment option in full, shares of common stock will be outstanding after this offering.

The number of shares of our common stock to be outstanding immediately after this offering listed above does not take into account approximately shares of our common stock reserved for issuance under our stock plans, of which options to purchase shares have been granted.

We were incorporated in Delaware in May 1999 as a wholly owned subsidiary of Hewlett-Packard. Our principal executive offices are located at 3000 Hanover Street, Palo Alto, California 94304, and our telephone number is (650) 857-1501. We expect to move our executive offices to 395 Page Mill Road, Palo Alto, California 94306 in the middle of calendar year 2000. Our website is <http://www.agilent-tech.com>. The information on the website is not a part of this prospectus.

SUMMARY FINANCIAL DATA

The following table presents summary consolidated financial data for Agilent Technologies. The data presented in this table are derived from "Selected Financial Data," "Unaudited Pro Forma Condensed Financial Statements" and the historical consolidated financial statements and notes thereto that are included elsewhere in this prospectus. You should read those sections for a further explanation of the financial data summarized here.

The historical financial information may not be indicative of our future performance and does not reflect what our financial position and results of operations would have been had we operated as a separate, stand-alone entity during the periods presented. The year ended October 31, 1998 includes the effect of pre-tax restructuring charges that reduced our earnings from operations by approximately \$163 million.

The Pro Forma Consolidated Balance Sheet Data reflects the planned initial funding of our operations by Hewlett-Packard and our pending purchase of Yokogawa Electric Corporation's 25% interest in Hewlett-Packard Japan. The Pro Forma As Adjusted Consolidated Balance Sheet Data also reflects the receipt and subsequent payment to Hewlett-Packard of the net proceeds from the sale of the shares of our common stock in this offering. The pro forma financial position shown in this table is not indicative of what our financial position would have been had the separation of our business from Hewlett-Packard been completed on April 30, 1999. See Notes to Unaudited Pro Forma Condensed Financial Statements for an explanation of the calculation of unaudited pro forma net earnings per

share.

Consolidated Statement of Earnings Data:

	Years Ended October 31,					Six Months Ended April 30,	
	1994	1995	1996	1997	1998	1998	1999
	(in millions, except per share data)						
Net revenue.....	\$5,546	\$6,595	\$7,379	\$7,785	\$7,952	\$4,090	\$3,796
Earnings from operations...	521	841	875	870	442	403	341
Net earnings.....	282	499	542	543	257	254	231
Unaudited pro forma net earnings per share:							
Basic.....					\$		\$
Diluted.....					\$		\$
Average shares used in computing unaudited pro forma net earnings per share:							
Basic.....							
Diluted.....							

Consolidated Balance Sheet Data:

	April 30, 1999		
	Actual	Pro Forma	Pro Forma As Adjusted
	(in millions)		
Cash and cash equivalents.....	\$ --	\$ 913	\$ 913
Working capital.....	1,642	2,232	2,232
Total assets.....	5,021	5,350	5,350
Stockholder's net investment/Stockholders' equity....	3,162	3,992	3,992

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RISK FACTORS

You should carefully consider the risks described below and the other information in this prospectus before investing in our common stock. Our business could be seriously harmed by any of these risks. The trading price of our common stock could decline due to any of these risks, and you may lose all or part of your investment.

Risks Related to Our Business

If we do not introduce new products and services in a timely manner, our products and services will become obsolete, and our operating results will suffer.

We sell our products in several industries that are characterized by rapid technological changes, frequent new product and service introductions and evolving industry standards. Without the timely introduction of new products, services and enhancements, our products and services will likely become technologically obsolete over time, in which case our revenue and operating

results would suffer. The success of our new product and service offerings will depend on several factors, including our ability to:

- . properly identify customer needs;
- . price our products competitively;
- . innovate and develop new technologies and applications;
- . successfully commercialize new technologies in a timely manner;
- . manufacture and deliver our products in sufficient volumes on time; and
- . differentiate our offerings from our competitors' offerings.

Many of our products are used by our customers to develop, test and manufacture their new products. We therefore must anticipate industry trends and develop products in advance of the commercialization of our customers' products. If we fail to adequately predict our customers' needs and future activities, we may invest heavily in research and development of products and services that do not lead to significant revenue. For example, the cellular phone industry, which is served by our test and measurement and semiconductor products businesses, currently has several competing communications standards. We may suffer competitive harm if we dedicate resources to developing products and technologies to support a standard that does not achieve broad market acceptance. Our other businesses will encounter similar challenges. In our healthcare business, new technologies that we develop may not be quickly accepted because of industry-specific factors such as the need for regulatory clearance, entrenched patterns of clinical practice, uncertainty over third-party reimbursement and clinicians' fears of malpractice suits. We would suffer competitive harm if we dedicate a significant amount of resources to the development of products and technologies that do not achieve broad market acceptance.

Moreover, significant technical innovations generally require a substantial investment before we can determine the commercial viability of these innovations. We may not have the financial resources necessary to fund these technical innovations. In addition, even if we are able to successfully develop enhancements or new generations of our products, these enhancements or new generations of products may not generate revenue in excess of the costs of development, and they may be quickly rendered obsolete by changing customer preferences or the introduction of products embodying new technologies or features by our competitors.

Our business is subject to economic, political and other risks associated with international sales and operations.

Since we sell our products worldwide, our business is subject to risks associated with doing business internationally. Our net revenue originating outside the United States, as a percentage of our total net revenue, was 54.4% in fiscal year 1998 and 56.0% for the six months ended April 30, 1999. We anticipate that revenue

from international operations will continue to represent a substantial portion of our total revenue. In addition, many of our manufacturing facilities and suppliers are located outside the United States. Accordingly, our future results could be harmed by a variety of factors, including:

- . changes in foreign currency exchange rates;
- . changes in a specific country's or region's political or economic conditions, particularly in emerging markets;
- . trade protection measures and import or export licensing requirements;

- . potentially negative consequences from changes in tax laws;
- . difficulty in staffing and managing widespread operations;
- . differing labor regulations;
- . differing protection of intellectual property; and
- . unexpected changes in regulatory requirements.

We do a substantial portion of our business in Korea and Japan, which have been subject to increased economic instability in recent years. Our business declined in 1998 when Korea and Japan experienced economic difficulties. The recurrence of weakness in these economies or weakness in other international economies could have a significant negative effect on our future operating results.

Fluctuations in our quarterly operating results may cause our stock price to decline.

Given the nature of the markets in which we participate, we cannot reliably predict future revenue and profitability, and unexpected changes may cause us to adjust our operations. A high proportion of our costs are fixed, due in part to our significant sales, research and development and manufacturing costs. Thus, small declines in revenue could disproportionately affect our operating results in a quarter. For example, when our revenue declined in 1998 as a result of the financial crisis in Asia, it caused significant negative fluctuations in our operating results. Other factors that could affect our quarterly operating results include:

- . demand for and market acceptance of our products;
- . competitive pressures resulting in lower selling prices;
- . adverse changes in the level of economic activity in the United States and other major regions in which we do business;
- . adverse changes in industries, such as semiconductors and electronics, on which we are particularly dependent;
- . changes in the relative portion of our revenue represented by our various products and customers;
- . unanticipated delays or problems in the introduction of new products;
- . our competitors' announcements of new products, services or technological innovations;
- . increased costs of raw materials or supplies;
- . changes in the timing of product orders due to:
 - unexpected delays in the introduction of products of our customers,
 - lifecycles of our customers' products ending earlier than expected,or
 - market acceptance of products developed by our customers; and
- . our inability to forecast revenue in a given quarter from large system sales.

The current technology labor market is very competitive, and our business will suffer if we are not able to hire and retain sufficient personnel.

Our future success depends partly on the continued service of our key technical, sales, marketing, manufacturing, executive and administrative personnel. If we fail to retain and hire a sufficient number of these personnel, we will not be able to maintain and expand our business. We also must attract and retain qualified research scientists and engineers for Agilent Technologies Laboratories. Competition for qualified personnel in the technology area is intense, and we operate in several geographic locations where labor markets are particularly competitive, including the Silicon Valley region of Northern California where our headquarters and central research and development laboratories are located. Although we believe we offer competitive salaries and benefits, certain of our businesses have had to increase spending in order to retain personnel. We also believe we have benefited from Hewlett-Packard's name and reputation as an employer in the past. To the extent we do not obtain similar popular recognition, our ability to attract and retain personnel could be harmed. In addition, some employees of Hewlett-Packard who worked in our businesses in the past may have chosen, or may choose, to remain with Hewlett-Packard in other positions. Until 30 days prior to Hewlett-Packard's distribution of our stock, our employees are generally eligible to apply for and move to positions at Hewlett-Packard without losing their Hewlett-Packard tenure.

Our operating results could be harmed if the industries into which we sell our products are in downward cycles.

Many of the industries and markets into which we sell our products are cyclical. For example, in 1998 the operating results of our test and measurement and semiconductor products businesses were harmed by downturns in the semiconductor market. From time to time, the electronics industry has also experienced significant downturns, often in connection with, or in anticipation of, maturing product cycles and declines in general economic conditions. In addition, the computer industry is subject to seasonal and cyclical fluctuations in demand for its products. These industry downturns have been characterized by diminished product demand, excess manufacturing capacity and subsequent accelerated erosion of average selling prices. In addition, the healthcare industry has experienced a significant increase in cost pressures resulting from hospital consolidation and the trend by insurance companies to reduce payments to healthcare providers. Any significant downturn in our customers' markets or in general economic conditions would likely result in a reduction in demand for our products and services and could harm our business.

After our separation from Hewlett-Packard, we may experience increased costs resulting from decreased purchasing power which could decrease our profitability.

Prior to our separation from Hewlett-Packard, our businesses were able to take advantage of Hewlett-Packard's size and purchasing power in procuring goods, services and technology, such as computer software licenses. As a separate, stand-alone entity, we may be unable to obtain goods, services and technology at prices and on terms as favorable as those we obtained prior to the separation. In addition, our patent cross-license agreement with Hewlett-Packard gives us the right to sublicense only a portion of Hewlett-Packard's intellectual property portfolio. As a result, in negotiating patent cross-license agreements with third parties, we may be unable to obtain agreements on terms as favorable as we may have been able to obtain if we had access to Hewlett-Packard's entire intellectual property portfolio.

Our semiconductor technology licensing and supply arrangements with Hewlett-Packard limit our ability to sell to other companies and could restrict our ability to expand our businesses.

We do not have a license under Hewlett-Packard's patents, patent applications and invention disclosures for printing devices, printer supplies, components and accessories, document scanners and some computing devices. In addition, our ICBT Technology Ownership and License Agreement, which generally covers integrated circuit technology that is used in integrated circuits for Hewlett Packard's printers, scanners and computers, provides that for a period of three years in some cases and 10 years in other cases we are prohibited

from using this integrated circuit technology for the development and sale of integrated circuits for use in printing devices, printer supplies, components and accessories, document scanners and some computing devices to third parties other than Hewlett-Packard.

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Although we have entered into a supply agreement for the sale to Hewlett-Packard of these kinds of integrated circuits, the supply agreement does not require Hewlett-Packard to purchase a minimum amount of product from us. In the event that Hewlett-Packard reduces its purchase of our integrated circuits, we would be unable to address this reduction through sales of these kinds of integrated circuits for these types of products to other customers.

If demand for Hewlett-Packard's printer, workstation and server products declines, or if Hewlett-Packard chooses a different supplier, our semiconductor products business revenue will decline significantly.

Historically, some of our businesses have sold products to Hewlett-Packard and have engaged in product development efforts with divisions of Hewlett-Packard. In fiscal 1998, our semiconductor products business received approximately 34% of its revenue from sales to Hewlett-Packard's printer, workstation and server businesses. These Hewlett-Packard businesses were not, and will not be, required to purchase products from us. A reduction in sales to any of these Hewlett-Packard customers would harm our business.

In the past, we have benefited from our access to Hewlett-Packard's research and development strategy, technology plans, future product features and product supply needs in competing for Hewlett-Packard's business. If our competitors were to gain better access to Hewlett-Packard as a result of our separation, our competitors may be able to develop products that better meet the future needs of Hewlett-Packard, decreasing the competitiveness of our products. In addition, we have taken advantage of collaborative relationships with some of Hewlett-Packard's businesses. We may not continue to enjoy all of the benefits of these collaborative relationships, particularly if our patent cross-license is not renewed.

We face aggressive competition in all areas of our business, and if we do not compete effectively, our business will be harmed.

We encounter aggressive competition in all areas of our business. Our competitors are numerous, ranging from some of the world's largest corporations, such as General Electric Company, International Business Machines Corporation, Lucent Technologies, Inc., and Siemens AG, to many highly specialized firms, such as Anritsu Corporation, PE Biosystems, Teradyne, Inc. and Waters Corporation, as well as many smaller technology startups. We may not be able to compete effectively with all of these competitors. We compete primarily on the basis of:

- . technology;
- . product performance;
- . price;
- . product quality and reliability;
- . sales and distribution capabilities; and
- . customer service and support.

To remain competitive, we will be required to develop new products and periodically enhance our existing products in a timely manner and compete effectively on the basis of the factors described above. We anticipate that we may have to adjust prices of many of our products to stay competitive, and we will have to manage financial returns effectively. In addition, new competitors may emerge, and entire product lines may be threatened by new

technologies or market trends which reduce the value of these product lines.

We and our customers are subject to various governmental regulations, and we may incur significant expenses to comply with these regulations and develop our products to be compatible with these regulations.

Several of our product lines are subject to significant international, federal, state and local environmental, health and safety, packaging, product content and labor regulations. These regulations are complex, change

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frequently and have tended to become more stringent over time. We may be required to incur significant expenses to comply with these regulations or remedy past violations of these regulations. Any failure by us to comply with applicable government regulations could also result in cessation of portions or all of our operations, impositions of fines and restrictions on our ability to carry on or expand our operations. In addition, because many of our products are regulated or sold into regulated industries, we must comply with additional regulations in marketing our products.

Except for liabilities relating to specified environment contamination, for which Hewlett-Packard is indemnifying us, we are indemnifying Hewlett-Packard for any liability associated with past non-compliance with environmental laws regulating ongoing operations at all properties to be transferred by Hewlett-Packard to us, as well as at sold or discontinued businesses that related to our business. While we are not aware of any material liabilities associated with past non-compliance, past non-compliance may exist and may expose us to material liability. For a discussion of indemnification related to environmental contamination, see "--We are subject to liability for environmental contamination resulting from the use of hazardous materials in the conduct of our business."

Chemical Regulation. Some of our chemical analysis business' products are used in conjunction with chemicals whose manufacture, processing and distribution are regulated by the United States Environmental Protection Agency under the Toxic Substances Control Act, and by regulatory bodies in other countries with laws similar to the Toxic Substances Control Act. We must conform the manufacture, processing and distribution of these chemicals to these laws, and adapt to regulatory requirements in all countries as these requirements change. If we fail to comply with these requirements in the manufacture or distribution of our products, then we can be made to pay civil penalties and, in some cases, prohibited from distributing our products in commerce until the products or component substances are brought into compliance.

Food and Drug Regulation. The medical device products produced by our healthcare solutions business are subject to regulation by the United States Food and Drug Administration (FDA) and similar international agencies. Their regulations govern a wide variety of product activities from design and development to labeling, manufacturing, promotion, sales and distribution. For example, we received a warning letter from the FDA in 1996 alleging non-compliance with the FDA's quality system regulations at one of our facilities. The FDA's quality systems regulation includes elaborate design, testing, control, documentation and other quality assurance requirements. We had to apply considerable resources to address the FDA's concerns. We believe we have resolved the issues identified in the FDA's letter and the FDA has concurred with our assessment, but we cannot assure you that the FDA will not identify other areas of noncompliance. If we fail to maintain satisfactory compliance with the FDA's quality system and other regulations, we may have to recall products and cease their manufacture and distribution. In addition, we could be subject to fines or criminal prosecution.

In addition, our chemical analysis products are used in the drug design and production processes to test compliance with the Toxic Substances Control Act, the Federal Food, Drug and Cosmetic Act and similar regulations. Therefore, we must continually adapt our chemical analysis products to changing regulations.

Healthcare Regulation. Our healthcare customers rely on third-party payors, such as government programs and private health insurance plans, to reimburse some or all of the cost of the procedures in which our products are used. The continuing efforts of government, insurance companies and other payors of healthcare costs to contain or reduce those costs could lead our customers to reduce or eliminate purchases of our products. Likewise, legislative proposals to reform healthcare or reduce government programs could result in lower prices for or rejection of our products. The cost containment measures that healthcare providers are instituting and the effect of any healthcare reform, both in the United States and internationally, could harm our ability to operate profitably.

Government Contracts and Other Regulation. We have agreements relating to sales of our products to government entities and as a result we are subject to various statutes and regulations that apply to companies doing business with the government. The laws governing government contracts differ from the laws governing private contracts. For example, many government contracts contain pricing terms and conditions that are not

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applicable to private contracts. We are also subject to investigation for compliance with the terms of contracts with the government.

Our products and operations are also often subject to the rules of industrial standards bodies, like the International Standards Organization, as well as regulation of other agencies such as the United States Federal Communications Commission. We also must comply with work safety rules. If we fail to adequately address any of these regulations, our business will be harmed.

We are subject to liability for environmental contamination resulting from the use of hazardous materials in the conduct of our business.

Environmental Contamination from Past Operations. Some of our properties are undergoing remediation by Hewlett-Packard for known subsurface contamination. Hewlett-Packard has agreed to retain the liability for the contamination, perform the required remediation and indemnify us with respect to claims arising out of that contamination. However, we will be responsible for any additional contamination at these properties caused by our operations following the separation. The determination of the existence and cost of any additional contamination caused by us could involve costly and time-consuming negotiations and litigation. In addition, Hewlett-Packard will have access to our properties to perform remediation. While Hewlett-Packard has agreed to minimize interference with on-site operations at those properties, we cannot assure you that the remediation activities and subsurface contamination will not require us to incur unreimbursed costs and have an adverse impact on site operations and on the future use and value of the properties. We also cannot assure you that Hewlett-Packard will fulfill its indemnification or remediation obligations.

We are indemnifying Hewlett-Packard for any liability associated with contamination from past operations at all other properties to be transferred from Hewlett-Packard to us other than those properties currently undergoing remediation by Hewlett-Packard. While we are not aware of any material liabilities associated with existing subsurface contamination at any of those properties, subsurface contamination may exist, and we may be exposed to material liability as a result of the existence of that contamination.

Environmental Contamination Caused by Ongoing Operations. We will be responsible for any contamination to our properties arising out of our operations following the separation. Our semiconductor and other manufacturing processes involve the use of substances regulated under various international, federal, state and local laws governing the environment. We cannot assure you that we will not be subject to liabilities for environmental contamination, and these liabilities may be substantial. Although our policy is to apply strict

standards for environmental protection at our sites inside and outside the United States, even if not subject to regulations imposed by foreign governments, we may not be aware of all conditions that could subject us to liability.

Third parties may claim we are infringing their intellectual property, and we could suffer significant litigation or licensing expenses or be prevented from selling products.

Third parties may claim that we are infringing their intellectual property rights, and we may be found to infringe those intellectual property rights. While we do not believe that any of our products infringe the valid intellectual property rights of third parties, we may be unaware of intellectual property rights of others that may cover some of our technology, products and services. Moreover, in connection with future intellectual property infringement claims, we will only have the benefit of asserting counterclaims based on Hewlett-Packard's intellectual property portfolio in limited circumstances, and we will only be able to offer licenses to Hewlett-Packard's intellectual property in order to resolve claims in limited circumstances.

Any litigation regarding patents or other intellectual property could be costly and time-consuming, and divert our management and key personnel from our business operations. The complexity of the technology

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involved and the uncertainty of intellectual property litigation increase these risks. Claims of intellectual property infringement might also require us to enter into costly royalty or license agreements. However, we may not be able to obtain royalty or license agreements on terms acceptable to us, or at all. We also may be subject to significant damages or injunctions against development and sale of certain of our products.

We often rely on licenses of intellectual property useful for our business. We cannot assure you that these licenses will be available in the future on favorable terms or at all. In addition, our position with respect to the negotiation of licenses may change after our separation from Hewlett-Packard.

Third parties may infringe our intellectual property, and we may expend significant resources enforcing our rights or suffer competitive injury.

Our success depends in large part on our proprietary technology. We rely on a combination of patents, copyrights, trademarks and trade secrets, confidentiality provisions and licensing arrangements to establish and protect our proprietary rights. If we fail to successfully enforce our intellectual property rights, our competitive position could suffer, which could harm our operating results.

Our pending patent and trademark registration applications may not be allowed or competitors may challenge the validity or scope of these patent applications or trademark registrations. In addition, our patents may not provide us a significant competitive advantage.

We may be required to spend significant resources to monitor and police our intellectual property rights. We may not be able to detect infringement and may lose competitive position in the market before we do so. In addition, competitors may design around our technology or develop competing technologies. Intellectual property rights may also be unavailable or limited in some foreign countries, which could make it easier for competitors to capture market share.

Potential year 2000 problems associated with our products, our internal systems or the products of our suppliers and customers could harm our business.

Many currently installed computer systems and software were written to

accept and process only two digit entry codes for the year when storing dates. Beginning with the year 2000, these entry codes will need to accept four digit entries to distinguish 21st century dates from 20th century dates. As a result, computer systems and products may need to be upgraded to solve this problem to avoid incorrect or lost data. We are working to implement the systems and programming changes necessary to address year 2000 internal information technology and non-information technology readiness issues, product and service readiness issues and material third party relationships. However, we may encounter a delay in, or increased costs associated with, the implementation of necessary systems and programming changes. In addition, if we fail to achieve year 2000 readiness for our internal systems and processes, it could delay our ability to manufacture and ship products and deliver services, disrupt our customer service and technical support facilities and interrupt customer access to our online products and services. Although we are dedicating substantial resources to attaining year 2000 readiness, we cannot assure you that we will be successful in our efforts to identify and address all year 2000 issues. Even if we act in a timely manner to complete all of our assessments; identify, develop and implement remediation plans believed to be adequate; and develop contingency plans believed to be adequate; some problems may not be identified or corrected in time to prevent serious harm to us. In addition, we have relied on assurances from third parties that they and the products they supply are year 2000 compliant. We have not independently verified these assurances in many cases, and any failure of these third party products and services to be year 2000 compliant could harm us. Although our newly introduced products are year 2000 compliant, some of our products that are currently installed at customer sites will require upgrades or other remediation. Some of these products are used in critical applications in which the impact of non-performance to these customers and other parties could be significant. There is a risk that our customers could initiate litigation against us for damages arising from our products that are not year 2000 compliant. Year 2000 issues could harm our future results of operations, cash flows or financial condition. See "Management's Discussion and Analysis of Financial Condition and Results of Operations--Year 2000."

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If our factories or facilities were to experience catastrophic loss, our operations would be seriously harmed.

Our facilities could be subject to a catastrophic loss such as a fire, earthquake or flood. We have significant facilities, such as our production facilities in California, Colorado, Delaware, Massachusetts and Washington in the United States, Germany, Japan, Malaysia, Singapore, and the United Kingdom and our headquarters and a portion of Agilent Technologies Laboratories in California. If any of these facilities were to experience a catastrophic loss, it could disrupt our operations, delay production, shipments and revenue, and result in large expenses to repair or replace the facility. Until Hewlett-Packard distributes our shares, we will be covered by its catastrophic insurance policies. After the distribution, we expect to obtain insurance to cover most potential losses at our facilities, other than those that result from earthquakes. However, the insurance we obtain may not be adequate to cover all possible losses.

Many of our facilities are located in areas with relatively frequent earthquake activity. We intend to follow Hewlett-Packard's past and current practices and do not intend to obtain earthquake insurance.

Risks Related to Our Separation from Hewlett-Packard

Our new name is not yet recognized as a brand in the marketplace, and as a result our product sales could suffer.

The loss of the "Hewlett-Packard" brand name may hinder our ability to establish new relationships. In addition, our current customers, suppliers and partners may react negatively to the separation. In connection with our separation from Hewlett-Packard, we will change the brand name and most of the

trademarks and trade names under which we conduct our business. This transition to our new name will occur rapidly in the case of some products and over specified periods of time in the case of other products. We believe that sales of our products have benefited from the use of the "Hewlett-Packard" brand name. In addition, although we believe we have all necessary rights to use the new brand name, our rights to use it may be challenged by others.

Substantial sales of common stock may occur in connection with the distribution, which could cause our stock price to decline.

Hewlett-Packard has announced that it intends to distribute the approximately shares of common stock it owns to Hewlett-Packard stockholders by the middle of calendar year 2000. Substantially all of these shares would be eligible for immediate resale in the public market. We are unable to predict whether significant amounts of common stock will be sold in the open market in anticipation of, or following, this distribution. We are also unable to predict whether a sufficient number of buyers would be in the market at that time.

A portion of Hewlett-Packard's common stock is held by index funds tied to the Standard & Poor's 500 Index, the Dow Jones Industrial Average or other stock indices. If we are not in these indices at the time of Hewlett-Packard's distribution of our common stock, these index funds will be required to sell our stock. Similarly, other institutional stockholders are not allowed by their charters to hold the stock of companies that do not pay dividends. Since we currently do not intend to pay dividends, we expect that these stockholders will sell the shares of our common stock distributed to them. Any sales of substantial amounts of common stock in the public market, or the perception that such sales might occur, whether as a result of this distribution or otherwise, could harm the market price of our common stock. See "Shares Eligible for Future Sale."

We currently use Hewlett-Packard's information systems, and we must develop our own information systems cost-effectively.

We currently use Hewlett-Packard's systems to support our operations, including systems to manage inventory, order processing, human resources, shipping and accounting. Many of these systems are proprietary to Hewlett-Packard and are very complex. These systems have been modified, and are in the process of being further modified, to enable Hewlett-Packard to separately track items related to our business. These modifications, however, may result in unexpected system failures or the loss or corruption of data.

We are in the process of creating our own information systems to eventually replace Hewlett-Packard's systems. We may not be successful in implementing these systems and transitioning data from Hewlett-Packard's

systems to ours. We are currently in the process of implementing new enterprise resource planning software applications to manage some of our information systems. Our chemical analysis and healthcare solutions businesses have each migrated to new enterprise resource planning software, and each experienced disruptions during the transition process that negatively affected their operating results for the period in which the transition occurred.

Any failure or significant downtime in Hewlett-Packard's or our own information systems could prevent us from taking customer orders, shipping products or billing customers and could harm our business. In addition, Hewlett-Packard's and our information systems require the services of employees with extensive knowledge of these information systems and the business environment in which we operate. In order to successfully implement and operate our systems, we must be able to attract and retain a significant number of current Hewlett-Packard employees to our company. If we fail to attract and retain the highly skilled personnel required to implement, maintain, and operate our information systems, our business could suffer.

Our business may suffer if Hewlett-Packard does not complete its distribution of our common stock.

Hewlett-Packard has announced that it intends to distribute to its stockholders all of our common stock that it owns by the middle of calendar year 2000, although it is not obligated to do so. This distribution may not occur by that time or at all. We may not obtain the benefits we expect as a result of this distribution, including greater strategic focus, increased agility and speed, greater access to capital markets, better incentives for employees, more accountable management and the other benefits described in "Our Separation From Hewlett-Packard." In addition, until this distribution occurs, the risks discussed below relating to Hewlett-Packard's control of us and the potential business conflicts of interest between Hewlett-Packard and us will continue to be relevant to our stockholders.

We will be controlled by Hewlett-Packard as long as it owns a majority of our common stock, and our other stockholders will be unable to affect the outcome of stockholder voting during such time.

After the completion of this offering, Hewlett-Packard will own approximately % of our outstanding common stock, or approximately % if the U.S. underwriters exercise their over-allotment option in full. As long as Hewlett-Packard owns a majority of our outstanding common stock, Hewlett-Packard will continue to be able to elect our entire board of directors and to remove any director, with or without cause, without calling a special meeting. Investors in this offering will not be able to affect the outcome of any stockholder vote prior to the planned distribution of our stock to the Hewlett-Packard stockholders. As a result, Hewlett-Packard will control all matters affecting Agilent Technologies, including:

- . the composition of our board of directors and, through it, any determination with respect to our business direction and policies, including the appointment and removal of officers;
- . the allocation of business opportunities that may be suitable for us and Hewlett-Packard;
- . any determinations with respect to mergers or other business combinations;
- . our acquisition or disposition of assets;
- . our financing;
- . changes to the agreements providing for our separation from Hewlett-Packard;
- . the payment of dividends on our common stock; and
- . determinations with respect to our tax returns.

Hewlett-Packard is not prohibited from selling a controlling interest in us to a third party.

Our historical financial information may not be representative of our results as a separate company.

The historical financial information we have included in this prospectus has been carved out from Hewlett-Packard's consolidated financial statements and does not reflect what our financial position, results of operations

and cash flows would have been, had we been a separate, stand-alone entity during the periods presented. Hewlett-Packard did not account for us as, and we were not operated as, a single stand-alone entity for the periods presented. In addition, the historical information is not necessarily

indicative of what our results of operations, financial position and cash flows will be in the future. We have not made adjustments to reflect many significant changes that will occur in our cost structure, funding and operations as a result of our separation from Hewlett-Packard, including changes in our employee base, changes in our tax structure, increased costs associated with reduced economies of scale, increased marketing expenses related to establishing a new brand identity and increased costs associated with being a public, stand-alone company.

For additional information, see "Unaudited Pro Forma Condensed Financial Statements," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our historical consolidated financial statements and notes thereto.

We will not be able to rely on Hewlett-Packard to fund our future capital requirements.

In the past, our capital needs have been satisfied by Hewlett-Packard. However, following the separation, Hewlett-Packard will no longer provide funds to finance our working capital or other cash requirements. We cannot assure you that financing, if needed, will be available on favorable terms.

We believe our capital requirements will vary greatly from quarter to quarter, depending on, among other things, capital expenditures, fluctuations in our operating results, financing activities and build-up of inventories. We believe that the planned initial funding from Hewlett-Packard, along with our future cash flow from operations, will be sufficient to satisfy our working capital, capital expenditure and research and development requirements for the foreseeable future. However, we may require or choose to obtain additional debt or equity financing in the future. Future equity financings would be dilutive to the existing holders of our common stock. Future debt financings could involve restrictive covenants. We will not be able to obtain financing with interest rates as favorable as those historically enjoyed by Hewlett-Packard. See "Management's Discussion and Analysis of Financial Condition and Results of Operations--Liquidity and Capital Resources."

We may have potential business conflicts of interest with Hewlett-Packard with respect to our past and ongoing relationships that could harm our business operations.

Conflicts of interest may arise between Hewlett-Packard and us in a number of areas relating to our past and ongoing relationships, including:

- . labor, tax, employee benefit, indemnification and other matters arising from our separation from Hewlett-Packard;
- . intellectual property matters;
- . employee retention and recruiting;
- . major business combinations involving us;
- . sales or distributions by Hewlett-Packard of all or any portion of its ownership interest in us;
- . the nature, quality and pricing of transitional services Hewlett-Packard has agreed to provide us; and
- . business opportunities that may be attractive to both Hewlett-Packard and us.

Nothing restricts Hewlett-Packard from competing with us other than some restrictions on the use of patents licensed to Hewlett-Packard by us.

We may not be able to resolve any potential conflicts, and even if we do,

the resolution may be less favorable than if we were dealing with an unaffiliated party. The agreements we have entered into with Hewlett-Packard may be amended upon agreement between the parties. While we are controlled by Hewlett-Packard, Hewlett-Packard may be able to require us to agree to amendments to these agreements that may be less favorable to us than the current terms of the agreement.

Our close relationship with Hewlett-Packard could limit our potential to do business with Hewlett-Packard's competitors.

Hewlett-Packard is one of our largest customers, and we will continue to have a variety of contractual relationships with Hewlett-Packard. Whether or not Hewlett-Packard completes its distribution of our common stock, our close relationship with Hewlett-Packard will continue for a significant period of time. We cannot predict whether existing and potential customers will be deterred by the existence of these relationships or the historical ties between Hewlett-Packard and us. If they are deterred, our future growth could be hindered.

Our directors and executive officers may have conflicts of interest because of their ownership of Hewlett-Packard common stock.

Many of our directors and executive officers have a substantial amount of their personal financial portfolios in Hewlett-Packard common stock and options to purchase Hewlett-Packard common stock. Ownership of Hewlett-Packard common stock by our directors and officers after our separation from Hewlett-Packard could create, or appear to create, potential conflicts of interest when directors and officers are faced with decisions that could have different implications for Hewlett-Packard and us. For information regarding directors' and officers' ownership of Hewlett-Packard common stock, see "Management-- Stock Ownership of Directors and Executive Officers."

The transitional services being provided to us by Hewlett-Packard may not be sufficient to meet our needs, and we may not be able to replace these services after our agreements with Hewlett-Packard expire.

Hewlett-Packard has agreed to provide certain transitional services to us, including services related to:

- . information technology systems;
- . buildings and facilities; and
- . finance and accounting.

Although Hewlett-Packard is contractually obligated to provide us with these services, these services may not be provided at the same level as when we were part of Hewlett-Packard, and we may not be able to obtain the same benefits. We will also lease and sublease certain office and manufacturing facilities from Hewlett-Packard. These transitional service and leasing arrangements generally have a term of less than two years following the separation. After the expiration of these various arrangements, we may not be able to replace the transitional services or enter into appropriate leases in a timely manner or on terms and conditions, including cost, as favorable as those we will receive from Hewlett-Packard.

These agreements were made in the context of a parent-subsubsidiary relationship and were negotiated in the overall context of our separation from Hewlett-Packard. The prices charged to us under these agreements may be lower than the prices that we may be required to pay third parties for similar services or the costs of similar services if we undertake them ourselves. For more information about these arrangements, see "Arrangements Between Agilent Technologies and Hewlett-Packard."

Our securities have no prior market, and we cannot assure you that our stock price will not decline after the offering.

Before this offering, there has not been a public market for our common stock, and an active public market for our common stock may not develop or be sustained after this offering. The market price of our common stock could be subject to significant fluctuations after the offering. Among the factors that could affect our stock price are:

- . quarterly variations in our operating results;
- . changes in revenue or earnings estimates or publication of research reports by analysts;
- . speculation in the press or investment community;
- . strategic moves by us or our competitors, such as acquisitions or restructurings;
- . actions by institutional stockholders or by Hewlett-Packard prior to its distribution of our stock;
- . general market conditions; and
- . domestic and international economic factors unrelated to our performance.

The stock markets in general, and the markets for high technology stocks in particular, have experienced extreme volatility that has often been unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the trading price of our common stock. In particular, we cannot assure you that you will be able to resell your shares at or above the initial public offering price, which will be determined by negotiations between the representatives of the underwriters and us. See the section entitled "Underwriters" for a discussion of the factors to be considered in determining the initial public offering price.

Provisions in our charter documents and Delaware law may delay or prevent acquisition of our company, which could decrease the value of your shares.

Our certificate of incorporation and bylaws and Delaware law contain provisions that could make it harder for a third party to acquire us without the consent of our board of directors, although these provisions have little significance while we are controlled by Hewlett-Packard. These provisions include a classified board of directors and limitations on actions by our stockholders by written consent. In addition, our board of directors has the right to issue preferred stock without stockholder approval, which could be used to dilute the stock ownership of a potential hostile acquiror. Delaware law also imposes some restrictions on mergers and other business combinations between us and any holder of 15% or more of our outstanding common stock. Although we believe these provisions provide for an opportunity to receive a higher bid by requiring potential acquirors to negotiate with our board of directors, these provisions apply even if the offer may be considered beneficial by some stockholders.

You should not rely on forward-looking statements.

You should not rely on forward-looking statements in this prospectus. This prospectus contains forward-looking statements that involve risks and uncertainties. We use words such as "anticipates," "believes," "plans," "expects," "future," "intends" "may," "will," "should," "estimates," "predicts," "potential," "continue" and similar expressions to identify such forward-looking statements. This prospectus also contains forward-looking statements attributed to third parties relating to their estimates regarding the growth of our markets. Forward-looking statements are subject to known and unknown risks, uncertainties and other factors that may cause our actual results, as well as those of the test and measurement, semiconductor,

healthcare, chemical analysis and related markets we serve, levels of activity, performance, achievements and prospects to be materially different from those expressed or implied by such forward-looking statements. These risks, uncertainties and other factors include, among others, those identified here in this "Risk Factors" section and elsewhere in this prospectus.

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OUR SEPARATION FROM HEWLETT-PACKARD

Our Separation from Hewlett-Packard

On March 2, 1999, Hewlett-Packard announced a plan to create a separate company that comprises Hewlett-Packard's test and measurement, semiconductor products, healthcare solutions and chemical analysis businesses, related portions of Hewlett-Packard Laboratories and associated infrastructure. We were incorporated in Delaware in May 1999 in preparation for our separation from Hewlett-Packard, and we are currently a wholly owned subsidiary of Hewlett-Packard. Prior to the separation, Hewlett-Packard has conducted and will conduct our business through various divisions and subsidiaries. We expect that the separation of our businesses from those of Hewlett-Packard, including the transfer of related assets, liabilities and intellectual property rights, will be substantially completed by the closing of this offering.

Benefits of the Separation

We believe that we will realize certain benefits from our complete separation from Hewlett-Packard, including the following:

- . Greater Strategic Focus. As a result of having our own board of directors and separate management team, we expect to have a sharper focus on the Agilent Technologies business and strategic opportunities. We will also have greater ability to modify business processes to better fit the needs of our customers, business units and employees.
- . Increased Speed and Responsiveness. As a company significantly smaller than Hewlett-Packard, we expect to be able to make decisions more quickly, deploy resources more rapidly and efficiently and operate with more agility than when we were a part of a larger organization. In addition, we expect to enhance our responsiveness to customers and partners.
- . Better Incentives for Employees and Greater Accountability. We expect the motivation of our employees and the focus of our management will be strengthened by incentive compensation programs tied to the market performance of our common stock. The separation will enable us to offer our employees compensation directly linked to the performance of the Agilent Technologies business, which we expect to enhance our ability to attract and retain qualified personnel.
- . More Direct Access to Capital Markets. As a separate company, we will have more direct access to the capital markets to issue debt or equity securities and to grow through acquisitions.

Separation and Transitional Arrangements

We and Hewlett-Packard, and, in some cases, our respective subsidiaries, have entered into or will enter into agreements providing for the separation of our business from Hewlett-Packard, including a master separation and distribution agreement to which we and Hewlett-Packard are parties. These agreements generally provide for, among other things, the transfer from Hewlett-Packard to us of assets and the assumption by us of liabilities relating to our business, in each case to the extent agreed to by Hewlett-Packard and us. We have entered into agreements with Hewlett-Packard regarding the transfer and licensing to us of intellectual property relating to our businesses. We have also entered into agreements governing various interim and

ongoing relationships between the parties including transitional services Hewlett-Packard will provide to us.

The agreements relating to our separation from Hewlett-Packard were made in the context of a parent-subsiary relationship and were negotiated in the overall context of our separation from Hewlett-Packard. The terms of these agreements may be more or less favorable than those we could have negotiated with unaffiliated third parties. For more information regarding the separation arrangements, see "Arrangements Between Agilent Technologies and Hewlett-Packard."

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The Distribution by Hewlett-Packard of Our Common Stock

After completion of this offering, Hewlett-Packard will own approximately % of the outstanding shares of our common stock, or approximately % if the U.S. underwriters exercise their over-allotment option in full. Hewlett-Packard has announced that it currently plans to complete its divestiture of our company by the middle of calendar year 2000 by distributing all of its shares of our common stock to the holders of Hewlett-Packard's common stock. However, Hewlett-Packard is not obligated to complete the distribution, and we cannot assure you as to whether or when it will occur. See "Risk Factors--Risks Related To Our Separation From Hewlett-Packard--Our business may suffer if Hewlett-Packard does not complete its distribution of our common stock."

Hewlett-Packard has advised us that it would not complete the distribution if its board of directors determines that the distribution is no longer in the best interest of Hewlett-Packard and its stockholders. Hewlett-Packard has further advised us that it currently expects that the principal factors that it would consider in determining whether and when to complete the distribution include:

- . the relative market prices of our common stock and Hewlett-Packard's common stock;
- . the absence of any court orders or regulations prohibiting or restricting the completion of the distribution; and
- . other conditions affecting the businesses of Agilent Technologies or Hewlett-Packard.

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USE OF PROCEEDS

We estimate that our net proceeds from this offering will be about \$, based on an assumed initial public offering price of \$ per share. The net proceeds of this offering, including net proceeds received from any exercise of the U.S. underwriters' over-allotment option, will be paid to Hewlett-Packard as a dividend to be declared prior to the offering. In November 1999, Hewlett-Packard will make a \$ cash payment to us under the terms of the master separation and distribution agreement in connection with our initial funding. See "Arrangements between Agilent Technologies and Hewlett-Packard--Master Separation and Distribution Agreement."

DIVIDEND POLICY

We currently intend to retain any future earnings to fund the development and growth of our business. Therefore, we do not anticipate paying any cash dividends in the foreseeable future.

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CAPITALIZATION

Set forth below is our actual capitalization at April 30, 1999, our unaudited pro forma capitalization that gives effect to the pro forma adjustments described in "Unaudited Pro Forma Condensed Financial Statements," and our unaudited pro forma as adjusted capitalization that gives further effect to the receipt and application of the net proceeds of this offering. You should read the information set forth below together with "Selected Financial Data," "Unaudited Pro Forma Condensed Financial Statements," our historical consolidated financial statements and the notes thereto, and "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this prospectus.

April 30, 1999

 Pro Pro Forma
 Actual Forma As Adjusted

 (in millions)

Stockholders' Equity:			
Preferred stock.....	\$ --	\$ --	\$ --
Common stock.....	--	--	
Additional paid-in capital.....	--	3,992	
Stockholder's net investment.....	3,162	--	--
	-----	-----	-----
Total stockholders' equity.....	3,162	3,992	3,992
	-----	-----	-----
Total capitalization.....	\$3,162	\$3,992	\$3,992
	=====	=====	=====

SELECTED FINANCIAL DATA

The following table presents our selected historical financial data. The information set forth below should be read in conjunction with "Unaudited Pro Forma Condensed Financial Statements," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our historical consolidated financial statements and notes thereto included elsewhere in this prospectus. The consolidated statement of earnings data set forth below for the years ended October 31, 1996, 1997 and 1998 and the consolidated balance sheet data as of October 31, 1997 and 1998 are derived from, and are qualified by reference to, our audited consolidated financial statements included elsewhere in this prospectus. The consolidated statement of earnings data for the years ended October 31, 1994 and 1995 and the consolidated balance sheet data as of October 31, 1994, 1995 and 1996 are derived from our unaudited consolidated financial data that is not included in this prospectus. The consolidated statement of earnings data for the six month periods ended April 30, 1998 and 1999 and the consolidated balance sheet data as of April 30, 1999 are derived from unaudited consolidated financial statements included elsewhere in this prospectus and, in the opinion of management, include all adjustments, consisting only of normal and recurring accruals, that are necessary for a fair presentation of our financial position and results of operations for these periods.

The historical financial information may not be indicative of our future performance and does not reflect what our financial position and results of operations would have been had we operated as a separate, stand-alone entity during the periods presented. Statement of earnings data for the year ended October 31, 1998 include pre-tax restructuring charges of approximately \$163 million. Of this amount, cost of products and services includes \$138 million, research and development includes \$7 million and selling, general and administrative includes \$18 million. See Note 8 of notes to consolidated

financial statements.

Our net revenue presented below differs from the net revenue associated with our businesses previously reported by Hewlett-Packard primarily because intercompany sales to Hewlett-Packard are accounted for as third-party transactions in the financial data below, but have been eliminated in information previously reported by Hewlett-Packard.

	Years Ended October 31,					Six Months Ended April 30,	
	1994	1995	1996	1997	1998	1998	1999
(in millions, except per share data)							
Consolidated Statement of Earnings Data:							
Net revenue.....	\$5,546	\$6,595	\$7,379	\$7,785	\$7,952	\$ 4,090	\$ 3,796
Costs and expenses:							
Cost of products and services.....	2,860	3,335	3,901	4,126	4,512	2,182	1,993
Research and development.....	692	765	805	880	948	469	463
Selling, general and administrative.....	1,473	1,654	1,798	1,909	2,050	1,036	999
Total costs and expenses.....	5,025	5,754	6,504	6,915	7,510	3,687	3,455
Earnings from operations.....	521	841	875	870	442	403	341
Other income (expense), net.....	(87)	(62)	(21)	(47)	(46)	(13)	15
Earnings before taxes...	434	779	854	823	396	390	356
Provision for taxes.....	152	280	312	280	139	136	125
Net earnings.....	\$ 282	\$ 499	\$ 542	\$ 543	\$ 257	\$ 254	\$ 231
Basic and diluted net earnings per share.....	\$	\$	\$	\$	\$	\$	\$
Average shares used in computing basic and diluted net earnings per share.....							
Unaudited pro forma diluted net earnings per share.....					\$	\$	
Average shares used in computing unaudited pro forma diluted net earnings per share.....							

October 31,					April 30,	
1994	1995	1996	1997	1998	1999	

(in millions)

Consolidated Balance Sheet Data:

Working capital.....	\$1,331	\$1,388	\$1,449	\$1,408	\$1,476	\$1,642
Total assets.....	3,925	4,454	4,720	5,006	4,987	5,021
Stockholder's net investment.....	2,666	2,829	2,998	3,110	3,022	3,162

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UNAUDITED PRO FORMA CONDENSED FINANCIAL STATEMENTS

The unaudited pro forma condensed financial statements set forth below consist of an unaudited pro forma condensed balance sheet as of April 30, 1999 and an unaudited pro forma condensed statement of earnings for the year ended October 31, 1998 and the six months ended April 30, 1999. The unaudited pro forma condensed balance sheet has been prepared assuming that Hewlett-Packard provided our planned initial funding and that the pending purchase of Yokogawa Electric Corporation's 25% interest in Hewlett-Packard Japan was completed on April 30, 1999. See Note 15 to our historical consolidated financial statements included elsewhere in this prospectus. The "Pro Forma As Adjusted" amounts also assume that the proceeds from the offering had been received and the related dividend to Hewlett-Packard had been paid on April 30, 1999.

The unaudited pro forma condensed statement of earnings has been prepared assuming that the pending purchase of Yokogawa's 25% interest and the offering occurred on November 1, 1997. The unaudited pro forma condensed balance sheet is not intended to represent what our financial position would actually have been had these events occurred on April 30, 1999 or to project our financial position for any future date. Similarly, the unaudited pro forma condensed statement of earnings is not intended to represent what our operating results would actually have been for the periods indicated or to project our operating results for any future period. We do not expect that the incremental costs related to our transitional services agreements with Hewlett-Packard will be material to our consolidated financial statements. Other changes to our cost structure resulting from our separation from Hewlett-Packard are not determinable. The pro forma adjustments are based upon currently available information and certain assumptions that management believes are reasonable. These unaudited pro forma condensed financial statements should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and the notes thereto included elsewhere in this prospectus.

UNAUDITED PRO FORMA CONDENSED BALANCE SHEET

	April 30, 1999					
	Actual	Adjustments for Initial Funding	Adjustments for Purchase	Pro Forma	Adjustments for the Offering	Pro Forma As Adjusted
	(in millions)					
Assets						
Current assets:						
Cash and cash equivalents.....	\$ --	\$ 913 (A)	\$ --	\$ 913	\$ (D) (D)	\$ 913
Accounts receivable....	1,211	(791) (A)	--	420	--	420
Inventory.....	1,466	--	--	1,466	--	1,466
Other current assets...	455	(27) (A)	--	428	--	428
Total current assets...	3,132	95	--	3,227	--	3,227
Property, plant and equipment, net.....	1,435	--	53 (C)	1,488	--	1,488
Other assets.....	454	--	181 (C)	635	--	635
Total assets.....	\$5,021	\$ 95	\$234	\$5,350	\$--	\$5,350

Basic.....	\$	\$	(G)	\$	\$	(G)
	=====	=====		=====	=====	
Diluted.....	\$	\$	(G)	\$	\$	(G)
	=====	=====		=====	=====	
Average shares used in computing net earnings per share:						
Basic.....			(G)			(G)
	=====	=====		=====	=====	
Diluted.....			(G)			(G)
	=====	=====		=====	=====	

NOTES TO UNAUDITED PRO FORMA CONDENSED FINANCIAL STATEMENTS

- (A) Reflects our initial funding from Hewlett-Packard that will occur on or about November 1, 1999. If the initial funding had occurred on April 30, 1999, we would have received \$913 million from Hewlett-Packard. Hewlett-Packard will retain some of our assets and liabilities, and will transfer to us some of the assets and liabilities related to its business. The actual amount received from Hewlett-Packard will differ based on Hewlett-Packard's and our assets and liabilities as of October 31, 1999.
- (B) Reflects the incorporation of Agilent Technologies in May 1999, the issuance of 10 million shares of \$.01 par value common stock and the transfer of Hewlett-Packard's net investment in Agilent Technologies to additional paid-in capital.
- (C) Reflects our pending purchase of Yokogawa's 25% interest in Hewlett-Packard Japan, which will be funded by Hewlett-Packard. For purposes of this pro forma presentation, management has allocated \$254 million of the Hewlett-Packard Japan purchase price to our business and we have allocated this amount as follows: minority interest--\$20 million, land--\$53 million and goodwill--\$181 million. This preliminary allocation will be refined upon the completion of an independent valuation.
- (D) Reflects the net proceeds from the offering and the subsequent payment of the dividend to Hewlett-Packard, assuming no exercise of the U.S. underwriters' over-allotment option.
- (E) Reflects amortization of the goodwill created from the pending purchase of Yokogawa's 25% interest in Hewlett-Packard Japan over 10 years.
- (F) Reflects the elimination of Yokogawa's share of earnings in Hewlett-Packard Japan.
- (G) Basic pro forma net earnings per share is calculated based on common stock outstanding of shares upon completion of the offering. Diluted pro forma net earnings per share assumes that % of the outstanding Hewlett-Packard options held by Agilent Technologies' employees are assumed by Agilent Technologies. The actual number of Hewlett-Packard options assumed by Agilent Technologies will not be determined until individual employees make an election to amend their Hewlett-Packard options in January 2000. See "Arrangements Between Agilent Technologies and Hewlett-Packard--Employee Matters Agreement." Unaudited pro forma diluted net earnings per share would be \$ if % of the outstanding Hewlett-Packard options are assumed and \$ if % of the outstanding Hewlett-Packard options are assumed.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL
CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with the

consolidated financial statements and notes thereto included elsewhere in this prospectus. The following discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from the results contemplated by these forward-looking statements due to certain factors, including those discussed below and elsewhere in this prospectus.

Overview

Separation from Hewlett-Packard

On March 2, 1999, Hewlett-Packard announced a plan to create a separate company, subsequently named Agilent Technologies, that comprises Hewlett-Packard's test and measurement, semiconductor products, healthcare solutions and chemical analysis businesses, related portions of Hewlett-Packard Laboratories, and associated infrastructure. After the completion of this offering, Hewlett-Packard will own approximately % of our outstanding common stock, assuming no exercise of the U.S. underwriters' over-allotment option. Hewlett-Packard has also announced its intention to distribute to its stockholders all of its remaining interest in us by the middle of calendar year 2000. Hewlett-Packard and we have entered into various agreements related to certain interim and ongoing relationships between the two companies. For a description of these agreements, see "Arrangements Between Hewlett-Packard and Agilent Technologies."

Agilent Technologies' Businesses

We were incorporated in Delaware in May 1999 as a wholly owned subsidiary of Hewlett-Packard. Our businesses historically have been operated as internal units of Hewlett-Packard. Hewlett-Packard has agreed to transfer to us prior to the completion of this offering, substantially all of the assets and liabilities relating to our businesses. We expect that the transfer of these assets and liabilities will be substantially complete by the closing date of this offering. In connection with our initial funding, Hewlett-Packard will retain a portion of our assets and will transfer to us some of the assets and liabilities related to its businesses. For a description of these retained amounts, see "Unaudited Pro Forma Condensed Financial Statements."

We have entered into agreements with Hewlett-Packard under which Hewlett-Packard will provide services to us during a transition period after the separation. The agreements relate primarily to building services, information technology services and accounting and finance services. Under these agreements, we will reimburse Hewlett-Packard for its cost of the service plus 5%. The transition period varies depending on the agreement but is generally less than two years. Some of the agreements, including those for building services and information technology services, may be extended beyond the initial transition period. If these agreements are extended, we would reimburse Hewlett-Packard at its cost plus 10% for information technology services and most other services and at negotiated market rates for building services. The agreements do not necessarily reflect the costs of obtaining the services from unrelated third parties or of our providing the applicable services ourselves. However, we believe that purchasing these services from Hewlett-Packard provides us with an efficient means of obtaining these services during the transition period. In addition, we will provide some transition services to Hewlett-Packard, for which we will be reimbursed at our cost plus 5%.

We must also negotiate new agreements with various third parties as a separate, stand-alone entity. There can be no assurance that the terms we will be able to negotiate for these agreements will be as favorable as those we enjoyed as part of Hewlett-Packard. In addition, as part of Hewlett-Packard, we benefited from various economies of scale including shared global administrative functions, facilities and volume purchase discounts. We expect that our costs and expenses will increase as a result of the loss of these economies of scale, although the amount is not determinable at this time.

Hewlett-Packard has been and is expected to continue to be a significant customer. In recent periods, sales to Hewlett-Packard represented approximately 9% of our net revenue and approximately 35% of the net revenue of our semiconductor products business.

Basis of Presentation

Our fiscal year end is October 31 and our fiscal quarters end on January 31, April 30 and July 31. Unless otherwise stated, all years and dates refer to our fiscal year and fiscal periods.

Our consolidated financial statements have been carved out from the consolidated financial statements of Hewlett-Packard using the historical results of operations and historical bases of the assets and liabilities of the Hewlett-Packard businesses that our company comprises. The consolidated financial statements also include allocations to us of certain Hewlett-Packard corporate assets, including pension assets; liabilities, including profit sharing, pension and non-qualified deferred compensation obligations; and expenses, including centralized research and development, legal, accounting, employee benefits, real estate, insurance services, information technology services, treasury and other Hewlett-Packard corporate and infrastructure costs. The expense allocations have been determined on bases that Hewlett-Packard and we considered to be a reasonable reflection of the utilization of the services provided to us or the benefit received by us. The expense allocation methods included relative sales, headcount, square footage, transaction processing costs, adjusted operating expenses and others.

The financial information presented in this prospectus is not indicative of our financial position, results of operations or cash flows in the future nor is it necessarily indicative of what our financial position, results of operations or cash flows would have been had we been an independent, stand-alone entity for the periods presented. The financial information presented in this prospectus does not reflect the many significant changes that will occur in our funding and operations as a result of our becoming a stand-alone entity, the offering and the distribution.

1998 Restructuring

During 1998, we committed to transfer the production of eight-inch semiconductor wafers to a third party contractor. We also undertook employee reductions through voluntary severance programs related to this transfer as well as actions related to other businesses. Approximately 1,650 employees accepted the voluntary severance incentive packages by the October 31, 1998 deadline. We recorded pre-tax charges of approximately \$163 million related to these restructuring actions. Of this amount, \$138 million was included in cost of products, \$7 million was included in research and development expense and \$18 million was included in selling, general and administrative expense in the 1998 consolidated statement of earnings. The restructuring costs included approximately \$78 million related to employee severance under the voluntary severance incentive plans and \$85 million related to non-cash asset impairments, primarily machinery and equipment, resulting from the restructuring actions. In the six months ended April 30, 1999, approximately \$65 million of employee severance costs were paid. The remaining severance costs of \$13 million are expected to be paid by October 31, 1999. We expect future benefits from the restructuring to be reflected primarily in cost of products and to a lesser extent in operating expenses.

Cyclical Business

Many of the industries and markets into which we sell our products and services are cyclical, causing a corresponding impact on our financial results. Shifts in the semiconductor market, electronics industry and computer industry, as well as rapidly shifting global economic conditions, have had significant impacts on our business. Additionally, as a capital equipment provider, our revenue is driven by the capital expenditure budgets and spending patterns of our customers who often delay or accelerate purchases in reaction to variations in their business. We expect our business to remain

cyclical when we operate as a separate, stand-alone entity. Given that a high proportion of our costs are fixed, variability in revenue as a result of these business cycles could disproportionately affect our quarterly and annual results.

Economic Conditions in Asia

Beginning in the second half of 1998 and continuing into the first half of 1999, our revenue and operating results declined as a result of the downturn in Asian economies, particularly Korea and Japan. Many of our major customers, particularly those in the semiconductor and electronics industries, delayed or canceled purchases of our products. This had a significant impact on us, particularly our test and measurement business.

Impact of Foreign Currencies

We sell our products in many countries and a substantial portion of our sales and a portion of our costs and expenses are denominated in foreign currencies, especially in the Japanese yen and the German mark. In 1997 compared to 1996 and in 1998 compared to 1997, the U.S. dollar strengthened significantly against the Japanese yen and the German mark. This had an adverse affect on our net revenue growth and a favorable impact on our operating expense growth in these periods. In the first half of 1999 compared to the first half of 1998, the U.S. dollar weakened against these currencies, which had a favorable impact on our net revenue growth and an adverse effect on our operating expense growth. Our currency exposures historically have been hedged as part of Hewlett-Packard's global hedging program, which is designed to minimize exposure to foreign currency fluctuations. We expect to implement a similar hedging program upon our separation from Hewlett-Packard.

Recent Accounting Pronouncements

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." This statement establishes accounting and reporting standards for derivative instruments and requires recognition of all derivatives as assets or liabilities in our balance sheet and measurement of those instruments at fair value. The statement is effective for fiscal years beginning after June 15, 2000. We will adopt the standard no later than the first quarter of fiscal year 2001 and we are in the process of determining the impact that adoption will have on our consolidated financial statements.

Results of Operations

Six Months ended April 30, 1998 and 1999

Our results of operations for the six months ended April 30, 1998 and 1999 in dollars and as a percentage of total net revenue follow.

Six Months Ended April 30,			
Dollars		As a Percentage of Total Net Revenue	
1998	1999	1998	1999
-----	-----	-----	-----

(dollars in millions)

Net revenue:

Products.....	\$ 3,532	\$ 3,185	86.4%	83.9%
Services.....	558	611	13.6	16.1
	-----	-----	-----	-----
Total net revenue.....	4,090	3,796	100.0	100.0
	-----	-----	-----	-----
Costs and expenses:				
Cost of products.....	1,829	1,623	44.7	42.8
Cost of services.....	353	370	8.6	9.7
Research and development.....	469	463	11.5	12.2
Selling, general and administrative...	1,036	999	25.3	26.3
	-----	-----	-----	-----
Total costs and expenses.....	3,687	3,455	90.1	91.0
	-----	-----	-----	-----
Earnings from operations.....	403	341	9.9	9.0
Other income (expense), net.....	(13)	15	(.4)	.4
	-----	-----	-----	-----
Earnings before taxes.....	390	356	9.5	9.4
Provision for taxes.....	136	125	3.3	3.3
	-----	-----	-----	-----
Net earnings.....	\$ 254	\$ 231	6.2%	6.1%
	=====	=====	=====	=====
Cost of products as a percentage of products revenue.....			51.8%	51.0%
Cost of services as a percentage of services revenue.....			63.3	60.6

Net revenue

Net revenue consists of revenue from sales of products and services net of trade discounts and allowances and includes revenue from sales to Hewlett-Packard. We recognize revenue from product sales at the time we ship the product to the customer or on installation and customer acceptance, if the acceptance criteria are substantive. Services include hardware and software support and maintenance, rentals, consulting and education. We recognize revenue from services over the contractual period or as services are rendered and accepted by the customer.

Our total net revenue decreased 7.2% in the first half of 1999 compared to the first half of 1998. In the first half of 1999, net revenue from products decreased 9.8%, while net revenue from services increased 9.5% compared to the first half of 1998. In 1999, United States revenue decreased 8.7% to \$1.7 billion while international revenue decreased 6.0% to \$2.1 billion. International revenue was negatively affected by the ongoing weakness in economic conditions throughout Asia, particularly in Korea and Japan, and particularly in the first quarter of 1999. Many of our United States customers were also negatively affected by conditions in Asia. General weakness in the semiconductor industry also negatively affected our revenue. These effects were particularly significant in our test and measurement business. Net revenue in the second quarter of 1999 increased 12.5% over the first quarter of 1999, reflecting improvement in economic conditions in Asia.

Earnings from operations

Earnings from operations decreased 15.4% in the first half of 1999 compared to the first half of 1998. First quarter earnings from operations decreased 62.0% while second quarter earnings from operations increased

75.2% compared to the same periods in the prior year. The decrease in earnings from operations in the first half of 1999 was substantially a result of lower net revenue. The impact of the lower net revenue was partially offset by a reduction of costs and expenses resulting from the 1998 restructuring,

particularly in the second quarter of 1999.

Cost of products and services consists of costs of manufacturing products and providing services. These include materials, costs of third party contract manufacturers, salaries and related expenses for manufacturing and service personnel, distribution costs, warranty costs, depreciation of manufacturing equipment and overhead allocations for facilities expenses and information technology services.

Cost of products and services as a percentage of net revenue decreased .8 percentage points in the first half of 1999 from the first half of 1998. Costs of semiconductor products decreased significantly as a percentage of net revenue due primarily to cost improvements resulting from the 1998 restructuring. This improvement was substantially offset by increased costs as a percentage of net revenue in all other businesses.

Operating expenses include research and development and selling, general and administrative expenses. Research and development expenses include salaries and related expenses of engineers and related engineering support personnel, initial tooling, project materials, depreciation on equipment used in research and development and an allocation of facilities expenses and information technology services. Selling, general and administrative expenses include salaries and related expenses for sales, account management, marketing, administrative, finance, legal, human resources and executive personnel, commissions, costs and expenses for marketing programs and trade shows, fees for professional services, costs of accounting and internal control systems, costs of patents, goodwill amortization and allocations for facilities expenses and information technology services.

Although operating expenses decreased in the first half of 1999, operating expenses as a percentage of net revenue increased by 1.7 percentage points in the first half of 1999 compared to the first half of 1998 as a result of lower net revenue. Research and development expenses were essentially unchanged in the first half of 1999 compared to the same period of 1998. In the first half of 1999, selling, general and administrative expenses decreased 3.6% compared to the first half of 1998. The 1998 restructuring contributed to this decrease.

We expect to benefit from lower operating expenses in future periods as a result of the 1998 restructuring. However, the positive impact of the 1998 restructuring may be offset by increases in operating expenses resulting from our operating as a separate, stand-alone entity.

Our effective tax rate, calculated on a separate return basis, for the first half of 1999 was 35.0%. The rate is based on estimates of our earnings before taxes in the various tax jurisdictions in which we operate throughout the world. While changes in our mix of earnings before taxes in these tax jurisdictions can cause our effective tax rate to fluctuate, we currently expect our effective tax rate to remain at approximately 35% for the remainder of 1999 and in 2000. From separation through the distribution, our tax liability will be determined in accordance with our tax sharing agreement with Hewlett-Packard.

Test and Measurement

Six Months Ended	
April 30,	
-----	-----
1998	1999
-----	-----
(dollars in millions)	

Net revenue.....	\$	2,149	\$	1,853
Earnings from operations.....		278		149
As a percentage of net revenue.....		12.9%		8.0%

Net revenue

Net revenue from our test and measurement business decreased 13.8% in the first half of 1999 compared to the first half of 1998 primarily due to the impact of economic conditions in Asia and the broad

downturn in the semiconductor industry on our customers. Revenue from sales of products to our customers in Asia decreased to approximately 29% of our test and measurement business' net revenue in the first half of 1999 from approximately 33% of net revenue in the first half of 1998. These decreases were partially offset by increased sales of communications test products as a result of the rapidly growing demand for greater bandwidth and new services.

Earnings from operations

Earnings from operations from our test and measurement business decreased 46.4% in the first half of 1999 from the first half of 1998 as a result of lower net revenue partially offset by lower costs and expenses.

Cost of products and services as a percentage of net revenue increased 1.3 percentage points in the first half of 1999 compared to the first half of 1998. The increase was attributable to lower volumes of products sold, primarily wireless communication test equipment and automated test equipment, and to higher support and services revenue and the associated higher cost of this revenue. This increase was partially offset by cost savings resulting from the 1998 restructuring.

Operating expenses as a percentage of net revenue increased 3.6 percentage points in the first half of 1999 compared to the first half of 1998 as a result of lower net revenue despite lower levels of expenses. Continued savings from cost reduction programs initiated in the second half of 1998 resulted in significant decreases in some components of both research and development and selling, general and administrative expenses. Research and development expenses decreased 5.4% in the first half of 1999 from the first half of 1998. Selling, general and administrative expenses decreased 7.2% in the first half of 1999 compared to the first half of 1998.

Semiconductor Products

Six Months Ended	
April 30,	
1998	1999

(dollars in millions)

Net revenue.....	\$ 795	\$ 773
Earnings from operations.....	20	64
As a percentage of net revenue.....	2.5%	8.3%

Net revenue

Net revenue from our semiconductor products business decreased 2.8% in the first half of 1999 compared to the first half of 1998, due to the sale of its power amplifier business. If net revenue in the first half of 1998 were adjusted to exclude revenue of the power amplifier business, net revenue would have increased by 2.4% over the comparable prior period. Net revenue from ASICs, fiber optic products, motion control products and high-speed networking products grew. Sales to Hewlett-Packard accounted for 35.4% of net revenue from the semiconductor products business in the first half of 1998 and 36.9%

of net revenue in the first half of 1999.

We expect sales of PA-RISC microprocessors to Hewlett-Packard to be reduced from estimated revenue of \$65 million in fiscal 1999 to estimated revenue of less than \$10 million in 2000 as Hewlett-Packard sources these products from an alternate supplier. We currently do not expect to incur any incremental costs related to winding down the microprocessor business. Although we expect that the loss of revenue associated with the microprocessor business will have a negative impact on our net revenue growth rates in the short term, we believe this negative impact will not have a material effect on our consolidated results of operations.

We have entered into a memorandum of understanding to expand our existing joint venture relationship with Royal Philips Electronics, N.V. If this transaction is completed, we expect to move a portion of our light-emitting diode (LED) business into the joint venture. Since we will have less than a majority ownership in the joint venture, our related LED business revenue will no longer be consolidated in our results. Instead, we will record our proportion of the joint venture's net earnings in other income.

Earnings from operations

Earnings from operations from our semiconductor products business increased 220.0% in the first half of 1999 from the first half of 1998 despite lower net revenue primarily due to the cost savings resulting from the 1998 restructuring.

As a percentage of net revenue, cost of products decreased 6.1 percentage points in the 1999 period compared to the 1998 period. A substantial portion of this improvement was the result of the 1998 restructuring. Decreases in cost of products also resulted from a more profitable product mix, specifically higher volumes of fiber optic communications products, motion control devices and microprocessors.

Operating expenses as a percentage of net revenue were essentially unchanged in the first half of 1999 compared to the first half of 1998. Research and development expenses increased 3.2% in the first half of 1999 from the first half of 1998 reflecting increased investments in the fast growing fiber optics and high-speed networking businesses. Lower marketing expenses largely accounted for the 6.5% decrease in selling, general and administrative expense.

Healthcare Solutions

Six Months Ended	
April 30,	
-----	-----
1998	1999
-----	-----
(dollars in millions)	

Net revenue.....	\$	676	\$	671
Earnings from operations.....		56		45
As a percentage of net revenue.....		8.3%		6.7%

Net revenue

Net revenue from our healthcare solutions business was essentially unchanged in the first half of 1999 from the comparable period in 1998. In the first half of 1999, higher net revenue from cardiology products was offset by lower net revenue from ultrasound imaging and patient monitoring products. The

lower revenue in these product lines was caused by internal production constraints resulting from our transition to a new enterprise resource planning system in November 1998 at our Andover, Massachusetts facility. The implementation of the new enterprise resource planning system is now complete, and we do not anticipate further problems.

Earnings from operations

Earnings from operations from our healthcare solutions business decreased 19.6% in the first half of 1999 compared to the first half of 1998 substantially as a result of higher expenses, primarily attributable to our acquisition of Heartstream, Inc. in 1998. Research and development expense increased 6.5% largely as a result of our efforts to develop new automatic external defibrillator products. Selling, general and administrative expense increased by 3.1% due to amortization of goodwill associated with the Heartstream acquisition.

Chemical Analysis

	Six Months Ended April 30,	
	1998	1999
	-----	-----
	(dollars in millions)	

Net revenue.....	\$	470	\$	499
Earnings from operations.....		46		64
As a percentage of net revenue.....		9.8%		12.8%

Net revenue

Net revenue from our chemical analysis business increased 6.2% in the first half of 1999 over the first half of 1998. This growth was generated primarily by pricing promotions across all product lines and a 13.5%

increase in services revenue. In addition, strong demand in the pharmaceutical industry led to increased sales of our liquid chromatography products.

Earnings from operations

Earnings from operations from our chemical analysis business increased 39.1% in the first half of 1999 compared to the first half of 1998 largely due to higher net revenue, partially offset by small increases in costs and expenses.

Cost of products and services as a percentage of net revenue decreased 2.4 percentage points in the first half of 1999 compared to the first half of 1998. The improvements were due to productivity improvements within the services business and higher volumes and greater manufacturing efficiencies in our mass spectrometer and liquid chromatography product lines. In addition, warranty costs were lower in the first half of 1999 than in the first half of 1998.

Operating expenses as a percentage of net revenue decreased .6 percentage points in the first half of 1999 compared to the first half of 1998 primarily as a result of higher net revenue. Research and development expense increased 10.8% in the first half of 1999 from the first half of 1998 because of increased investments in our microfluidics program. Microfluidics is the manipulation of minute quantities of fluids for research purposes. Selling, general and administrative expense was essentially the same in both periods.

Years ended October 31, 1996, 1997 and 1998

Our results of operations for the years ended October 31, 1996, 1997 and 1998 in dollars and as a percentage of total net revenue follow.

	Years Ended October 31,					
	Dollars			As a Percentage of Total Net Revenue		
	1996	1997	1998	1996	1997	1998
	(in millions)					
Net revenue:						
Products.....	\$6,440	\$6,754	\$6,794	87.3%	86.8%	85.4%
Services.....	939	1,031	1,158	12.7	13.2	14.6
Total net revenue.....	7,379	7,785	7,952	100.0	100.0	100.0
Costs and expenses:						
Cost of products.....	3,327	3,455	3,807	45.1	44.4	47.9
Cost of services.....	574	671	705	7.8	8.6	8.8
Research and development.....	805	880	948	10.9	11.3	11.9
Selling, general and administrative.....	1,798	1,909	2,050	24.3	24.5	25.8
Total costs and expenses.....	6,504	6,915	7,510	88.1	88.8	94.4
Earnings from operations.....	875	870	442	11.9	11.2	5.6
Other income (expense), net.....	(21)	(47)	(46)	(.4)	(.6)	(.6)
Earnings before taxes.....	854	823	396	11.5	10.6	5.0
Provision for taxes.....	312	280	139	4.2	3.6	1.8
Net earnings.....	\$ 542	\$ 543	\$ 257	7.3%	7.0%	3.2%
Cost of products as a percentage of products revenue.....				51.7%	51.2%	56.0%
Cost of services as a percentage of services revenue.....				61.1	65.1	60.9

Net revenue

Our total net revenue increased 5.5% in 1997 from 1996 and 2.1% in 1998 from 1997. The increase in 1997 from 1996 was driven primarily by our test and measurement business, which contributed over half of our total net revenue. The increase in 1998 from 1997 reflects improvements from our other three businesses, substantially offset by decreased revenue in our test and measurement business. United States revenue increased 2.1% to \$3.4 billion in 1997 and increased 6.6% in 1998 to \$3.6 billion. International revenue increased 8.3% to \$4.4 billion in 1997 and decreased 1.3% to \$4.3 billion in 1998. Economic conditions in Asia adversely affected revenue from sales of our products and services to customers in Japan and Korea, particularly in the last three quarters of 1998, and also reduced revenue from other parts of the world. Our product revenue was also affected by the global weakness in the semiconductor industry. Product revenue increased 4.9% in 1997 from 1996 and

was essentially unchanged in 1998 from 1997. Revenue from services grew 9.8% in 1997 from 1996 and 12.3% in 1998 from 1997 as a result of increases in our installed base, primarily in test and measurement.

Earnings from operations

Earnings from operations was essentially unchanged in 1997 from 1996 and decreased 49.2% in 1998 from 1997. Slightly higher net revenue in 1998 as compared to 1997 was offset by significantly higher costs and expenses, including the charges related to the 1998 restructuring.

As a percentage of net revenue, cost of products and services was essentially unchanged in 1997 from 1996 and increased 3.7 percentage points in 1998 from 1997. The increase in 1998 was a result of lower volumes and less profitable product mix in the test and measurement business and costs associated with the 1998 restructuring.

Operating expenses as a percentage of net revenue increased .6 percentage points in 1997 from 1996 and 1.9 percentage points in 1998 from 1997. The increase in 1997 and 1998 reflects higher expenses offset by higher net revenue.

Research and development expenses increased 9.3% in 1997 compared to 1996 and 7.7% in 1998 compared to 1997. The increases in 1997 and 1998 reflect ongoing investments in new products and new technologies, primarily in test and measurement and semiconductor products. Selling, general and administrative expenses grew 6.2% in 1997 and 7.4% in 1998. The 1998 increase reflects the acquisition of Heartstream. For both years, the expense growth reflects increased selling costs related to revenue growth and increased marketing program costs associated with our continued introduction of new products and the expansion of our support capabilities. The growth rate in operating expenses, exclusive of the 1998 restructuring costs, decreased significantly in the second half of 1998 due to our cost reduction programs that reduced certain variable costs such as travel and discretionary marketing programs.

Our effective tax rate was 36.5% in 1996, 34.0% in 1997 and 35.0% in 1998. The primary reason for the fluctuation in our tax rate is the change in the mix of our earnings in various tax jurisdictions throughout the world.

Test and Measurement

Years Ended October 31,

1996 1997 1998

(dollars in millions)

Net revenue.....	\$ 3,823	\$ 4,203	\$ 4,100
Earnings from operations.....	606	674	348
As a percentage of net revenue.....	15.9%	16.0%	8.5%

Net revenue

Net revenue from our test and measurement business grew 9.9% in 1997 from 1996 and declined 2.5% in 1998 from 1997. The increase in 1997 from 1996 primarily reflected significant growth in sales to global wireless

communications customers. Additional revenue growth resulted from investments in increased capacity and capability by contract manufacturers, which resulted in increased sales of our automated semiconductor test and automated

manufacturing test products. Sales of our communications test systems and instruments also increased.

Results in 1998 reflected weak economic conditions in Asia, which represented approximately 31% of test and measurement's total net revenue in 1998 compared to approximately 36% in 1997 and approximately 36% in 1996. A slowdown in the semiconductor industry in mid-1998, which was partially caused by the economic conditions in Asia, also reduced our revenue growth. Competitive pressure increased because of these conditions and in some cases, we granted higher than normal pricing discounts and allowances. These revenue trends were partially offset by increased sales of products for development and deployment of higher bandwidth and optical networks. In addition, services revenue increased 18.6% in 1998 from 1997.

Earnings from operations

Earnings from operations from our test and measurement business increased 11.2% in 1997 from 1996 and decreased 48.4% in 1998 from 1997. The increase in 1997 from 1996 primarily reflects higher net revenue. The decrease in 1998 from 1997 reflects a combination of lower net revenue and higher costs and expenses, including the costs of the 1998 restructuring.

Cost of products and services as a percentage of net revenue decreased .6 percentage points in 1997 from 1996. Most of this improvement was caused by higher volumes in 1997, primarily in communications products and electronic instruments. Cost of products and services as a percentage of net revenue increased 3.3 percentage points from 1997 to 1998. The increase was substantially attributable to lower volumes and less profitable product mix, primarily in wireless communications products and automated test equipment. Cost of products in 1998 included restructuring charges for employee severance and other non-recurring charges, accounting for .7 percentage points of the increase. Higher excess inventory write-offs across all product lines, as a result of the weak economic conditions in Asia and the timing of new product introductions, also contributed to the higher cost ratio in 1998.

Operating expenses as a percentage of net revenue increased .4 percentage points in 1997 from 1996 and 4.3 percentage points in 1998 from 1997. The increase in 1997 from 1996 was due to higher expenses only partially offset by higher net revenue. The increase in 1998 from 1997 was due to a combination of lower net revenue and higher expenses.

Research and development expense increased 15.2% in 1997 from 1996 and 10.0% in 1998 from 1997. The expense growth in 1997 from 1996 resulted from the accelerated development of products for the wireless communications market. The increase in 1998 from 1997 reflects our ongoing investment in new products. Selling, general and administrative expense increased 9.3% in 1997 from 1996 and 7.4% in 1998 from 1997. The increase in 1997 from 1996 was driven by marketing investments in the wireless communications market, as well as new marketing efforts focused on Internet service providers. In 1998, our cost reduction programs slowed overall expense growth and significantly decreased some variable operating costs. However, this was partially offset by 1998 restructuring charges for employee severance costs.

Semiconductor Products

Years Ended October 31,			
	1996	1997	1998
	(dollars in millions)		

Net revenue.....	\$ 1,470	\$ 1,479	\$ 1,574
Earnings (loss) from operations.....	125	57	(106)
As a percentage of net revenue.....	8.5%	3.9%	(6.7)%

Net revenue

Net revenue from our semiconductor products business was essentially unchanged in 1997 from 1996 and increased 6.4% in 1998 from 1997. Our sales of ASICs and microprocessors in 1997 were lower as compared to 1996 because Hewlett-Packard shipped fewer workstations using these components in the first half of 1997. This decrease was offset by strong revenue growth in the fiber optics and high-speed networking areas. The strong revenue growth in these two areas continued into 1998. In addition, revenue in 1998 from sales of integrated circuits increased significantly over 1997. In the second half of 1998, revenue growth slowed due to customer anticipation of the divestiture of the power amplifier business and the decline in the wireless communications semiconductor business in Asia. Revenue from sales to Hewlett-Packard was 32.8% of net revenue in 1996, 34.2% of net revenue in 1997 and 34.5% of net revenue in 1998.

Earnings from operations

Earnings from operations from our semiconductor products business decreased 54.4% in 1997 from 1996 and 286.0% in 1998 from 1997. The decrease in 1997 from 1996 reflects significant growth in operating expenses while net revenue remained essentially unchanged. The decrease in 1998 from 1997 occurred despite growth in net revenue and was primarily a result of costs incurred for the 1998 restructuring.

Cost of products as a percentage of net revenue increased 2.2 percentage points in 1997 from 1996 and 9.7 percentage points in 1998 from 1997. The increase in 1997 from 1996 was the result of lower volumes of ASIC sales to Hewlett-Packard as well as write-offs of obsolete semiconductor inventory related to wireless communications devices. Costs in 1998 include \$116 million of restructuring charges. Without these charges, cost of products as a percentage of net revenue would have increased primarily as a result of lower ASIC volumes in the second half of 1998.

Operating expenses as a percentage of net revenue increased 2.3 percentage points in 1997 from 1996 and 1.0 percentage point in 1998 from 1997. The increase in 1997 from 1996 was due primarily to higher expenses. The increase in 1998 from 1997 was due to higher expenses, including amounts related to the 1998 restructuring, partially offset by the growth in net revenue.

Research and development expense increased 19.1% in 1997 from 1996 and 13.7% in 1998 from 1997. The increase in 1997 included increased research and development spending on semiconductor process technologies, packaging technologies and development tools. Research and development expense increased in 1998 primarily as a result of our efforts to develop high-speed networking products and advanced technology ASICs. Selling, general and administrative expense increased 4.7% in 1997 from 1996, due primarily to higher marketing costs, and increased 8.5% in 1998 from 1997. The increase in 1998 from 1997 reflects primarily the effect of one-time charges, including the 1998 restructuring.

We expect future research and development efforts to focus on the areas of fiber optic and high-speed networking devices. Although we have had significant research and development expenses related to semiconductor process technologies in recent years, we expect to conduct future efforts through joint venture partnering arrangements and through third-party agreements, thereby reducing our research and development expenses in this area.

Healthcare Solutions

Years Ended October 31,

 1996 1997 1998

 (dollars in millions)

Net revenue.....	\$ 1,244	\$ 1,208	\$ 1,340
Earnings from operations.....	106	30	62
As a percentage of net revenue.....	8.5%	2.5%	4.6%

Net revenue

Net revenue from our healthcare solutions business decreased 2.9% in 1997 compared to 1996 and increased 10.9% in 1998 from 1997. The decrease in 1997 from 1996 was primarily attributable to internal product transition issues in the second half of 1997 that resulted in delays in shipments of patient monitoring and ultrasound imaging products. The increase in 1998 from 1997 was driven by strong sales of new patient monitoring systems and cardiology ultrasound imaging products, which were introduced in the second half of 1997. In addition, our entry into the automatic external defibrillator market through our acquisition of Heartstream in March 1998 provided additional revenue. The net revenue growth in 1998 from 1997 was achieved despite the negative impact from international revenue resulting from economic weakness in certain markets in Asia as well as lower healthcare system spending in parts of Europe.

Earnings from operations

Earnings from operations from our healthcare solutions business decreased 71.7% in 1997 from 1996 and increased 106.7% in 1998 from 1997. The decrease in 1997 from 1996 resulted from lower net revenue combined with higher costs and expenses. The increase in 1998 from 1997 was primarily due to higher net revenue, partially offset by higher costs and expenses.

Cost of products and services as a percentage of net revenue increased by 3.6 percentage points in 1997 from 1996 and decreased by .9 percentage points in 1998 from 1997. The increase in 1997 from 1996 was driven by product transition issues in the second half of 1997 as well as manufacturing quality control issues in the second half of 1997. These factors resulted in delays in shipments of ultrasound imaging and patient monitoring products, as well as a shift in product mix to less profitable services and supplies. The decrease in 1998 from 1997 was primarily a result of higher volumes, as product transition issues and manufacturing quality control issues encountered in 1997 were resolved. The effect of higher volumes was partially offset by increased spending related to the implementation of a new worldwide quality system and the development of a new enterprise resource planning system.

Operating expenses as a percentage of net revenue increased 2.4 percentage points in 1997 from 1996 and decreased 1.2 percentage points in 1998 from 1997. The increase in 1997 from 1996 was due to lower revenue combined with higher expenses. The decrease in 1998 from 1997 resulted primarily from higher revenue.

Research and development expense decreased 7.0% in 1997 from 1996 and 3.0% in 1998 from 1997. The decrease in 1997 was attributable to lower initial tooling costs than in 1996 and a headcount reduction related to the closure of some product line operations. The decrease in 1998 from 1997 primarily resulted from the lower spending levels required to complete customer commitments after our divestiture of the healthcare information management business. Selling, general and administrative expense increased 8.1% in 1997 from 1996 and 11.1% in 1998 from 1997. The increase in 1997 from 1996 was due primarily to higher sales and marketing costs associated with new product introductions in patient monitoring and ultrasound imaging. The acquisition of

Heartstream in March 1998 resulted in increased headcount in the sales organization and higher goodwill amortization.

Chemical Analysis

	Years Ended October 31,		
	1996	1997	1998
	(dollars in millions)		
Net revenue.....	\$ 842	\$ 895	\$ 938
Earnings from operations.....	38	77	75
As a percentage of net revenue.....	4.5%	8.6%	8.0%

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Net revenue

Net revenue from our chemical analysis business increased 6.3% in 1997 from 1996 and 4.8% in 1998 from 1997. The increases resulted from strong growth in mass spectroscopy, liquid chromatography and consumables, such as columns and supplies. The increase in 1998 was achieved despite decreased revenue from products and services sold to customers in Asia as a whole and Japan in particular as a result of the economic conditions in that region. In 1998, pricing pressures increased as some competitors cut prices worldwide.

Earnings from operations

Earnings from operations from our chemical analysis business increased 102.6% in 1997 from 1996 and decreased 2.6% in 1998 from 1997. The increase in 1997 from 1996 resulted from higher net revenue while costs and expenses remained relatively unchanged. The decrease in 1998 from 1997 reflects higher operating expenses partially offset by higher revenue.

As a percentage of net revenue, cost of products and services decreased by 1.4 percentage points in 1997 from 1996 and .7 percentage points in 1998 from 1997. The improvements in 1997 and 1998 were driven by revenue growth and higher volumes. In addition, cost structure improvements were achieved as we moved some production processes to contract manufacturers.

Operating expenses as a percentage of net revenue decreased 2.7 percentage points in 1997 from 1996 and increased 1.3 percentage points in 1998 from 1997. The decrease in 1997 was due to higher net revenue and essentially unchanged expenses. The increase in 1998 from 1997 resulted from greater growth in expenses than in net revenue.

Research and development expense decreased 5.3% in 1997 from 1996 and increased 9.7% in 1998 from 1997. The decrease in 1997 from 1996 resulted from the completion in late 1996 of major development projects that were not immediately replaced. In 1998, research and development investments increased primarily due to joint development efforts in the bio-instrumentation and microfluidics areas. Selling, general and administrative expense was unchanged in 1997 from 1996 and increased 8.2% in 1998 from 1997. The increase in 1998 was primarily due to the 1998 restructuring and higher goodwill amortization charges as a result of acquisitions in 1998 and the second half of 1997.

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Quarterly Financial Results

The following tables present our operating results for each of the ten

operations.....	10.6	11.2	7.6	14.6	13.2	6.6	4.6	(2.4)	5.7	11.9
Other income (expense), net.....	(1.1)	(.7)	--	(.6)	(.9)	.2	(.1)	(1.6)	.7	.1
Earnings (loss) before taxes.....	9.5	10.5	7.6	14.0	12.3	6.8	4.5	(4.0)	6.4	12.0
Provision (benefit) for taxes.....	3.2	3.6	2.6	4.8	4.3	2.3	1.6	(1.4)	2.3	4.2
Net earnings (loss).....	6.3%	6.9%	5.0%	9.2%	8.0%	4.5%	2.9%	(2.6)%	4.1%	7.8%
Costs of products as a percentage of products revenue.....	51.3%	50.4%	52.9%	50.3%	49.0%	54.5%	56.0%	65.0%	53.2%	49.0%
Costs of services as a percentage of services revenue.....	63.5%	66.5%	65.2%	65.1%	63.2%	63.3%	60.3%	57.1%	61.1%	60.1%

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In the third quarter of 1997, our net earnings declined significantly compared to the prior and subsequent quarters. During the quarter, the healthcare solutions business received a letter from the FDA citing their concerns regarding quality system regulations. As a result, the business delayed shipping some of its products until the FDA's concerns were resolved, which caused the quarter's net revenue to decrease. In addition, sales and marketing programs in the test and measurement business related to new product releases caused selling, general and administration expenses to increase.

Beginning in the third quarter of 1998 and through the first half of 1999, our revenue was significantly affected by the economic conditions in Asia and the slowdown in the semiconductor industry. Since a substantial portion of our cost of products and services, as well as some of our operating expenses, are relatively fixed in the short term, the sharp decline in revenue caused our operating margins to decline. There are indications that conditions in Asia are beginning to improve. Charges from the restructuring that occurred in the quarter ended October 31, 1998 adversely affected operating results in that quarter. The 1999 quarterly results reflect the benefit of the 1998 restructuring as well as other cost containment measures that we implemented in the second half of 1998.

Our quarterly net revenue, earnings from operations and net earnings have varied significantly in the past and we expect that they are likely to vary in the future. In addition, upon our separation from Hewlett-Packard, we expect to incur substantial additional costs in future periods resulting from being a separate, stand-alone entity.

Liquidity and Capital Resources

Historically, Hewlett-Packard has managed cash on a centralized basis. Cash receipts associated with our business have been transferred to Hewlett-Packard on a daily basis and Hewlett-Packard has provided funds to cover our disbursements. Accordingly, we have reported no cash or cash equivalents at October 31, 1997 and 1998 and April 30, 1999.

In November 1999, Hewlett-Packard will make an initial cash payment to us to fund our working capital and other needs for the first few months of our operations as a separate, stand-alone entity. Our separation agreement with Hewlett-Packard provides that Hewlett-Packard will retain some of our assets and liabilities and Hewlett-Packard will transfer to us some of the assets and liabilities related to its business. We expect that our cash balance will initially decline until we begin to collect newly generated accounts receivable. The net proceeds of the offering, including proceeds received from any exercise of the U.S. underwriters' over-allotment option, will be paid to Hewlett-Packard as a dividend. See "Arrangements between Agilent Technologies and Hewlett-Packard--Master Separation and Distribution Agreement."

We generated cash from operations of \$881 million in 1996 compared to \$965 million in 1997 and \$751 million in 1998. For the six months ended April 30, we generated cash from operations of \$341 million in 1998 and \$223 million in 1999. In all periods, cash from operations is primarily a result of net earnings adjusted for non-cash charges for depreciation and amortization.

Capital expenditures for property, plant and equipment constituted substantially all of our cash used in investing activities in 1996, 1997, 1998 and the six months ended April 30, 1998 and 1999. The amounts expended were partially offset by proceeds from the disposal of excess, unused or retired assets. The high level of capital expenditures in 1996 and 1997 reflected our investment in our semiconductor products business integrated circuit fabrication capability, which was subsequently replaced with a joint venture arrangement. In addition, we used small amounts of cash in each period to acquire several small companies. We expect to continue to acquire complementary products or businesses in the future.

On July 6, 1999, Hewlett-Packard entered into an agreement with Yokogawa to acquire Yokogawa's 25% minority equity ownership of Hewlett-Packard Japan for approximately \$508 million. Under the terms of the agreement, Hewlett-Packard will acquire Yokogawa's shares through redemption and sale of shares in several steps beginning in January 2000. Under the terms of the master separation and distribution agreement, we will

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assume these Hewlett-Packard obligations under the agreement with Yokogawa. In the initial step, which will occur on or before January 31, 2000, we will redeem 10.4% of Hewlett-Packard Japan's shares from Yokogawa. In the second step, which will occur on or before April 30, 2000, we will purchase 10.4% of Hewlett-Packard Japan's shares from Yokogawa. We will acquire the remaining 4.2% of Hewlett-Packard Japan's shares owned by Yokogawa either by redemption or purchase of shares prior to March 31, 2003. Hewlett-Packard will provide the funding for this transaction.

An independent valuation is being performed to determine the portion of the transaction's purchase price attributable to our business and the remaining Hewlett-Packard business and to allocate the purchase price to identifiable assets and liabilities. Our preliminary estimate is that of the total purchase price, \$254 million is attributable to us, with the remainder attributable to Hewlett-Packard's remaining business.

Our commitments consist primarily of future minimum lease payments under noncancelable lease agreements. In addition, we have entered into agreements with Hewlett-Packard under which Hewlett-Packard will provide services to us during a transition period after the separation.

Our liquidity is affected by many factors, some of which are based on the normal ongoing operations of our businesses and some of which arise from uncertainties related to global economies. We believe that the initial cash funding we receive from Hewlett-Packard together with cash generated from operations will be sufficient to satisfy our working capital, capital expenditure and research and development requirements for the foreseeable future. However, we may require or choose to obtain additional debt or equity financing in the future. We cannot assure you that financing, if needed, will be available on favorable terms.

Factors That May Affect Future Results

Since we sell our products worldwide, our business is subject to risks associated with doing business internationally. We do a substantial portion of our business in Korea and Japan, which have been subject to increased economic instability in recent years. We experienced a decline in our business in 1998 when Korea and Japan experienced economic difficulties. The recurrence of weakness in these economies or weakness in other international economies could have a significant negative effect on our future operating results. For a detailed discussion of these risks, see "Risk Factors--Risks Related To Our

Business--Our business is subject to economic, political and other risks associated with international sales and operations."

Given the nature of the markets in which we participate, we cannot reliably predict future revenue and profitability, and unexpected changes may cause us to adjust our operations. Small declines in revenue could disproportionately affect our operating results in a quarter. Factors that could effect quarterly operating results include the demand for and market acceptance of our products and competitive pressures resulting in lower selling prices. For a detailed discussion of these risks, see "Risk Factors--Risks Related To Our Business--Fluctuations in our quarterly operating results may cause our stock price to decline."

Many of the industries and markets into which we sell our products are cyclical. Any significant downturn in our customers' markets or in general economic conditions would likely result in a reduction in demand for our products and services and could harm our business. For a detailed discussion of these risks, see "Risk Factors--Risks Related To Our Business--Our operating results could be harmed if the industries into which we sell our products are in downward cycles."

Year 2000

The year 2000 problem arises from the use of a two-digit field to identify years in computer programs, e.g., 85=1985, and the assumption of a single century, the 1900s. Any program so created may read, or attempt to read, "00" as the year 1900. There are two other related issues that could also lead to incorrect calculations or failure: some systems' programming assigns special meaning to certain dates and the year 2000 is a leap year. Accordingly, some computer hardware and software, including programs embedded within machinery and parts, will need to be modified prior to the year 2000 to remain functional. Our year 2000 initiatives are focusing

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primarily on four areas of potential impact: internal information technology (IT) systems; internal non-IT systems and processes, including services and embedded chips (controllers); our products and services; and the readiness of significant third parties with whom we have material business relationships. In 1997, Hewlett-Packard established a Year 2000 Program Office to coordinate these programs for all of its businesses, including Agilent Technologies, across the enterprise and to provide a single point of contact for information about year 2000 programs. The year 2000 efforts in these areas are led by the year 2000 general manager who reports directly to Hewlett-Packard's senior management, including Agilent Technologies' chief executive officer.

The costs associated with our IT internal readiness actions are a combination of incremental external spending and use of existing internal resources. We estimate that over the life of our IT internal readiness effort, we will have spent a total of approximately \$90 million over a multi-year period. We expect to implement successfully the systems and programming changes necessary to address year 2000 internal IT and non-IT readiness issues and material third party relationships. Based on current estimates, we do not believe that the costs associated with these actions will have a material effect on our results of operations, cash flows or financial condition. However, the costs of these actions may vary from quarter to quarter. There can be no assurance, however, that there will not be a delay in, or increased costs associated with the implementation of these changes. In addition, failure to achieve year 2000 readiness for our internal systems and processes could delay our ability to manufacture and ship products and deliver services, disrupt our customer service and technical support facilities and interrupt customer access to our online products and services. Our inability to perform these functions could have an adverse effect on our future results of operations, cash flows or financial condition.

Internal IT Systems

Hewlett-Packard has established a dedicated Year 2000 IT Internal Readiness Program Organization to oversee the worldwide year 2000 internal IT application and infrastructure readiness activities, for all its businesses, including Agilent Technologies. The Internal Readiness IT Program Organization provides monthly progress reports to Hewlett-Packard's senior management, including Agilent Technologies' chief executive officer. The Internal Readiness IT Program Organization is charged with raising awareness throughout Hewlett-Packard and Agilent Technologies, developing tools and methodologies for addressing the year 2000 issue, monitoring the development and implementation of business and infrastructure plans to bring non-compliant applications into compliance on a timely basis and identifying and assisting in resolving high-risk issues.

We, in conjunction with the Hewlett-Packard program, are approaching our year 2000 IT internal readiness program in four phases: (1) assessment, (2) planning, (3) preparation and (4) implementation. The assessment phase involves taking an inventory of our internal IT applications to prioritize risk, identifying failure dates, defining a solution strategy, estimating repair costs and communicating across and within business units regarding the magnitude of the problem and the need to address year 2000 issues. The planning phase consists of identifying the tasks necessary to ensure readiness, scheduling remediation plans for applications and infrastructure and determining resource requirements and allocations. The third phase, preparation, involves readying the development and testing environments and piloting the remediation process. Implementation, the last phase, consists of executing the plans to fix, test and implement critical applications and associated infrastructure, and putting in place contingency plans for processes that have a high impact on our businesses.

We have targeted our efforts to ensure that our critical IT applications will be year 2000 compliant. The assessment, planning and preparation phases have been completed. As of July 31, 1999, the implementation phase is substantially complete.

Internal Non-IT Systems and Processes

Non-IT systems include, but are not limited to, those systems that are not commonly thought of as IT systems, such as telephone/PBX systems; fax machines; facilities systems regulating alarms, building access and sprinklers; manufacturing, assembly and distribution equipment; and other miscellaneous systems and processes.

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Year 2000 readiness for these internal non-IT systems is the responsibility of our worldwide operating units and their respective functions and operations, e.g., facilities, research and development, manufacturing, distribution, logistics, sales and customer support.

The year 2000 Program Office has developed a comprehensive process to ensure all operations and global business units use a structured and standardized methodology to organize, plan and implement their year 2000 readiness.

Hewlett-Packard has also established a Year 2000 Council to coordinate its overall internal readiness and its business continuity planning efforts, including those of Agilent Technologies. The Council is composed of representatives from the major business units within Hewlett-Packard and Agilent Technologies and the critical corporate and infrastructure functions that support them. The Council is chaired by the year 2000 general manager and has initiated a comprehensive program to ensure timely and consistent business continuity planning by all of Hewlett-Packard's and Agilent Technologies' business units. As of July 31, 1999, substantially all year 2000 testing, internal mitigation and remediation activities, and business contingency plans have been finalized. From July 31, 1999, until November 30, 1999, all year 2000 internal readiness solutions, contingency plans, crisis management and recovery mechanisms will be further stress-tested to ensure full preparation.

Product and Customer Readiness

Our newly introduced products are year 2000 compliant. However, some hardware and software products currently installed at customer sites will require upgrade or other remediation. Some of these products are used in critical applications in which the impact of non-performance to these customers and other parties could be significant. While we believe our customers are responsible for the year 2000 readiness of their IT and business environments, we are taking significant steps to enable customers to achieve their readiness goals, thereby preserving our customers' satisfaction and our brand reputation. In 1997, Hewlett-Packard established a dedicated Year 2000 Product Compliance Program Office to coordinate worldwide year 2000 product compliance activities for all its businesses, including Agilent Technologies. The Product Compliance Program Office is charged with developing and overseeing implementation of plans to identify all standard products delivered since January 1, 1995; to test those products for compliance; to identify an appropriate path to compliance for non-compliant standard products; and to communicate the status and necessary customer action for non-compliant standard products.

Hewlett-Packard has an Internet website dedicated to communicating year 2000 issues to a broad customer base. Most of our key business groups have complementary Internet websites dedicated to similar communication to their specific customers. These websites include product compliance search pages that allow customers to look up the status of our products they have installed. We are taking additional steps to identify affected customers, raise customer awareness related to non-compliance of some products and help customers to assess their risks. We are in the process of implementing plans to accommodate increased levels of customer assistance in the first half of 2000 and currently anticipate that a significant portion of the costs related to these actions will occur in the fourth quarter of 1999 and the first half of 2000.

All of these efforts are coordinated by representatives from all of Hewlett-Packard's and Agilent Technologies' product and service business units, who work in conjunction with the Product Compliance Program Office to develop and implement Hewlett-Packard's and Agilent Technologies' year 2000 policies for products and services. The year 2000 general manager chairs this group of representatives.

The costs of the readiness program for products are primarily costs of existing internal resources largely absorbed within existing engineering spending levels. These costs were incurred primarily in 1998 and earlier years and were not broken out from other product engineering costs. Historical year 2000 customer satisfaction costs were not material. Future product readiness costs, including those for customer satisfaction, are not anticipated to be material. We are aware of the potential for legal claims against us and other companies for damages arising from products that are not year 2000 compliant. We believe that reasonable communication and customer satisfaction steps are under way so that any claims would not result in material liability for us.

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It is unknown how year 2000 issues may affect customer spending patterns. As customers focus their attention and capital budgets in the near term on preparing their own businesses for the year 2000, they may either delay or accelerate purchases of new applications, services and systems from us. Many of our products run custom software or connect to other systems or peripheral products that may be adversely affected by operating system or hardware upgrades. Although it is possible that these factors may increase demand for certain of our products and services, the increase may be offset by the softening in demand for other offerings. As a result, these events may affect our future revenue and revenue patterns.

Material Third-Party Relationships

We have developed a year 2000 process for dealing with our key suppliers, contract manufacturers, distributors, vendors and partners. The process generally involves the following steps: (1) initial supplier survey; (2) risk assessment and contingency planning; (3) follow-up supplier reviews and escalation, if necessary; and where relevant, (4) testing. To date, we have received formal responses from substantially all of our critical suppliers. Most of them have responded that they expect to address all their significant year 2000 issues on a timely basis. We regularly review and monitor the suppliers' year 2000 readiness plans and performance. Based on our risk assessment, selective on-site reviews have been performed. Risk analysis has been completed with our base of suppliers and contingency plans are now being developed and tested. All critical surveys and testing efforts were completed by June 1, 1999. In some cases, to meet year 2000 readiness, we have replaced suppliers or eliminated suppliers from consideration for new business. Where efforts to work with critical suppliers have not been successful, contingency planning generally emphasizes the identification of substitute and second-source suppliers, or in certain situations includes a planned increase in the level of inventory held (e.g., in the case of sole sources). We have also contracted with multiple transportation companies to provide product delivery alternatives. We have also completed substantially all Electronic Data Interchange (EDI) migration and testing with our supply base.

We are working to identify and analyze the most reasonably likely worst-case scenarios for third-party relationships affected by year 2000. These scenarios could include possible infrastructure collapse, the failure of power and water supplies, major transportation disruptions, unforeseen product shortages due to hoarding of products and sub-assemblies and failures of communications and financial systems. Any one of these scenarios could have a major and material effect on our ability to build our products and deliver services to our customers. While we have contingency plans in place to address most issues under our control, an infrastructure problem outside of our control or some combination of several of these problems could result in a delay in product shipments depending on the nature and severity of the problems. We would expect that most utilities and service providers would be able to restore service within days although more pervasive system problems involving multiple providers could last two to four weeks or more depending on the complexity of the systems and the effectiveness of their contingency plans.

Although we are dedicating substantial resources towards attaining year 2000 readiness, we cannot assure you that we can identify and address successfully all year 2000 issues. Even if we act in a timely manner to complete all of our assessments; identify, develop and implement remediation plans believed to be adequate; and develop contingency plans believed to be adequate, some problems may not be identified or corrected in time to prevent material adverse consequences to us.

The discussion above regarding estimated completion dates, costs, risks and other forward-looking statements regarding year 2000 is based on our best estimates given information that is currently available and is subject to change. As we continue to progress with our year 2000 initiatives, we may discover that actual results will differ materially from these estimates.

Adoption of the Euro

Hewlett-Packard has established a dedicated task force to address the issues raised for all of its businesses, including Agilent Technologies, by the introduction of a European single currency, the Euro. The Euro's initial implementation was effective as of January 1, 1999 and the transition period will continue through January 1,

2002. Beginning January 1, 1999, product prices in local currencies are being converted to Euros as required. At an appropriate point during the transition period, product prices in participating countries will be established and stored in Euros, and converted to local denominations. We implemented system

changes to give multi-currency capability to the few internal applications that did not yet have this capability, or to ensure that external partners' systems processing Euro conversions are compliant with the European council regulations.

We do not presently expect that introduction and use of the Euro will materially affect Hewlett-Packard's foreign exchange and hedging activities or our use of derivative instruments. We do not expect that the introduction of the Euro will result in any material increase in our costs and all costs associated with the introduction of the Euro will be expensed to operations as incurred. While we will continue to evaluate the impact of the Euro introduction over time, based on currently available information, we do not believe that the introduction of the Euro currency will have a material adverse impact on our consolidated financial condition, cash flows or results of operations.

Market Risk

We are exposed to foreign currency exchange rate risk inherent in our sales commitments, anticipated sales, and assets and liabilities denominated in currencies other than the United States dollar. Historically, our exposure to exchange rate risk has been managed on an enterprise-wide basis as part of Hewlett-Packard's risk management strategy. This strategy has utilized derivative financial instruments, including forwards, swaps and purchased options, to hedge certain foreign currency exposures, with the intent of offsetting gains and losses that occur on the underlying exposures with gains and losses on the derivative contracts hedging them. We are currently evaluating our exchange rate risk management strategy. We do not currently and do not intend in the future to utilize derivative financial instruments for trading purposes.

Hewlett-Packard has performed a sensitivity analysis assuming a hypothetical 10% adverse movement in foreign exchange rates to the hedging contracts and the underlying exposures described above. As of October 31, 1997 and 1998 and April 30, 1999, the analysis indicated that these hypothetical market movements would not have a material effect on Hewlett-Packard's consolidated financial position, results of operations or cash flows. Because the exposure to exchange rate risk has been managed on an enterprise-wide basis, it is not practicable to perform a similar analysis on only our exposures. However, it is unlikely that the results of such an analysis on our exposures would indicate a material impact on our consolidated financial position, results of operations or cash flows.

All debt will be retained by Hewlett-Packard. Therefore, no debt has been directly attributed to us. Accordingly, we have not been exposed to interest rate risk.

BUSINESS

Agilent Technologies is a diversified technology company that provides enabling solutions to high growth markets within the communications, electronics, life sciences and healthcare industries. Our broad technology portfolio and our experience in working with market-leading customers around the world have allowed us to establish and continue to expand our leadership across multiple markets.

We are a global leader in designing and manufacturing test, measurement and monitoring instruments, systems and solutions and of semiconductors and optical components. Agilent Technologies includes the following businesses:

- . test and measurement, which provides test instruments, standard and customized test, measurement and monitoring systems for the design, manufacture and support of electronic and communication devices, and software for the design of high-frequency electronic and communication devices;

- . semiconductor products, which provides fiber optic communications devices and assemblies, wireless integrated circuits, application-specific integrated circuits, optoelectronics and image sensors;
- . healthcare solutions, which provides patient monitoring, ultrasound imaging and cardiology products and systems; and
- . chemical analysis, which provides analytical instruments, systems and services for chromatography, spectroscopy and bio-instrumentation.

Agilent Technologies' ability to succeed is based on two fundamental attributes. First, we have a broad and deep portfolio of technology expertise in electronics, communications, medical and chemical measurement, biotechnology, photonics, solid-state materials and components and measurement systems and solutions. This expertise is driven by the research and development efforts within our businesses and by the activities of Agilent Technologies Laboratories, one of the world's leading industrial research and development organizations. Each of our businesses takes advantage of the technology advances developed by our central laboratories, often using common technology in different applications within their specific business.

Our second core attribute is our close relationships with our customers and our comprehensive insight into the worldwide markets in which we sell our products and services. Our businesses have developed these relationships and insights over our 60 year history. During this time, our businesses have worked with thousands of customers worldwide as technologies, business needs and global economic conditions have undergone dramatic changes.

Our businesses share important characteristics and resources that we believe contribute significantly to our competitive success. Our test and measurement, healthcare solutions and chemical analysis businesses are built around our excellence in applying measurement technologies to the development of products that sense, analyze and display data required by the end-user. Our test and measurement and semiconductor businesses share focus on growth opportunities in the communications sector, while our healthcare and chemical analysis businesses share focus on growth opportunities in healthcare and life sciences. Each of our businesses takes advantage of the applied technology advances from Agilent Technologies Laboratories, often modifying basic technologies for use in its specific business. Our global infrastructure enables our businesses to move products from initial commercialization to worldwide availability rapidly and efficiently, and to provide our customers with localized service and support.

We provide the world's broadest range of test and measurement solutions to customers in the communications, electronics and semiconductor industries. We are also a leading supplier of:

- . semiconductor and fiber optic components to the communications and computer industries;
- . modules and assemblies to the communications and electronics industries;

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- . patient monitoring and ultrasound imaging equipment and automatic external defibrillators to the healthcare industry; and
- . chemical measurement instruments and systems to the hydrocarbon processing, environmental and pharmaceutical industries.

We serve customers in more than 110 countries, and sell our products primarily through our direct sales force, but we also utilize distributors, resellers, telesales and electronic commerce. Of our total net revenue of \$8.0 billion in the fiscal year ended October 31, 1998, we generated 45.6% in the United States and 54.4% internationally. As of July 31, 1999, we employed

approximately 42,000 people worldwide. We have major research and development and manufacturing sites in California, Colorado, Delaware, Massachusetts, and Washington in the United States and in China, Germany, Japan, Korea, Malaysia, Singapore and the United Kingdom.

Our net revenue by business segment for each of the years ending October 31, 1996, 1997 and 1998 and for the six months ended April 30, 1998 and 1999 was:

	Years Ended October			Six Months	
	31,			Ended	
	1996	1997	1998	1998	1999
	(in millions)				
Test and measurement.....	\$3,823	\$4,203	\$4,100	\$2,149	\$1,853
Semiconductor products.....	1,470	1,479	1,574	795	773
Healthcare solutions.....	1,244	1,208	1,340	676	671
Chemical analysis.....	842	895	938	470	499
Total net revenue.....	\$7,379	\$7,785	\$7,952	\$4,090	\$3,796

Industry Overview

Many of the markets we serve are undergoing rapid change and experiencing significant growth. We believe that these trends will provide us with major growth opportunities.

Communications Industry

The communications industry is undergoing fundamental change and growth resulting principally from explosive demand for Internet access and data transmission services. Traditional voice telecommunications have been carried as an electrical signal over copper wire. Since this technology was designed for low-capacity voice transmission, it is unable to meet the high-volume transmission requirements of Internet access and other forms of high-speed, digital data communications. Increased bandwidth is critically important to the transmission of high-volume data and is the driving force behind the deployment of the high-speed, high-capacity, digital network infrastructure.

Fiber optic networks are increasingly replacing copper-based technologies in local area and wide area networks. Fiber optics enable digital information, such as coded data, voice or video, to be transmitted as pulses of light. The light being transmitted along each fiber-optic cable can be divided up into multiple frequencies, and each frequency can be used as a separate transmission path. Thus each fiber optic cable can simultaneously carry multiple transmissions. Other new communications technologies, such as Gigabit Ethernet, Digital Subscriber Line and Asynchronous Transfer Mode, are being deployed to expand the capabilities of existing networks or build new broadband data networks. Cable service providers are in the early stages of introducing broadband interactive data services and Internet access to their customers by redesigning their networks and deploying cable modem technologies.

The usage levels of wireless communications around the world are increasing dramatically, as penetration increases in developed countries, and lesser-developed countries deploy wireless networks as a means to quickly

address the surging demand for communications. As an alternative to wireline access, some carriers and service providers are utilizing wireless technologies to provide voice, data and Internet services to their customers. While broadband wireless data services are still in the early stages, the development and deployment of next generation cellular technologies and services is likely to lead to their rapid growth.

We believe that these emerging trends in the communications industry provide us with a number of significant business opportunities. The widespread deployment of fiber optic networks generates increasing demand for high-speed optoelectronic components to connect the electronic systems controlling the network to the transmission fiber. The manufacture, physical installation and maintenance of network switches, routers and other high-speed devices rely on increasingly sophisticated testing, calibration and measurement instruments and systems. Additionally, these systems typically require physical layer integrated circuits to prepare data for transmission across high-speed networks, such as Gigabit Ethernet, Digital Subscriber Line, Asynchronous Transfer Mode and next-generation cable networks. Service providers face increased competition as a result of these emerging technologies and deregulation of the industry. Traditional communications service providers and emerging Internet service providers, competing aggressively for subscribers, require advanced test and monitoring solutions to optimize quality of service to their customers. Similarly, the manufacturers of cellular handsets, base stations and other wireless network equipment require advanced design software and test and measurement instruments and systems to develop, manufacture and deploy advanced wireless communications products and capture the high growth market opportunity.

Semiconductor and Electronics Industries

The semiconductor and electronics industries are still largely driven by rapid technological advancement, a phenomenon commonly known as Moore's Law, which states that the functionality and performance of a digital integrated circuit doubles roughly every 18-24 months. Decreased size and greater density of the individual electronic components on the integrated circuit drive improvements in the performance and functionality of the device and decrease price to the end user. This continuous cycle of increased performance at lower cost drives the pervasiveness of semiconductor devices in multiple applications, from communications networks to consumer products. At the same time, the cycle places increasing demands on companies that develop and use electronic components, products and systems to keep up with the fast pace of technological advances.

The effect of Moore's Law creates major business opportunities for us. Each new integrated circuit design presents new challenges for test and measurement systems: smaller, more densely-packed elements; faster operating speeds; and greater complexity. Semiconductor devices and electronic components and assemblies comprise an increasing proportion of the overall value of end-products, increasing the importance of test within the electronic component and systems design and manufacturing process. The increasing pervasiveness of semiconductor devices creates strong growth opportunities for many of our products, including our electronic and optical components, our high frequency and digital design solutions, as well as our automated test equipment used in high volume manufacturing settings.

Pharmaceutical, Bioscience and Healthcare Industries

The time and expense required to discover and develop new drugs demand that pharmaceutical companies continually find ways to improve the efficiency of the drug-discovery process, often relying on analytical instruments to improve productivity while remaining compliant with laws and regulations. At the same time, the healthcare industry is seeking ways to reduce costs and improve the quality of health care. We believe this trend will require healthcare solutions that can be deployed in non-hospital settings, such as in smaller clinics and in patients' homes. Healthcare research and development institutions are also focusing increased resources on disease diagnosis and prevention. Greater understanding of the genetic basis of disease is considered critical to learning how to prevent, diagnose and manage diseases

and requires advanced instrumentation for DNA and related analysis.

Strategy

Focus on High Growth Market Opportunities

Our strategy is to use our strengths as a diversified technology company to enter new markets through internal development, strategic partnerships and acquisitions. To achieve this objective, we work closely with our customers' research and development teams to understand emerging markets, technologies and standards and we invest accordingly in our own development of enabling solutions in those areas. We intend to use strategic partnerships and make tactical acquisitions to develop advanced systems that complement our existing technologies and products to accelerate our entry into strategic, high-growth markets.

Within the communications markets, we are focused on providing test, measurement and monitoring technologies and solutions for the development and deployment of next-generation fiber optic, broadband, Internet and cellular networks, as well as leading edge fiber optic and semiconductor components. We work closely with cellular component and device manufacturers at the research and development stage to understand emerging industry standards. We have also continued to invest in our market-leading high-frequency design solutions. We were able to take advantage of our product diversity by applying the technologies we developed for the defense industries in the 1980s to the higher growth communications industry when growth of the defense market slowed. In life sciences, we have focused our efforts on the high-growth segments of the pharmaceutical industry. In healthcare, we recently made an acquisition that accelerated our entry and gave us leading market share in the fast-growing automatic external defibrillator market.

Continue to Innovate Technologically

Agilent Technologies and Agilent Technologies Laboratories have a long legacy of technological innovation and product generation as part of Hewlett-Packard. We will continue to invest in and build research and development expertise, focusing our centralized laboratories on fundamental technology and process developments and utilizing innovations from our businesses to develop products to address high growth market segments. Our scientists have provided significant contributions and technological advances across multiple markets and industries. Our reputation for technological innovation allows us to work closely with both established and emerging leaders in the communications, electronics, life sciences and healthcare industries, and to provide advanced solutions to meet emerging market requirements. The experience and knowledge of our engineers, combined with our close customer relationships, enable us to anticipate customer needs for next-generation products and solutions. In healthcare, we market our equipment and establish strong relationships with influential medical research and development centers around the world, to gain valuable insights into new discoveries and strategic initiatives in the healthcare and life sciences industries. Similarly, in semiconductor test, we have worked closely with Rambus to develop a high-speed test solution for advanced memory chips, which has been used in selected niche products such as video games, but is now being developed as main memory for high-performance personal computers.

Maximize the Benefits of our Scale and Global Presence

We believe our scale and global presence provide us with a competitive advantage across multiple industries. In many of our targeted markets and in many of the countries in which we operate, we are the largest industry participant and possess greater resources for research and development and service and support than any competitor. Our global direct sales force gathers valuable insights into emerging industry trends around the world and provides us an effective means of bringing new products to market rapidly. In addition,

we believe our customers value our global ability to provide more complete solutions with our training, systems integration, and project management programs. Our regional support centers enable us to provide localized service and support, and our telesales and electronic commerce systems allow remote customers to order products, obtain product information and utilize remote support services. We intend to continually enhance overall customer satisfaction by remaining focused on providing effective service and support.

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AGILENT TECHNOLOGIES LABORATORIES

We are supported by the technological expertise of Agilent Technologies Laboratories, one of the world's foremost industrial research and development organizations. Agilent Technologies Laboratories consists of those operations of Hewlett-Packard Laboratories that historically conducted basic research in our focus areas. Agilent Technologies Laboratories is thoroughly integrated with our businesses in design, development and manufacturing engineering, and substantially all of its development staff are aligned with the research and development staff in our specific businesses.

Agilent Technologies Laboratories conducts applied research in electronics, medical and analytical measurements, biotechnology, photonics, solid-state materials and components, and measurement systems and solutions. The scientists in Agilent Technologies Laboratories have made significant contributions and advances in many of these areas, including LEDs, gallium-arsenide integrated circuits, lightwave and LAN-based instruments, mass spectrometry, ultra-violet and visible spectrophotometry, cardiac ultrasound imaging, electrocardiogram algorithms and the wireless mouse.

Agilent Technologies Laboratories is located primarily in Palo Alto, California and employs 500 people. Approximately half of the 300 technical professionals in Agilent Technologies Laboratories have doctoral degrees and over 75% have some form of advanced degree. In recent years, on average, 80 patents per year are issued to Agilent Technologies Laboratories.

TEST AND MEASUREMENT

Our test and measurement business is a leader in providing test and measurement solutions to companies in the communications, electronics, semiconductor and related industries. We provide standard and customized solutions that are used in the design, development, manufacture, installation, deployment and operation of electronic equipment and systems. These solutions are used by our customers to improve time-to-market, lower cost of manufacturing and improve the quality of their products. These solutions include test and measurement instruments and systems, automated test equipment, communications network monitoring and management tools and software design tools and associated services. Our solutions are employed by a wide range of customers, including:

- . communications and network equipment manufacturers, including providers of fiber optic, wireless and wireline components, products and systems;
- . providers of communications services, including telecommunications, Internet and cellular service providers;
- . designers and manufacturers of semiconductor products, including microprocessors, memory devices, ASICs, radio frequency and microwave integrated circuits and other types of integrated circuits; and
- . designers and manufacturers of electronic equipment, including printed circuit board assemblies and electronic equipment, such as cellular handsets, personal computers and avionics equipment.

We believe that we are the leading provider in over 25 product categories of the test and measurement market, including:

- . network and spectrum analyzers;
- . communications test equipment;
- . wireless test equipment;
- . in-circuit test and x-ray inspection systems for printed circuit board assemblies;
- . lightwave test equipment;
- . logic analyzers and logic-signal sources; and

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- . high-frequency computer-aided engineering and simulation software.

These products represent more than 60% of our test and measurement business. Our test and measurement business employed approximately 18,300 people as of July 31, 1999. We serve customers in more than 110 countries and sell our products primarily through our direct sales force, as well as through resellers, distributors, telesales and electronic commerce. Our products are complemented by service and support offerings such as consulting, training, local solutions integration, and instrument calibration and repair. We have manufacturing and research and development facilities in Australia, Canada, China, Germany, Japan, Korea, Malaysia, Singapore, the United Kingdom and the United States. Our test and measurement business generated \$4.1 billion in revenue in fiscal 1998 and \$1.9 billion in revenue in the first half of fiscal 1999.

Markets

The market for our test and measurement products comprises three major customer groups:

- . communications network equipment manufacturers and service providers;
- . electronic component and equipment manufacturers; and
- . semiconductor manufacturers and purchasers of semiconductors.

Communications Network Equipment Manufacturers and Service Providers

Network equipment manufacturers provide products to facilitate the transmission of voice and data traffic. This transmission may be in various forms, such as electronic signals over copper wire, optical signals over fiber cables, and radio frequency or microwave signals. The customers of the network equipment manufacturers are the communications service providers that deploy and operate the networks. The communication service providers are facing increasing competitive pressures as a result of deregulation in the telecommunications industry and the rapid advances in transmission technology, including communications switching and routing. Communications service providers must provide high-quality, highly reliable service to remain competitive, maintain customer loyalty and meet the rapidly growing demand for data transmission and related services. As a result, these service providers require network equipment that enables their networks to operate at increasingly faster speeds while providing rapidly expanding capacity and superior reliability. To meet these demands, network component and equipment manufacturers require test and measurement instruments, systems and solutions for the development, production, installation and operation of each new network technology. These solutions include:

- . test instruments and systems for developing and manufacturing communications modules, assemblies and products; and
- . test instruments and systems to support the installation and deployment

of network equipment and to validate the operational performance of the equipment in the network.

Communications and Internet service providers also require a range of sophisticated test instruments and systems to evaluate network performance and to identify any sources of communications failure. Additionally, these customers require advanced software and systems to monitor and manage the network infrastructure on a continuous, proactive basis to achieve either regulated or customer-specified service levels. Real-time monitoring of the network infrastructure also enables the implementation of additional services, such as fraud detection, which customers increasingly require of service providers. Many corporations manage their own internal voice and data communications networks. As enterprises increasingly rely on these networks for critical applications, they also require advanced test and monitoring equipment, systems and software to optimize network performance.

The market for cellular telephony has increased dramatically in recent years, as the levels of wireless penetration in developed countries have grown rapidly. Many lesser-developed countries have decided to build

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wireless communications infrastructure to meet their nations' needs for telephony, rather than invest in expensive wire-based infrastructure. To develop cellular telephone equipment, manufacturers require electronic design software and test instruments and systems for the development of high-frequency communications circuits, devices and systems. Cellular equipment manufacturers also require advanced, high-frequency test instruments and systems to develop, manufacture and deploy cellular base stations for these wireless networks. In addition, the rapid growth of the cellular handset market has created a new market segment for automated test equipment to test cellular handsets on the factory floor. Further, as new standards evolve in the wireless industry, new test and measurement equipment and systems have to be developed to enable testing of the new standards in the research and development and later in the manufacturing and deployment phases.

In the last several years, producers of networking communications equipment have increased their use of contract manufacturers to reduce cost, retain business flexibility and access high end or high volume manufacturing capabilities. Contract manufacturers require test solutions that are particularly well-suited for faster production and flexible for use in different applications. Recently, cellular phone producers have also begun to increasingly use contract manufacturers, including for functional test. This requires specialized test products and services to address the particular needs of these high-frequency products.

Electronic Equipment Manufacturers

The electronics industry designs, develops, manufactures and distributes a wide range of products, including products in high-volume categories such as computers, computer peripherals and consumer electronics. In addition, electronic components and printed circuit assemblies are incorporated into other products, such as aircraft, satellites and automobiles. These components and printed circuit assemblies may be designed, developed and manufactured by electronic components companies, by original equipment manufacturers or by third-party contract manufacturers. For the development and timely commercialization of new technologies, original equipment manufacturers require state-of-the-art test instruments, systems and software design tools in order to design the products for efficient and cost-effective manufacturing and validate product performance in a variety of configurations and environments. These demands have resulted in an increasing trend toward the use of contract manufacturers by electronics equipment manufacturers.

Designers and developers of electronic devices and products require state-of-the-art digital design tools and instruments in order to build electronic circuits, components and products, to validate their performance and functionality and to improve the efficiency of the overall design and

development process.

High volume manufacturers of electronics products, such as printed circuit board assemblies, require sophisticated automated test equipment to operate and perform highly accurate tests at speeds and volumes matching those of the production line. This equipment includes in-circuit testing systems, automated x-ray inspection systems and automated optical inspection systems, all of which examine the printed circuit assemblies for manufacturing defects. Manufacturers are also beginning to demand automated functional test systems, which test an electronic device as if it were in its final environment. Functional test equipment must have a wide range of capabilities in order to simulate the functions of a wide variety of electronic devices such as personal computers, personal computer peripherals or automotive electronics.

Electronics manufacturing also requires standardized test instruments, system components and complete solutions. These offerings are used for testing electronic devices in a broad range of applications, such as radar systems, electronics used in the operation of household appliances and industrial automation. Aerospace and defense are important markets for standardized electronic equipment because of the high electronic content of advanced defense systems and defense-related communications and surveillance equipment. Following recent reductions in defense spending, defense purchasers are shifting from specialized test equipment to off-the-shelf test products and systems.

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Semiconductor Manufacturers

Semiconductor test systems are used by semiconductor designers, semiconductor manufacturers and electronic component manufacturers in the design, manufacture and testing of a wide variety of semiconductor products, including logic, memory, mixed analog and digital signal, and system-on-a-chip integrated circuits. Semiconductor test systems are sold to semiconductor manufacturers and assembly and test subcontractors to the semiconductor industry. Semiconductor manufacturers use our semiconductor test systems to measure product performance, to confirm functionality, to improve product and production process quality, to shorten time to market, to enhance manufacturability, to reduce labor costs and to increase production yields.

According to VLSI Research, the market for automatic test equipment for semiconductor manufacturing was approximately \$3.3 billion in 1998 and is expected to grow at a compound annual rate of 17% over the next five years. Demand for this test equipment is driven primarily by the increased volume of semiconductor devices produced. The use of semiconductors has proliferated across many industries, including communications, computing, and consumer electronics, driving up the overall production volume of semiconductor devices. Advances in semiconductor technology are also increasing demand for semiconductor test equipment. The development of increasingly faster and more complex semiconductor devices stimulates demand for testers capable of evaluating these high-speed devices. In addition, the continuing integration of functions, such as microprocessor, logic and memory, on a single integrated circuit has created a new category of device called system-on-a-chip. These devices require a new category of sophisticated and flexible automatic test equipment.

Strategy

Our test and measurement business pursues the following strategies to maintain and extend our global leadership position and to be the preferred supplier of enabling solutions for our customers:

Address the Needs of High Growth Markets

Our test and measurement business is focused on addressing the needs of the communications and electronics industries. We believe these markets will

provide significant growth opportunities as end-users' demands are driven by the rapid adoption of new technologies providing increased performance at lower cost. In communications markets, we address the needs of both network component and equipment manufacturers and network service providers, including fiber optic, Internet Protocol-based and cellular networks. As demand for greater communications capacity increases, network manufacturers must develop higher speed and higher capacity equipment. Similarly, network service providers must be able to expand and operate existing networks, as well as create and operate new networks, at high service levels. In the electronics industry, designers must develop next generation electronic devices and equipment rapidly and in a cost-effective manner. To keep pace with the speed of innovation in this market, manufacturers need to bring product to market faster and achieve high quality at high volume production levels. We have targeted our test and measurement business products and services to enable our customers in these high growth markets to achieve these goals.

Utilize Our Investments in New Technology Across Multiple Customer Applications

We design our products to be used in many phases of our customers' business--from design and development through installation and deployment. We invest heavily in the development of new test and measurement instruments, systems and design tools to meet the requirements of our most innovative customers. Our work with these customers in developing tools and test instruments targeted for the research and development labs provides us with valuable insight into emerging technologies and standards. Once we have developed a testing solution for what we anticipate will become a sizable market, we invest in further product development to market the solution to a broader customer base. Our initial solutions often combine several general purpose instruments with customized software applications. This approach enables us to move our solutions more easily from our customers' research and development laboratories to their manufacturing lines, allowing us to meet their manufacturing test needs in a timely manner. By working closely with our customers

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to understand the final application of their products, we are able to modify the software and hardware design of our solutions for use in the installation and deployment phase of their products. We believe that this strategy allows us to utilize fully our investments in these new technologies.

Maintain Strong Customer Relationships to Anticipate Important Industry Trends

A central component of our strategy is to work closely with our customers in their product design stage to understand emerging technologies and applications and develop advanced test and measurement instruments, systems and solutions. We gather information from our customers so that we may design and create new instruments to test emerging technologies as they develop them. For example, as communications networks have been overwhelmed by demand for increased speed and capacity, we have focused our product development on the technologies to enable next-generation, high-speed networks. We provide advanced fiber optic network test instruments and solutions to service providers to maximize the performance and minimize the total cost of ownership of high-speed fiber optic networks. In the cellular communications industry, we are working closely with industry leaders such as Telefonaktiebolaget LM Ericsson, Motorola, Inc. and Nokia Oy to develop testing solutions to support next-generation high-capacity wireless cellular standards. We have also worked closely with Rambus in developing advanced test solutions for high-speed memory devices.

Expand Our Services and Consulting Business Globally

We believe that the rapid pace of technology innovation and our customers' focus on more efficient uses of their resources have created an opportunity for us to differentiate ourselves from our competitors with our global support

and service capabilities. We provide basic support services, such as repair and calibration; systems integration services; training and customer education; and advanced business services, such as design services and consulting. For some of our more complex products, such as our automated test equipment, we provide proactive maintenance and support to ensure maximum reliability and continuous operation. In addition, we believe we provide customers with more flexibility and lower the total cost of ownership with our asset management, financing and pay-per-use programs.

Products

Our test and measurement business designs, develops and manufactures test and design products that range from single-unit electronic measurement devices priced under \$1,000 to large scale integrated test solutions priced at \$1 million and higher.

Communications Equipment Test Solutions

We provide test solutions for fiber optic, broadband wire-based, radio frequency and microwave communications networks and products.

Fiber Optics. We make products that enable the development, production, installation, verification and maintenance of fiber optic networks. Our products include optical signal and spectrum analysis instruments used by the industry's leading equipment manufacturers to develop and manufacture reliable optical components. We also make products that test dense wavelength division multiplexing systems, a new technology that is used to increase the transmission capacity of optical fibers. Our products also include network analyzers and high-speed bit-error rate testers that measure key transmission properties of high-speed optical and electrical signals. These products are used by network component and equipment manufacturers as well as service providers to test the proper functioning of fiber optic components and networks.

Broadband and Data Networks. Our network test equipment is used by service providers to install and maintain connections to the Internet, high-speed data networks, telephone systems and cable television lines. This equipment is also used by network equipment manufacturers to develop and manufacture high-speed network equipment. We market test solutions for high-speed network equipment based on broadband data transmission

technologies such as Digital Subscriber Line, Asynchronous Transfer Mode and Integrated Services Digital Network. Our suite of solutions for network equipment based on the Internet Protocol tests quality and service performance of voice and data traffic transmitted over Internet Protocol-based networks. Enterprise network managers, network equipment designers and third-party field network maintenance service providers rely on our Internet Advisor product line for comprehensive diagnostic and problem solving solutions for troubleshooting high-speed local area networks, wide area networks and asynchronous transfer mode networks. Our cable television test equipment ensures maximum radio frequency and video performance and troubleshooting of components in the cable infrastructure and the connection to the cable subscriber.

Wireless Communications and Microwave. In wireless communications, we market our test solutions to manufacturers of cellular handsets and wireless telephone infrastructure. Our radio frequency and microwave test instruments assist in the design and production of cellular handsets and base stations, as well as satellite and aerospace defense systems. Examples of our radio frequency and microwave products include network analyzers, spectrum analyzers and signal sources. These products generate and measure electronic communications signals. We have combined several of our instruments into integrated test solutions, such as our single-box testers for cellular handsets that determine the ability of a handset to send and receive signals accurately as well as successfully switch between cellular base stations while

traveling. Another example is our integrated solution for testing communication satellite electronics.

Communications Service Test and Monitoring Solutions

Our acceSS7 product allows communications service providers using Signaling System 7 (SS7), such as AT&T Corporation and Sprint Corporation, to monitor and analyze their signaling network traffic for network performance and management, fraud management and billing of interconnecting service providers. Similarly, our AccessFiber products and solutions perform fault detection and monitor fiber optic communications networks. Our acceSS7 and AccessFiber products are typically sold as a combination of hardware, software and services. Our Firehunter network management software solution provides performance monitoring, analysis and reporting capabilities for Internet service providers. Firehunter allows Internet service providers to monitor and analyze network occurrences and helps improve the availability and responsiveness of the network, while reducing the time required to isolate problems. It gives Internet service providers the capability to monitor and measure important service level parameters and thus to offer and meet customer service level agreements. Our NetMetrix local area network probes and software provide local area network management solutions for the enterprise.

We also market benchtop and handheld measurement devices such as lightwave multimeters, power meters and optical sources. We also market portable test instruments for installation and field service testing and monitoring for many types of communications networks. For example, our portable bit error rate test instruments are used by service providers for transmission performance analysis during installation and for ongoing maintenance.

Electronics Design and Manufacturing Solutions

General Purpose Instruments. General purpose instruments are used by a wide variety of customers across all electronics-related industries. They are used principally by engineers in research and development laboratories, manufacturing, calibration and service for measuring voltage, current, frequency, signal pulse width and other standard electronics measurements. These products are often the core of an electrical engineer's benchtop equipment. Examples of general purpose instruments include:

- . digitizing oscilloscopes;
- . voltmeters and multimeters;
- . frequency counters;
- . bench and system power supplies; and

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- . function generators and waveform synthesizers.

Our general purpose instruments have been the basic building blocks for many of our more advanced products and solutions.

Modular Instruments and Test Software. Our modular instruments and test software, including instruments incorporating the VXI bus, a standard interface for building test systems using modular components, and modular measurement system software is used to dynamically configure and reconfigure test systems for designers and manufacturers of electronic devices.

Data Acquisition Devices. Our data acquisition and control products measure physical phenomena, acquire data from sensors and perform digital-to-analog conversion, signal processing and control functions. Data acquisition and control products include digital-to-analog converters that are attached to sensors to measure a wide range of physical data such as temperature, airplane wing strain and vibrations in cars, jet engines and power generation

equipment.

Digital Design Products. Our digital design and test products are used primarily by research and development engineers to design, test and remove design defects from digital electronic systems, including microprocessors, computers and computer peripherals. These systems range from simple digital control circuits to complex, high-speed servers incorporating the latest microprocessor technology. Our digital design products include logic analyzers, logic-signal sources and data generators.

Automated In-Circuit Testing. We offer the leading family of in-circuit test products, which test printed circuit board assemblies to find defects caused by the manufacturing process. In-circuit testers use a probe fixture which makes electrical contact with the circuit board and provides electrical measurements. These products are used with a suite of proprietary tools for testing printed circuit assemblies where probing may be able to access as little as 50% of the contacts due to very densely packed or very small components. These tools enable our current systems to test up to twice as fast as previous in-circuit test systems.

Automated X-ray Inspection. Our leading x-ray inspection products provide a three-dimensional scan of printed circuit board assemblies to identify and isolate quality defects caused by the manufacturing process. Using patented techniques, our products can look through a device to identify structural defects in soldering that are not identified by visual inspection and that may not be detected with in-circuit testing. This technique also eliminates the need for expensive physical probe fixtures.

Automated Optical Inspection. Our automated optical inspection line of products enables automated visual inspection of printed circuit assemblies. These systems are able to locate, with a high degree of repeatability and reliability, misplaced and misaligned parts, gross solder defects and other process faults without the need for a human inspector.

Intelligent Test. In products that demand the highest reliability, like those used in networking and communications, customers will often require that their printed circuit assemblies be tested using a combination of automated test processes. Our AwareTest Software enables customers to design test processes that avoid unnecessary test duplication. For example, an in-circuit test device will receive information about the faults that have already been detected by an x-ray inspection system and not repeat the test of that circuit. AwareTest allows customers to obtain maximum test coverage while decreasing total test time and cost.

Semiconductor Automated Test Equipment

Our automated test equipment supports the development and manufacture of semiconductor devices. We produce semiconductor test equipment to perform electrical and functional testing of the operation of memory, logic, mixed signal, systems-on-a chip, and radio frequency integrated circuits. Our parametric test instruments and systems are used to examine semiconductor wafers during the semiconductor manufacturing process. Our

semiconductor parametric test systems combine hardware technology with system software. The software can be customized to meet specific application needs to allow faster verification of the accuracy of the manufacturing process of a silicon wafer and wafer quality through its first electrical test. Our product development efforts are targeted at leading edge technologies, such as systems-on-a-chip and high-speed memory products, such as Direct Rambus dynamic random access memory devices.

Our semiconductor test products test a variety of different circuit types. These devices are usually tested after final assembly, but the testing of some devices is most effective immediately after the production of the silicon wafer, when the wafers are sorted. We believe we are the industry leader in

wafer-sort test solutions for flash memory devices, which retain data even when the power is turned off and that are critical for use in digital cameras, cellular phones, personal digital assistants and storage of portable digital audio files. Our flash memory test products can test as many as 16 devices in parallel, greatly improving test throughput for our customers.

In the final test area, we are exploiting our successful logic and mixed signal semiconductor test offerings into two market areas. Based on our high performance logic technology, we have developed an accurate, high-speed test system for Direct Rambus dynamic random access memory chip testing. The Rambus architecture addresses performance limitations in other random access memory chips by moving data quickly in and out of memory. Rambus-designed memory has been used in selected niche products, such as video games, for several years but is now being developed as the main memory for high-performance personal computers. Our Rambus memory testers will initially test 16 devices in parallel. In the year 2000, we expect to offer the ability to test 32 devices in parallel, which we believe will result in an extremely competitive cost of test.

Our test equipment for the system-on-a-chip market is based on our newest generation logic and mixed signal product platform. This platform is designed to span the wide range of price, performance and functionality that the system-on-a-chip market will require. We also produce a radio frequency integrated circuit test system that has established a leadership position in the wireless device market.

High-Frequency Electronic Design Tools

Our high-frequency electronic design automation software tools are used by radio frequency integrated circuit design engineers to model, simulate and analyze communications product designs at the circuit and system levels. Our technology is the first in the industry to allow the simulation of complete communication product design in a single environment. According to Dataquest, we are the leader in the market for high-frequency computer aided engineering software.

Customers

We market our test and measurement solutions to more than 3,000 customers across a broad array of industries. Several of our customers purchase products across several of our major product lines for their different business units.

A representative list of the customers of our test and measurement business follows:

Alcatel Alsthom	Intel Corporation	Qualcomm, Inc.
AT&T	LG Group	Samsung Electronics Co., Ltd.
Bell Canada Enterprises, Inc.	Lockheed Martin Corporation	Siemens
(Nortel Networks Corporation)	Lucent	Soletron Corporation
The Boeing Company	Matsushita Electric Industrial Co., Ltd.	Sprint
Ericsson	Mitsubishi Electronics America, Inc.	THOMSON Multimedia,
Fujitsu Limited	Motorola	Toshiba Corporation
General Electric	NEC Corporation	Tyco International
General Motors Corporation	Nippon Telephone & Telegraph Corporation	United States Air Force
Hitachi, Ltd.	Nokia	U S WEST, Inc.
IBM		

Sales, Marketing and Support

We have a focused sales strategy to strengthen customer satisfaction. Our worldwide sales and support teams are key elements of this strategy. Our direct sales force is focused on identifying customer needs and recommending solutions involving the effective use and deployment of our equipment and systems. Some members of our direct sales force focus on global accounts, providing uniform services on a worldwide basis. Others focus on our more

complex products such as our communications monitoring systems and our automated test equipment, where customers require intensive strategic consultation. Our sales force also specifically targets the contract manufacturer market by collaborating with original equipment manufacturers to specify that our test equipment be used by contract manufacturers, as well as marketing to contract manufacturers directly.

Our direct sales force consists of field engineers and systems engineers who often hold advanced degrees and who have in-depth knowledge of the customers' business and technology needs. Some of our field engineers are account managers for our large accounts, and enhance our understanding of the future needs of these customers. Our systems engineers provide a combination of consulting, systems integration and application and software engineering services, and are instrumental in all stages of the sale, implementation and support of our complex systems and solutions. We have more than 3,000 sales, service and support engineers located throughout the world. In support of our selling efforts, we have regional sales and customer support centers in Hong Kong, the Netherlands and the United States. We believe that the scale and global presence of our direct sales force are an important competitive advantage. We also use value-added resellers to address specific market segments.

We sell our less complex products through a combination of our direct sales force, distributors, mail order, telephone and electronic commerce, utilizing our extensive catalogs. In many cases, initial sales of our products may be made by our direct sales force, with follow-up sales of the products through one of our alternative sales channels.

We have a support organization dedicated to delivering a full range of services to our customers, including:

- . instrument repair and calibration;
- . proactive support to ensure continuous productivity of our semiconductor and electronics manufacturing test equipment;
- . application and process consulting;
- . solution development and product integration;
- . customer education;
- . system integration; and
- . software support.

We offer these services worldwide through an integrated team of support engineers. We also provide support services over the Internet and through call centers.

Manufacturing

We concentrate our test and measurement manufacturing efforts primarily on final assembly and test of our products. To maximize our productivity and our ability to respond to market conditions, we use contract manufacturers for the production of printed circuit boards, sheetmetal fabrication, metal die casting, plastic molding and standard electronic components. We also manufacture proprietary devices and assemblies, such as x-ray tubes and high-frequency integrated circuits and devices, in our own foundries for competitive advantage.

We have approximately 2.5 million square feet of manufacturing space worldwide dedicated to our test and measurement business.

Competition

The market for test and measurement equipment is highly competitive, and we expect this competition to increase. We believe that the principal factors of competition are:

- . speed, accuracy and cost of test;
- . breadth of product offerings;
- . scalability and flexibility of products;
- . ease of product use;
- . ability to upgrade product platform;
- . time to market of new technologies;
- . adherence to industry standards;
- . ability to support emerging industry protocols; and
- . ability to provide localized service and support on a worldwide basis.

We believe we compete favorably with respect to each of these factors and have gained significant market share in many of our targeted markets as a result. We believe our success has been driven by technology leadership, our ability to generate customer loyalty and our track record at anticipating market trends.

Our test and measurement business competes with a number of significant competitors in all our major product categories and across our targeted industries. In communications test, our primary competitors are Anritsu, IFR Systems, Inc./Marconi Communications Ltd., Network Associates, Inc., Rhode & Schwartz, Tektronix, Inc. and Wandel & Goltermann Technologies, Inc./Wavetek Corporation, as well as INET Technologies, Inc. and Micromuse Inc. in the communications network monitoring market. In the semiconductor test market, we compete primarily against Advantest Corporation, Schlumberger Limited and Teradyne. In the printed circuit board test market, a segment of the electronics manufacturing market, we compete against GenRad, Inc. and Teradyne. In the general purpose electronic test market, we compete against companies such as Fluke Corporation (a subsidiary of Danaher Corporation), Keithley Instruments, Inc., LeCroy Corporation, National Instruments Corporation and Tektronix. Some of our competitors may have a strategic advantage based on geographic location that could make it difficult for us to compete in those markets. In addition to our larger competitors, we also face competition from start-up companies with newer technologies or products based on next-generation industry protocols, particularly in communications test. Any of these start-up or other emerging competitors, as well as our existing competitors, may develop technologies that more effectively address our targeted markets at a lower cost. In addition, these small competitors may enter into strategic alliances or business combinations that increase their ability to innovate and address our markets.

SEMICONDUCTOR PRODUCTS

Our semiconductor products business is a leading supplier of semiconductor components, modules and assemblies for high performance communications infrastructure, computing devices and mobile information appliances. We design, develop and manufacture:

- . fiber-optic communication devices, components and assemblies;
- . integrated circuits for high-speed local area networks;
- . integrated circuits and board-level solutions for storage area networks;
- . discrete devices and integrated circuits for microwave and radio

frequency mobile wireless devices and infrastructure;

- . infrared components used for short-range communication between portable and stationary devices;

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- . ASICs for workstations, servers and laser and inkjet printers;
- . LEDs for electronic image and information display; and
- . semiconductors for image capture and display.

We believe we are the leading provider of:

- . fiber optic communications transceiver (transmitter/receiver) modules used for high speed data transmission;
- . integrated circuits for storage area networks based on the Fibre Channel protocol;
- . infrared components;
- . optoelectronic components and displays; and
- . ASICs to Hewlett-Packard for its workstations, servers and printers.

In total, we produce more than 9,000 products for high-speed networking, mobile communications and computing devices worldwide. As of July 31, 1999, our semiconductor products business had approximately 10,900 employees worldwide. We have eleven major design centers and eight manufacturing sites around the world. Our semiconductor products business generated revenue of \$1.6 billion in fiscal 1998 and \$773 million in the first half of fiscal 1999.

Markets

Our semiconductor products business serves two primary markets: communications and computing.

Communications

High-Speed Networking. The advent of the Internet as a communications medium has dramatically increased business and consumer demand for high-speed, reliable access to data and, as a result, has placed considerable stress on existing communications networks. In data communications, speed is measured in the number of bits of data per second that can be transmitted across the network.

As the volume of data transferred over networks grows, users are becoming increasingly frustrated with the low performance of the existing communications infrastructure, which was originally designed for lower speed analog transmission rather than high-speed digital transmission. This infrastructure consists primarily of copper wiring, which was originally intended for analog voice transmission. Copper wiring is highly susceptible to noise and interference, making accurate transmission of data at high speeds difficult.

Fiber optic cables, which carry information in the form of pulses of light produced by light-emitting diodes or lasers, can carry very large amounts of data in a small space and are immune to electrical and magnetic interference. Because fiber optic cables are not susceptible to interference, they can minimize error in data transmission and prevent the crossing of telephone conversations between lines. Fiber optic cables can also provide enhanced security compared to copper wiring, since intercepting communications on a fiber optic line without detection is difficult. Because of these benefits, telecommunications service providers have historically used fiber-optic cables for their ultra-long-distance, typically undersea, communications

infrastructure. For a number of years, fiber-optic cables have also been the method of choice for long-distance, high-volume voice and data, and have more recently been increasingly used in local area networks, in place of traditional copper wires, for higher-speed and more reliable data communication.

We are a major supplier of fiber optic transceivers, which convert digital data into light signals for transmission, and convert light signals back into digital form on the receiving end of the communication. We market fiber optic transceivers for both short-range, local area network applications and long-range, wide area

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network applications to major telecommunications and data networking equipment vendors such as Alcatel, Cisco Systems, Inc., Lucent and Nortel. In addition, we supply high reliability solid-state lasers to major telecommunications companies for high-reliability, ultra-long-distance applications. We are also a major supplier of physical layer integrated circuits for high-speed networking applications, which prepare data for transmission across fiber networks.

Storage Area Networking. As the volume of data that is being transmitted, processed and stored in networked environments has increased, the market for storage area network equipment, which connects computers and storage devices, has grown dramatically. The increase in data transmission speeds across networks has created a demand for high-speed and high-performance storage-to-server and server-to-server connectivity. The Fibre Channel interconnect protocol, a standard for the transfer of information between computers and storage devices defined by the American National Standards Institute, was developed to meet this growing demand. Fibre Channel supports the transfer of large amounts of data within storage area networks at speeds of one gigabit per second and greater and provides high transmission reliability. We supply a broad range of integrated circuits, fiber optic components and systems to manufacturers of storage area network systems utilizing the Fibre Channel protocol, such as Data General Corporation, EMC Corporation, Hitachi and NEC.

Wireless Communications. Worldwide subscriber growth for wireless communications has been increasing rapidly in recent years. The Strategis Group anticipates that the worldwide market for cellular services will increase to 519 million subscribers by 2002 from 256 million subscribers in 1998. We supply a wide range of radio frequency and microwave integrated circuits and devices to mobile telephone manufacturers and vendors of equipment for the mobile telephone infrastructure to meet this increasing demand. We supply infrared and radio frequency devices and modules for short-range, point-to-point wireless communications to manufacturers of computers, printers and consumer electronics products, such as mobile telephones, digital cameras, personal digital assistants and pagers.

Computing

We are the largest supplier to Hewlett-Packard of ASICs for printers, workstations and servers. ASICs are semiconductors that are designed for a unique, customer-specified application and typically replace a number of discrete components resulting in improved performance, lower cost and high reliability.

Strategy

To service the needs of our customers in the communications and computer industries, the semiconductor products business pursues the following strategies:

Apply our Broad Technology Base to Capture Demand for Higher-speed and Mobile Data Transmission

We have established leadership positions in the design and development of

semiconductors used in fiber optic communications, radio frequency and infrared technology. Building on this leadership and our broad technology base, we continue to invest in designing and marketing semiconductor products to address the growing demand for higher-speed, higher-capacity connections and mobile communications. In particular, we are focused on developing devices that enable data transmission speeds of one gigabit per second or greater to address the increasing demand for high speed networking. We currently produce integrated circuits for the most prevalent mobile communications standards, and we believe we are well positioned to benefit from the increased demand for these products.

Continue to be Hewlett-Packard's leading supplier of ASICs

Key elements of our remaining a leading supplier of ASICs to Hewlett-Packard for use in its printers, workstations and servers have been:

- . our development, external sourcing and application of intellectual property;

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- . our ability to meet competitive pricing and performance requirements; and
- . our dedicated sales force and co-location of design personnel with major Hewlett-Packard businesses.

To maintain this position, we will continue to pursue our intellectual property strategy through both internal development and acquisitions, and apply this intellectual property strategically to our products. In addition, to remain competitive, we are focused on reducing the costs and improving the performance of the ASICs we provide to Hewlett-Packard by pursuing higher levels of device integration and employing advanced process technology. We also intend to increase sales of ASICs to purchasers other than Hewlett-Packard, in areas other than workstations, servers and printers, particularly in the networking area.

Take Advantage of Technology Partnerships

To maintain technology leadership in a cost-effective manner, we have formed several strategic technology partnerships. We intend to continue to enter into strategic technology partnerships to gain access to intellectual property and advanced semiconductor manufacturing process technology. For example, through our joint venture with Chartered Semiconductor Manufacturing, Ltd. and the joint venture's technology sharing arrangements with Motorola, we obtain access to advanced semiconductor process technology and volume production capacity while reducing capital outlays and design process costs. Our alliance with Displaytech, Ltd. provides us with access to its expertise in liquid crystal materials development, microdisplay design and display systems integration for use in our near-eye microdisplay products.

Products

Our major product areas include:

Fiber Optics

Our fiber optic transceiver products address all segments of the market for high-speed optical communications, including local area networking, wide area networking, long-distance networks and custom-built, proprietary network solutions. We market optical transceivers, transmitters and receivers for high-speed local area network applications from 10 megabits per second to one gigabit per second and higher, and wide area network applications at up to 2.5 gigabits per second. We are also the leading producer of solid-state lasers, which are used for high-reliability undersea transmission, such as intercontinental communications.

High-Speed Network Input-Output Circuits

We market integrated circuits and solutions for high-speed input-output devices, focusing on the high-speed networking and storage area networking markets. We produce physical layer integrated circuits for high speed network switches and routers, devices that direct network traffic. We are also the industry leader in Fibre Channel protocol-based integrated circuits and subsystems for storage area networks.

Radio Frequency and Microwave Communications Devices

We produce a broad family of radio frequency and microwave communications products, primarily integrated circuits for wireless communications products and infrastructure. Our products include integrated circuits, individual transistors and diodes and amplifiers used in higher speed and higher frequency applications. These products are focused on applications in a broad variety of wireless communications standards, including Cellular and Personal Communication Systems based on Code Division Multiple Access, Global System for Mobile Communications. We offer products for both cellular base stations and handsets.

Infrared Emitters, Detectors and Transceiver Modules

We produce a full line of infrared products that enable short range, point-to-point wireless communication between portable and stationary devices. Examples of these portable devices include notebook personal

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computers, cellular phones, personal digital assistants and digital cameras. Our infrared products utilize our strength in high-speed communication design and our expertise in optics and are used in a substantial portion of the notebook computers and laser printers produced today.

ASICs

Through a competitive process, we have been the primary supplier to Hewlett-Packard of ASICs for Hewlett-Packard's printers. In addition, we provide graphics chips, core electronics chipsets that surround central processing units and microprocessors for Hewlett-Packard's workstations and servers. However, we expect shipments of microprocessors to Hewlett-Packard to be substantially reduced before the end of 2000. The terms of our license limit our use of Hewlett-Packard's intellectual property for the sale of integrated circuits in printing devices, printer supplies, components and accessories, document scanners and some computing devices for a period of three years in some cases and 10 years in other cases.

Optical Image Sensors, Optical Position Sensors and Reflective Microdisplay Components

We have recently begun applying our capabilities in optoelectronics and integrated circuit design to image and position sensors and microdisplays. Our sensor products include color and monochrome still and video camera image capture solutions and intelligent optical sensors. Our focus in this area is to enable pervasive imaging through low-cost digital image sensors for use on a stand-alone basis or embedded within personal computers, laptops, peripherals, cellular telephones and affordable digital cameras.

We also produce optical position motion control products used primarily for motion control in printers and small motors that require precise control. These optical position sensors are used to locate the printing device in an inkjet printer. In addition, our optical image sensors are being used as the sensing system in a new generation of computer mice.

Our microdisplay products deliver high quality, low power, low cost images on a single silicon chip with television or computer monitor image capability. These image subsystems can be used as display panels on electronic devices

such as portable telephones and, when coupled with optics, can be used for viewfinders in cameras and camcorders. Through an alliance with Displaytech, we are jointly developing advanced microdisplay components and subsystems for sale to original equipment manufacturers.

LEDs and Optocouplers

We manufacture and sell a broad range of LEDs, alphanumeric displays and optocouplers. LEDs are semiconductor devices that emit light when an electrical signal is applied. LEDs and alphanumeric displays are primarily used as status indicators, back-lighting for panels or switches and information in consumer, home office and industrial applications. Typical applications include status indicators on computers, fax and other office equipment, display panels and indicators for audio and video equipment, and as indicators and displays on industrial grade electronic equipment. Optocoupler products are devices that provide both electrical insulation, for protection, and signal isolation, to prevent distortion of data, between differing electrical environments. Typical applications for these products include industrial automation, electrical motor control and data communications interface isolation.

Lighting Joint Venture

We recently announced a memorandum of understanding with Philips to extend our existing joint venture relating to the design and production of LEDs. The joint venture will be expanded to take advantage of our technology and manufacturing strength in high-brightness color LEDs, and Philips' strength in developing, manufacturing and selling innovative lighting products and systems. Under the terms of the new agreement, the global joint venture will develop, manufacture and sell LEDs, modules, products and systems for a broad spectrum of lighting applications, including automotive lighting, high-brightness traffic signals, contour lighting

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and signs, outdoor illumination, and white LEDs for both indoor and outdoor applications. We will equally own the joint venture with Philips, which will involve 1,000 employees located in California, Malaysia and the Netherlands. We are negotiating a definitive agreement with Philips based on the memorandum of understanding, and we therefore cannot guarantee that our relationship with Philips will be extended on these terms or at all.

Competition

The markets for our semiconductor products are intensely competitive, and we expect competition to increase. Our ability to compete effectively depends upon a number of factors, including:

- . product reliability and performance in operation;
- . price;
- . power consumption;
- . compliance with standards;
- . product size and integration; and
- . time to market.

In the fiber-optic products market, our principal competitors are Tyco, Lucent and Siemens. In the market for high-speed network components, our principal competitors are Emulex Corporation, LSI Logic Corporation, QLogic Corporation and Vitesse Semiconductor Corporation. Our principal competitors in wireless communications are Motorola, NEC and Siemens. In the market for infrared products, our principal competitors are Vishay Intertechnology, Inc. and IBM. We compete with companies including LSI, IBM, Mitsubishi, Motorola

and NEC in the production of integrated circuits. Principal competitors in our LED businesses include Lite-on, Inc., Stanley Electronic Co., Ltd., Siemens and Toshiba.

Customers

We sell to a broad array of customers in the communications and computing industries. We sell to original equipment manufacturers directly, as well as contract manufacturers including Celestica, Inc., Jabil Circuit, Inc., SCI Systems, Inc. and Solectron. Our top customers by product line, including customers purchasing through contract manufacturers and distributors, include the following:

Fiber Optics -----	High-Speed Networking Components -----	Wireless -----
Alcatel	Cisco	Alcatel
Cabletron Systems, Inc.	Compaq Computer Corporation	Ericsson
Cisco	Data General	Lucent
FORE Systems, Inc.	EMC	Motorola
Hwawei	Hewlett-Packard	Nokia
IBM	Hitachi	Qualcomm
Lucent	IBM	Samsung
Nortel	NEC	Siemens
Siemens	3Com Corporation	
Tellabs, Inc.	Veritas Software Corp.	
Tyco		

In addition, through sales of ASICs, storage area networking components, motion-control products and microprocessors, Hewlett-Packard accounted for approximately 37% of our semiconductor products business revenue in the six months ended April 30, 1999, and approximately 34% in fiscal 1997 and fiscal 1998. We have begun marketing our imaging products to companies such as Microsoft Corporation and Logitech International S.A.

Sales, Marketing and Support

Our sales organization consists of 375 professionals. Our sales organization is divided into four groups, with responsibilities for large, global accounts and three regional areas: the Americas, Europe and Asia Pacific. We also have a direct sales team that has several years of experience in servicing our customer relationship with Hewlett-Packard. Our sales force has specialized product and service knowledge that enables it to sell specific offerings at key levels throughout a customer's organization. In addition to our direct sales force, we generate approximately 25% of our revenue through our relationships with key electronic distributors, such as Arrow Electronics, Inc. and Avnet, Inc. on a worldwide basis, EBV Elektronik GmbH/Wyle Electronics in Europe and North America, Future Electronics, Inc. in Europe and North America, and Ryoyo Electro Singapore PTE, Ltd. and Tokyo Electric Power Company in Japan. We have also recently focused a sales effort to major contract manufacturers such as Celestica, Jabil, SCI and Solectron. Our total sales effort reaches 45 countries through 200 distribution locations.

In support of our selling effort, we also have regional sales and customer support centers in Germany, Hong Kong, Japan, Singapore, the United Kingdom and the United States. These regional centers are responsible for sales support, product presentations, developing new services and business opportunities, and meeting the demands of our customers for localized aftermarket support. We also provide a broad range of products and applications-related information to customers and channel partners via the Internet.

Manufacturing

Our semiconductor products business has a total of eight manufacturing sites located in California, Colorado in the United States, Malaysia, Singapore and the United Kingdom. The sites together have usable manufacturing space of over 897,000 square feet and, as of July 31, 1999 approximately 7,900 employees devoted strictly to manufacturing. The majority of our silicon and gallium arsenide wafer fabrication is done in the United States and Singapore, while our assembly and test operations are in Malaysia, Singapore and the United Kingdom. In addition to these facilities, we utilize a network of contract manufacturers throughout Asia for semiconductor fabrication and test.

Our manufacturing strategy has been to outsource more mature technologies while using our in-house manufacturing fabrication, assembly and test capabilities to develop new, leading edge-products. In addition, through our joint venture with Chartered Semiconductor Manufacturing, we have access to a guaranteed source of silicon wafers for our integrated circuit designs at favorable prices. The joint venture provides us with access to Motorola's fabrication process developments through the joint venture's licensing arrangements with Motorola.

Our production facilities have developed several quality-management processes designed to increase productivity. We have developed proprietary automated test systems, particularly in optical, light-emitting diode and microwave.

HEALTHCARE SOLUTIONS

Our healthcare solutions business is a worldwide leader in clinical measurement and diagnostic solutions. Our products and systems enable medical professionals to gather and analyze information in hospital intensive care units and emergency rooms, outpatient clinics, doctors' offices, patients' homes and other settings. Our products and services include patient monitoring systems, imaging systems, external defibrillators, cardiology products and related professional services and support, each aimed at helping our customers improve the quality of patient care while decreasing their costs. We hold leading market share with our patient monitoring and associated clinical information-management systems for critical care and cardiovascular ultrasound imaging systems.

We market our products to professionals and institutions in more than 100 countries. We have sales offices in 33 countries and manufacturing sites in Massachusetts and Washington in the United States, China and

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Germany. As of July 31, 1999, the healthcare solutions business had approximately 5,000 employees worldwide. Our healthcare solutions business generated revenue of \$1.3 billion in fiscal year 1998 and \$671 million in the first half of fiscal year 1999.

Markets

The principal markets in which we participate are patient monitoring, ultrasound imaging and external defibrillator and cardiology products.

Patient Monitoring

Patient monitoring systems continuously assess a patient's vital signs, such as heart rate, blood pressure and respiration rates, to enable very rapid decision making in emergency and critical care environments. Our patient monitoring systems are used in three major market segments: critical care, anesthesia care and neonatal care. According to Frost & Sullivan, the worldwide market for multi-functional patient monitoring equipment totaled \$5.3 billion in 1997, growing at a compound annual rate of 8.7% from 1994 to 1997. This market is forecasted to grow at a compound annual rate of 11.5% from 1998 to 2003.

Patient monitoring equipment and services are also used in non-critical care environments. As providers seek to reduce costs, patient care is often being delivered in non-critical care environments. Many patients who previously would have remained in the intensive-care unit are being moved to non-critical care areas, where portable monitors and remote measurement systems are used. These non-critical care areas, which include non-intensive-care areas of hospitals, outpatient care facilities and patients' homes, are expected to provide significant growth opportunities for patient monitoring markets in the future. Frost & Sullivan expects the market for lower cost and portable monitoring equipment to grow from \$675 million in 1998 to \$1.3 billion by the year 2004, a 11.3% compound annual growth rate.

Ultrasound Imaging

Ultrasound imaging systems enable medical professionals to view multiple parts of the human anatomy with high-resolution images that are produced non-invasively from sound waves. The ultrasound imaging equipment market includes cardiovascular, radiology, obstetrical and general imaging equipment. Frost & Sullivan estimates that the worldwide market for ultrasound imaging equipment was \$2.5 billion in 1998 and grew at a compound annual rate of 5.1% from 1996 to 1998. Frost & Sullivan forecasts the overall market to grow at a compound annual rate of 6.7% over the next five years. Within ultrasound imaging, our principal targeted market is cardiology ultrasound imaging. Frost & Sullivan estimates that the global market for cardiology ultrasound imaging equipment was approximately \$768 million in 1998 and grew at a compound annual rate of 5.5% from 1996 to 1998. In line with the overall ultrasound market, Frost & Sullivan forecasts the cardiovascular imaging segment to grow at an annual rate of approximately 6.8% over the next five years.

Cardiology Products

Our cardiology products business includes external defibrillators, electrocardiographs and related information systems. External defibrillators are devices that deliver an electrical shock designed to restart the heart of victims of sudden cardiac arrest. Theta Corporation estimates the worldwide external defibrillator market was approximately \$425 million for 1998 and forecasts a compound annual growth of 8% for the years 1998 through 2000. The fastest-growing segment of the defibrillator market is the out-of-hospital segment, which is expected to grow more than 35% annually for the next three years, according to Frost & Sullivan. Each year in the United States, sudden cardiac arrest strikes approximately 350,000 people, of whom less than 5% survive, largely because defibrillators do not reach victims in time. In 1997, the American Heart Association called for the broad deployment of automatic external defibrillators in public places where large groups of people gather and estimated that broader public access to defibrillators could save an additional 20,000 lives each year in the United States.

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We also sell electrocardiography equipment, which measures and displays information about the electrical activity of the heart. According to Frost & Sullivan estimates that the total worldwide electrocardiography equipment market was approximately \$200 million in 1998 and grew at a compound annual growth rate of approximately 2.3% from 1991 to 1998. This market is expected to grow at an annual rate of 3.0% over the next three years.

Strategy

Our healthcare solutions business focuses on creating and delivering new products and services for the healthcare market, establishing and maintaining a strong reputation with our customers and developing effective strategic partnerships by pursuing the following strategies:

Bring New Technologies and Applications to Targeted Markets

We have established leadership positions in the patient monitoring,

ultrasound and cardiology markets. We believe we can expand our market opportunity by moving into new areas of these markets, increasing the market penetration of our existing products and services and delivering new products that offer higher performance at lower prices. In particular, we aim to bring new technologies to the patient monitoring and imaging markets and expand our coverage in developed countries by delivering cost-effective diagnostic and therapeutic tools. We are also focused on developing new, low-cost applications of our existing products to expand our presence in smaller hospitals and less-developed countries.

Target Medical Care Beyond the Hospital

We believe that an increasing proportion of healthcare is being delivered outside of the hospital in clinics, surgical centers and doctors' offices, as well as in the workplace and homes. According to data from the American Hospital Association, the average length of stay at hospitals has declined 17.6% from 1990 to 1996. By contrast, outpatient visits increased 37% between 1990 and 1996. This growth in outpatient services has increased demand for products that can enable nurses, other clinicians and nonmedical professionals to provide care outside of the hospital. In 1998, we acquired Heartstream, a market leader in automatic external defibrillators which enable nonmedical professionals to deliver defibrillation in settings outside the hospital. Through internal development efforts, we are also delivering cost-effective diagnostic and therapeutic tools, which can decrease the cost of diagnosing and monitoring patients. These tools are targeted at smaller hospitals, mobile clinics and private offices.

Increase Presence in Emerging Systems Worldwide

We believe an opportunity exists in emerging countries with underdeveloped healthcare systems and infrastructure. We believe the large and growing populations of these countries will fuel demand for cost-efficient medical products and services. In order to capitalize on this opportunity, we plan to expand our global presence by continuing to invest in the development of low-cost, reliable, high-utility, diagnostic, monitoring and therapy instruments designed to be easily supported in rural areas. We also work with international financial organizations, such as the World Bank, to arrange secured financing services for our customers in these regions.

Take Advantage of the Rapid Adoption of Information Technology, the Internet and Industry Standards

The rapid growth of the Internet is fueling the adoption of Internet-based healthcare services, medical care by telephone and online self-care. According to Cyber Dialogue, by the year 2000 an estimated 30 million Americans will use the Internet to learn about options for treatment, self-care and prevention. To take advantage of this accelerating trend, we are working with medical professionals to deploy Internet-based communication systems that link medical professionals and patients. For example, our CodeRunner Web product allows healthcare professionals to review a summary of cardiac resuscitation efforts to ensure that approved procedures were followed in an emergency situation.

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Our customers are increasingly demanding clinical diagnostic information systems based on open standards for easier and more cost-effective access to medical data. To proactively participate in the definition of new industry standards and ensure compliance of our products and technologies, we are currently leading several industry-wide efforts to create and promulgate standards for communication and interoperability among disparate healthcare systems.

Develop Point-of-Care Technologies

Point-of-care diagnostic products consist of blood-and-tissue analysis systems that provide immediate or continuous diagnostic results at the

patient's bedside. These systems include portable, microprocessor-based analyzers that employ single-use, disposable cartridges to perform simultaneously several of the most frequently ordered blood tests in a simple 90-second procedure. These biochemistry-based devices provide accurate and reliable blood test results more quickly, cost-effectively and simply than most advanced clinical laboratory equipment. We believe market acceptance of point-of-care diagnostics is increasing. In 1995, we entered into an agreement with i-STAT Corporation to enter the point-of-care testing marketplace with critical blood parameters. In 1999, we entered into a worldwide agreement with Diametrics Medical Incorporated in order to provide both continuous and intermittent blood monitoring capabilities. These companies' biochemical sensors, when integrated into our monitoring platforms, enable time-sensitive measurements to be made quickly and accurately at a patient's bedside for faster diagnosis and therapeutic intervention. We intend to continue to enhance our patient monitoring capabilities by developing alliances with other companies.

Focus on the Management and Treatment of Chronic Illnesses

Our products and solutions primarily address the need for the diagnosis and treatment of non-critical illnesses in a clinical setting. We believe healthcare expenditures are shifting from acute care in the hospital to ongoing care or treatment of long-standing conditions, as a result of the dramatic growth in the elderly population and advances in life-extending medical therapies and technologies. Therefore, we have recently begun to pursue opportunities focused on the ongoing management and treatment of chronic illnesses. We plan to introduce our first product to address the chronic care market, our remote measurement solution, in late 1999. It is our intention that this solution will assist clinicians in successfully managing congestive heart failure patients at home. Studies show that this type of disease management program increases patient comfort while avoiding costly hospital emergency visits.

Products

Our products and services include patient monitoring, imaging systems, cardiology products and related professional services.

Patient Monitoring

According to a 1998 study by Frost & Sullivan, we maintain a leadership position in the market for patient monitoring and related information management systems. Our products range from critical-care bedside monitors, fetal monitoring and remote-measurement systems to central station monitors, associated clinical decision support systems and critical-care information-management systems. Our clinical decision support and critical-care information-management systems are scalable based on department protocols, severity of patient condition and workflow requirements. Our solutions range from basic surveillance and centralized alarms to very large system configurations that provide comprehensive patient information-management support.

We have supplied over 170,000 units worldwide of our modular Viridia Component Monitoring System family of patient monitors. The Viridia CMS monitors support more than 20 different kinds of clinical measurements in critical care, anesthesia and perinatal care. Our Viridia Information Center is one of the industry's most advanced real-time, patient data analysis and surveillance solutions offering data at a central station. It enables clinicians to provide more effective care through the analysis, integration and management of

patient information. The Viridia Information Center integrates the data management and review capabilities of a clinical workstation with the features of a central monitor for increased productivity and improved quality of care. Our CareVue clinical information system, deployed at the point of care,

captures, stores and makes available data that can be configured for comprehensive reports. CareVue enables multiple caregivers to analyze patient data in order to improve outcomes, analyze care protocols and perform research and continuous quality improvements.

We have established a number of strategic relationships to provide us with certain clinical applications to be used with our existing products and products under development. We have an agreement with Diametrics Medical and i-STAT Corporation in point-of-care blood chemistry. Continuous and intermittent monitoring sensors provided by these partners, when integrated into our monitoring platforms, enable these time-sensitive measurements to be made quickly and accurately at a patient's bedside for faster diagnosis and therapeutic intervention.

Ultrasound Imaging

We have a broad range of ultrasound imaging products, which are used by doctors and technicians in cardiology, radiology, obstetrics, vascular, emergency and operating departments to diagnose non-invasively a range of diseases and abnormalities throughout the body. Our U.S. cardiac-ultrasound business was ranked number one in the industry for overall quality of service and support by International Marketing Ventures in 1998 for the fifth year in a row. We offer three major ultrasound platforms: SONOS 5500, SONOS 4500 and ImagePoint Hx. SONOS 5500 is a premium performance cardiovascular ultrasound system used for both research and clinical applications, while SONOS 4500 is a high-performance cardiovascular ultrasound system used primarily in the clinical environment. ImagePoint Hx is a multispecialty product used in a broad range of ultrasound applications to address the broad needs of physicians working in smaller hospitals, mobile clinics and offices.

Our technology differentiates our ultrasound products from competitive products. A key component of ultrasound products is the transducer, a complex electro-mechanical device that transmits sound waves into the body and converts the returning echoes into electrical signals, providing for the display of high quality images of human anatomy. We believe our proprietary transducers provide the widest bandwidth, or range of soundwave frequencies, in the industry, enabling the ultrasound system to optimize image detail and penetration without making the operator switch transducers. Another key technology in ultrasound products, signal processing, takes the electrical signals from the transducers and converts them into a high quality image. An example is our proprietary Acoustic Quantification, which automatically measures critical characteristics of the beating heart, eliminating time-consuming manual measurements. Our expertise in signal processing has also led to the development of proprietary ASICs, which have enabled us to provide ultrasound imaging equipment with enhanced performance for the same or lower cost.

To address the information-management needs of our ultrasound customers, we have developed EnConcert, which consists of a series of software applications running on personal computer hardware. EnConcert allows clinicians to review, measure, manage and archive images, reports and patient data related to their ultrasound exams. These tools improve doctors' efficiency and allow them to communicate exam results more rapidly to their colleagues.

Cardiology Products

We develop and manufacture external defibrillators, electrocardiographs and electrocardiogram information management systems. An external defibrillator is a device that delivers an electrical charge that can restart a person's heart in sudden cardiac arrest or restore a heart's correct rhythm in cases of irregular heartbeat. An electrocardiograph is a diagnostic tool that measures and displays the characteristics of the heart's electrical activity. An electrocardiogram management system allows for the digital storage, review and retrieval of electrocardiograms.

We produce both manual and automatic external defibrillators. Manual defibrillators are used by highly trained medical personnel, primarily in hospitals and paramedic units. We believe our CodeMaster manual defibrillator product line is one of the most extensive in the industry. Our products are designed for both hospital and out-of-hospital use and are recognized as having the fastest charge time in the industry. In addition to their reliability and ease of use, our defibrillation products record the patient data monitored, and action taken by the caregiver, for review by an emergency medical director or other responsible parties, to enable monitoring of caregiver performance and product effectiveness. We also have the industry's first pre-hospital product with predictive software that provides information used to accelerate assessment and triage of patients with chest pains so that appropriate therapy can begin promptly.

Automatic external defibrillators are portable defibrillators that are used by nonmedical professionals to deliver on-site defibrillation following a cardiac event. Given the relatively low cost and ease of use, these systems are well suited for deployment in places where people congregate. Purchasers of our ForeRunner automatic external defibrillators include American Airlines, Inc., Delta Air Lines, Inc., United Air Lines, Inc., Chicago O'Hare International Airport, Hilton Gaming Corporation, Michelin and Sundance Ski Resort. The ForeRunner's competitive advantage is based upon its unique, proprietary, low-energy biphasic waveform. A biphasic waveform is a form of energy where the electrical current is reversed midway through the pulse. It enables the ForeRunner to be lighter, less costly, safer, more reliable and the smallest external defibrillator in the market.

Our electrocardiographs monitor the characteristics of the heart's electrical activity to enable cardiology professionals to provide accurate diagnoses and deliver care for cardiac patients. Our electrocardiogram information management systems allow cardiologists in institutions where large numbers of electrocardiograms are taken each day to automate the flow of information efficiently and generate accurate diagnostic reports for referring physicians. This system is based on industry standard computing platforms and also provides for remote connectivity and information access using standard Internet software.

We have also established strategic alliances for our cardiology products business. For example, we have an agreement with Dr. Harry P. Selker, Chief of the Division of Clinical Research at the New England Medical Center, to jointly develop predictive instruments to help accelerate the assessment and triage of patients who may be having a cardiac event. Dr. Selker provides us with clinical and technical input and product evaluation by clinical trial, while we provide software and hardware engineering and development. We also have an agreement with Zymed, Inc. in electrocardiograms. Zymed's "EASI 12-lead" technology, when integrated into our monitoring platforms, provides the ability to more quickly and easily acquire, process and transmit a derived 12-lead electrocardiogram using five electrodes instead of the customary 10 used today in the critical care setting.

Customers

We provide products and services to a broad range of customers in the industry. Within the last 12 months, 91% of the largest 2,000 hospitals in the United States purchased our equipment and/or services. Outpatient clinics, doctors' offices and public facilities, travel companies and entertainment providers are also a growing part of our customer base.

A representative list of customers of our healthcare solutions business follows:

Adventist Health System--Sunbelt	Kaiser Foundation Hospitals	Scripps Memorial Health System
Advocate Health Care	Lahey Hitchcock Clinic	Sisters of Providence (WA)
Baptist Health System of South Florida	Mayo Foundation	St. Joseph Health System (CA)
Catholic Healthcare West	Memorial Healthcare Systems	Stanford Healthcare

Columbia/HCA Healthcare Corporation	Methodist System	Services
Intermountain Health Care	Methodist/Indiana University	Sutter Health California
International Military Medical Center, Cairo, Egypt	Mount Sinai Health System	Healthcare Systems
	New York Health Hospital	Tenet Healthcare Corporation
	Promedica Health System	Tri-State Health Initiative
	Quorum Health Group, Inc.	United States Government

Sales, Marketing and Support

Our products and services are sold through both direct and indirect channels. We have sales offices in 33 countries and more than 2,400 direct sales and service personnel. Our sales strategy is to sell to and service our largest accounts (hospital and corporate business) directly while employing third-party distributors and manufacturer's representatives for smaller or more geographically dispersed countries. Electronic commerce is also an integral and growing element of our sales and distribution strategy. Today, customers can access product and service information for all our products, and they can purchase medical supplies and replacement parts on our website.

In select instances we have also established distribution alliances with complementary medical equipment manufacturers in order to leverage market strength or bring a broader array of solutions to our customers. Specifically, Quinton Instruments Company is the United States distributor for our electrocardiographs and electrocardiogram information-management systems. We have an agreement with Laerdal Medical Corporation in the area of worldwide distribution and complementary training products in the emergency medical services segment. Laerdal sells our CodeMaster and ForeRunner defibrillators in the pre-hospital market for paramedics and other specifically-trained emergency medical teams.

We believe that medical equipment sales are heavily influenced by personal references among clinicians with large medical research facilities serving as key installations. For this reason, we have sold equipment into what we believe to be some of the most influential facilities worldwide, including Allgemeines Krankenhaus (Vienna), Cedars Sinai Medical Center, Cleveland Clinic Foundation, Duke University Medical Center, Johns Hopkins Hospital, Massachusetts General Hospital, Mayo Foundation, Royal Brisbane Hospital, Stanford University Hospital and Tokyo General Hospital.

To support our sales efforts we have marketing centers in Hong Kong and Japan covering Asia; in Germany covering Europe; and in Massachusetts covering North and Latin America. These centers are responsible for outbound marketing programs, tradeshows, telesales, call-center operations and distribution support.

Our professional services offerings include multivendor systems integration, training and consulting to hospitals, outpatient facilities and doctors' offices. Our professional services enhance our clients' ability to access and utilize their data, enabling enhanced clinical decision support and improved workflow for lower healthcare costs and improved delivery of patient care. We combine our knowledge of clinical processes and technology with complementary applications and tools from partners to create information management solutions required by our customers. For example, our Report Review software product integrates a patient's clinical reports from multiple information sources to provide one access point for care planning and treatment.

Our technical specialists and clinical application specialists provide installation, repair and training services to preserve and maximize customer investments in our solutions. In addition, geographic response centers and

remote on-line support supplement on-site services. Finally, we provide consulting, project management and technical implementation services to meet customer needs for networking and integrating our solutions.

Manufacturing

The healthcare solutions business has four manufacturing locations: Massachusetts and Washington in the United States, China and Germany. We selectively use suppliers to provide manufacturing capabilities outside our core competencies, such as the manufacture of printed circuit assemblies by Celestica. We typically complete the final assembly and test of our medical products and systems internally.

Competition

The markets we address are highly competitive. Our competitors are diverse and offer a variety of solutions directed at various segments of our medical products and services markets. Our ability to compete effectively depends upon a number of factors, including our ability to:

- . provide a complete set of high quality products for our customers;

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- . offer competitive prices;
- . provide financing services;
- . provide support and training; and
- . innovate technologically.

Our competitors with broad product portfolios include GE Marquette Medical Systems and Siemens Medical Systems, Inc. We also compete with other vendors in specific markets. Our major competitors in patient monitoring include GE Marquette Medical, Siemens Medical, Spacelabs Medical, Inc. and the Datex-Ohmeda division of Instrumentarium Corporation. In the imaging systems business, we compete with Acuson Corporation, Toshiba Medical Systems, Inc., GE Marquette Medical, Siemens Medical and the ATL Ultrasound, Inc. division of Philips Medical Systems International. Our competition in the external defibrillator market comes primarily from Physio Control Corporation (a subsidiary of Medtronic Inc.), and Zoll Medical Corporation.

Government Regulation

The products developed and marketed by our healthcare solutions business are subject to extensive regulation by the FDA and other regulatory bodies. FDA regulations govern, among other things, the following product activities:

- . design and development;
- . testing, including animal and human studies;
- . labeling;
- . premarket clearance or approval;
- . manufacturing;
- . storage;
- . advertising and promotion; and
- . sales and distribution.

In the United States, medical devices are classified on the basis of controls deemed necessary to ensure their safety and effectiveness. Class I

devices are subject to general controls, such as labeling, premarket notification, and adherence to the FDA's Quality System Regulations, which incorporate current good manufacturing practices that are applicable to medical devices. Class II devices are subject to general and special controls. Special controls include performance standards, postmarket surveillance, patient registries and FDA guidelines. Most class III devices are controlled through the premarket approval process to ensure their safety and effectiveness.

Prior to commercialization, premarket notification clearance generally must be obtained for class I and II devices as well as class III devices for which the FDA has not called for premarket approval. For most class III devices, a premarket approval application is required and must be supported by valid scientific evidence to demonstrate their safety and effectiveness. The notification or application typically includes:

- . results of bench and laboratory tests;
- . when appropriate, results of animal tests and clinical studies;
- . a detailed description of the methods, facilities and controls used to manufacture the device; and
- . proposed labeling and advertising literature.

Most medical devices marketed by the healthcare solutions business are class II or "Pre-Amendment" class III devices, which currently require only premarket clearance. The healthcare solutions business does not market

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any class III device requiring premarket approval in the United States, but it may do so in the future or the FDA may require by regulation that premarket approval applications be submitted for our existing "Pre-Amendment" class III devices.

Once clearance or approval is obtained, FDA oversight continues. We are required to demonstrate and maintain compliance with the Quality System Regulations for all our products. The FDA enforces the Quality System Regulations through periodic inspections of our manufacturing operations and those of our contract manufacturers. The Quality System Regulations relate to product testing and quality assurance, as well as to the maintenance of records and documentation. We are required to provide information to the FDA on deaths or serious injuries alleged to have been associated with the use of our medical devices, as well as on product malfunctions that could contribute to death or serious injury. The FDA also restricts the promotion of products for unapproved or off-label uses.

If the FDA believes we are not in compliance with the Federal Food, Drug and Cosmetic Act or its regulations it can:

- . detain or seize our products;
- . order or request a recall;
- . seek an injunction against future violations;
- . assess civil penalties against us; and
- . initiate criminal proceedings against us.

Compliance with other regulatory requirements is necessary to market our medical devices outside the United States. These regulations vary from country to country.

CHEMICAL ANALYSIS

Our chemical analysis business is a leading provider of analytical instrument systems that enable customers to identify, quantify, analyze and test the atomic, molecular, physical and biological properties of substances and products. Our chemical analysis products and services are used by scientists, engineers and technicians working in research and development, quality assurance, quality control and manufacturing.

Our four main product lines are chromatography, spectroscopy, bio-instrumentation and related consumables. We also provide service and customer support for our products. Chromatographs separate a mixed sample in gas or liquid form into its component compounds so that these components can be analyzed individually. Mass spectrometers identify and quantify molecules and elements within a sample by measuring the mass of atoms. Bio-instrumentation is used in the analysis of complex compounds, such as DNA.

Our chemical analysis business offers a wide range of products and services that are sold primarily into the hydrocarbon-processing, environmental, pharmaceutical and bioscience markets. We are a leading provider of chromatography and mass spectrometry systems used by research and development and quality assurance laboratories for the measurement and analysis of chemical compounds. We are also the market leader in the sale of benchtop inductively coupled plasma mass spectrometers (ICP-MS), which are generally acknowledged as the most powerful tools for the detection of minute quantities of metals.

Some of the uses of our instrument systems are:

- . determining octane levels in gasoline;
- . analyzing pesticide levels in drinking water;
- . ascertaining the quality of compounds in the manufacture of pharmaceuticals;

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- . identifying impurities in the manufacture of semiconductors; and
- . analyzing DNA for various life science applications.

We employed approximately 3,700 people as of July 31, 1999 in our chemical analysis business. This business operates in more than 50 countries, with manufacturing and product development centers in China, Germany, Japan and the United States and marketing centers in Germany, the United States, and Singapore. Our chemical analysis business generated \$938 million in revenues in fiscal 1998 and \$499 million in revenues in the first half of fiscal 1999.

Markets

Strategic Directions International estimates that in 1998, worldwide revenue in the analytical instrumentation market totaled approximately \$15.9 billion. According to Strategic Directions International, growth of the overall analytical instrumentation market between 1998 to 2001 is expected to be approximately 8% annually. The primary markets served by our chemical analysis business are the hydrocarbon processing, environmental, pharmaceutical and biopharmaceutical industries. We estimate that our market represents approximately 30% of the total available analytical instrumentation market.

Hydrocarbon Processing

The hydrocarbon processing industry encompasses the natural gas, petroleum refining, petrochemical and chemical markets. This industry spends approximately \$2.2 billion annually on analytical instrumentation. We sell primarily gas chromatographs and gas chromatography-mass spectrometry products and systems into these markets. Petroleum refiners use our measurement solutions to analyze crude oil composition and perform other raw material

analysis, verify and improve refining processes, and ensure the overall quality of gasoline, fuels, lubricants and other products. Our gas chromatographs are used to monitor consistent quality in the natural gas delivered to consumers and industry. Petrochemical and chemical producers use our products to measure and control the quality of their finished products and to verify the environmental safety of their operations. We expect growth in these markets to be driven by: (A) migration of measurement and analysis activities out of the centralized labs and closer to the process, (B) standardization of measurement processes across companies' worldwide operations, and (C) technologies that improve analysts' productivity.

Environmental

We develop and market analytical instrumentation for the environmental market for applications such as laboratory and field analysis and characterization of chemical pollutants in air, water, soils, solid waste, agriculture and food products. Environmental industry customers include all levels of government, the industrial and manufacturing sectors, engineering and consulting companies, commercial testing laboratories, colleges and universities. We are a market and technology leader in the worldwide environmental instruments market. Strategic Directions International estimates that the market for our environmental products and services was \$1 billion in 1998. We expect growth in this market to be driven by: (A) government legislation, enforcement, site assessment and monitoring, (B) multi-national trade agreements, (C) concerns about public health and food safety and (D) technologies that identify new environmental risks. We believe these factors will lead to more demand for environmental instrumentation in the Asia-Pacific, Latin America and Eastern Europe regions, as these regions implement new and stricter environmental regulations.

Pharmaceutical and Biopharmaceutical

Our analytical-instrument solutions are used by pharmaceutical and biopharmaceutical companies in every phase of the drug development process. This includes research into the basic causes of disease, identification and development of new drugs, obtaining regulatory approval, manufacturing and distribution. Strategic Directions International estimates that these companies will spend approximately \$3.8 billion on analytical instrumentation in 2002.

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Drug discovery is extremely costly and involves high risk. The Pharmaceutical Research Manufacturers' Association indicate that it takes, on average, more than 10 years and costs in excess of \$500 million to discover and develop a new drug. Therefore, investment in productivity-enhancing technology, such as analytical instrument solutions, is critical to reducing the time and cost it takes to bring new drugs to the consumer.

Strategy

In order to maintain our leading position in the analytical instrumentation market, our strategy is as follows:

Target high-growth opportunities in the pharmaceutical and biopharmaceutical markets

We believe the pharmaceutical and biopharmaceutical markets represent a high-growth opportunity for us, as participants in these markets continue to invest significant resources in research and development. Companies in this industry are constantly in search of ways to discover and develop new drugs faster and at lower cost. We continue to invest in developing new instruments and technologies to address these requirements. For example, through our strategic relationship with Caliper Technologies Corporation, we have developed instrumentation that enables chemical analysis procedures to be performed on the surface of the Caliper LabChip. The LabChip uses a technology called microfluidics to manipulate minute quantities of various fluids, which

allows researchers to conduct analysis at a fraction of the time and cost it would take using conventional techniques.

Pharmaceutical and biopharmaceutical companies are also investing in bio-instrumentation that increases understanding of the genetic cause of diseases in order to speed the development and increase the efficacy of new drugs. We will continue to focus resources on the development of technologies to address this market segment. For example, working with Affymetrix, Inc., we have developed an instrument that scans a large number of DNA molecules synthesized on the surface of an Affymetrix GeneChip, enabling identification of important genetic information.

Focus on growth opportunities in current markets

We will continue to focus resources on growth opportunities in markets we currently address. We believe that emerging markets, particularly in the Asia Pacific, Latin America and Eastern Europe regions, represent a growth opportunity for analytical instrumentation, as investments in basic industries, infrastructure and environmental protection increase over the coming years. To address these emerging markets, we are broadening our worldwide distribution capabilities and developing less complex instrumentation with lower prices. Additionally, in order to differentiate our product offerings and increase our market share in developed markets, we intend to continue to grow our portfolio of services and consumable products, enabling us to offer our customers more complete solutions. Finally, we continue to develop gas chromatography and mass spectroscopy products that are smaller and more portable to meet increasing demand for use of these instruments outside of centralized laboratories.

Bring new products and technologies to market faster

We seek to bring new products and technologies to market both through internal development and the strategic acquisition of technologies from third parties. Internal development of new technology is accomplished through a combination of discoveries at Agilent Technologies Laboratories and research and development efforts within our chemical analysis business. Agilent Technologies Laboratories is primarily focused on basic long-term research, while our chemical analysis business emphasizes research and development of technology for more immediate commercialization. We also focus considerable effort on developing solutions that meet the current and anticipated needs of customers. For example, we are expanding our programs to offer customers early access to products under development to ensure that these products are meeting customer needs. In addition, our development of modular hardware and software platforms allows us to bring new generations of products to market faster.

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In addition to our internal efforts, we consider acquisitions to complement our current products, solutions and technologies and to accelerate our entry into strategic markets.

Leverage strategic relationships and alliances

We intend to build strategic relationships to enable us to develop products and services that complement existing technologies and products in our target markets. For example, through our relationship with Caliper Technologies Corp., we are conducting joint research and development in microfluidics. This has resulted in the commercialization of the LabChip technology, which is designed to increase the speed and accuracy of traditional analytical methods.

In addition, through our strategic alliances, we develop instruments that work with our partners' products, enabling us to offer our customers a broader range of products and solutions. These alliances also help our customers to reduce the time and resources needed to integrate disparate products from separate vendors.

Products

A key factor in our target markets is the need for new products that increase productivity of the end customer. Our chemical analysis products, systems and services enable our customers to analyze water, air and soil for monitoring and remediation; to understand the properties of natural and man-made gases, liquids and chemically-based products; and to advance knowledge of the genetic basis of disease and enable the development, testing and use of new drugs. Our four main product lines, chromatography, spectroscopy, bio-instrumentation and related consumables, are described below.

Gas Chromatography

Gas chromatographs are used to separate molecules of a gaseous mixture to determine the quantity and identity of the molecules present. A gas chromatograph can analyze gas samples as well as solids and liquids that can be converted to a gaseous state. Most gas chromatographs have the approximate size and appearance of a large microwave oven.

We are the worldwide market leader in the \$1 billion gas chromatograph industry, according to Strategic Directions International. Our gas chromatography systems are used in many industries, including pharmaceutical, hydrocarbon processing, environmental, foods and flavors, forensics and consumer products. Our instruments are used in laboratories involved in research and development, quality assurance, quality control and routine testing. We also produce portable chromatography systems used in the field for performing on-site, real-time measurements. Our products are used to test the quality and safety of food, air and water; to develop cleaner-burning fuels and more effective pharmaceuticals; and to test for alcohol in blood, drugs in urine or explosive residues in crime scene evidence.

Liquid Chromatography

Liquid chromatographs are used to separate molecules of a liquid mixture to determine the quantity and identity of the molecules present. These instruments are modular in construction and can be configured to form instruments that perform specific analyses. Each module is about the size of a home videocassette recorder.

According to Strategic Directions International, the high-performance liquid chromatography market is larger than any other analytical instrument market, exceeding \$1.8 billion in 1998 with an estimated annual growth rate of 8% over the next five years. High-performance liquid chromatographs are an essential tool in the pharmaceutical industry for basic research, drug development and clinical trials of new drugs. Other industry groups that utilize high-performance liquid chromatographs include chemical development and manufacturing, industry and government testing laboratories for safety, quality and nutritional content of foods and beverages, athlete monitoring for illegal drug use and environmental monitoring.

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Mass Spectroscopy

Mass spectroscopy systems break molecules into their component parts and analyze these parts. Our mass spectrometers range in size from that of a small microwave oven to that of a medium-sized refrigerator.

We are a leader in the worldwide mass spectroscopy market, which Strategic Directions International estimates to have been about \$518 million in 1998. Mass spectroscopy systems are typically used in combination with gas or liquid chromatographs in the pharmaceutical, semiconductor and environmental industries. The combined instruments are used to study and refine the chemical structure of new drugs, to determine the presence of impurities in semiconductors as they are manufactured, or to research the presence of heavy metals and other unwanted substances in soil and water.

Bio-Instrumentation

We have developed relationships with Affymetrix and Caliper Technologies to address opportunities in the pharmaceutical and biopharmaceutical industries.

Our GeneArray system allows a researcher to use GeneChips designed by Affymetrix to analyze many different samples more quickly than other DNA analysis techniques. The procedure consists of extracting DNA from the sample to be analyzed, tagging it with a fluorescent molecule and fragmenting it into relatively small pieces. This fluorescent DNA sample is then placed on Affymetrix's GeneChip. During this process, the DNA on the chip binds to complementary DNA in the sample. Our GeneArray system then scans the GeneChip with a laser and the results are analyzed by our software. For example, these results are useful in identifying defects in genes that cause disease. The GeneChip and GeneArray Scanner enable high-speed detection and characterization of large amounts of genetic information.

In addition to our gene analysis system, we are also developing faster ways to conduct chemical analysis for the pharmaceutical and biopharmaceutical industries. The new instrument systems that we have developed through our relationship with Caliper Technologies integrate a large number of chemical-analysis procedures onto a single chip. We develop and distribute instrumentation that extracts and analyzes data from the microchip developed by Caliper Technologies, using advanced microfluidics technology. Using miniature, integrated chemical-processing systems etched into glass, silicon, quartz or plastic, the microchip allows the steps customarily performed in conventional instruments to be done using minute quantities of costly liquids in a fraction of the usual time. We believe these new systems will speed up chemical analysis significantly while reducing costs.

Consumables

We also offer consumable products, including chromatograph columns, analytical reagents and other accessories and supplies used by our customers during the analytical experimentation process. Columns are metal or glass tubes containing various substances that are inserted into chromatographs to assist in the process of separating compounds into their constituent parts. Reagents are chemicals used to perform analysis on the resulting constituent parts. Other accessories and supplies we provide range from rubber rings to syringes to safety glasses.

Our offerings include both generic consumables, where we seek to distinguish our products on price, selection and customer loyalty, and proprietary consumables developed by us, where we offer exclusive technology, performance and functionality.

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Customers

We sell our products and services to a broad array of customers in each of the markets we serve. Our top customers by market segment are the following:

<u>Hydrocarbon Processing</u>	<u>Environmental</u>	<u>Pharmaceutical</u>
Bayer AG	Browning-Ferris Industries, Inc.	AstraZeneca PLC
Boehringer Ingelheim International GmbH	Government of Korea	Chiyoda
E. I. du Pont de Nemours and Company	Government of Switzerland	Glaxo Wellcome PLC
Elf Group	Quanterra, Inc.	Johnson & Johnson
Exxon Corporation	Savannah Laboratories &	Merck & Co., Inc.

	Environmental Services, Inc.	
Hoechst AG	State of California	Novartis AG
Monsanto Company	State of Georgia	Pfizer, Inc.
Petroleos de Venezuela S.A.	State of Texas	Pharmacia & Upjohn, Inc.
Rhone-Poulenc S.A.	United States Army	Roche Holdings, Inc.
Royal Dutch Shell	U.S. Federal Government	SmithKline Beecham Clinical Laboratories, Inc.

Sales, Marketing and Support

Our sales and support delivery channels are aligned by our key markets to maximize market coverage and to optimize selling and support delivery efficiency. We market our products to our customers through our direct sales force, value-added resellers, manufacturers' representatives and distributors.

We use our direct sales force to market our products to all our pharmaceutical and biopharmaceutical accounts, large and medium size hydrocarbon processing customers and all environmental accounts. We supplement our direct sales force with sales agents to provide broader geographic coverage and to cover smaller accounts. We also have an active value-added reseller program to augment our ability to provide more complete solutions to our customers. We sell our consumable products through distributors, telesales and electronic commerce.

We offer a wide range of startup, operational, educational and compliance support services for our chemical analysis measurement and data handling systems. We deliver our support services to customers in a variety of ways, including on-site assistance, return to us for repair or exchange, telephone support and self diagnostic services provided over the Internet. Our support services limit the amount of time an instrument is out of service, provide increased system productivity, extend the instrument life and offer fast problem resolution. We also offer special industry-focused service bundles that are designed to meet the specific needs of hydrocarbon processing, environmental, pharmaceutical and biopharmaceutical customers to keep instruments fully operational and compliant with the respective industry requirements.

Competition

The markets for analytical instruments in which we compete are characterized by evolving industry standards and intense competition. Our principal competitors include EG&G, Inc., PE Biosystems, Shimadzu Corporation, Thermo Instrument Systems, Inc. and Waters.

Our ability to compete effectively depends upon a number of factors including our ability to:

- . produce high-quality and reliable products;
- . introduce new technologies and products in a timely manner;
- . provide favorable overall cost of ownership; and
- . provide product and service solutions that complement and support our main product lines.

We believe our analytical instrument solutions compete favorably with respect to each of the above listed factors.

Manufacturing

Our manufacturing strategy supports our diverse product range and customer-centric focus. We assemble highly configurable products to individual customer orders and make standard products to stock. We employ advanced manufacturing techniques and supply chain management systems to reduce costs and manufacturing cycle times. We selectively use partners to provide manufacturing capabilities outside our core competencies, such as the manufacture of printed circuit assemblies and the delivery of shipment logistics. We have manufacturing facilities in California and Delaware in the United States, China, Germany and Japan.

Government Regulation

The chemical analysis product and related consumables marketed by our chemical analysis business are subject to regulation in the United States by the Environmental Protection Agency under the Toxic Substances Control Act, and by government agencies in other countries under similar laws. The Toxic Substances Control Act regulations govern, among other things, the testing, manufacture, processing and distribution of chemicals, the testing of regulated chemicals for their effects on human health and safety and import and export of chemicals. The act prohibits persons from manufacturing any chemical in the United States that has not been reviewed by Environmental Protection Agency for its effect on health and safety, and placed on an Environmental Protection Agency inventory of chemical substances. If we fail to comply with the notification, record-keeping and other requirements in the manufacture or distribution of our products, then the Environmental Protection Agency can obtain an order from a court that would prohibit the further distribution or marketing of a product that contains a chemical that is out of compliance or can impose fines and penalties.

Research and Development

The process of developing new high-technology products and solutions is inherently complex and uncertain. It requires, among other things, innovation and accurate anticipation of customers' changing needs and emerging technological trends. Without the introduction of new products, services and enhancements, our products and services are likely to become technologically obsolete over time, in which case revenue would be materially and adversely affected. There can be no assurance that such new products and services, if and when introduced, will achieve market acceptance. After the products and services are developed, we must quickly manufacture and deliver such products and services in sufficient volumes at acceptable costs to meet demand.

Research and development expenditures were \$805 million in 1996, \$880 million in 1997 and \$948 million in 1998. We anticipate that we will continue to have significant research and development expenditures in order to maintain our competitive position with a continuing flow of innovative, high-quality products and services.

Intellectual Property

Our general policy has been to seek patent and other intellectual property protection for those inventions and improvements likely to be incorporated into our products and services or to give us a competitive advantage. While we believe that our patents and applications have value, in general no single patent is in itself essential. In addition, we cannot assure you that any of our proprietary rights will not be challenged, invalidated or circumvented, or that our rights will provide significant competitive advantages.

International Operations

Our net revenue originating outside the United States, as a percentage of our total net revenue, was approximately 54.9% in 1996, 56.3% in 1997, and 54.4% in 1998 the majority of which was from customers other than foreign governments. Approximately 20% of our international revenue in the last three years was derived from Japan.

Most of our sales in international markets are made by foreign sales subsidiaries. In countries with low sales volumes, sales are made through various representatives and distributors. However, we make certain sales in international markets directly from the United States.

Our international business is subject to risks customarily encountered in foreign operations, including changes in a specific country's or region's political or economic conditions, trade protection measures, import or export licensing requirements, the overlap of different tax structures, unexpected changes in regulatory requirements and natural disasters. We are also exposed to foreign currency exchange rate risk inherent in our sales commitments, anticipated sales and assets and liabilities denominated in currencies other than the United States dollar and may also become subject to interest rate risk inherent in any debt, investment and finance receivable portfolios we incur.

We believe that our international diversification provides stability to our worldwide operations and reduces the impact on us of adverse economic changes in any single country.

Properties

Our principal executive offices are located in Palo Alto, California. We plan to move our headquarters to another location in Palo Alto, California in May 2000. As of August 1999, we operated 35 manufacturing sites, occupying in excess of 10.5 million square feet, of which approximately 500,000 square feet were leased. These sites are located in eight countries, including 10 in the United States.

As of August 1999, we operated three research and development sites, of which one was located in the United States, occupying in excess of 1.3 million square feet, none of which were leased. These sites were located in two countries. We operated five warehouse sites, of which two were located in the United States, occupying in excess of 300,000 square feet, all of which were leased. These sites were located in two countries. We operated 92 office sites (administration, sales, field service), of which 29 were located in the United States, occupying in excess of five million square feet, of which one million square feet were leased. These sites were located in 21 countries.

Materials

Our manufacturing operations employ a wide variety of semiconductors, electromechanical components and assemblies, and raw materials such as plastic resins and sheet metal. We believe that the materials and supplies necessary for our manufacturing operations are presently available in the quantities required. We purchase materials, supplies and product subassemblies from a substantial number of vendors. For many of our products, we have existing alternate sources of supply, or such sources are readily available. In certain instances, however, we enter into non-cancelable purchase commitments with, or make advance payments to, certain suppliers to ensure supply. Portions of our manufacturing operations are dependent on the ability of suppliers to deliver quality components, subassemblies and completed products in time to meet critical manufacturing and distribution schedules. The failure of suppliers to deliver these components, subassemblies and products in a timely manner may adversely affect our operating results until alternate sources could be developed. In addition, we periodically experience constrained supply of certain component parts in some product lines as a result of strong demand in the industry for those parts. Such constraints, if persistent, may adversely affect our operating results. However, we believe that alternate suppliers or design solutions could be arranged within a reasonable time so that material long-term adverse impacts would be minimized.

Environmental

Our research and development and manufacturing operations involve the use

of hazardous substances and are regulated under international, federal, state and local laws governing health and safety and the environment. We apply strict standards for protection of the environment and worker health and safety to sites inside and outside the United States, even if not subject to regulation imposed by foreign governments. We believe that our

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properties and operations at our facilities comply in all material respects with applicable environmental laws; however, the risk of environmental liabilities cannot be completely eliminated and there can be no assurance that the application of environmental and health and safety laws to our company may not require our company to incur substantial expenditures. We are also regulated under a number of international, federal, state and local laws regarding recycling, product packaging and product content requirements. These laws are gradually becoming more stringent and may in the future cause us to incur substantial expenditures.

Some of our operations are located on properties that are known to have subsurface contamination that is undergoing remediation by Hewlett-Packard. Hewlett-Packard has agreed to retain the liability for the contamination, perform the required remediation and indemnify us with respect to claims arising out of the contamination. While we expect that Hewlett-Packard will meet its remediation and indemnification obligations in this regard, there can be no guarantee that it will do so. Under our agreement with Hewlett-Packard, Hewlett-Packard will have access to these properties to perform the remediation. Hewlett-Packard has agreed to minimize interference with on-site operations at those properties during the course of the remediation, but there can be no guarantee that our operations will not be interrupted or that we will not be required to incur unexpected expenses associated with the remediation.

In addition, some of these properties are undergoing remediation by Hewlett-Packard under an order of an agency of the state in which the property is located. Although Hewlett-Packard has agreed to indemnify us with respect to that subsurface contamination, it is possible that one or more of the governmental agencies will require us to be named on any of these orders. The naming of our company will not affect Hewlett-Packard's obligation to indemnify us with regard to these matters.

We are liable and are indemnifying Hewlett-Packard for any contamination found at all facilities being transferred to us excluding the properties undergoing remediation. In addition, we are indemnifying Hewlett-Packard for any liability associated with past non-compliance with environmental laws regulating ongoing operations at all properties to be transferred by Hewlett-Packard to us, as well as at sold or discontinued businesses that related to our businesses. While we are not aware of any material liabilities associated with such indemnified matters, there is no guarantee that such contamination or regulatory non-compliance does not exist, and will not expose us to material liability in the future.

We are being indemnified by Hewlett-Packard with respect to all environmental liabilities for which Hewlett-Packard accrued a reserve and we are not aware of any material and probable environmental liabilities being assumed by us which are not subject to the indemnity.

Legal Proceedings

The Environmental Protection Agency initiated a civil penalty proceeding against Hewlett-Packard in 1998 that alleged four violations of the Toxic Substances Control Act, two of which were directed at operations of our chemical analysis business. Under this proceeding, the Environmental Protection Agency is seeking a total of \$112,750 in civil penalties. As a result of this enforcement action, Hewlett-Packard offered in 1999 to conduct a post-enforcement audit of some of its operations for compliance with the Toxic Substances Control Act. The audit will include some facilities operated by our chemical analysis business. If violations of the law are discovered in

the audit, we would pay civil penalties for those violations in stipulated amounts.

There are presently no other material legal proceedings, other than routine litigation incidental to our business, pending against us or our properties.

MANAGEMENT

Directors and Executive Officers

Set forth below is information concerning our directors and executive officers and their ages as of June 30, 1999.

Name ----	Age ---	Position -----
Edward W. Barnholt.....	55	President, Chief Executive Officer and Director
Gerald Grinstein.....	67	Chairman of the Board of Directors
Thomas E. Everhart.....	67	Director
Walter B. Hewlett.....	55	Director
David M. Lawrence, M.D.	58	Director
Byron Anderson.....	56	Vice President, Electronic Products and Solutions
Cynthia Danaher.....	41	Vice President, Healthcare Solutions
William R. Hahn.....	48	Vice President, Strategic Programs
Jean M. Halloran.....	46	Vice President, Human Resources
Dorothy D. Hayes.....	48	Vice President and Controller
Richard D. Kniss.....	58	Vice President, Chemical Analysis
D. Craig Nordlund.....	50	Vice President, General Counsel and Secretary
Thomas A. Saponas.....	49	Vice President and Chief Technology Officer
John E. Scruggs.....	57	Vice President, Automated Test
William P. Sullivan.....	49	Vice President, Semiconductor Products
Robert R. Walker.....	48	Vice President and Chief Financial Officer
Thomas White.....	41	Vice President, Communications Solutions

Edward W. Barnholt has served as our President and Chief Executive Officer and as a director since May 1999. Before being named our Chief Executive Officer, Mr. Barnholt served as General Manager of Hewlett-Packard's Measurement Organization from 1998 to 1999, which included Hewlett-Packard's Electronic Instruments Group, the Microwave and Communications Group, the Communications Test Solutions Group, the Automated Test Group, the Chemical Analysis Group, the Components Group and the Medical Products Group. From 1990 to 1998, he served as General Manager of Hewlett-Packard's Test and Measurement Organization. He was elected a Senior Vice President of Hewlett-Packard in 1993 and an Executive Vice President in 1996. He is a director of KLA-Tencor Corporation.

Gerald Grinstein has served as Chairman of our board of directors since August 1999. From 1985 to 1995, he held a number of positions at Burlington Northern, Inc. He was named its Chairman and Chief Executive Officer in 1991 and retired from that position in 1995. Mr. Grinstein is Chairman of the Board of Delta Air Lines, Inc. and is a principal of Madrona Investment Group, L.L.C., a Seattle based investment company. He is a director of Browning-Ferris Industries, Inc., PACCAR Inc., Vans, Inc., the Pittston Company and Imperial Sugar Corporation.

Thomas E. Everhart has served as a director since July 1999. From February to July 1998, Dr. Everhart acted as the Pro-Vice Chancellor of the University of Cambridge. Since October 1998, he has served as a trustee of the California Institute of Technology. Prior to assuming that position, Dr. Everhart served as President of the California Institute of Technology from September 1987

until his retirement in October 1997, when he became President Emeritus. Since December 1997, Dr. Everhart has acted as the Senior Scientific Advisor to the W. M. Keck Foundation. He is a director of General Motors Corporation, Raytheon Company, Hughes Electronics Corporation, Reveo, Inc. and Saint-Gobain Company. He is also a director of the Corporation for National Research Initiatives, the Electric Power Research Institute and a member of the Board of Trustees of the California Institute of Technology and of the Board of Overseers of Harvard University. He has served as a director of Hewlett-Packard since June 1991.

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Walter B. Hewlett has served as a director since July 1999. Mr. Hewlett is an independent software developer involved with computer applications in the humanities. In 1997, Mr. Hewlett was elected to the Board of Overseers of Harvard University. In 1994, Mr. Hewlett participated in the formation of Vermont Telephone Company of Springfield, Vermont and currently serves as its Chairman. Mr. Hewlett founded the Center for Computer Assisted Research in the Humanities in 1994, for which he serves as a director. Mr. Hewlett has been a trustee of The William and Flora Hewlett Foundation since its founding in 1966 and currently serves as its Chairman. Mr. Hewlett has served as a director of Hewlett-Packard since 1987. He is the son of Hewlett-Packard co-founder William R. Hewlett.

David M. Lawrence, M.D. has served as a director since July 1999. Dr. Lawrence has served as Chairman of the Board since 1992 and Chief Executive Officer since 1991 of Kaiser Foundation Health Plan, Inc. and Kaiser Foundation Hospitals. He held a number of management positions with those organizations prior to assuming his current positions, including Vice Chairman of the Board and Chief Operating Officer. Dr. Lawrence is a director of Pacific Gas and Electric Company and Raffles Medical Group, Inc. He has served as a director of Hewlett-Packard since May 1995.

Byron Anderson has served as our Vice President, Electronic Products and Solutions since August 1999. Prior to assuming that position, Mr. Anderson served as a vice president of Hewlett-Packard since November 1995 and General Manager of the Microwave and Communications Group since September 1997. In January 1991, Mr. Anderson was named General Manager of Hewlett-Packard's Communications Test Business Unit, which became the Test Solutions Group in 1994.

Cynthia Danaher has served as our Vice President, Healthcare Solutions since August 1999. Prior to assuming that position, Ms. Danaher served as Vice President and General Manager of Hewlett-Packard's Medical Products Group. Ms. Danaher joined Hewlett-Packard's Imaging Systems Division as a Marketing Manager in 1990, before assuming the position of General Manager of Hewlett-Packard's Medical Products Group's Imaging Systems Division.

William R. Hahn has served as our Vice President, Strategic Programs since August 1999. Since October 1997, Mr. Hahn served as the Sector Controller of Hewlett-Packard's Measurement Organization. From September 1995 to October 1997, he served as Operations Manager for Hewlett-Packard's interactive broadband program. From May 1993 to September 1995, Mr. Hahn served as Vice President of Finance and Manufacturing and Chief Financial Officer at Aspect Communications.

Jean M. Halloran has served as our Vice President, Human Resources since August 1999. Since 1997, Ms. Halloran served as Director of Corporate Education and Development for Hewlett-Packard. Prior to assuming this position, from 1993 to 1997, Ms. Halloran acted as personnel manager for Hewlett-Packard's Measurement Systems Organization. From 1990 to 1993, she acted as group personnel manager for Hewlett-Packard's Medical Products Group. Ms. Halloran joined Hewlett-Packard in 1980 in the Medical Products Group, where she held a variety of positions in human resources, manufacturing and strategic planning.

Dorothy D. Hayes has served as our Vice President and Controller since

August 1999. Prior to assuming that position, since October 1989, Ms. Hayes held a number of positions at Hewlett-Packard. She served as Transition General Manager from March to July 1999, Director of Internal Audit from July 1997 to June 1999, Measurement Systems Organization Controller from February 1994 to July 1997, Components Group Controller from September 1993 to February 1996 and Corporate Financial Reporting Manager from October 1989 to September 1993.

Richard D. Kniss has served as our Vice President, Chemical Analysis Group since August 1999. Prior to assuming that position, since May 1995, Mr. Kniss was General Manager of Hewlett-Packard's Chemical Analysis Group and was named a vice president of Hewlett-Packard in June 1997. He served as general manager of the Optical Communication Division from 1984 to 1995.

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D. Craig Nordlund was named our Vice President, General Counsel and Secretary in May 1999. Mr. Nordlund has served as Associate General Counsel and Secretary of Hewlett-Packard since 1987. He has served as an officer or director for a variety of Hewlett-Packard's subsidiaries and affiliates. He currently serves as Chairman of the National American Society of Corporate Secretaries organization.

Thomas A. Saponas has served as our Vice President and Chief Technology Officer since August 1999. Prior to being named Chief Technology Officer, from June 1998 to April 1999, Mr. Saponas was Vice President and General Manager of Hewlett-Packard's Electronic Instruments Group. Mr. Saponas has held a number of positions since the time he joined Hewlett-Packard. Mr. Saponas served as General Manager of the Lake Stevens Division from August 1997 to June 1998 and General Manager of the Colorado Springs Division from August 1989 to August 1997. In 1986 he was a White House Fellow in Washington. D.C.

John E. Scruggs has served as our Vice President, Automated Test since August 1999. Prior to assuming that position, since January 1992, Mr. Scruggs was General Manager of the Automated Test Group of Hewlett-Packard within the Test and Measurement Organization. He was elected a vice president of Hewlett-Packard in November 1996.

William P. Sullivan has served as our Vice President, Semiconductor Products since August 1999. Prior to assuming that position, since February 1998, he served as Vice President and General Manager of Hewlett-Packard's Components Group. In 1997, Mr. Sullivan became General Manager of the Communication Semiconductor Solutions Division. From 1995 to 1997, he was General Manager of the Optical Communication Division. From April 1991 to February 1995, Mr. Sullivan served as research and development manager for the Optical Communication Division.

Robert R. Walker has served as our Vice President and Chief Financial Officer since May 1999. During 1997 and 1998 Mr. Walker served as Vice President and General Manager of Hewlett-Packard's Professional Services Business Unit. From 1993 to 1997 he led Hewlett-Packard's information systems function. He became Chief Information Officer in 1995 and served in that position until 1997. Mr. Walker was named a vice president of Hewlett-Packard in 1995.

Thomas White has served as our Vice President, Communications Solutions since August 1999. From 1997 to August 1999, Mr. White served as Vice President and General Manager of the Communications Solutions Group of Hewlett-Packard. From 1996 to 1997, he served as General Manager of the Computer Peripherals Bristol Division and, in 1994, he served as General Manager for the Telecommunications Systems Division, South Queensferry, Scotland.

Board Structure and Compensation

Our board of directors is divided into three classes serving staggered three-year terms. Mr. Barnholt's and Mr. Grinstein's initial term will expire

in 2000. Mr. Hewlett's initial term will expire in 2001. Dr. Everhart's and Dr. Lawrence's initial term will expire in 2002. Prior to Hewlett-Packard's distribution of our shares to its stockholders, our nominating committee expects to identify a number of additional candidates not affiliated with Agilent Technologies or Hewlett-Packard for election to our board of directors.

Our board of directors has four directors and the following four committees: (1) audit, (2) compensation, (3) nominating, and (4) executive. The membership and the function of each committee are described below.

Audit -----	Compensation -----	Nominating -----	Executive -----
Thomas E. Everhart	Thomas E. Everhart	Edward W. Barnholt	Edward W. Barnholt
Walter B. Hewlett	Gerald Grinstein	Thomas E. Everhart	Gerald Grinstein
David M. Lawrence, M.D.	David M. Lawrence, M.D.	Gerald Grinstein Walter B. Hewlett David M. Lawrence, M.D.*	

* Committee Chair

Audit Committee

Our audit committee reviews our auditing, accounting, financial reporting and internal control functions and makes recommendations to the board of directors for the selection of independent accountants. In addition, the committee monitors the quality of our accounting principles and financial reporting, our compliance with foreign trade regulations as well as the independence of and the non-audit services provided by independent accountants. In discharging its duties, the audit committee:

- . reviews and approves the scope of the annual audit and the independent accountant's fees;
- . meets independently with our internal auditing staff, our independent accountants and our senior management; and
- . reviews the general scope of our accounting, financial reporting, annual audit and internal audit program, matters relating to internal control systems as well as the results of the annual audit.

Compensation Committee

Our compensation committee determines, approves and reports to the board on all elements of compensation for our elected officers including targeted total cash compensation and long-term equity based incentives.

Nominating Committee

Our nominating committee proposes a slate of directors for appointment by our stockholders at each annual meeting and candidates to fill any vacancies on the board of directors. It is also responsible for approving management succession plans and addressing board of directors organizational and governance issues.

Executive Committee

Our executive committee meets or takes written action when the board is not otherwise meeting and has the level of authority delegated to it from time to time by the board of directors, except that it cannot amend our bylaws, recommend any action that requires the approval of the stockholders or to take any other action not permitted under Delaware law to be delegated to a committee.

Stock Ownership of Directors and Executive Officers

All of our common stock is currently owned by Hewlett-Packard, and thus none of our officers, directors or director nominees own any of our common stock. To the extent our directors and officers own shares of Hewlett-Packard common stock at the time of the distribution, they will participate in the distribution on the same terms as other holders of Hewlett-Packard common stock.

The following table sets forth the number of shares of Hewlett-Packard common stock beneficially owned on June 30, 1999 by each director, each of the executive officers named in the Summary Compensation Table in the "--Executive Compensation" section below, and all of our directors, director nominees and executive officers as a group. Except as otherwise noted, the individual director or executive officer or their family members had sole voting and investment power with respect to such securities. The total number of shares of Hewlett-Packard common stock outstanding as of June 30, 1999 was 1,019,373,830.

Name of Beneficial Owner -----	Shares of Hewlett-Packard Beneficially Owned -----	
	Number	Percentage -----
Edward W. Barnholt(1).....	345,046	*
Gerald Grinstein(2).....	4,500	*
Thomas E. Everhart(3).....	10,780	*
Walter B. Hewlett(4).....	320,434	*
David M. Lawrence, M.D.(5).....	6,012	*
Robert R. Walker(6).....	63,153	*
All directors and executive officers as a group.....		

* Represents holdings of less than one percent.

- (1) Includes 189,988 shares issuable upon the exercise of options exercisable within 60 days of June 30, 1999 and 4,872 of the shares are held by Mr. Barnholt as a custodian for his children.
- (2) These shares are beneficially owned by Mr. Grinstein and his spouse.
- (3) Includes 8,380 shares issuable upon the exercise of options exercisable within 60 days of June 30, 1999.
- (4) Includes 3,224 shares issuable upon the exercise of options exercisable within 60 days of June 30, 1999. Also includes 14,580 shares held by Mr. Hewlett as a custodian for his children, 1,100 shares held by Mr. Hewlett for the benefit of his son, 250 shares held by Mr. Hewlett for the benefit of his daughter and 1,280 shares held by Mr. Hewlett for the benefit of his spouse. Excludes 60,695,396 shares held by the William R. Hewlett Revocable Trust, of which Mr. Hewlett is a co-trustee, 1,083,000 shares held by the Flora L. Hewlett Trust, of which Mr. Hewlett is a co-trustee, and 2,353,500 shares held by the William and Flora Hewlett Foundation, of which Mr. Hewlett is a director. Mr. Hewlett shares voting and investment power over the shares held by the William R. Hewlett Revocable Trust, the Flora L.

Hewlett Trust and the William and Flora Hewlett Foundation. Mr. Hewlett disclaims any beneficial interest in the excluded shares, because he has no economic interest in any of these shares.

- (5) Includes 4,560 shares issuable upon the exercise of options exercisable within 60 days of June 30, 1999.
- (6) Includes 24,600 shares issuable upon the exercise of options exercisable within 60 days of June 30, 1999.

Executive Compensation

The following table sets forth certain compensation information for the chief executive officer and the four other executive officers of Agilent Technologies who, based on salary and bonus compensation from Hewlett-Packard and its subsidiaries, were the most highly compensated for the year ended October 31, 1998. All information set forth in this table reflects compensation earned by these individuals for services with Hewlett-Packard and its subsidiaries for the year ended October 31, 1998.

SUMMARY COMPENSATION TABLE

Name and Principal Position	Annual Compensation		Long-Term Compensation			All Other Compensation (\$)(5)
	Salary (\$)	Bonus (\$)(1)(4)	Restricted Stock Award(s) (\$)(2)	Awards	Payouts	
				Securities Underlying Options (#)	Long Term Incentive Payouts (\$)(3)(4)	
Edward W. Barnholt..... President and Chief Executive Officer	\$759,488	\$115,754	\$967,581	60,000	\$(531,000)	\$6,499
Robert R. Walker..... Vice President and Chief Financial Officer	408,438	22,514	104,125	12,000	0	6,499

FOOTNOTES TO SUMMARY COMPENSATION TABLE

(1) The amounts shown in this column reflect payments under Hewlett-Packard's 1998 Variable Pay Plan established November 1, 1998 and Hewlett-Packard's Cash Profit-Sharing Plan. Hewlett-Packard's 1998 Variable Pay Plan is available to designated key employees of Hewlett-Packard. The Cash Profit-Sharing Plan is available to all employees of Hewlett-Packard.

Under the cash profit-sharing plan, a portion of Hewlett-Packard's earnings generated during each half of Hewlett-Packard's fiscal year is paid to employees. The amount paid is based upon the performance of Hewlett-Packard as measured by return on assets and revenue growth.

Hewlett-Packard's 1998 Variable Pay Plan permits Hewlett-Packard to designate a portion of the annual cash compensation planned for certain key employees as variable pay. Under Hewlett-Packard's 1998 Variable Pay Plan, the percentage of the targeted variable amount to be paid is dependent upon the degree to which performance metrics defined on an annual basis are met. In November 1998, the Compensation Committee of the Board of Directors of Hewlett-Packard established the performance metrics for fiscal 1998, which metrics were based on the performance of Hewlett-Packard's common stock relative to the S&P High Technology Composite Index. In November 1998, the Compensation Committee determined that 80% of the targeted variable compensation for Mr. Barnholt in the amount of \$86,000 had been earned. The amounts attributable to the Variable Pay Plan for fiscal 1998 are disclosed

in the table above as "Bonus".

- (2) The amounts disclosed in this column reflect, for fiscal 1998, the dollar values of Hewlett-Packard's common stock which Hewlett-Packard contributed under its Stock Purchase Plan, as a match for every two shares purchased by the named executive officer and for Mr. Barnholt performance-based restricted shares of Hewlett-Packard's common stock which Hewlett-Packard granted.

The Stock Purchase Plan is a broad-based plan which is available to all employees of Hewlett-Packard. The matching shares vest two years after the date of Hewlett-Packard's contributions, which occur on a rolling fiscal quarter basis, and are subject to forfeiture during the two-year period in the event of termination or certain other events. The named executive officers receive non-preferential dividends on these restricted shares. In fiscal 1998, Hewlett-Packard, under its Stock Purchase Plan, granted 664 shares of restricted stock to Mr. Barnholt worth \$41,331 and 258 shares of restricted stock to Mr. Walker worth \$17,562.

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In fiscal 1998, Hewlett-Packard granted 15,000 shares of performance-based restricted stock to Mr. Barnholt valued at \$926,250 based upon the grant date closing price of \$61.75 per share. The performance-based restricted stock will vest only to the extent that Hewlett-Packard achieves stated performance goals with respect to earnings per share and return on assets over a three-year period ending October 31, 2000 for the performance-based restricted stock granted in fiscal 1998. Because the stated performance goals for the three year period ended October 31, 1998 were not met, 75% of the performance-based restricted stock granted in fiscal 1996 was forfeited as further described in footnote 3 below.

At October 31, 1998, Mr. Barnholt held 51,000 shares of restricted stock valued at \$3,072,750, and Mr. Walker held 24,000 shares of restricted stock valued at \$1,446,000 based on the October 30, 1998 closing price of \$60.25 per share.

- (3) In November 1998, the Compensation Committee reviewed the results for the three year performance period ended October 31, 1998 to determine to what extent the performance objectives associated with performance-based restricted stock granted in fiscal 1996 had been met. The Compensation Committee determined that under the terms of each grant Mr. Barnholt was required to forfeit 75% of the performance-based restricted stock granted in 1996. The amount forfeited is reflected in the table above as a negative LTIP pay-out in fiscal 1998 based upon the original grant date closing price of \$44.25 per share.
- (4) As noted above, Hewlett-Packard provides performance-based compensation under its 1998 Variable Pay Plan, its cash profit-sharing plan and pursuant to the agreement under which the Compensation Committee granted shares of restricted stock in fiscal 1998. The subsequent payment or forfeiture described above as "Bonus" or "LTIP Payout" is reflected as compensation in the fiscal year for which the relevant performance period is completed.
- (5) The amounts disclosed in this column include payment by Hewlett-Packard of \$99 in fiscal 1998 for term life insurance on behalf of Mr. Barnholt and Mr. Walker and Hewlett-Packard's contributions under its Tax Saving Capital Accumulation Plan, a tax-qualified defined contribution 401(k) plan, in fiscal 1998 of \$6,400 on behalf of Mr. Barnholt and \$6,400 on behalf of Mr. Walker.

Grants of Stock Options

The following table shows all grants of options to acquire shares of Hewlett-Packard common stock granted to the executive officers named in the

Summary Compensation Table in the "--Executive Compensation" section in the year ended October 31, 1998.

Name	Number of Securities Underlying Options Granted (#) (1)	% of Total Options Granted to		Exercise or Base Price (\$/Sh.) (3)	Expiration Date	Grant Date Present Value (\$)(4)
		Hewlett-Packard Employees in Fiscal Year(2)	Hewlett-Packard Employees in Fiscal Year(2)			
Edward W. Barnholt.....	60,000	.6%		\$61.75	Nov. 2007	\$1,315,200
Robert R. Walker.....	12,000	.1%		61.75	Nov. 2007	263,040

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- (1) The options granted in fiscal 1998 are exercisable 25% after the first year, 50% after the second year, 75% after the third year, and 100% after the fourth year.
 - (2) Hewlett-Packard granted options representing 10,648,000 shares to employees in fiscal 1998.
 - (3) The exercise price may be paid by delivery of already-owned shares and tax withholding obligations related to exercise may be paid by offset of the underlying shares, subject to certain conditions.
 - (4) Hewlett-Packard used a modified Black-Scholes model of option valuation to determine grant date present value. Hewlett-Packard does not advocate or necessarily agree that the Black-Scholes model can properly determine the value of an option. Calculations for the named officers are based on a seven-year option term, which reflects Hewlett-Packard's experience that its options, on average, are exercised within seven years of grant. Other assumptions used for the valuations are: an annual interest rate of 5.39%; annual dividend yield of 1.0%; and volatility of 30%. The resulting values are reduced by 9% to reflect Hewlett-Packard's experience with forfeitures.

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Exercises of Stock Options

The following table shows aggregate exercises of options to purchase Hewlett-Packard common stock in the year ended October 31, 1998 by the executive officers named in the Summary Compensation Table in the "--Executive Compensation" section above.

Name	Shares Acquired on Exercise	Value Realized (\$)	Number of Securities Underlying Unexercised Options at Fiscal Year-End (#)		Value of Unexercised In-The-Money Options at Fiscal Year-End (\$) (1)	
			Exercisable	Unexercisable	Exercisable	Unexercisable
Edward W. Barnholt.....	20,000	\$1,035,600	218,288	110,000	\$9,113,541	\$824,450
Robert R. Walker.....	25,000	1,319,650	27,600	24,000	1,067,240	119,040

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- (1) The value of unexercised options is based upon the difference between the exercise price and the average of the high and low market prices on October 30, 1998 of \$59.91.

Treatment of Hewlett-Packard Options

Under the existing terms of Hewlett-Packard's stock option plans, substantially all Hewlett-Packard options held by our employees on the distribution date will be fully vested and, if not exercised, will expire in three months. Alternatively, our employees may elect to amend their Hewlett-Packard options to waive the vesting acceleration. We will assume these amended options, which will convert at the distribution into options to

purchase our common stock. The number of shares and the exercise price of Hewlett-Packard options that convert into Agilent Technologies options will be adjusted using a conversion formula. The conversion formula will be based on the opening per share price of our common stock on the first trading day after the distribution relative to the closing per share price of Hewlett-Packard common stock on the last trading day before the distribution. The resulting Agilent Technologies options will maintain the original vesting provisions and option periods. We do not currently know how many Hewlett-Packard options held by our employees will be converted into Agilent Technologies options.

Treatment of Hewlett-Packard Restricted Stock

Under the Hewlett-Packard 1985 Incentive Compensation Plan and the 1990 and 1995 Incentive Stock Plans, certain key employees of Hewlett-Packard were granted restricted stock awards. The majority of the shares of restricted stock outstanding at October 31, 1998 are subject to forfeiture if employment terminates prior to three years from the date of grant. Restricted shares held by our employees are expected to be forfeited on or before the distribution. Our employees who forfeit Hewlett-Packard restricted shares may elect to receive either replacement options to purchase our common stock granted on the effective date of this offering at an exercise price equal to the initial public offering price or replacement Agilent Technologies restricted shares granted on or before the distribution, in either case with the same vesting as before. We intend to provide replacement options and replacement Agilent Technologies restricted shares with a value that is comparable to the value of the forfeited Hewlett-Packard restricted shares. Our employees will be required to make their election in October 1999.

Incentive Plans

1999 Stock Plan

We intend to adopt the 1999 Stock Plan to provide grants of incentive stock options to our employees, including officers and employee directors, and grants of nonstatutory stock options, stock appreciation rights, stock awards and cash awards to our employees and directors. A total of shares of common stock will be reserved for issuance under the stock plan.

Administration of the 1999 Stock Plan

The administrator, which is either the board of directors or a committee of the board of directors, will administer the stock plan. In the case of options intended to qualify as "performance-based compensation" within the meaning of Section 162(m) of the Code, the committee will consist of two or more "outside directors"

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within the meaning of Section 162(m) of the Code. The administrator has the power to determine the terms of the options, stock awards, stock appreciation rights and cash awards granted, including the exercise price, the number of shares subject to each option, stock appreciation right or stock award, the exercisability of the options and stock appreciation rights and the form of consideration payable upon exercise of the options.

Options

The exercise price of nonstatutory stock options granted under the stock plan is determined by the administrator, but the per share exercise price shall be no less than seventy-five percent of the fair market value of our common stock on the date of grant. With respect to nonstatutory stock options intended to qualify as "performance-based compensation" within the meaning of Section 162(m) of the Internal Revenue Code, the exercise price must be at least equal to the fair market value of our common stock on the date of grant. The exercise price of all incentive stock options granted under the stock plan must be at least equal to the fair market value of our common stock on the date of grant. The term of all other options granted under the stock plan may

not exceed ten years.

Unless otherwise provided in the optionee's option agreement, options granted under the stock plan terminate immediately upon the termination of the optionee's status as an employee of our company, within three years after the optionee's termination by disability or retirement, or within one year after the optionee's termination by death, but in no event later than the expiration of the option's term. If an optionee's status as an employee ends due to death, disability, retirement or through certain voluntary severance programs, the optionee will fully vest in and have the right to exercise the option within the time limits described above.

During any fiscal year each optionee may be granted options and stock appreciation rights to purchase a maximum of _____ shares of our common stock.

Stock Appreciation Rights

Stock appreciation rights may be granted under the stock plan to employees who hold options. An optionee may exercise a stock appreciation right by surrendering to us, unexercised, a corresponding portion of an option. A stock appreciation right is exercisable only to the extent the related option is exercisable. The stock appreciation right will terminate at the same time and pursuant to the same terms as the related option.

Stock Awards

The administrator determines the terms and conditions, including vesting, of stock awards granted under the stock plan. Unless the administrator determines otherwise, stock awards shall be forfeited upon the voluntary or involuntary termination of the grantee's employment with us for any reason, although full or partial vesting may occur in the event of termination by reason of death, disability or retirement, or in connection with a corporate transaction.

Cash Awards

Cash awards may be granted alone, in addition to, or in tandem with other awards granted under the stock plan. The terms of a cash award will be determined by the administrator.

Non-Transferability of Options, Stock Appreciation Rights and Stock Awards

Options, stock appreciation rights, cash awards and stock awards granted under the stock plan are generally not transferable by the grantee, and each option, stock appreciation right and stock award is exercisable during the lifetime of the optionee only by such grantee.

Adjustments upon Merger or Change in Control

The stock plan provides that in the event we are merged into or acquired by another entity; we may provide for the assumption or substitution in, or adjustment to, awards under the stock plan. In the event of a transaction

involving a change in control, we may accelerate the vesting of options and terminate any restrictions on stock awards and we may provide for the cancellation of awards under the stock plan with a cash payment to the grantee.

Amendment and Termination of the 1999 Stock Plan

Unless terminated sooner, the stock plan will terminate automatically ten years from the date of its adoption by the board of directors. In addition, the administrator has the authority to amend, suspend or terminate the stock plan, so long as no such action affects any shares of common stock previously issued and sold and any option or award previously granted under the stock

plan.

1999 Employee Stock Purchase Plan

We intend to adopt the 1999 Employee Stock Purchase Plan to encourage employee stock ownership. The total number of shares of common stock that we will reserve for issuance under the employee stock purchase plan equals shares.

Administration of the Employee Stock Purchase Plan

Our officers or other selected employees of us will administer the employee stock purchase plan and determine employee eligibility to participate in the employee stock purchase plan.

Eligibility to Participate

Regular full-time or regular part-time employees are eligible to participate in the employee stock purchase plan on their hire date and may enroll before their first day of work or at the beginning of any fiscal quarter. The employee stock purchase plan permits participants to purchase our common stock through payroll deductions of up to 10% of the participant's pay. Pay means base earnings but excludes:

- . bonuses;
- . pay for overtime work; and
- . other extra compensation.

An employee may participate in both the 401(k) plan and the stock purchase plan. A participant may always contribute up to 5% of pay to the employee stock purchase plan, even if the participant contributes the maximum percentage permitted under the 401(k) plan. If a participant contributes more than 5% of pay to the employee stock purchase plan, the participant's combined 401(k) plan and employee stock purchase plan contributions cannot exceed 10% of eligible pay.

Purchases

Participant contributions are used to purchase shares of our common stock on the last business day of each fiscal quarter. Our fiscal quarters end in January, April, July, and October. The price of stock purchased under the employee stock purchase plan will be the lowest of the following:

- . the average of the daily closing prices of the stock on the [New York Stock Exchange/Nasdaq Stock Market] for the full quarter;
- . the average of the daily closing prices of the stock on the [New York Stock Exchange/Nasdaq Stock Market] for the last five trading days of the quarter; or
- . the closing price of the stock on the last trading day of the quarter.

For every two shares purchased through employee contributions, we will contribute one share.

Restrictions

A participant cannot sell or transfer shares purchased with contributions from us for the two-year period after purchase unless the participant leaves us due to retirement, permanent and total disability or death. If a

participant leaves us within two years of purchase for any reason other than retirement, permanent and total disability or death, the participant will

forfeit all our contributions. If a participant sells or transfers shares purchased through employee contributions in a quarter prior to the lapse of the two-year period, the participant will forfeit our contributions for that quarter.

End of Participation

Participation in the employee stock purchase plan will end when an employee voluntarily elects to withdraw from the employee stock purchase plan or is no longer eligible to participate. If an employee's participation in the employee stock purchase plan ends, we will promptly distribute all accrued employee contributions without interest and the employee will not be able to participate in the employee stock purchase plan until the next quarter.

Transferability of Rights

A participant may not transfer rights granted under the employee stock purchase plan other than by will or the laws of descent and distribution.

Amendment and Termination of the Employee Stock Purchase Plan

Our board of directors has the authority to amend or terminate the employee stock purchase plan at any time.

1999 Non-Employee Director Stock Plan

We intend to adopt the 1999 Non-Employee Director Stock Plan to help attract and retain non-employee directors. The total number of shares of our common stock that we will reserve for issuance under the non-employee director stock plan equals shares.

Administration

Our board of directors or a committee of the board of directors will administer the non-employee director stock plan.

Stock Options

The non-employee director stock plan will permit stock option grants. Each non-employee director shall receive a minimum of 75% of the value of his or her annual retainer in the form of a stock option grant and the balance in a cash payment.

We will issue the non-employee director an option grant on or about March 1 of each year based on the non-employee director's election. If the non-employee director fails to make a timely election, a non-employee director will receive an option grant that has a value equal to 75% of the value of his or her annual retainer. We will use a modified Black-Scholes option valuation model to determine the number of shares necessary so that the value of each stock option equals that portion of the annual retainer that a non-employee director receives in the form of a stock option.

Each stock option will vest in full 12 months after the grant date. The exercise price of each stock option will equal the fair market value of our common stock on the date of grant.

Transferability of Options

Unless the administrator provides otherwise, a non-employee director may not transfer stock a option granted under the non-employee director stock plan other than by will or by the laws of descent and distribution.

Cash Payments

All cash payments will be paid in equal quarterly installments beginning in March of each year.

Adjustments upon Merger or Asset Sale

At the time of any merger, consolidation, reorganization, recapitalization, stock dividend, stock split, or other change in the corporate structure or capitalization affecting our common stock, our board of directors or the committee will make appropriate adjustments to the number and kind of shares to be issued under the non-employee director stock plan and the price of any stock option.

Amendment and Termination of the 1999 Non-Employee Director Stock Plan

The non-employee director stock plan will terminate 10 years from its adoption, unless our board of directors or the committee terminates the non-employee director stock plan earlier. No stock options will be granted after the non-employee director stock plan terminates. Our board of directors has the authority to amend, modify, suspend or terminate the non-employee director stock plan at any time.

1999 Variable Pay Plan

We intend to adopt a 1999 variable pay plan that will be designed to link annual cash compensation for designated executives to business performance. Under the variable pay plan, a portion of targeted total cash compensation for each plan participant will be designated "at risk" variable pay which will only be paid if certain pre-determined business performance goals are achieved. If the pre-determined business performance goals are exceeded, additional cash compensation may be awarded.

The variable pay plan will be administered in six-month performance periods which coincide with each half of our fiscal year. Awards will be distributed after each performance period if the pre-determined business performance goals are achieved.

Pension Plans

The following table shows the estimated annual benefits payable upon retirement to Hewlett-Packard eligible employees in the United States under Hewlett-Packard's Deferred Profit-Sharing Plan or the Deferred Plan, Hewlett-Packard's Retirement Plan, or the Retirement Plan, and Hewlett-Packard's Excess Benefit Retirement Plan or the Excess Benefit Plan. To calculate the number of years of an eligible employee's service, the pension plans will bridge each eligible employee's service with Hewlett-Packard to that eligible employee's service with Agilent Technologies.

ESTIMATED ANNUAL RETIREMENT BENEFITS(1) (2)

Highest Five-Year Average Compensation	15 Years of Service	20 Years of Service	25 Years of Service	30 Years of Service
-----	-----	-----	-----	-----
\$ 400,000	\$ 87,207	\$116,276	\$145,345	\$ 174,414
600,000	132,207	176,276	220,345	264,414
800,000	177,207	236,276	295,345	354,414
1,000,000	222,207	296,276	370,345	444,414
1,200,000	267,207	356,276	445,345	534,414
1,400,000	312,207	416,276	520,345	624,414
1,600,000	357,207	476,276	595,345	714,414
1,800,000	402,207	536,276	670,345	804,414
2,000,000	447,207	596,276	745,345	894,414
2,200,000	492,207	656,276	820,345	984,414
2,400,000	537,207	716,276	895,345	1,074,414

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- (1) Amounts exceeding \$130,000 would be paid pursuant to the Excess Benefit Plan.
 - (2) No more than \$160,000 (as adjusted from time to time by the IRS) of eligible compensation may be taken into account in calculating benefits payable under the Retirement Plan.

The compensation covered by the pension plans whose benefits are summarized in the table above equals base pay. The covered compensation for each of the executive officers named in the Summary Compensation Table is the highest five-year average of the amounts shown in the "Salary" column of that table. The compensation covered by the pension plans for any Hewlett-Packard officer who participates in Hewlett-Packard's 1999 Variable Pay Plan shall be the "total targeted cash compensation" as defined under each of such variable pay plans.

Agilent Technologies employees will receive credit under Agilent Technologies' new defined benefit plans for their years of service with Hewlett-Packard. Officers named in the Summary Compensation Table have been credited with the following years of service: Mr. Barnholt, 30 years and Mr. Walker, 23 years. Retirement benefits shown are payable at age 65 in the form of a qualified joint and survivor annuity or single life annuity, as applicable to the employee and reflect the maximum offset allowance currently in effect under Section 401(1) of the Internal Revenue Code of 1986, as amended, to compute the offset for such benefits under the pension plans. For purposes of calculating the benefit, an employee cannot be credited with more than 30 years of service.

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ARRANGEMENTS BETWEEN AGILENT TECHNOLOGIES AND HEWLETT-PACKARD

We have provided below a summary description of the master separation and distribution agreement, effective as of August 12, 1999, or the separation agreement, and the key related agreements. This description, which summarizes the material terms of such agreements, is not complete. You should read the full text of these agreements, which have been filed with the Securities and Exchange Commission as exhibits to the registration statement of which this prospectus is a part.

Master Separation and Distribution Agreement

The master separation and distribution agreement contains the key provisions relating to the separation, this offering and the distribution.

The Separation. The separation is scheduled to occur on or around November 1, 1999. On or before the separation date, Hewlett-Packard and we will sign the general assignment and assumption agreement which provides for the transfer to us of assets and liabilities from Hewlett-Packard, effective on the separation date. Hewlett-Packard will also transfer to us ownership of specified subsidiaries. Hewlett-Packard will deliver additional agreements governing various interim and ongoing relationships between Hewlett-Packard and us following the separation date. The ancillary agreements include:

- . a general assignment and assumption agreement;
- . master technology, patent, and trademark ownership agreements;
- . an employee matters agreement;
- . a tax sharing agreement;
- . a master information technology service level agreement;
- . a real estate matters agreement;

- . an environmental matters agreement;
- . a master confidential disclosure agreement; and
- . an indemnification and insurance matters agreement.

To the extent that the terms of any of these ancillary agreements conflict with the separation agreement, the terms of these agreements govern. These agreements are described more fully below.

Cash to be Transferred to Agilent Technologies. Hewlett-Packard has agreed to provide us sufficient cash to satisfy the following obligations or requirements (as adjusted with mutual agreement):

- . the obligations of Hewlett-Packard, which will be assumed by Agilent Technologies, and the obligations of our Japanese subsidiary under Hewlett-Packard's agreement with Yokogawa to buy out Yokogawa's interest in this subsidiary;
- . taxes specified in the tax sharing agreement incurred in connection with Hewlett-Packard's restructuring of its operations in Japan;
- . working capital and acquisition requirements of \$250 million;
- . an amount equal to the difference between our assets and liabilities retained by Hewlett-Packard and Hewlett-Packard's assets and liabilities transferred to us, as of October 31, 1999; and
- . taxes payable by some of our subsidiaries as of October 31, 1999.

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Additional cash will be held by Agilent Technologies subsidiaries on the separation date. On December 15, 1999, Hewlett-Packard and we will recalculate these cash payments based on our October 31, 1999 balance sheet and Hewlett-Packard's October 31, 1999 balance sheet, and reallocate cash in the amount of any difference.

The Initial Public Offering. Under the terms of the separation agreement we are offering approximately % of our outstanding common stock in this offering. We estimate that the net proceeds from this offering will be about \$, based on an assumed initial public offering price of \$ per share. All of the proceeds of this offering (including any proceeds from the sale of shares pursuant to the exercise of the U.S. underwriters' over-allotment option), less underwriters' discounts and commissions, will be paid to Hewlett-Packard as a dividend to be declared prior to the offering. We are obligated to use our reasonable best efforts to satisfy the following conditions to the consummation of this offering (any of which may be waived by Hewlett-Packard):

- . the registration statement containing this prospectus must be effective;
- . U.S. securities laws must be satisfied;
- . our common stock must be listed on the New York Stock Exchange or the Nasdaq Stock Market;
- . all our obligations under the underwriting agreement must be met or waived by the underwriters;
- . Hewlett-Packard must own at least 80.1% of our stock and must be satisfied that the distribution will be tax free to its U.S. stockholders;
- . no legal restraints must exist preventing the separation or this offering;

- . the separation must have occurred; and
- . the separation agreement must not have been terminated.

The Distribution. By the middle of calendar year 2000, Hewlett-Packard intends to distribute the remaining shares of our common stock Hewlett-Packard holds to Hewlett-Packard stockholders on a pro rata basis. We will prepare an information statement with Hewlett-Packard and send it to Hewlett-Packard stockholders before the distribution becomes effective. The information statement will inform the stockholders of the distribution and its specifics. Hewlett-Packard may, in its sole discretion, change the distribution date. Hewlett-Packard intends to consummate the distribution only if the following conditions are met (any of which may be waived by Hewlett-Packard):

- . the Internal Revenue Service must issue a favorable tax ruling on the tax-free status of the transaction and the transaction qualifies as a tax-free reorganization under Sections 368(a)(1)(D) and 355 of the Internal Revenue Code of 1986;
- . all required government approvals must be in effect;
- . no legal restraints must exist preventing this distribution; and
- . nothing must have happened in the intervening time between the initial public offering and the distribution that makes the distribution harmful to Hewlett-Packard or its stockholders.

Covenants Between Hewlett-Packard and Agilent Technologies. In addition to signing documents that transfer control and ownership of various assets and liabilities of Hewlett-Packard relating to our business, we have agreed with Hewlett-Packard to enter into additional service level agreements, exchange information, engage in certain auditing practices and resolve disputes in particular ways.

Additional Service Level Agreements. Hewlett-Packard and we will enter into interim service level agreements covering the provision of various interim services, including financial, accounting, building services, legal and other services by Hewlett-Packard to us or, in certain circumstances, vice versa. These services will generally be provided for a fee equal to the actual direct and indirect costs of providing the services plus 5%. The interim service level agreements will generally have a term of two years or less from the date of separation. However, some interim service level agreements, including those for building services and

information technology services, may be extended beyond the initial two-year period. If these agreements are extended, their terms will change so that the lessor will receive fair market rental value for the rental component of the building services and the costs plus 10% for information technology and other services and non-rental components of building services.

Information Exchange. Both Hewlett-Packard and we have agreed to share information with each other, at no cost to the requesting party, for the following purposes, unless the sharing would be commercially detrimental:

- . Each party has agreed to maintain adequate internal accounting to allow the other party to satisfy its own reporting obligations and prepare its own financial statements.
- . Each party will retain records that may be beneficial to the other party for a specified period of time. If the records are going to be destroyed, the destroying party will give the other party an opportunity to retrieve all relevant information from the records.
- . Each party will do its best to provide the other party with personnel,

directors, officers or agents who may be used as witnesses in legal proceedings.

Auditing Practices. So long as Hewlett-Packard is required to consolidate our results of operations and financial position, we have agreed to:

- . not change independent accounting firms without Hewlett-Packard's consent;
- . use reasonable commercial efforts to cause our auditors to date their opinion on our audited annual financial statements on the same date as Hewlett-Packard's auditors' date their opinion on Hewlett-Packard's financial statements;
- . provide Hewlett-Packard all relevant information to enable Hewlett-Packard to prepare their financial statements (and Hewlett-Packard has agreed to provide us all relevant information to enable us to prepare our financial statements);
- . grant each other's internal auditors access to our records; and
- . notify each other of any change in our accounting principles.

Dispute Resolution. If problems arise between us and Hewlett-Packard, we have agreed to the following procedures:

- . The parties will make a good faith effort to first resolve the dispute through negotiation.
- . If negotiations fail, the parties agree to attempt to resolve the dispute through non-binding mediation.
- . If mediation fails, the parties can resort to litigation. In addition, nothing prevents either party acting in good faith from initiating litigation at any time if failure to do so would substantially disadvantage the party.

No Representations and Warranties. Neither party is making any promises to the other regarding:

- . the value of any asset that Hewlett-Packard is transferring;
- . whether there is a lien or encumbrance on the asset Hewlett-Packard is transferring; or
- . the legal sufficiency of any conveyance of title to any asset Hewlett-Packard is transferring.

No Solicitation. Both parties have agreed not to directly recruit employees of the other party for two years after the distribution date if the recruiting would be damaging to the other party. However, general advertising and employee-initiated solicitations are permissible.

Expenses. Hewlett-Packard will pay all of our costs and expenses related to this offering and the distribution and a portion of our costs and expenses related to the separation.

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Termination of the Agreement. Hewlett-Packard in its sole discretion can terminate the separation agreement and all ancillary agreements and abandon the distribution at any time prior to the closing of this offering. Both Hewlett-Packard and Agilent Technologies must agree to terminate the separation agreement and all ancillary agreements at any time between the closing of this offering and the distribution.

General Assignment and Assumption Agreement

The general assignment and assumption agreement identifies the assets Hewlett-Packard will transfer to us and the liabilities we will assume from Hewlett-Packard in the separation. The agreement also describes when and how these transfers and assumptions will occur.

Asset Transfer. Effective on the separation date, Hewlett-Packard will transfer the following assets to us, except as provided in an ancillary agreement or other agreement:

- . all assets reflected on our balance sheet as of July 31, 1999, minus any assets disposed of after July 31, 1999;
- . all written off, expensed or fully depreciated assets that would have appeared on our balance sheet as of July 31, 1999 if we had not written off, expensed or fully depreciated them;
- . all assets that Hewlett-Packard acquired after July 31, 1999 that would have appeared in our financial statements as of the separation date if we prepared such financial statements using the same principles we used in preparing our balance sheet dated July 31, 1999;
- . all assets that our business primarily uses as of the separation date but are not reflected in our balance sheet as of July 31, 1999 due to mistake or omission;
- . all contingent gains related primarily to our business;
- . all supply, vendor, capital, equipment lease or other contracts that relate primarily to our business, including contracts representing obligations reflected on our balance sheet as of July 31, 1999;
- . all outstanding stock, investments or similar interests of specified Hewlett-Packard subsidiaries;
- . all computers, desks, equipment and other assets used primarily by employees of Hewlett-Packard who will become our employees due to the separation;
- . specified rights under existing insurance policies; and
- . other specified assets.

Excluded Assets. The general assignment and assumption agreement also provides that Hewlett-Packard will not transfer certain assets to us, including most accounts receivable.

Assumption of Liabilities. Effective on the separation date, we will assume the following liabilities from Hewlett-Packard, except as provided in an ancillary agreement or other agreement:

- . all liabilities reflected as liabilities on our balance sheet as of July 31, 1999, minus any liabilities that were discharged after such date of the balance sheet;
- . all liabilities of Hewlett-Packard that arise after July 31, 1999, that would have appeared in our financial statements as of the separation date if we prepared such financial statements using the same principles we used in preparing our balance sheet of Agilent Technologies as of July 31, 1999;
- . all liabilities that are primarily related to or primarily arise out of our business at the separation date but are not reflected in our balance sheet as of July 31, 1999 due to mistake or omission;
- . all contingent liabilities primarily related to our business;
- . all liabilities (other than taxes) primarily resulting from the

operation of our business, or resulting from any asset that Hewlett-Packard transferred to us;

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- . all liabilities arising out of specified terminated, divested or discontinued businesses and operations; and
- . other specified liabilities.

Excluded Liabilities. The general assignment and assumption agreement provides that we will not assume specified liabilities, including:

- . most accounts payable;
- . any liabilities that would otherwise be allocated to us but which are covered by Hewlett-Packard's insurance policies, unless we are a named insured under such policies; and
- . specified third party environmental actions.

The Non-United States Plan. The transfer of international assets and assumption of international liabilities will be accomplished through agreements entered into between international subsidiaries. According to the general assignment and assumption agreement, Hewlett-Packard will transfer its ownership of all outstanding capital stock of the holding company that owns all of the subsidiaries holding the international assets and liabilities related to our business. The agreement acknowledges that circumstances in jurisdictions outside of the United States may require the timing of the international separation to be delayed past the separation date.

Delayed Transfers. If it is not practicable to transfer specified assets and liabilities on the separation date, the agreement provides that these assets and liabilities will be transferred after the separation date.

Terms of Other Ancillary Agreements Govern. To the extent that another ancillary agreement expressly provides for the transfer of an asset or an assumption of a liability, the terms of such other ancillary agreement will determine the manner of the transfer and assumption.

Obtaining Approvals and Consents. The parties agree to use all reasonable efforts to obtain any required consents, substitutions or amendments required to novate or assign all rights and obligations under any contracts that will be transferred in the separation.

Nonrecurring Costs and Expenses. Any nonrecurring costs and expenses that are not allocated in the separation agreement or any other ancillary agreement shall be the responsibility of the party that incurs the costs and expenses.

Indemnification and Insurance Matters Agreement

General Release of Pre-Separation Claims. Effective as of the separation date, we will release Hewlett-Packard and its affiliates, agents, successors and assigns, and Hewlett-Packard will release us, and our affiliates, agents, successors and assigns, from any liabilities arising from events occurring on or before the separation date, including events occurring in connection with the activities to implement the separation, the initial public offering and the distribution. This provision will not impair a party from enforcing the separation agreement, any ancillary agreement or any arrangement specified in any of these agreements.

Indemnification. The indemnification and insurance matters agreement also contains provisions governing indemnification. In general, we have agreed to indemnify Hewlett-Packard and its affiliates, agents, successors and assigns from all liabilities arising from:

- . our business, any of our liabilities or any of our contracts; and

- . any breach by us of the separation agreement or any ancillary agreement.

Hewlett-Packard has agreed to indemnify us and our affiliates, agents, successors and assigns from all liabilities arising from:

- . Hewlett-Packard's business other than the businesses transferred to us pursuant to the separation; and
- . any breach by Hewlett-Packard of the separation agreement or any ancillary agreement.

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The indemnifying party will make all indemnification payments net of insurance proceeds that the indemnified party receives. The agreement also contains provisions governing notice and indemnification procedures.

Liability Arising From This Prospectus. We and Hewlett-Packard have agreed to share any liability arising from any untrue statement of a material fact or any omission of a material fact in this prospectus. Hewlett-Packard will bear 82% of any such liability, and we will bear 18% of any such liability.

Agilent Technologies Contingent Liabilities in Excess of \$50 Million. To the extent we incur any contingent liability or group of related contingent liabilities with a value of more than \$50 million, after deducting related insurance proceeds and amounts recovered from third parties, Hewlett-Packard has agreed to share the liability relating to this excess portion. Hewlett-Packard will bear 82% of any such liability, and we will bear 18% of any such liability. This provision only applies to Agilent Technologies contingent liabilities arising from written demands made or suits or similar proceedings filed within four years following the separation date that seek or demand monetary damages, services or non-monetary relief. An Agilent Technologies contingent liability is a liability that primarily relates to our business that arises out of events, acts or omission occurring prior to the separation date, where the existence or scope of the obligation of Hewlett-Packard or Agilent Technologies as of the separation date with respect to such liability was not acknowledged, fixed or determined in any material respect. We may not assign our rights under this provision, and this provision terminates upon a change of control of Agilent Technologies (other than as a result of the distribution).

Insurance Matters. The agreement also contains provisions governing our insurance coverage from the separation date until the distribution date. In general, we agree to reimburse Hewlett-Packard for premium expenses related to insurance coverage during this period. Prior to the distribution, Hewlett-Packard will maintain insurance policies on our behalf that are generally comparable to those maintained at Hewlett-Packard.

Environmental Matters. Under the general assignment and assumption agreement, we have generally assumed environmental liabilities associated with the historic operations of the businesses transferred to us. This would include, for example, liabilities associated with non-compliance with environmental laws prior to separation. However, under the indemnification and insurance matters agreement and general assignment and assumption agreement, there are exceptions to our assumption of liabilities for environmental contamination associated with the historic operations of those businesses. They include the following:

- . Hewlett-Packard will generally retain and indemnify us for all liabilities for environmental contamination, whether or not arising out of the businesses transferred to us, on any property (including third party disposal sites) other than the properties that are to be transferred to us upon separation.
- . Hewlett-Packard will also retain and indemnify us for liabilities associated with any contamination existing prior to the separation date

on those properties to be transferred to us which are currently undergoing investigation and remediation by Hewlett-Packard and for which Hewlett-Packard has accrued a reserve.

We will indemnify Hewlett-Packard for liabilities associated with environmental contamination at those sites that are to be transferred to us (other than specifically listed properties which are undergoing investigation and remediation by Hewlett-Packard) regardless of whether the contamination was caused by historic operations of the business transferred to us or a business retained by Hewlett-Packard. We will have limited access to Hewlett-Packard's historic insurance policies for coverage of liabilities associated with pre-separation contamination assumed by us. Each party will be responsible for all liabilities associated with any environmental contamination caused by that party post-separation.

Certain Losses and liabilities Not Covered by Hewlett-Packard's Insurance Policies. Hewlett-Packard has agreed to reimburse us for any losses or liabilities aggregating in excess of \$20 million, exclusive of amounts

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covered by insurance policies, that we incur between the separation date and the distribution date of the following nature:

- . specified categories of losses resulting from an earthquake;
- . property losses of a type that is covered by Hewlett-Packard's insurance policies or that is covered by standard form insurance policies; or
- . events, acts or omissions occur that give rise to one or more third party claims that result in a liability to Agilent Technologies of a type that is covered by Hewlett-Packard's insurance policies or that is covered by standard form insurance policies, but only to the extent that suits or similar proceedings are filed or written demands are made in connection with such claims within four years following the distribution date that seek or demand monetary damages, services or non-monetary relief.
- . releases occur that give rise to one or more environmental actions that result in a liability to Agilent Technologies, but only to the extent that suits or similar proceedings are filed, orders or decrees are issued, written notice that the environmental action will be commenced is received by us or Hewlett-Packard, or written demands are made in connection with the environmental action within four years following the distribution date that seek or demand monetary damages, services or non-monetary relief.

Assignment. The indemnification and insurance matters agreement is not assignable by either party without prior written consent.

Master Patent Ownership and License Agreement

The master patent ownership and license agreement, or the master patent agreement, allocates rights relating to patents, patent applications and invention disclosures. Under the master patent agreement, Hewlett-Packard will assign to us ownership of listed patents, patent applications and invention disclosures and joint ownership of a small number of listed patents and patent applications. Hewlett-Packard will not restrict our right to practice the assigned patents, and neither party will restrict the other's right to practice the joint patents except for a small number of joint patents that will be subject to field-of-use limitations.

In addition, each party will grant the other a non-exclusive, royalty-free patent cross-license to make, have made, use, lease, sell, offer for sale, and import any and all products and services of the businesses in which the licensed company and its subsidiaries, including specified affiliated companies are, as of or after the separation date, engaged, except in specific

excluded fields-of-use. The fields that are excluded from the license granted by us to Hewlett-Packard are some areas of biological and chemical deposition and some areas of health care. The fields that are excluded from the license granted by Hewlett-Packard to us are printing devices, printer supplies, components and accessories, document scanners and some computing devices. The cross-licenses between Hewlett-Packard and us will cover all of each company's patents issued on patent applications with first effective filing dates before the separation date or within five years after, and will include rights to sublicense to subsidiaries and specified affiliated companies as well as certain rights to sublicense a small number of patents to third parties. The licenses continue for the life of the patent.

The master patent agreement also will provide that Hewlett-Packard and we will assist each other in specified ways for a period of five years after the separation date in the event either party is subject to patent litigation.

Under the master patent agreement, Hewlett-Packard and we will have the right to require, subject to some restrictions, that the other party license its patents, subject to the same field-of-use restrictions, to (A) a subsidiary or one of the specified affiliated companies valued at \$10 million or more that has been spun-off or sold and (B) a third party that acquires a business from it valued at \$10 million or more. These licenses will be limited to the products, services and processes that are in the subsidiary, affiliated company or business at the time of transfer

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and minor extensions to those products, services and processes and will be limited to patents issued on patent applications with first effective filing dates on or before the effective date of the spin-off or acquisition. As a condition of these licenses, the transferee of the subsidiary, affiliated company or business must grant a patent license back to the non-transferring party.

In the event of an acquisition of either party, the acquired party may assign the master patent agreement. In that event, the license granted to the acquired party will be limited to the products, services and processes of the acquired party as of the date of the acquisition and minor extensions to those products, services and processes. The license granted to the acquired party will not include patents issued on patent applications with first effective filing dates after the date of acquisition.

Master Technology Ownership and License Agreement

The master technology ownership and license agreement, or the master technology agreement, allocates rights in technology other than the integrated circuit technology covered by the ICBT technology ownership and license agreement (discussed below) and other than patents, patent applications and invention disclosures. In the master technology agreement, Hewlett-Packard will assign to us technology related to our products and developments. Hewlett-Packard will not restrict our right to use the assigned technology. In addition, each party will license its technology to the other party for unrestricted use (except for commercially released software, which is subject to narrower rights), to the extent that its technology has been disclosed to or is in the possession of the other party as of the separation date, with the right to sublicense to subsidiaries and specified affiliated companies. The licenses are perpetual.

Under the master technology agreement, subject to some restrictions, each party may also sublicense the technology that it licenses from the other party to (A) a subsidiary or one of the specified affiliated companies valued at \$10 million or more that has been spun-off or sold and (B) a third party that acquires a business from it valued at \$10 million or more.

The master technology agreement will not obligate either party to provide to the other party improvements that it makes, whether to its own technology or to the other party's technology licensed to it under the agreement.

In the event of an acquisition of either party, the acquired party may assign the master technology agreement.

ICBD Technology Ownership and License Agreement

The ICBD technology ownership and license agreement, or the ICBD technology agreement, assigns to us listed technology relating to the design, development and manufacture of integrated circuits that is used by the Integrated Circuits Business Division (ICBD), or integrated circuit technology, (other than patents, patent applications and invention disclosures). The ICBD technology agreement also provides that Hewlett-Packard will retain ownership of other integrated circuit technology. In the ICBD technology agreement, Hewlett-Packard will assign to us joint ownership of other listed integrated circuit technology and both parties will have unrestricted rights to use the jointly owned integrated circuit technology. The integrated circuit technology that is covered by the ICBD technology agreement encompasses the majority of the integrated circuit technology within Hewlett-Packard. The covered integrated circuit technology generally includes the integrated circuit technology that was developed jointly with or for the benefit of the imaging and computing businesses of Hewlett-Packard.

In addition, under the ICBD technology agreement, each party will license the listed integrated circuit technology to the other party, with the right to sublicense to subsidiaries and specified affiliated companies. The licenses are perpetual. We will be restricted from using both the integrated circuit technology that Hewlett-Packard will assign to us and that Hewlett-Packard will license to us within the fields of printing devices, printer supplies, components and accessories, document scanners and some computing devices, other than to supply Hewlett-Packard. This restriction expires ten years after the separation date for certain printing, scanning and computing technology considered fundamental or of long term value and three years after the separation date for the rest of the technology.

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Under the ICBD technology agreement, subject to some restrictions, each party may sublicense the integrated circuit technology that it licenses from the other party to (A) a subsidiary or one of the specified affiliated companies valued at \$10 million or more that has been spun-off or sold and (B) a third party that acquires a business from it valued at \$10 million or more.

The ICBD technology agreement will not obligate either party to provide to the other party improvements that it makes, whether to its own technology or to the other party's technology licensed to it under the agreement. Each party, upon request, will notify the other party of improvements that it may have made in a particular defined technical area and will negotiate in good faith disclosing and licensing those improvements to the other party.

In the event of an acquisition of either party, the acquired party may assign the ICBD technology agreement.

Master Trademark Ownership and License Agreement

The master trademark ownership and license agreement, or the master trademark agreement, will allocate rights relating to trademarks, service marks and trade names. Under the master trademark agreement, Hewlett-Packard will assign to us its rights in listed trademarks, service marks and trade names that it uses in connection with the businesses transferred to us. In addition, Hewlett-Packard will grant us a perpetual license to mark our products shipping as of the distribution date with, and advertise and promote these products using, listed Hewlett-Packard trademarks and service marks. After five years, our use will be subject to royalty payments. We may sublicense these rights to subsidiaries and specified affiliated companies, and we and our subsidiaries and the specified affiliated companies may allow authorized dealers to use the trademarks and service marks in the

advertisement and promotion of these products.

During the first three years from the separation date, Hewlett-Packard will agree not to license the trademarks and service marks it licenses to us to third parties for use in connection with products or services that compete with our products shipping as of the distribution date (other than in connection with co-branding activities and other than any licenses that may have previously been granted).

Hewlett-Packard may terminate the license under the master trademark agreement only with regard to products that fail to meet required quality standards, subject to a notice and cure period.

In the event of an acquisition of either party, the acquired party may assign the master trademark agreement.

Master Confidential Disclosure Agreement

The master confidential disclosure agreement provides that both parties agree not to disclose confidential information of the other party except in specific circumstances. Hewlett-Packard and we also agree not to use this information in violation of any use restrictions in one of the other written agreements between us.

Master IT Service Level Agreement

The master IT service level agreement governs the provision of information technology services by Hewlett-Packard and us to each other, on an interim basis, until November 1, 2001, unless extended for specific services or otherwise indicated in the agreement. The services include data processing and telecommunications services, such as voice telecommunications and data transmission, and information technology support services, for functions including accounting, financial management, tax, payroll, stockholder and public relations, legal, human resources administration, procurement, real estate management and other administrative functions. Specified charges for such services are generally intended to allow the providing company to recover the direct and indirect costs of providing the services, plus 5% until November 1, 2001 and such costs plus 10% thereafter. The master IT service level agreement also will cover the provision of certain additional information technology services identified from time to time after the separation date that were inadvertently or unintentionally omitted from the specified services, or that are essential to effectuate an orderly transition under the separation agreement, so long as the provision of such services would not significantly disrupt the providing company's operations or significantly increase the scope of the agreement.

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In addition, the master IT service level agreement will provide for the replication of some computer systems, including hardware, software, data storage or maintenance and support components. Generally, the party needing the replicated system will bear the costs and expenses of replication. Generally, the party purchasing new hardware or licensing new software will bear the costs and expenses of purchasing the new hardware or obtaining the new software licenses.

Employee Matters Agreement

We will enter into an employee matters agreement with Hewlett-Packard to allocate assets, liabilities, and responsibilities relating to current and former United States employees of Agilent Technologies and their participation in the benefit plans, including stock plans, that Hewlett-Packard currently sponsors and maintains.

In general, separate agreements will address similar issues relating to

foreign employment and benefit matters.

All eligible United States Agilent Technologies employees will continue to participate in the Hewlett-Packard benefit plans on comparable terms and conditions to those for Hewlett-Packard employees until we establish comparable benefit plans for our current and former employees. We intend to establish these plans no later than the time of the distribution.

Around November 1, 1999, all United States Agilent Technologies employees will be transferred to Agilent Technologies' United States payroll. At that time, we will adopt specified plans associated with our United States payroll system, such as the Agilent Technologies stock plans, the Agilent Technologies executive deferred compensation plan and the Agilent Technologies leave of absence programs. After that time, we will adopt benefit plans that reflect our more permanent separation from Hewlett-Packard, such as the Agilent Technologies health and welfare plans, the Agilent Technologies pension plans, the Agilent Technologies Excess Benefit Plan and the Agilent Technologies fringe benefit plans. Each Agilent Technologies benefit plan will be comparable to the corresponding Hewlett-Packard benefit plan.

Once we establish our own corresponding benefit plan, we may modify or terminate that plan in accordance with the terms of that plan and our policies. No Agilent Technologies benefit plan will provide benefits that overlap benefits under the corresponding Hewlett-Packard benefit plan at the time of the distribution. Each Agilent Technologies benefit plan will provide that all service, compensation and other benefit determinations that, as of the distribution, were recognized under the corresponding Hewlett-Packard benefit plan will be taken into account under that Agilent Technologies benefit plan.

Each Agilent Technologies benefit plan will assume any liabilities under the corresponding Hewlett-Packard benefit plan for Agilent Technologies employees. Assets relating to the employee liabilities will also be transferred to Agilent Technologies or the related Agilent Technologies plans and trusts from trusts and other funding vehicles associated with Hewlett-Packard's benefit plans.

Options and Stock Appreciation Rights. We will establish a replacement stock plan for eligible Agilent Technologies employees on the distribution. Under the existing terms of the Hewlett-Packard stock option plans, substantially all Hewlett-Packard options held by Agilent Technologies employees at the time of the distribution will be fully vested and, if not exercised, will expire three months from the distribution. Alternatively, Agilent Technologies employees may elect to amend their Hewlett-Packard options to waive the vesting acceleration. We will assume the amended options, which will convert at the distribution into options to purchase our common stock. The number of shares and the exercise price of Hewlett-Packard options that convert into Agilent Technologies options will be adjusted using a conversion formula. The conversion formula will be based on the opening per-share price of our common stock on the first trading day after the distribution relative to the closing per-share price of Hewlett-Packard common stock on the last trading day before the distribution. The resulting Agilent Technologies options will maintain the original vesting provisions and option period. At the distribution, Agilent Technologies will assume each Hewlett-Packard stock appreciation right held by Agilent Technologies employees.

Restricted Stock. On or before the distribution, Hewlett-Packard restricted stock granted under incentive stock plans and held by Agilent Technologies employees is expected to be forfeited. Each Agilent Technologies

employee who forfeits Hewlett-Packard restricted stock may elect to receive replacement Agilent Technologies options or Agilent Technologies restricted shares.

Stock Purchase Plan. We anticipate that Agilent Technologies employees will

continue to participate in the Hewlett-Packard stock purchase plan through October 31, 1999 or at such later date as we and Hewlett-Packard mutually agree. After that time, we will sponsor a stock purchase plan for the benefit of Agilent Technologies employees that is comparable to the Hewlett-Packard stock purchase plan.

Tax Sharing Agreement

Hewlett-Packard and we will enter into a tax sharing agreement providing for each of the party's obligations concerning various tax liabilities. The tax sharing agreement provides that Hewlett-Packard generally will pay, and indemnify us if necessary, with respect to all federal, state, local and foreign taxes relating to our business for any taxable period ending prior to this offering. In addition, the tax sharing agreement provides that Hewlett-Packard and we will make payments between us so that, with respect to tax returns for any taxable period in which we or any of our subsidiaries are included in Hewlett-Packard's consolidated group for U.S. federal income tax purposes, or in any consolidated, combined or unitary group which includes Hewlett-Packard or any of its subsidiaries for state, local or foreign income tax purposes the amount of taxes to be paid by us will be determined, subject to specified adjustments, as if we and each of our subsidiaries filed our own consolidated, combined or unitary tax return. Each member of a consolidated group for U.S. federal income tax purposes is jointly and severally liable for the federal income tax liability of each other member of the consolidated group. Accordingly, although the tax sharing agreement allocates tax liabilities between Hewlett-Packard and us, for any period in which we were included in Hewlett-Packard's consolidated group we could be liable in the event that any federal tax liability was incurred, but not discharged, by any other member of the group.

The tax sharing agreement allocates responsibility for various taxes arising from restructurings related to the spinoff between Hewlett-Packard and Agilent Technologies. In addition, Agilent Technologies will bear 18% of unanticipated taxes related to the spinoff where neither party is at fault.

In addition, the tax sharing agreement provides that we shall indemnify Hewlett-Packard for any taxes arising out of the failure of the spin-off or some of the transactions related to it to qualify as tax free as a result of actions taken, or the failure to take required actions, by us or any of our subsidiaries. Specifically, we are required under the tax sharing agreement to comply with the representations made to the Internal Revenue Service in connection with the private letter ruling that has been issued to Hewlett-Packard by the Internal Revenue Service regarding the tax-free nature of the spin-off of our stock by Hewlett-Packard to Hewlett-Packard's stockholders.

The tax sharing agreement further provides for cooperation with respect to tax matters, the exchange of information and the retention of records which may affect the income tax liability of either party. Disputes arising between Hewlett-Packard and us relating to matters covered by the tax sharing agreement are subject to resolution through specific dispute resolution provisions.

Real Estate Matters Agreement

The real estate matters agreement addresses real estate matters relating to the Hewlett-Packard leased and owned properties that Hewlett-Packard will transfer to or share with us. The agreement describes the manner in which Hewlett-Packard will transfer to or share with us various leased and owned properties, including the following types of transactions:

- . conveyances to us of specified properties that Hewlett-Packard owns;
- . leases back to Hewlett-Packard of specified owned properties that Hewlett-Packard will convey to us;
- . leases to us of portions of specified properties that Hewlett-Packard owns;

- . assignments to us of Hewlett-Packard's leases for specified leased properties;
- . subleases back to Hewlett-Packard of specified leased properties to be assigned to us; and
- . subleases to us of portions of specified leased properties.

The real estate matters agreement includes a description of each material property to be transferred to or shared with us for each type of transaction. The standard forms of the proposed transfer documents (e.g., lease and sublease) are contained in schedules.

The real estate matters agreement also requires both parties to use reasonable efforts to obtain any landlord consents required for the proposed transfers of leased sites, including Hewlett-Packard paying commercially reasonable consent fees and negotiating other commercially reasonable amendments to the leases, if required by the landlords, and us agreeing to provide the security required under the applicable leases.

The real estate matters agreement further provides that we will be required to accept the transfer of all sites allocated to us, even if a site has been damaged by a casualty before the separation date. Transfers with respect to leased sites where the underlying lease is terminated due to casualty or action by the landlord prior to the separation date will not be made, and neither party will have any liability related thereto.

The real estate matters agreement also gives the parties the right to change the allocation and terms of specified sites by mutual agreement based on changes in the requirements of the parties.

The real estate matters agreement provides that all reasonable costs required to effect the transfers (including landlord consent fees, landlord attorneys' fees, title insurance fees and transfer taxes) will be paid by Hewlett-Packard.

Environmental Matters Agreement

Hewlett-Packard has agreed to retain and indemnify us for liabilities associated with properties transferred to us which are undergoing environmental investigation and remediation and for which Hewlett-Packard has accrued a reserve. The purpose of the environmental matters agreement is to address, in a general way, Hewlett-Packard's rights and obligations with respect to remediation of contamination at those properties. The agreement also sets forth our rights and obligations with respect to that remediation.

Among other things, we are required to cooperate with Hewlett-Packard in providing access to and use of the property for the performance of the remedial activities by Hewlett-Packard and make reasonable efforts to avoid interference with the remedial activities. Hewlett-Packard agrees to minimize, to the extent feasible, the impact of remedial activities on the use and operation on or at the relevant properties.

Hewlett-Packard and Agilent Technologies will designate liaisons for each property who will work together and attend regular meetings with respect to the remedial activities.

PRINCIPAL STOCKHOLDER

Prior to this offering, all of the outstanding shares of our common stock will be owned by Hewlett-Packard. After this offering, Hewlett-Packard will

own about %, or about % if the U.S. underwriters exercise their over-allotment option in full, of our outstanding common stock. Except for Hewlett-Packard, we are not aware of any person or group that will beneficially own more than 5% of the outstanding shares of our common stock following this offering.

DESCRIPTION OF CAPITAL STOCK

General

Upon the completion of this offering, we will be authorized to issue 2,000,000,000 shares of common stock, \$0.01 par value, and 125,000,000 shares of undesignated preferred stock, \$0.01 par value. The following description of our capital stock is subject to and qualified in its entirety by our certificate of incorporation and bylaws, which are included as exhibits to the registration statement of which this prospectus forms a part, and by the provisions of applicable Delaware law.

Common Stock

Prior to this offering, there were shares of common stock outstanding, all of which were held of record by Hewlett-Packard.

The holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by the board of directors out of funds legally available for that purpose. See "Dividend Policy." In the event of our liquidation, dissolution or winding up, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock, if any, then outstanding. The holders of common stock have no preemptive or conversion rights or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

Preferred Stock

The board of directors has the authority, without action by the stockholders, to designate and issue preferred stock in one or more series and to designate the rights, preferences and privileges of each series, which may be greater than the rights of the common stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock upon the rights of holders of the common stock until the board of directors determines the specific rights of the holders of such preferred stock. However, the effects might include, among other things:

- . restricting dividends on the common stock;
- . diluting the voting power of the common stock;
- . impairing the liquidation rights of the common stock; or
- . delaying or preventing a change in control of us without further action by the stockholders.

At the closing, no shares of preferred stock will be outstanding, and we have no present plans to issue any shares of preferred stock.

Anti-Takeover Effects of Our Certificate and Bylaws and Delaware Law

Some provisions of Delaware law and our certificate of incorporation and bylaws could make the following more difficult:

- . acquisition of us by means of a tender offer;

- . acquisition of us by means of a proxy contest or otherwise; or
- . removal of our incumbent officers and directors.

These provisions, summarized below, are expected to discourage coercive takeover practices and inadequate takeover bids. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our board. We believe that the benefits of increased protection give us the potential ability to negotiate with the proponent of an unfriendly or unsolicited proposal to acquire or restructure us and outweigh the disadvantages of discouraging such proposals because negotiation of such proposals could result in an improvement of their terms.

Election and Removal of Directors. Our board of directors is divided into three classes. The directors in each class will serve for a three-year term, one class being elected each year by our stockholders. See "Management--Directors and Executive Officers." This system of electing and removing directors may discourage a third party from making a tender offer or otherwise attempting to obtain control of us because it generally makes it more difficult for stockholders to replace a majority of the directors.

Stockholder Meetings. Under our bylaws, only the board of directors, the chairman of the board, and until Hewlett-Packard owns less than 50% of our common stock, Hewlett-Packard, may call special meetings of stockholders.

Requirements for Advance Notification of Stockholder Nominations and Proposals. Our bylaws establish advance notice procedures with respect to stockholder proposals and the nomination of candidates for election as directors, other than nominations made by or at the direction of the board of directors or a committee of the board of directors.

Delaware Anti-Takeover Law. We are subject to Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, Section 203 prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years following the date the person became an interested stockholder, unless the "business combination" or the transaction in which the person became an interested stockholder is approved in a prescribed manner. Generally, a "business combination" includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. Generally, an "interested stockholder" is a person who, together with affiliates and associates, owns or within three years prior to the determination of interested stockholder status, did own, 15% or more of a corporation's voting stock. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors, including discouraging attempts that might result in a premium over the market price for the shares of common stock held by stockholders.

Elimination of Stockholder Action By Written Consent. Our certificate of incorporation eliminates the right of stockholders other than Hewlett-Packard to act by written consent without a meeting. Hewlett-Packard will lose this right once it owns less than 50% of our common stock.

Elimination of Cumulative Voting. Our certificate of incorporation and bylaws do not provide for cumulative voting in the election of directors.

Undesignated Preferred Stock. The authorization of undesignated preferred stock makes it possible for the board of directors to issue preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of us.

Amendment of Charter Provisions. The amendment of any of the above provisions would require approval by holders of at least 80% of the outstanding common stock.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Harris Trust and Savings Bank.

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SHARES ELIGIBLE FOR FUTURE SALE

All of the _____ shares of our common stock sold in this offering (_____ shares if the U.S. underwriters exercise their over-allotment option in full), will be freely tradeable without restriction under the Securities Act, except for any shares which be may acquired by an affiliate of Agilent Technologies, as that term is defined in Rule 144 under the Securities Act. Persons who may be deemed to be affiliates generally include individuals or entities that control, are controlled by, or are under common control with, Agilent Technologies and may include directors and officers of Agilent Technologies as well as significant stockholders of Agilent Technologies, if any.

Hewlett-Packard has announced that, subject to specified conditions, it intends to distribute to its stockholders by the middle of calendar year 2000 all of the _____ shares of our common stock owned by Hewlett-Packard by means of the distribution. Shares of our common stock distributed to Hewlett-Packard shareholders in the distribution generally will be freely transferable, except for shares of common stock received by persons who may be deemed to be affiliates. Persons who are affiliates will be permitted to sell the shares of common stock that are issued in this offering or that they receive in the distribution only through registration under the Securities Act, or under an exemption from registration, such as the one provided by Rule 144.

The shares of our common stock held by Hewlett-Packard before distribution are deemed "restricted securities" as defined in Rule 144, and may not be sold other than through registration under the Securities Act or under an exemption from registration, such as the one provided by Rule 144. Hewlett-Packard, our directors and officers and we have agreed not to offer or sell any shares of our common stock, subject to exceptions (including the distribution), for a period of 180 days after the date of this prospectus, without the prior written consent of the underwriters. See "Underwriters."

We will grant shares of our common stock and non-stock awards pursuant to the 1999 Stock Plan subject to restrictions. See "Management--Incentive Plans--1999 Stock Plan." We currently expect to file a registration statement under the Securities Act to register shares reserved for issuance under the 1999 Stock Plan. Shares issued pursuant to awards after the effective date of such registration statement (other than shares issued to affiliates) generally will be freely tradable without further registration under the Securities Act. Any vested and exercisable options of Hewlett-Packard will also be freely tradeable without registration under the Securities Act after the effective date of such registration statement. See "Management--Treatment of Hewlett-Packard Options."

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MATERIAL UNITED STATES FEDERAL TAX CONSEQUENCES TO NON-UNITED STATES HOLDERS

General

The following is a general discussion of the material United States federal income and estate tax consequences of the ownership and disposition of common stock that may be relevant to you if you are a non-United States Holder. In general, a "non-United States Holder" is any person or entity that is, for United States federal income tax purposes, a foreign corporation, a nonresident alien individual, a foreign partnership or a foreign estate or trust. This discussion is based on current law, which is subject to change,

possibly with retroactive effect, or different interpretations. This discussion is limited to non-United States Holders who hold shares of common stock as capital assets. Moreover, this discussion is for general information only and does not address all of the tax consequences that may be relevant to you in light of your personal circumstances, nor does it discuss special tax provisions which may apply to you if you relinquished United States citizenship or residence.

If you are an individual, you may, in many cases, be deemed to be a resident alien, as opposed to a nonresident alien, by virtue of being present in the United States for at least 31 days in the calendar year and for an aggregate of at least 183 days during a three-year period ending in the current calendar year (counting for such purposes all of the days present in the current year, one-third of the days present in the immediately preceding year, and one-sixth of the days present in the second preceding year). Resident aliens are subject to United States federal income tax as if they were United States citizens.

EACH PROSPECTIVE PURCHASER OF COMMON STOCK IS ADVISED TO CONSULT A TAX ADVISOR WITH RESPECT TO CURRENT AND POSSIBLE FUTURE TAX CONSEQUENCES OF PURCHASING, OWNING AND DISPOSING OF OUR COMMON STOCK AS WELL AS ANY TAX CONSEQUENCES THAT MAY ARISE UNDER THE LAWS OF ANY UNITED STATES STATE, MUNICIPALITY OR OTHER TAXING JURISDICTION.

Dividends

If dividends are paid, as a non-United States Holder, you will be subject to withholding of United States federal income tax at a 30% rate or a lower rate as may be specified by an applicable income tax treaty. To claim the benefit of a lower rate under an income tax treaty, you must properly file with the payor an IRS Form 1001, or successor form, claiming an exemption from or reduction in withholding under the applicable tax treaty.

If dividends are considered effectively connected with the conduct of a trade or business by you within the United States and, where a tax treaty applies, are attributable to a United States permanent establishment of yours, those dividends will not be subject to withholding tax, but instead will be subject to United States federal income tax on a net basis at applicable graduated individual or corporate rates, provided an IRS Form 4224, or successor form, is filed with the payor. If you are a foreign corporation, any effectively connected dividends may, under certain circumstances, be subject to an additional "branch profits tax" at a rate of 30% or a lower rate as may be specified by an applicable income tax treaty.

Unless the payor has knowledge to the contrary, dividends paid prior to January 1, 2001 to an address outside the United States are presumed to be paid to a resident of such country for purposes of the withholding discussed above and for purposes of determining the applicability of a tax treaty rate. However, recently finalized Treasury Regulations pertaining to United States federal withholding tax provide that you must comply with certification procedures, or, in the case of payments made outside the United States with respect to an offshore account, certain documentary evidence procedures, directly or under certain circumstances through an

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intermediary, to obtain the benefits of a reduced rate under an income tax treaty with respect to dividends paid after December 31, 2000. In addition, these regulations will require you, if you provide an IRS Form 4224 or successor form, as discussed above, to also provide your identification number.

If you are eligible for a reduced rate of United States withholding tax pursuant to an income tax treaty, you may obtain a refund of any excess amounts withheld by filing an appropriate claim for refund with the IRS.

Gain on Disposition of Common Stock

As a non-United States Holder, you generally will not be subject to United States federal income tax on any gain recognized on the sale or other disposition of common stock unless:

- (1) the gain is considered effectively connected with the conduct of a trade or business by you within the United States and, where a tax treaty applies, is attributable to a United States permanent establishment of yours (and, in which case, if you are a foreign corporation, you may be subject to an additional branch profits tax equal to 30% or a lower rate as may be specified by an applicable income tax treaty).
- (2) you are an individual who holds the common stock as a capital asset and are present in the United States for 183 or more days in the taxable year of the sale or other disposition and other conditions are met; or
- (3) we are or have been a "United States real property holding corporation", or a USRPHC, for United States federal income tax purposes. We believe that we are not currently, and are likely not to become, a USRPHC. If we were to become a USRPHC, then gain on the sale or other disposition of common stock by you generally would not be subject to United States federal income tax provided:
 - . the common stock was "regularly traded" on an established securities market; and
 - . you do not actually or constructively own more than 5% of the common stock during the shorter of the five-year period preceding the disposition or your holding period.

Federal Estate Tax

If you are an individual, common stock held at the time of your death will be included in your gross estate for United States federal estate tax purposes, and may be subject to United States federal estate tax, unless an applicable estate tax treaty provides otherwise.

Information Reporting and Backup Withholding Tax

We must report annually to the IRS and to each of you the amount of dividends paid to you and the tax withheld with respect to those dividends, regardless of whether withholding was required. Copies of the information returns reporting those dividends and withholding may also be made available to the tax authorities in the country in which you reside under the provisions of an applicable income tax treaty or other applicable agreements.

Backup withholding is generally imposed at the rate of 31% on certain payments to persons that fail to furnish the necessary identifying information to the payer. Backup withholding generally will not apply to dividends paid prior to January 1, 2001 to a Non-United States Holder at an address outside the United States, unless the payor has knowledge that the payee is a United States person. In the case of dividends paid after December 31, 2000, the recently finalized Treasury Regulations provide that you generally will be subject to withholding tax at a 31% rate unless you certify your non-United States status.

The payment of proceeds of a sale of common stock effected by or through a United States office of a broker is subject to both backup withholding and information reporting unless you provide the payor with your name and address and you certify your non-United States status or you otherwise establish an exemption. In general, backup withholding and information reporting will not apply to the payment of the proceeds of a sale of common stock by or through a foreign office of a broker. If, however, such broker is, for United States federal income tax purposes, a United States person, a controlled foreign

corporation, or a foreign person that derives 50% or more of its gross income for certain periods from the conduct of a trade or business in the United States, or, in addition, for periods after December 31, 2000, a foreign partnership that at any time during its tax year either is engaged in the conduct of a trade or business in the United States or has as partners one or more United States persons that, in the aggregate, hold more than 50% of the income or capital interest in the partnership, such payments will be subject to information reporting, but not backup withholding, unless such broker has documentary evidence in its records that you are a non-United States Holder and certain other conditions are met or you otherwise establish an exemption.

Any amounts withheld under the backup withholding rules generally will be allowed as a refund or a credit against your United States federal income tax liability provided the required information is furnished in a timely manner to the IRS.

UNDERWRITERS

Under the terms and subject to the conditions contained in an underwriting agreement dated the date hereof the U.S. underwriters named below, for whom Morgan Stanley & Co. Incorporated and Goldman, Sachs & Co. are acting as U.S. representatives, and the international underwriters named below for whom Morgan Stanley & Co. International Limited and Goldman Sachs International are acting as international representatives, have severally agreed to purchase, and Agilent Technologies has agreed to sell to them, severally, the number of shares of our common stock indicated below:

Name ----	Number of Shares -----
U.S. Underwriters:	
Morgan Stanley & Co. Incorporated.....	
Goldman, Sachs & Co.....	

Subtotal.....	

International Underwriters:	
Morgan Stanley & Co. International Limited.....	
Goldman Sachs International.....	

Subtotal.....	

Total.....	===

The U.S. underwriters and the international underwriters, and the U.S. representatives and the international representatives, are collectively referred to as the "underwriters" and the "representatives," respectively. The underwriters are offering the shares of common stock subject to their acceptance of the shares from Agilent Technologies and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of our common stock offered hereby are subject to the approval of certain legal matters by their counsel and to certain other conditions. The underwriters are obligated to take and pay for all of the shares of our common stock offered hereby, if any such shares are taken, other than those covered by the U.S. underwriters' over-allotment option described below.

In the agreement between the U.S. and international underwriters, sales may be made between the U.S. underwriters and international underwriters of any number of shares as may be mutually agreed. The per share price of any shares

sold by the underwriters shall be the public offering price set forth on the cover page of this prospectus, in United States dollars, less an amount not greater than the per share amount of the concession to dealers described below.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the public offering price set forth on the cover page of this prospectus and part to certain dealers at a price that represents a concession not in excess of \$ a share under the public offering price. Any underwriter may allow, and such dealers may reallow, a concession not in excess of \$ a share to other underwriters or to certain dealers. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives.

Agilent Technologies has granted to the U.S. underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to an aggregate of additional shares of common stock at the public offering price set forth on the cover page of this prospectus, less underwriting discounts and commissions. The

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U.S. underwriters may exercise this option solely for the purpose of covering over-allotments, if any, made in connection with this offering of the shares of common stock offered by this prospectus. To the extent the option is exercised, each U.S. underwriter will become obligated, subject to certain conditions, to purchase about the same percentage of the additional shares of common stock as the number listed next to the U.S. underwriter's name in the preceding table bears to the total number of shares of common stock set forth next to the names of all U.S. underwriters in the preceding table. If the U.S. underwriters' option is exercised in full, the total price to the public would be \$, the total underwriters' discounts and commissions would be \$ and total proceeds to Agilent Technologies would be \$.

The underwriters have informed Agilent Technologies that each principal underwriter in this offering may, subject to the approval of Morgan Stanley & Co. Incorporated, sell to discretionary accounts over which such principal underwriter exercises discretionary authority. The underwriters have further informed Agilent Technologies that they estimate that such sales will not exceed in the aggregate five percent of the total number of shares of common stock offered by them.

Application has been made for listing of the Agilent Technologies common stock on the [Nasdaq Stock Market/New York Stock Exchange] under the symbol " ."

Each of Agilent Technologies, Hewlett-Packard and the directors and executive officers of Agilent Technologies has agreed that, without the prior written consent of Morgan Stanley & Co. Incorporated on behalf of the underwriters, it will not, during the period ending 180 days after the date of this prospectus:

- . offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock; or
- . enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock;

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise.

The restrictions described in the previous paragraph do not apply to:

- . the sale of the shares to the underwriters;
- . the issuance by Agilent Technologies of shares of common stock upon the exercise of an option or a warrant or the conversion of a security outstanding on the date of this prospectus of which the underwriters have been advised in writing;
- . the granting of stock options and/or restricted stock units pursuant to existing Agilent Technologies employee benefit plans, provided that such options do not become exercisable and such units do not vest during such 180-day period;
- . transactions by any person other than Agilent Technologies relating to shares of common stock or other securities acquired in open market or other transactions after the completion of this offering;
- . transactions in shares of Hewlett-Packard common stock;
- . the distribution; or
- . the substitution of Hewlett-Packard Awards with replacement awards under Agilent Technologies' incentive plans and other transactions under Agilent Technologies' incentive plans.

In order to facilitate this offering, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may over-allot in connection with

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this offering, creating a short position in the common stock for their own account. In addition, to cover any over-allotments or to stabilize the price of the common stock, the underwriters may bid for, and purchase, shares of common stock in the open market. Finally, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the common stock in this offering, if the syndicate repurchases previously distributed common stock in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the common stock above independent market levels. The underwriters are not required to engage in these activities, and may end any of these activities at any time.

From time to time, certain of the underwriters have provided, and may continue to provide, investment banking services to each of Agilent Technologies and Hewlett-Packard.

Hewlett-Packard has generally agreed to pay the costs and expenses relating to this offering. The underwriters have agreed to reimburse Hewlett-Packard for certain of its expenses incurred in connection with this offering.

Agilent Technologies and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

Pricing of this Offering

Prior to this offering, there has been no public market for the common stock. The initial public offering price will be determined by negotiations between Agilent Technologies and the U.S. representatives. Among the factors to be considered in determining the initial public offering price will be the future prospects of Agilent Technologies and its industry in general, sales, earnings and certain other financial and operating information of Agilent Technologies in recent periods, and the price-earnings ratios, price-sales ratios, market prices of securities and certain financial and operating information of companies engaged in activities similar to those of Agilent Technologies. The estimated initial public offering price range set forth on

the cover page of this preliminary prospectus is subject to change as a result of market conditions and other factors.

LEGAL MATTERS

The validity of the common stock offered hereby and certain other legal matters will be passed upon for us by Wilson Sonsini Goodrich & Rosati, Professional Corporation, Palo Alto, California. Certain legal matters will be passed upon for the underwriters by Shearman & Sterling, Menlo Park, California.

EXPERTS

The consolidated financial statements as of October 31, 1997 and 1998 and for each of the three years in the period ended October 31, 1998 included in this prospectus have been so included in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission, Washington, D.C. 20549, a registration statement on Form S-1 under the Securities Act with respect to the common stock offered hereby. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. Certain items are omitted in accordance with the rules and regulations of the SEC. For further information with respect to Agilent Technologies and its common stock, reference is made to the registration statement and the exhibits and any schedules filed therewith. Statements contained in this prospectus as to the contents of any contract or other document referred to are not necessarily complete and in each instance, if such contract or document is filed as an exhibit, reference is made to the copy of such contract or other documents filed as an exhibit to the registration statement, each statement being qualified in all respects by such reference. A copy of the registration statement, including the exhibits and schedules thereto, may be read and copied at the SEC's Public Reference Room at 450 Fifth Street, N.W., Washington, D.C. 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. In addition, the SEC maintains an Internet site at <http://www.sec.gov>, from which interested persons can electronically access the registration statement, including the exhibits and any schedules thereto.

As a result of this offering, we will become subject to the full informational requirements of the Securities Exchange Act of 1934, as amended. We will fulfill our obligations with respect to such requirements by filing periodic reports and other information with the SEC. We intend to furnish our stockholders with annual reports containing consolidated financial statements certified by an independent public accounting firm. We also maintain an Internet site at <http://www.agilent-tech.com>. Our website and the information contained therein or connected thereto shall not be deemed to be incorporated into this prospectus or the registration statement of which it forms a part.

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REPORT OF INDEPENDENT ACCOUNTANTS

To the Stockholder of Agilent Technologies, Inc.:

In our opinion, the accompanying consolidated balance sheet and the related consolidated statements of earnings, stockholder's net investment and cash flows present fairly, in all material respects, the financial position of Agilent Technologies, Inc. and its subsidiaries at October 31, 1997 and 1998, and the results of their operations and their cash flows for each of the three years in the period ended October 31, 1998 in conformity with generally accepted accounting principles. These financial statements are the responsibility of the company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

PricewaterhouseCoopers LLP

San Jose, California
August 13, 1999

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AGILENT TECHNOLOGIES, INC.

CONSOLIDATED BALANCE SHEET
(in millions)

	October 31,		April 30,
	1997	1998	1999
	-----	-----	-----
			(unaudited)
ASSETS			
Current assets:			
Cash and cash equivalents.....	\$ --	\$ --	\$ --
Accounts receivable.....	1,234	1,154	1,211
Inventory.....	1,432	1,485	1,466
Other current assets.....	265	436	455
	-----	-----	-----
Total current assets.....	2,931	3,075	3,132
Property, plant and equipment, net.....	1,623	1,481	1,435
Other assets.....	452	431	454
	-----	-----	-----
Total assets.....	\$5,006	\$4,987	\$5,021
	=====	=====	=====

LIABILITIES AND STOCKHOLDER'S NET INVESTMENT

Current liabilities:

Accounts payable.....	\$ 495	\$ 435	\$ 403
Employee compensation and benefits.....	604	574	556
Deferred revenue.....	157	205	231
Other accrued liabilities.....	267	385	300
	-----	-----	-----
Total current liabilities.....	1,523	1,599	1,490
Other liabilities.....	373	366	369
Commitments and contingencies			
Stockholder's net investment.....	3,110	3,022	3,162
	-----	-----	-----
Total liabilities and stockholder's net investment...	\$5,006	\$4,987	\$5,021
	=====	=====	=====

The accompanying notes are an integral part of these financial statements.

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AGILENT TECHNOLOGIES, INC.

CONSOLIDATED STATEMENT OF EARNINGS
(in millions, except per share amounts)

	Years Ended October 31,			Six Months Ended April 30,	
	1996	1997	1998	1998	1999
	-----	-----	-----	-----	-----
	(unaudited)				
Net revenue:					
Products.....	\$5,756	\$6,114	\$6,098	\$ 3,184	\$ 2,807
Products to Hewlett-Packard.....	684	640	696	348	378
Services.....	939	1,031	1,158	558	611
	-----	-----	-----	-----	-----
Total net revenue.....	7,379	7,785	7,952	4,090	3,796
	-----	-----	-----	-----	-----
Costs and expenses:					
Cost of products.....	3,327	3,455	3,807	1,829	1,623
Cost of services.....	574	671	705	353	370
Research and development.....	805	880	948	469	463
Selling, general and administrative.....	1,798	1,909	2,050	1,036	999
	-----	-----	-----	-----	-----
Total costs and expenses.....	6,504	6,915	7,510	3,687	3,455
	-----	-----	-----	-----	-----
Earnings from operations.....	875	870	442	403	341
Other income (expense), net.....	(21)	(47)	(46)	(13)	15
	-----	-----	-----	-----	-----
Earnings before taxes.....	854	823	396	390	356
Provision for taxes.....	312	280	139	136	125
	-----	-----	-----	-----	-----
Net earnings.....	\$ 542	\$ 543	\$ 257	\$ 254	\$ 231
	=====	=====	=====	=====	=====
Basic and diluted net earnings per share.....	\$	\$	\$	\$	\$
	=====	=====	=====	=====	=====
Average shares used in computing basic and diluted net earnings per share.....					
	=====	=====	=====	=====	=====

Unaudited pro forma diluted net earnings per share.....	\$	\$
	=====	=====
Average shares used in computing unaudited pro forma diluted net earnings per share.....		
	=====	=====

The accompanying notes are an integral part of these financial statements.

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AGILENT TECHNOLOGIES, INC.

CONSOLIDATED STATEMENT OF STOCKHOLDER'S NET INVESTMENT
(in millions)

	Stockholder's Net Investment -----
Balance, October 31, 1995.....	\$2,829
Net earnings.....	542
Net cash transfers to Hewlett-Packard Company.....	(373)

Balance, October 31, 1996.....	2,998
Net earnings.....	543
Transfer of net assets from Hewlett-Packard Company related to an immaterial acquisition.....	19
Net cash transfers to Hewlett-Packard Company.....	(450)

Balance, October 31, 1997.....	3,110
Net earnings.....	257
Transfer of net assets from Hewlett-Packard Company related to the Heartstream acquisition.....	134
Net cash transfers to Hewlett-Packard Company.....	(479)

Balance, October 31, 1998.....	3,022
Net earnings (unaudited).....	231
Net cash transfers to Hewlett-Packard Company (unaudited).....	(91)

Balance, April 30, 1999 (unaudited).....	\$3,162
	=====

The accompanying notes are an integral part of these financial statements.

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AGILENT TECHNOLOGIES, INC.

CONSOLIDATED STATEMENT OF CASH FLOWS
(in millions)

Years Ended	Six Months Ended
October 31,	April 30,

	1996	1997	1998	1998	1999
				(unaudited)	
Cash flows from operating activities:					
Net earnings.....	\$ 542	\$543	\$ 257	\$ 254	\$ 231
Adjustments to reconcile net earnings to net cash provided by operating activities:					
Depreciation and amortization.....	401	409	477	212	235
Deferred taxes on earnings.....	(1)	(26)	(140)	(70)	(69)
Non-cash restructuring charges.....	--	--	85	17	--
Write-down of investments.....	--	--	52	13	--
Changes in assets and liabilities:					
Accounts receivable.....	67	(20)	79	44	(59)
Inventory.....	(181)	(57)	(67)	(164)	18
Accounts payable.....	(11)	72	(60)	(48)	(32)
Other current assets and liabilities.....	84	57	69	103	(24)
Other, net.....	(20)	(13)	(1)	(20)	(77)
Net cash provided by operating activities.....	881	965	751	341	223
Cash flows from investing activities:					
Investment in property, plant and equipment.....	(559)	(582)	(410)	(199)	(196)
Disposition of property, plant and equipment.....	64	81	78	21	31
Acquisitions, net of cash acquired....	(6)	(9)	(2)	14	(12)
Cash proceeds of divestitures.....	--	--	57	--	39
Other, net.....	(7)	(5)	5	8	6
Net cash used in investing activities..	(508)	(515)	(272)	(156)	(132)
Net cash transfers to Hewlett-Packard Company.....					
	(373)	(450)	(479)	(185)	(91)
Change in cash and cash equivalents....	--	--	--	--	--
Cash and cash equivalents at beginning of period.....	--	--	--	--	--
Cash and cash equivalent at end of period.....	\$ --	\$ --	\$ --	\$ --	\$ --

The accompanying notes are an integral part of these financial statements.

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Overview and Basis of Presentation

On March 2, 1999, Hewlett-Packard Company (HP) announced a plan to create a separate company, subsequently named Agilent Technologies, Inc. (Agilent Technologies), comprised of HP's test and measurement, semiconductor products, healthcare solutions and chemical analysis businesses, related portions of Hewlett-Packard Laboratories and associated infrastructure. After completion of Agilent Technologies' initial public offering, HP will own at least 80.1% of Agilent Technologies' outstanding common stock. HP also announced its intention to distribute all of the shares of Agilent Technologies' common

stock that HP owns to HP's stockholders by the middle of calendar year 2000 (the distribution date).

Agilent Technologies was incorporated in Delaware in May 1999 as a wholly owned subsidiary of HP. Agilent Technologies authorized 125,000,000 shares of \$.01 par value preferred stock, with no shares issued and outstanding, and 2,000,000,000 shares of \$.01 par value common stock, with 10,000,000 shares issued and outstanding.

HP and Agilent Technologies have entered into a Master Separation and Distribution Agreement (the separation agreement) under which HP will make an initial cash payment to Agilent Technologies on or about November 1, 1999 (the separation date), to fund working capital and other needs for the first few months of operation as a separate, stand-alone entity. Additionally, HP will transfer to Agilent Technologies, on or about the separation date, substantially all of the assets and liabilities associated with Agilent Technologies' businesses, except that HP will retain some of Agilent Technologies' assets and liabilities and will transfer to Agilent Technologies some of its assets and liabilities.

The consolidated financial statements include the assets, liabilities, operating results and cash flows of Agilent Technologies and have been prepared using HP's historical bases in the assets and liabilities and the historical results of operations of Agilent Technologies. Changes in stockholder's net investment represent HP's transfer of its net investment in Agilent Technologies, after giving effect to the net earnings of Agilent Technologies plus net cash transfers to HP and other transfers from HP. Agilent Technologies will begin accumulating retained earnings on November 1, 1999.

The consolidated financial statements include allocations of certain HP corporate expenses, including centralized research and development, legal, accounting, employee benefits, real estate, insurance services, information technology services, treasury and other HP corporate and infrastructure costs. The expense allocations have been determined on bases that HP and Agilent Technologies considered to be a reasonable reflection of the utilization of services provided or the benefit received by Agilent Technologies. However, the financial information included herein may not reflect the consolidated financial position, operating results, changes in stockholder's net investment and cash flows of Agilent Technologies in the future or what they would have been had Agilent Technologies been a separate, stand-alone entity during the periods presented.

2. Summary of Significant Accounting Policies

Principles of consolidation. The consolidated financial statements include the accounts of Agilent Technologies and its wholly- and majority-owned subsidiaries. All significant intercompany accounts and transactions have been eliminated.

Use of estimates. The preparation of financial statements in accordance with generally accepted accounting principles requires management to make estimates and assumptions that affect the amounts reported in Agilent Technologies' consolidated financial statements and accompanying notes. Actual results could differ from those estimates.

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

Interim financial information. The financial information as of April 30, 1999 and for the six months ended April 30, 1998 and 1999 is unaudited but includes all adjustments, consisting only of normal and recurring accruals, that management considers necessary for a fair presentation of its

consolidated financial position, operating results and cash flows. Results for the six months ended April 30, 1999 are not necessarily indicative of results to be expected for the full fiscal year 1999 or for any future period.

Revenue recognition. Revenue from product sales, net of trade discounts and allowances, is recognized at the time the product is shipped or upon installation and customer acceptance, if the acceptance criteria are substantive. Provisions are established for estimated costs that may be incurred for product warranties and post-sales support. Revenue from services is recognized over the contractual period or as services are rendered and accepted by the customer.

Advertising. Advertising costs are expensed as incurred and amounted to \$87 million in 1996, \$98 million in 1997 and \$94 million in 1998.

Taxes on earnings. Agilent Technologies' operating results historically have been included in HP's consolidated U.S. and state income tax returns and in tax returns of certain HP foreign subsidiaries. The provision for income taxes in Agilent Technologies' consolidated financial statements has been determined on a separate-return basis. Deferred tax assets and liabilities are recognized for the expected tax consequences of temporary differences between the tax bases of assets and liabilities and their reported amounts.

Net earnings per share. In July 1999, Agilent Technologies issued 10,000,000 shares of common stock, all of which is owned by HP. Immediately prior to the offering, Agilent Technologies will effect a stock split or other issuance of shares resulting in common shares outstanding, at which time historical net earnings per share will be presented. Subsequent to the offering of common shares, a total of common shares will be outstanding.

Basic and diluted net earnings per share have been computed by dividing the net earnings for each period presented by the common shares. Unaudited pro forma diluted net earnings per share has been computed by dividing the net earnings for each period by the sum of the common shares plus the estimated number of dilutive stock options. The number of dilutive stock options was computed using the treasury stock method assuming an initial public offering price of \$ per share.

It is currently unknown how many HP options held by Agilent Technologies employees will be assumed by Agilent Technologies. The estimated number of dilutive stock options assumes that % of the outstanding HP options held by Agilent Technologies employees are assumed by Agilent Technologies. The actual number of HP options assumed by Agilent Technologies will not be determined until individual employees make an election to amend their Hewlett-Packard options in January 2000. See Note 9, "Employee Stock Plans," for a description of the election to be made by employees. Unaudited pro forma diluted net earnings per share would be \$ if % of the outstanding HP options are assumed and \$ if % of the outstanding HP options are assumed.

Cash and cash equivalents. Historically, HP has managed cash and cash equivalents on a centralized basis. Cash receipts associated with Agilent Technologies' business have been transferred to HP on a daily basis and HP has funded Agilent Technologies' disbursements.

Inventory. Inventory is valued at standard cost that approximates actual cost computed on a first-in, first-out basis, not in excess of market value.

Property, plant and equipment. Property, plant and equipment are stated at cost. Additions, improvements and major renewals are capitalized. Maintenance, repairs and minor renewals are expensed as incurred.

Depreciation is provided using accelerated methods, principally over 15 to 40 years for buildings and improvements and 3 to 10 years for machinery and equipment. Depreciation of leasehold improvements is provided using the straight-line method over the life of the lease or the asset, whichever is shorter.

Impairment of long-lived assets. Agilent Technologies continually monitors events and changes in circumstances that could indicate carrying amounts of long-lived assets, including intangible assets, may not be recoverable. When such events or changes in circumstances are present, Agilent Technologies assesses the recoverability of long-lived assets by determining whether the carrying value of such assets will be recovered through undiscounted expected future cash flows. If the total of the future cash flows is less than the carrying amount of those assets, Agilent Technologies recognizes an impairment loss based on the excess of the carrying amount over the fair value of the assets.

Foreign currency translation. Agilent Technologies uses the U.S. dollar as its functional currency. Foreign currency assets and liabilities are remeasured into U.S. dollars at end-of-period exchange rates except for inventory, property, plant and equipment, other assets and deferred revenue, which are remeasured at historical exchange rates.

Revenue and expenses are remeasured at average exchange rates in effect during each period, except for those expenses related to balance sheet amounts that are remeasured at historical exchange rates. Gains or losses from foreign currency remeasurement are included in net earnings. Because Agilent Technologies' consolidated balance sheets include no cash or cash equivalents, foreign currency exchange rate fluctuations have had no material effect on Agilent Technologies' cash flows.

Comprehensive earnings. Agilent Technologies has no material components of other comprehensive earnings and, accordingly, comprehensive earnings are the same as net earnings for all periods presented.

Recent pronouncements. In June 1998, the Financial Accounting Standards Board (FASB) issued SFAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." This statement establishes accounting and reporting standards for derivative instruments and requires recognition of all derivatives as assets or liabilities in the statement of financial position and measurement of those instruments at fair value. The statement is effective for fiscal years beginning after June 15, 2000. Agilent Technologies will adopt the standard no later than the first quarter of fiscal year 2001 and is in the process of determining the impact that adoption will have on its consolidated financial statements.

3. Acquisitions

In March 1998, Agilent Technologies acquired all of the outstanding stock of Heartstream, Inc. for approximately 2.1 million shares of HP stock with a fair market value of approximately \$134 million. Heartstream develops and markets automatic external defibrillators. During 1996, 1997, 1998 and the first six months of 1999, Agilent Technologies acquired several additional companies that were not significant to its financial position, results of operations or cash flows. All of these acquisitions were accounted for under the purchase method. Under the purchase method, the results of operations of the acquired companies were included prospectively from the date of acquisition and the acquisition cost was allocated to the acquired tangible and identifiable intangible assets and liabilities based on fair market values at the date of acquisition. Residual amounts were recorded as goodwill. In-process research and development write-offs have not been significant. Goodwill is amortized on a straight-line basis over its estimated economic life, generally three to five years. The net book value of goodwill associated with acquisitions was \$56 million at October 31, 1997 and \$126 million at October 31, 1998.

Unaudited pro forma statement of earnings information has not been

presented because the effects of these acquisitions were not material on either an individual or aggregated basis.

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

4. Financial Instruments

Off-balance-sheet foreign exchange risk. HP enters into foreign exchange contracts, primarily forwards and purchased options, to hedge against exposures to changes in foreign currency exchange rates. At October 31, 1998, HP had entered into foreign exchange contracts in approximately 35 foreign currencies. These contracts are designated at inception to the related foreign currency exposures being hedged, which include committed and anticipated sales by subsidiaries and assets and liabilities that are denominated in currencies other than the U.S. dollar. To achieve hedge accounting, contracts must reduce the foreign currency exchange rate risk otherwise inherent in the amount and duration of the hedged exposures and comply with established HP risk management policies. Hedging contracts generally mature within six months.

When hedging sales-related exposure, HP sets foreign exchange contract expirations so as to occur in the same month the hedged shipments occur, allowing realized gains and losses on the contracts to be recognized in net revenue in the same periods in which the related revenue is recognized. When hedging balance sheet exposure, HP recognizes realized gains and losses on foreign exchange contracts in other income and expense in the same period as the realized gains and losses on remeasurement of the foreign currency denominated assets and liabilities occur.

Agilent Technologies' exposures to foreign currency exchange rate fluctuations have been netted with those of other HP businesses and hedged as described above on a combined basis. As of October 31, 1997 and 1998 and April 30, 1999, there were no specific contracts for Agilent Technologies' foreign exchange exposures. A portion of the gains and losses related to foreign exchange contracts has been allocated to Agilent Technologies based on the proportion of its foreign currency exposures to HP's total foreign currency exposures. The gains and losses are included in cash flows from operating activities in the consolidated statement of cash flows.

Concentrations of credit risk. Agilent Technologies sells the majority of its products through its direct sales force. No single customer accounted for 10% or more of accounts receivable at October 31, 1997 and 1998. Credit risk with respect to accounts receivable is generally diversified due to the large number of entities comprising Agilent Technologies' customer base and their dispersion across many different industries and geographies. Agilent Technologies performs ongoing credit evaluations of its customers' financial condition, and requires collateral, such as letters of credit and bank guarantees, in certain circumstances.

Fair value of financial instruments. The carrying values of Agilent Technologies' financial instruments, including accounts receivable, accounts payable and other accrued liabilities, approximate their fair values due to their short maturities. The estimated fair values may not be representative of actual values of the financial instruments that could have been realized as of the period end or that will be realized in the future.

5. Inventory

October 31,
----- April 30,

	1997	1998	1999
	-----	-----	-----
	(unaudited)		
	(in millions)		
Finished goods.....	\$ 477	\$ 617	\$ 585
Purchased parts and fabricated assemblies.....	955	868	881
	-----	-----	-----
	\$1,432	\$1,485	\$1,466
	=====	=====	=====

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AGILENT TECHNOLOGIES, INC

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

6. Property, Plant and Equipment

	October 31,	
	-----	-----
	1997	1998
	-----	-----
	(in millions)	
Land.....	\$ 96	\$ 93
Buildings and leasehold improvements.....	1,410	1,442
Machinery and equipment.....	1,950	1,997
	-----	-----
	3,456	3,532
Accumulated depreciation.....	(1,833)	(2,051)
	-----	-----
	\$ 1,623	\$ 1,481
	=====	=====

Agilent Technologies leases certain of its products to customers under operating leases. Equipment on operating leases was \$173 million at October 31, 1997 and \$193 million at October 31, 1998 and is included in machinery and equipment. Accumulated depreciation on equipment on operating leases was \$58 million at October 31, 1997 and \$68 million at October 31, 1998. At October 31, 1998, minimum future rentals on noncancelable operating leases with original terms of one year or longer are \$109 million in 1999, \$42 million in 2000, \$17 million in 2001, \$7 million in 2002 and \$1 million in 2003.

7. Taxes on Earnings

The provision for income taxes is comprised of:

	Years Ended		
	October 31,		
	-----	-----	-----
	1996	1997	1998
	-----	-----	-----
	(in millions)		
U.S. federal taxes:			
Current.....	\$181	\$236	\$ 213
Deferred.....	(17)	(42)	(133)
Non-U.S. taxes:			

Current.....	128	65	63
Deferred.....	11	17	(8)
State taxes.....	9	4	4
	----	----	----
	\$312	\$280	\$ 139
	====	====	====

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

The significant components of deferred tax assets, which required no valuation allowance, and deferred tax liabilities included on the balance sheet are:

	October 31,			
	1997		1998	
	Deferred Tax Assets	Deferred Tax Liabilities	Deferred Tax Assets	Deferred Tax Liabilities
	(in millions)			
Inventory.....	\$ 89	\$ 4	\$ 96	\$ 3
Property, plant and equipment....	22	18	13	15
Warranty.....	18	--	29	--
Retiree medical benefits.....	90	--	89	--
Other retirement benefits.....	--	42	--	40
Employee benefits, other than retirement.....	92	4	126	16
Intracompany sales.....	--	--	77	--
Unremitted earnings of foreign subsidiaries.....	--	68	--	89
Other.....	76	78	65	19
	----	----	----	----
	\$387	\$214	\$495	\$182
	====	====	====	====

The current portion of the deferred tax asset is \$134 million at October 31, 1997 and \$260 million at October 31, 1998 and is included in other current assets.

The differences between the U.S. federal statutory income tax rate and Agilent Technologies' effective tax rate are:

	Years Ended October 31,		
	1996	1997	1998
U.S. federal statutory income tax rate.....	35.0%	35.0%	35.0%
State income taxes, net of federal tax benefit.....	1.0	0.5	0.9
Lower rates in other jurisdictions, net.....	(1.4)	(2.2)	(1.4)
Other, net.....	1.9	0.7	0.5

 36.5% 34.0% 35.0%
 =====

The domestic and foreign components of earnings before taxes are:

	Years Ended		
	October 31,		
	-----	-----	-----
	1996	1997	1998
	----	----	----
	(in millions)		
U.S. operations.....	\$443	\$543	\$224
Non-U.S. operations.....	411	280	172
	----	----	----
	\$854	\$823	\$396
	=====	=====	=====

As a result of certain employment and capital investment actions undertaken by Agilent Technologies, income from manufacturing activities in certain countries is subject to reduced tax rates, and in some cases is wholly exempt from taxes, for years through 2007. The income tax benefits attributable to the tax status of these subsidiaries are estimated to be \$44 million in 1996, \$46 million in 1997 and \$40 million in 1998.

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

Agilent Technologies has not provided for U.S. federal income and foreign withholding taxes on \$791 million of non-U.S. subsidiaries' undistributed earnings as of October 31, 1998 because these earnings are intended to be reinvested indefinitely. Where excess cash has accumulated in Agilent Technologies' non-U.S. subsidiaries and it is advantageous for tax or foreign exchange reasons, subsidiary earnings are remitted.

See Note 11, "Transactions with Hewlett-Packard," for a description of the Tax Sharing Agreement between Agilent Technologies and HP.

8. Restructuring

During 1998, management committed to transfer the production of eight-inch semiconductor wafers to a third-party contractor. Management also undertook employee reductions through voluntary severance programs related to this transfer, as well as actions related to other businesses. Approximately 1,650 employees accepted the voluntary severance incentive packages by the October 31, 1998 deadline. Agilent Technologies recorded pre-tax charges of approximately \$163 million related to these restructuring actions. Of this amount, \$138 million was included in cost of products, \$7 million was included in research and development expense and \$18 million was included in selling, general and administrative expense in the 1998 consolidated statement of earnings. The restructuring costs included approximately \$78 million related to employee severance under the voluntary severance incentive plans and \$85 million related to non-cash asset impairments, primarily machinery and equipment, resulting from the restructuring actions taken by management. In the six months ended April 30, 1999, approximately \$65 million of employee severance costs were paid. The remaining severance costs of \$13 million are expected to be paid by October 31, 1999.

9. Employee Stock Plans

Employee Stock Purchase Plan. Eligible Agilent Technologies employees have generally been able to contribute up to 10 percent of their base compensation to the quarterly purchase of shares of HP's common stock under the HP Stock Purchase Plan. Under this plan, employee contributions to purchase shares are partially matched with shares contributed by HP. These matching shares generally vest over two years. Agilent Technologies and HP have not yet determined the treatment of unvested shares held by Agilent Technologies employees on the distribution date. Compensation expense, measured using the fair market value of HP shares on the date of purchase by HP, is recognized over the two-year vesting period. The allocated portion of compensation expense attributable to Agilent Technologies employees was \$24 million in 1996, \$32 million in 1997 and \$33 million in 1998.

Incentive compensation plans. Eligible Agilent Technologies employees participate in HP's four principal stock option plans, which were adopted in 1979, 1985, 1990 and 1995. Options are generally granted as non-qualified options although all plans permit the granting of options that qualify as "Incentive Stock Options" under the Internal Revenue Code. The exercise price of a stock option is generally equal to the fair market value of HP's common stock on the date the option is granted and its term is generally ten years. Under the 1990 and 1995 Incentive Stock Plans, HP's Compensation Committee, in certain cases, may choose to establish a discounted exercise price at no less than 75 percent of fair market value on the grant date. The allocated portion of stock compensation expense related to Agilent Technologies employees' discounted options was not material in 1996, 1997 and 1998. Options, other than discounted options, generally vest at a rate of 25 percent per year over a period of four years from the date of grant. Discounted options generally vest fully on the third or fifth anniversary of the date of grant.

Under the existing terms of the stock option plans, substantially all HP options held by Agilent Technologies employees on the distribution date will be fully vested, and if not exercised, will expire in three months.

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

Alternatively, Agilent Technologies employees may elect to amend their HP options to waive the vesting acceleration and have the resulting options assumed by Agilent Technologies. This election will be made in January 2000. The conversion of HP options into Agilent Technologies options will be done in such a manner that (1) the aggregate intrinsic value of the options immediately before and after the exchange are the same, (2) the ratio of the exercise price per option to the market value per option is not reduced, and (3) the vesting provisions and option period of the replacement Agilent Technologies options are the same as the original vesting terms and option period of the HP options. It is currently unknown how many HP options held by Agilent Technologies employees will be converted into Agilent Technologies options.

Under the HP 1985 Incentive Compensation Plan and the 1990 and 1995 Incentive Stock Plans, certain key employees may be granted cash or restricted stock awards. The majority of the shares of restricted stock outstanding at October 31, 1998 are subject to forfeiture if employment terminates prior to three years from the date of grant. During the restricted period, ownership of the shares cannot be transferred. Restricted stock has the same cash dividend and voting rights as other common stock and is considered to be currently issued and outstanding. The cost of the awards, determined to be the fair market value of the shares at the date of grant, is expensed ratably over the period the restrictions lapse. This expense was not material in 1996, 1997 or 1998. Restricted shares held by Agilent Technologies employees will be forfeited on or before the distribution date. Agilent Technologies employees who forfeit HP restricted shares may elect to receive either replacement

options to purchase Agilent Technologies stock granted on the effective date of the initial public offering at an exercise price equal to the initial public offering price or replacement Agilent Technologies restricted shares granted on or before the distribution date, in either case with the same vesting as before. Agilent Technologies employees will be required to make their election in October 1999.

Pro forma information. Agilent Technologies applies the intrinsic value method prescribed by Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," in accounting for stock options granted to Agilent Technologies employees. Accordingly, compensation expense is recognized only when options are granted with a discounted exercise price. Any compensation expense is recognized ratably over the associated service period, which is generally the option vesting term.

Pro forma net earnings and earning per share information, as required by SFAS No. 123, "Accounting for Stock-Based Compensation," has been determined as if HP had accounted for employee stock options granted to Agilent Technologies employees under SFAS No. 123's fair value method. The fair value of these options was estimated at grant date using a Black-Scholes option pricing model with the following weighted-average assumptions: risk-free interest rates of 6.29 percent in 1996, 6.21 percent in 1997 and 5.38 percent in 1998; dividend yield of 1.0 percent in all years; expected option life of 6 years for 1996 and 1997 and 7 years for 1998; and volatility of 30 percent in all years.

For purposes of pro forma disclosures, the estimated fair value of the options is amortized to expense over the four-year average vesting period of the options. The pro forma effect of recognizing compensation expense in accordance with SFAS No. 123 would have been to reduce Agilent Technologies' reported net earnings by \$5 million in 1996, \$11 million in 1997 and \$20 million in 1998. Had compensation expense been recorded by Agilent Technologies in accordance with SFAS No. 123, the effect would be to reduce unaudited pro forma diluted net earnings per share to \$ in 1998. These pro forma amounts include amortized fair values attributable to options granted after October 31, 1995 only, and therefore are not representative of future pro forma amounts.

10. Retirement Plans and Retiree Medical Benefits

At the date of distribution by HP of its investment in Agilent Technologies to the stockholders of HP, Agilent Technologies will assume responsibility for pension, deferred profit sharing and other post-employment

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

benefits for current and former employees whose last work assignment prior to the distribution was with Agilent Technologies. These current and former employees are collectively referred to as "Agilent Technologies Employees." Until the distribution date, the expense for these programs associated with Agilent Technologies Employees will be allocated to Agilent Technologies.

Pension and deferred profit-sharing plans. Substantially all Agilent Technologies employees are covered under various HP retirement plans. Worldwide retirement costs were \$100 million in 1996, \$115 million in 1997 and \$123 million in 1998.

U.S. employees who meet eligibility criteria are provided benefits under HP's Retirement Plan. Defined benefits are generally based on an employee's average pay and length of service. For eligible service through October 31, 1993, the benefit payable under the defined benefit plan is reduced by any amounts due to the eligible employee under HP's fixed and frozen deferred profit-sharing plan (DPSP), which has been closed to new participants.

The combined status of the Retirement Plan and DPSP allocated to Agilent Technologies follows.

	October 31,	

	1997	1998

	(in millions)	
Fair value of plan assets.....	\$1,215	\$1,356
Retirement benefit obligation.....	\$1,231	\$1,423

Eligible employees outside the U.S. generally receive retirement benefits under various retirement plans based upon factors such as years of service and compensation levels. Eligibility is generally determined in accordance with local statutory requirements.

Retiree medical plan. In addition to receiving pension benefits, Agilent Technologies Employees may participate in HP's medical plan which provides medical benefits to U.S. retired employees. Substantially all of Agilent Technologies' current U.S. employees could become eligible for these benefits, and the existing benefit obligation relates primarily to those employees. Once participating in the plan, retirees may choose from managed-care and indemnity options, with their contributions dependent on options chosen and length of service.

401(k) Plan. Agilent Technologies' U.S. eligible employees may participate in HP's 401(k) plan, the Tax Savings Capital Accumulation Plan (TAXCAP), which was established as a supplemental retirement program. Beginning February 1, 1998, enrollment in the TAXCAP became automatic for employees who met eligibility requirements unless they declined participation. Under the TAXCAP program, HP matches contributions by employees up to a maximum of 4 percent of an eligible employee's annual compensation. The maximum combined contribution to the Employee Stock Purchase Plan and TAXCAP is 25 percent of an employee's annual eligible compensation subject to certain regulatory and plan limitations. Agilent Technologies' expense related to TAXCAP was \$36 million in 1996, \$40 million in 1997 and \$47 million in 1998.

Upon the distribution, Agilent Technologies will establish separate defined benefit pension, deferred profit-sharing, retiree medical and 401(k) plans for its current and former employees. An allocable share of the defined benefit plan assets will be transferred from the HP pension trust in each country to a newly established Agilent Technologies pension trust. Subject to local law, it is anticipated that the share of assets allocated to Agilent Technologies will be in the same proportion as the projected benefit obligation of Agilent Technologies Employees to the total projected benefit obligation of HP. The deferred profit sharing plan assets attributable to Agilent Technologies will also be transferred to Agilent Technologies. Included in the consolidated

AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

balance sheet as of October 31, 1997 and 1998 are estimates of the assets and pension obligations to be transferred to Agilent Technologies. Actual amounts to be transferred will be measured at the distribution, using the same methodology, and will likely be different from these estimates.

The tables below set forth the estimated net periodic cost and funded status of the HP pension and retiree medical plans allocable to Agilent

Technologies based on the allocation methodology described above, as well as the actuarial assumptions on which those amounts are based.

Net periodic cost. For the years ended October 31, 1996, 1997 and 1998, net pension and retiree medical costs allocated to Agilent Technologies are comprised of:

	Pensions						U.S. Retiree Medical Plan		
	U.S. Plan			Non-U.S. Plans					
	1996	1997	1998	1996	1997	1998	1996	1997	1998
	(in millions)								
Service cost--benefits earned during the period.....	\$ 50	\$ 58	\$ 69	\$ 30	\$ 36	\$ 40	\$ 8	\$ 9	\$ 10
Interest cost on benefit obligation.....	10	15	20	28	30	33	12	13	13
Actual return on plan assets.....	(22)	(39)	(32)	(43)	(121)	(89)	(21)	(31)	(21)
Net amortization and deferral.....	9	21	6	12	83	38	5	11	(2)
Net plan costs.....	\$ 47	\$ 55	\$ 63	\$ 27	\$ 28	\$ 22	\$ 4	\$ 2	\$ --

Funded status. As of October 31, 1997 and 1998, the estimated funded status of the defined benefit and retiree medical plans allocated to Agilent Technologies is:

	U.S. Defined Benefit Plan		Non-U.S. Defined Benefit Plans		U.S. Retiree Medical Plan	
	1997	1998	1997	1998	1997	1998
	(in millions)					
Fair value of plan assets.....	\$ 269	\$ 343	\$ 578	\$ 705	\$ 168	\$ 189
Benefit obligation.....	(292)	(420)	(545)	(750)	(179)	(204)
Plan assets in excess (less than) benefit obligation.....	(23)	(77)	33	(45)	(11)	(15)
Unrecognized net experience (gain) loss.....	(9)	28	(29)	50	(101)	(96)
Unrecognized prior service cost (benefit) related to plan changes.....	16	14	14	13	(57)	(54)
Unrecognized net transition asset*.....	(9)	(5)	(1)	(1)	--	--
Prepaid (accrued) costs.....	\$ (25)	\$ (40)	\$ 17	\$ 17	\$ (169)	\$ (165)
Vested benefit obligation.....	\$ (120)	\$ (186)	\$ (407)	\$ (567)		

Accumulated benefit obligation.....	\$ (120)	\$ (186)	\$ (421)	\$ (587)
-------------------------------------	----------	----------	----------	----------

*Amortized over 15 years for the U.S. plan and over periods ranging from 12 to 20 years for the foreign plans.

Plan assets consist primarily of listed stocks and bonds. These costs are funded to the extent they are tax-deductible.

AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

Assumptions. The assumptions used to measure the benefit obligations and to compute the expected long-term return on assets for Agilent Technologies' defined benefit and retiree medical plans are:

	Years Ended		
	October 31,		
	1996	1997	1998
U.S. defined benefit plan:			
Discount rate.....	7.5%	7.0%	6.5%
Average increase in compensation levels.....	5.5%	5.5%	5.0%
Expected long-term return on assets.....	9.0%	9.0%	9.0%
Non-U.S. defined benefit plans:			
Discount rate.....	4.0-8.5%	3.5-8.0%	3.0-6.5%
Average increase in compensation levels.....	3.5-6.5%	3.5-5.5%	3.75-5.0%
Expected long-term return on assets.....	5.8-10.0%	6.0-9.0%	6.5-8.5%
U.S. retiree medical plan:			
Discount rate.....	7.5%	7.0%	6.5%
Expected long-term return on assets.....	9.0%	9.0%	9.0%
Current medical cost trend rate.....	10.0%	9.6%	8.65%
Ultimate medical cost trend rate.....	6.0%	6.0%	5.5%
Medical cost trend rate decreases to ultimate rate in year.....	2007	2007	2007
Effect of a 1% increase in the medical cost trend rate (in millions):			
Increase in benefit obligation.....	\$33	\$37	\$43
Increase in the annual retiree medical cost.....	5	6	6

11. Transactions with Hewlett-Packard

Agilent Technologies' revenue from sales of products to HP was \$684 million in 1996, \$640 million in 1997, \$696 million in 1998, \$348 million (unaudited) for the six months ended April 30, 1998 and \$378 million (unaudited) for the six months ended April 30, 1999.

Agilent Technologies has purchased products from HP, at a price that management believes approximates the price an unrelated third party would pay, for inclusion in its products sold to third parties. These purchases from HP totaled \$91 million in 1996, \$99 million in 1997, \$86 million in 1998, \$43 million (unaudited) for the six months ended April 30, 1998 and \$27 million (unaudited) for the six months ended April 30, 1999. Agilent Technologies also purchases products from HP at cost for internal use. Purchases at cost were

separation date, Agilent Technologies and HP will each release the other from any liabilities arising from events occurring on or before the separation date. The agreement also contains provisions governing indemnification. In general, Agilent Technologies and HP will each indemnify the other from all liabilities arising from its business, any of its liabilities, any of its contracts or a breach of the separation agreement. In addition, HP and Agilent Technologies will each indemnify the other against liability for specified environmental matters. Agilent Technologies will reimburse HP for the cost of any insurance coverage from the separation date to the distribution date.

Employee Matters Agreement. The Employee Matters Agreement outlines how HP and Agilent Technologies plan to allocate responsibility for, and liability related to the employment of those employees of HP who will become Agilent Technologies employees. The agreement also contains provisions describing Agilent Technologies' benefit and equity plans. On or before the distribution date, Agilent Technologies expects to establish employee benefit plans comparable to those of HP for its active, inactive and former employees. However, in certain cases, certain of its employees will continue to participate in the HP benefit plans. The transfer to Agilent Technologies of employees at certain of HP's international operations, and of certain pension and employee benefit plans, may not take place until Agilent Technologies receives consents or approvals or has satisfied other applicable requirements.

Tax Sharing Agreement. The tax sharing agreement provides for HP's and Agilent Technologies' obligations concerning various tax liabilities. The tax sharing agreement provides that HP generally will pay, and indemnify Agilent Technologies if necessary, with respect to all federal, state, local and foreign taxes relating to Agilent Technologies' business for any taxable period ending prior to this offering. In addition, the tax sharing agreement provides that HP and Agilent Technologies will make payments between them such that the amount

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

of taxes to be paid by HP and Agilent Technologies will be determined, subject to specified adjustments, as if HP and Agilent Technologies and each of their subsidiaries included in HP's consolidated tax returns had filed their own consolidated, combined or unitary tax return.

The tax sharing agreement allocates responsibility for various taxes arising from restructurings related to the spinoff between HP and Agilent Technologies. In addition, Agilent Technologies will bear 18% of unanticipated taxes related to the distribution where neither party is at fault.

In addition, the tax sharing agreement provides that Agilent Technologies will indemnify HP for any taxes arising out of the failure of the distribution or certain of the transactions related to it to qualify as tax free as a result of actions taken, or the failure to take required actions, by Agilent Technologies. Specifically, Agilent Technologies is required under the tax sharing agreement to comply with the representations made to the Internal Revenue Service, or the IRS, in connection with the private letter ruling that has been issued to HP from the IRS regarding the tax-free nature of the distribution of Agilent Technologies' stock by HP to HP's stockholders.

The tax sharing agreement further provides for cooperation with respect to certain tax matters, the exchange of information and the retention of records which may affect the income tax liability of either party. Disputes arising between HP and Agilent Technologies relating to matters covered by the tax sharing agreement are subject to resolution through specific dispute resolution provisions.

Real Estate Matters Agreement. The Real Estate Matters Agreement addresses real estate matters relating to the HP leased and owned properties that HP

will transfer to or share with Agilent Technologies. The agreement describes the manner in which HP will transfer to or share with Agilent Technologies various leased and owned properties. The Real Estate Matters Agreement provides that Agilent Technologies will be required to accept the transfer of all sites allocated to Agilent Technologies, even if a site has been damaged by a casualty before the separation date. The Real Estate Matters Agreement also provides that all costs required to effect the transfers, including landlord consent fees, landlord attorneys' fees, title insurance fees and transfer taxes, will be paid by HP.

Master IT Service Level Agreement. The Master IT Service Level Agreement governs the provision of information technology services by HP and Agilent Technologies to each other, on an interim basis, until November 1, 2001, unless extended for specific services or otherwise indicated in the agreement. The services include data processing and telecommunications services, such as voice telecommunications and data transmission, and corporate support services, including accounting, financial management, tax, payroll, stockholder and public relations, legal, human resources administration, procurement, real estate management and other administrative functions. Specified charges for such services are generally intended to allow the providing company to recover the direct and indirect costs of providing the services, plus 5% until November 1, 2001 and such costs plus 10% thereafter. The Master IT Service Level Agreement also will cover the provision of certain additional information technology services identified from time to time after the separation date that were inadvertently or unintentionally omitted from the specified services, or that are essential to effectuate an orderly transition under the separation agreement, so long as the provision of such services would not significantly disrupt the providing company's operations or significantly increase the scope of the agreement.

In addition, the Master IT Service Level Agreement will provide for the replication of some computer systems, including hardware, software, data storage or maintenance and support components. Generally, the party needing the replicated system will bear the costs and expenses of replication. Generally, the party purchasing new hardware or licensing new software will bear the costs and expenses of purchasing the new hardware or obtaining the new software licenses.

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

Intellectual Property Agreements. The Master Technology Ownership and License Agreement, the Master Patent Ownership and License Agreement, the Master Trademark Ownership and License Agreement and the ICBT Technology Ownership and License Agreement together are referred to as the Intellectual Property Agreements. Under the Intellectual Property Agreements, HP will transfer to Agilent Technologies its rights in specified patents, specified trademarks and other intellectual property related to Agilent Technologies' current business and research and development efforts. HP and Agilent Technologies will each be licensed under the other's patents issued on patent applications with effective filing dates before November 1, 2004, subject to field restrictions. HP and Agilent Technologies will also be licensed to use technology that has been disclosed to such licensed company or that is in the licensed company's possession as of the separation date, with certain limitations. The agreements include certain rights to sublicense for both parties. Agilent Technologies will be licensed to use some Hewlett-Packard trademarks, and this license is royalty-bearing after five years.

Environmental Matters Agreement. Hewlett-Packard has agreed to retain and indemnify Agilent Technologies for liabilities associated with properties transferred to Agilent Technologies which are undergoing environmental investigation and remediation and for which Hewlett-Packard has accrued a reserve. The purpose of the Environmental Matters Agreement is to address, in

a general way, HP's and Agilent Technologies' rights and obligations with respect to that investigation and remediation.

12. Commitments

Agilent Technologies leases certain real and personal property from unrelated third parties under noncancelable operating leases. Future minimum lease payments under these leases at October 31, 1998 were \$36 million for 1999, \$26 million for 2000, \$17 million for 2001, \$11 million for 2002, \$8 million for 2003 and \$36 million thereafter. Certain leases require Agilent Technologies to pay property taxes, insurance and routine maintenance, and include escalation clauses. Rent expense was \$87 million in 1996, \$92 million in 1997 and \$111 million in 1998.

Beginning in November 1999, Agilent Technologies will lease or sublease some of its facilities from HP at amounts that are yet to be determined. See Note 11, "Transactions with Hewlett-Packard."

13. Contingencies

Agilent Technologies is involved in lawsuits, claims, investigations and proceedings, including patent, commercial and environmental matters, which arise in the ordinary course of business. There are no such matters pending that Agilent Technologies expects to be material in relation to its business, consolidated financial condition, results of operations or cash flows. See Note 11, "Transactions with Hewlett-Packard," for a discussion of Agilent Technologies' indemnification agreement with HP.

14. Segment Information

Description of segments. Agilent Technologies is a diversified technology company that provides enabling solutions to high growth markets within the communications, electronics, life sciences and healthcare industries. Agilent Technologies designs and manufactures test, measurement and monitoring instruments, systems and solutions and semiconductors and optical components.

Agilent Technologies' organizes its business operations into four major groups--test and measurement, semiconductor products, healthcare solutions and chemical analysis, each of which comprises a reportable segment. The segments were determined based primarily on how management views and evaluates Agilent Technologies' operations. Other factors, including customer base, homogeneity of products, technology and delivery channels, were also considered in determining Agilent Technologies' reportable segments. Agilent Technologies measures segment performance based on earnings from operations.

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

Agilent Technologies includes the following businesses:

- . test and measurement, which provides test instruments, standard and customized test, measurement and monitoring systems for the design, manufacture and support of electronic and communication devices, and software for the design of high-frequency electronic and communication devices. The test and measurement business includes operating segments that have been aggregated based on the similarity of the nature of their products and services, their production processes, their class of customers, their distribution methods and their economic characteristics;
- . semiconductor products, which provides fiber optic communications devices and assemblies, integrated circuits for wireless applications, application-specific integrated circuits, optoelectronics and image

sensors;

- . healthcare solutions, which provides patient monitoring, ultrasound imaging and cardiology products and systems; and
- . chemical analysis, which provides analytical instruments, systems and services for chromatography, spectroscopy and bio-instrumentation.

Segment revenue and profit. The accounting policies used to derive reportable segment results are generally the same as those described in Note 2, "Summary of Significant Accounting Policies." Internal revenue and earnings from operations include transactions between segments that are intended to reflect an arm's length transfer at the best price available for comparable external customers.

A significant portion of the segments' expenses arise from shared services and infrastructure that HP has historically provided to the segments in order to realize economies of scale and to efficiently use resources. These expenses include costs of centralized research and development, legal, accounting, employee benefits, real estate, insurance services, information technology services, treasury and other HP corporate and infrastructure costs. These allocations have been determined on bases that HP and Agilent Technologies considered to be a reasonable reflection of the utilization of services provided to or benefits received by the segments. A different result could be arrived at for any segment if costs were specifically identified to each segment.

The following tables reflect the results of Agilent Technologies' reportable segments under Agilent Technologies management system. These results are not necessarily a depiction that is in conformity with generally accepted accounting principles. The performance of each segment is measured based on several metrics, including earnings from operations. These results are used, in part, by management, in evaluating the performance of, and in allocating resources to, each of the segments.

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

	Test and Measurement	Semiconductor Products	Healthcare Solutions	Chemical Analysis	Total Segments
(in millions)					
Year ended October 31, 1996:					
External revenue.....	\$3,823	\$1,470	\$1,244	\$842	\$7,379
Internal revenue.....	--	30	--	--	30
Total net revenue.....	\$3,823	\$1,500	\$1,244	\$842	\$7,409
Depreciation and amorti- zation expense.....	\$ 110	\$ 181	\$ 21	\$ 13	\$ 325
Earnings from opera- tions.....	\$ 606	\$ 125	\$ 106	\$ 38	\$ 875
Year ended October 31, 1997:					
External revenue.....	\$4,203	\$1,479	\$1,208	\$895	\$7,785
Internal revenue.....	--	27	--	1	28

Total net revenue.....	----- \$4,203 =====	----- \$1,506 =====	----- \$1,208 =====	----- \$896 =====	----- \$7,813 =====
Depreciation and amorti- zation expense.....	----- \$ 107 =====	----- \$ 177 =====	----- \$ 16 =====	----- \$ 13 =====	----- \$ 313 =====
Earnings from opera- tions.....	----- \$ 674 =====	----- \$ 57 =====	----- \$ 30 =====	----- \$ 77 =====	----- \$ 838 =====
Year ended October 31, 1998:					
External revenue.....	\$4,100	\$1,574	\$1,340	\$938	\$7,952
Internal revenue.....	--	39	--	--	39
Total net revenue.....	----- \$4,100 =====	----- \$1,613 =====	----- \$1,340 =====	----- \$938 =====	----- \$7,991 =====
Depreciation and amorti- zation expense.....	----- \$ 133 =====	----- \$ 205 =====	----- \$ 28 =====	----- \$ 15 =====	----- \$ 381 =====
Earnings (loss) from op- erations.....	----- \$ 348 =====	----- \$ (106) =====	----- \$ 62 =====	----- \$ 75 =====	----- \$ 379 =====
Six months ended April 30, 1998 (unaudited):					
External revenue.....	\$2,149	\$ 795	\$ 676	\$470	\$4,090
Internal revenue.....	--	19	--	--	19
Total net revenue.....	----- \$2,149 =====	----- \$ 814 =====	----- \$ 676 =====	----- \$470 =====	----- \$4,109 =====
Depreciation and amorti- zation expense.....	----- \$ 58 =====	----- \$ 90 =====	----- \$ 9 =====	----- \$ 7 =====	----- \$ 164 =====
Earnings from opera- tions.....	----- \$ 278 =====	----- \$ 20 =====	----- \$ 56 =====	----- \$ 46 =====	----- \$ 400 =====
Six months ended April 30, 1999 (unaudited):					
External revenue.....	\$1,853	\$ 773	\$ 671	\$499	\$3,796
Internal revenue.....	2	12	--	--	14
Total net revenue.....	----- \$1,855 =====	----- \$ 785 =====	----- \$ 671 =====	----- \$499 =====	----- \$3,810 =====
Depreciation and amorti- zation expense.....	----- \$ 68 =====	----- \$ 85 =====	----- \$ 18 =====	----- \$ 9 =====	----- \$ 180 =====
Earnings from opera- tions.....	----- \$ 149 =====	----- \$ 64 =====	----- \$ 45 =====	----- \$ 64 =====	----- \$ 322 =====

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

Reconciliations to Agilent Technologies, as reported.

Years Ended October 31,			Six Months Ended April 30,	
-----	-----	-----	-----	-----
1996	1997	1998	1998	1999
-----	-----	-----	-----	-----

(unaudited)

(in millions)

Net revenue:

Total reportable segments.....	\$ 7,409	\$ 7,813	\$ 7,991	\$ 4,109	\$ 3,810
Elimination of internal revenue.....	(30)	(28)	(39)	(19)	(14)
	-----	-----	-----	-----	-----
Total net revenue, as reported.....	\$ 7,379	\$ 7,785	\$ 7,952	\$ 4,090	\$ 3,796
	=====	=====	=====	=====	=====
Earnings before taxes:					
Total reportable segments' earnings from operations.....	\$ 875	\$ 838	\$ 379	\$ 400	\$ 322
Corporate and unallocated.....	--	32	63	3	19
Other income (expense), net.....	(21)	(47)	(46)	(13)	15
	-----	-----	-----	-----	-----
Total earnings before taxes, as reported.....	\$ 854	\$ 823	\$ 396	\$ 390	\$ 356
	=====	=====	=====	=====	=====
Depreciation and amortization expense:					
Total reportable segments.....	\$ 325	\$ 313	\$ 381	\$ 164	\$ 180
Corporate and unallocated.....	76	96	96	48	55
	-----	-----	-----	-----	-----
Total depreciation and amortization expense, as reported.....	\$ 401	\$ 409	\$ 477	\$ 212	\$ 235
	=====	=====	=====	=====	=====

Corporate and unallocated primarily relates to employee related benefit programs. The expenses for these programs are recorded by the segments at a pre-determined rate and are adjusted at the corporate level to reflect the actual rate. This adjustment is not allocated to the segments. Corporate and unallocated also includes certain unallocated goodwill amortization.

Major customers. No single customer represents 10% or more of Agilent Technologies' total net revenue.

Segment assets and other items. Segment assets directly managed by the segment primarily consist of accounts receivable, inventory, property, plant and equipment and certain other current and non-current assets. In some cases, several segments may occupy the same location and therefore will share a common building and certain machinery and equipment. In these cases, there will not be a precise correlation between a segment's earnings from operations and the segment's assets. Capital expenditures for each segment also reflect the asset assignment by segment.

Corporate-held assets not allocated to the segments include property, plant and equipment assigned to corporate functions, equity investments managed at the corporate level, deferred tax assets and other current and non-current assets managed at the corporate level.

The investment in equity method investees totals disclosed for each segment represent equity investments directly managed by the segment.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

	Test and Measurement	Semiconductor Products	Healthcare Solutions	Chemical Analysis	Total Segments
(in millions)					
As of October 31, 1996:					
Assets.....	\$2,214	\$1,173	\$763	\$455	\$4,605
Capital expenditures, year-to-date.....	146	326	17	13	502
Investment in equity- method investees.....	15	--	--	--	15
As of October 31, 1997:					
Assets.....	\$2,305	\$1,273	\$793	\$469	\$4,840
Capital expenditures, year-to-date.....	147	316	13	17	493
Investment in equity- method investees.....	14	4	--	--	18
As of October 31, 1998:					
Assets.....	\$2,188	\$1,134	\$847	\$517	\$4,686
Capital expenditures, year-to-date.....	155	162	22	8	347
Investment in equity- method investees.....	11	19	--	--	30
As of April 30, 1999 (unaudited):					
Assets.....	\$2,234	\$ 935	\$907	\$511	\$4,587
Capital expenditures, year-to-date.....	75	49	7	3	134
Investment in equity- method investees.....	11	16	--	--	27

Reconciliations to Agilent Technologies, as reported.

	October 31,			April 30,
	1996	1997	1998	1999
(in millions)				
Assets:				(unaudited)
Total reportable segments.....	\$4,605	\$4,840	\$4,686	\$4,587
Unallocated corporate assets.....	115	166	301	434
Total assets, as reported.....	\$4,720	\$5,006	\$4,987	\$5,021

Geographic information.

United States	Japan	Rest of the World	Total
(in millions)			

Revenue (based on location of customer):				
Year ended October 31, 1996.....	\$3,328	\$918	\$3,133	\$7,379
Year ended October 31, 1997.....	3,399	972	3,414	7,785
Year ended October 31, 1998.....	3,623	880	3,449	7,952
Six months ended April 30, 1998				
(unaudited).....	1,831	491	1,768	4,090
Six months ended April 30, 1999				
(unaudited).....	1,672	404	1,720	3,796
Long-lived assets (all non-current assets):				
October 31, 1996.....	\$1,127	\$267	\$ 491	\$1,885
October 31, 1997.....	1,223	261	591	2,075
October 31, 1998.....	1,180	242	490	1,912
April 30, 1999 (unaudited).....	1,158	269	462	1,889

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AGILENT TECHNOLOGIES, INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS--(Continued)

15. Subsequent Event

On July 6, 1999, HP entered into an agreement with Yokogawa Electric Corporation (Yokogawa) to acquire Yokogawa's 25% equity interest in Hewlett-Packard Japan (HPJ) for approximately \$508 million. Under the terms of the agreement, HP will acquire Yokogawa's shares through redemption and sale of shares in several steps beginning in January 2000. Under the terms of the Master Separation and Distribution Agreement, Agilent Technologies will assume HP's obligations under the terms of the agreement. In the initial step, which will occur on or before January 31, 2000, Agilent Technologies will redeem approximately 10.4% of HPJ shares from Yokogawa. In the second step, which will occur on or before April 30, 2000, Agilent Technologies will purchase approximately 10.4% of HPJ shares from Yokogawa. Agilent Technologies will acquire the remaining 4.2% of HPJ shares owned by Yokogawa either by redemption or purchase of shares prior to March 31, 2003. HP will provide the funding for this transaction.

An independent valuation is being performed to determine the portion of the purchase price attributable to Agilent Technologies' business and the remaining HP business and to allocate the purchase price to identifiable assets and liabilities. Management's preliminary estimate is that of the total purchase price, \$254 million is attributable to Agilent Technologies' business.

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[AGILENT TECHNOLOGIES LOGO]

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 +The information in this prospectus is not complete and may be changed. We may +
 +not sell these securities until the registration statement filed with the +
 +Securities and Exchange Commission is effective. This prospectus is not an +
 +offer to sell securities and we are not soliciting offers to buy these +
 +securities in any state where the offer or sale is not permitted. +
 +++++
 PROSPECTUS (Subject to Completion)
 Issued August 16, 1999

Shares

COMMON STOCK

Agilent Technologies, Inc. is offering _____ shares of common stock. This is our initial public offering and no public market currently exists for our shares. We anticipate that the initial public offering price will be between \$ _____ and \$ _____ per share.

After the offering, Hewlett-Packard will own approximately _____ % of our common stock, assuming no exercise of the underwriters' over-allotment option. Hewlett-Packard has announced that it plans to complete its divestiture of Agilent Technologies by the middle of calendar year 2000 by distributing all of the shares of our common stock owned by Hewlett-Packard to holders of Hewlett-Packard's common stock. See "Arrangements Between Agilent Technologies and Hewlett-Packard."

Application has been made for listing of our common stock on [the New York Stock Exchange/the Nasdaq Stock Market] under the trading symbol " _____".

Investing in our common stock involves risks. See "Risk Factors" beginning on page 9.

PRICE \$ _____ A SHARE

	Price to Public	Underwriting Discounts and Commissions	Proceeds to Agilent Technologies
	-----	-----	-----
Per Share.....	\$ _____	\$ _____	\$ _____
Total.....	\$ _____	\$ _____	\$ _____

The United States Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Agilent Technologies has granted the U.S. underwriters the right to purchase up to an additional _____ shares of common stock to cover over-allotments. Morgan Stanley & Co. Incorporated expects to deliver the shares of common stock to purchasers on _____, 1999.

MORGAN STANLEY DEAN WITTER

GOLDMAN SACHS INTERNATIONAL

, 1999

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth the costs and expenses, other than underwriting discounts and commissions, payable in connection with the sale and distribution of the securities being registered. All amounts are estimated except the Securities and Exchange Commission registration fee and the registration fee. Hewlett-Packard has generally agreed to pay these costs and expenses.

Item ----	Amount -----
Securities and Exchange Commission registration fee.....	\$
NASD registration fee.....	
[Nasdaq Stock Market / NYSE original and continued listing fees]...	
Blue Sky qualification fees and expenses.....	
Legal fees and expenses.....	
Accounting fees and expenses.....	
Transfer agent and registrar fees.....	
Printing and engraving expenses.....	
Miscellaneous expenses.....	

Total.....	\$ =====

Item 14. Indemnification of Directors and Officers

Agilent Technologies is incorporated under the laws of the State of Delaware. Section 145 ("Section 145") of the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended (the "General Corporation Law"), inter alia, provides that a Delaware corporation may indemnify any persons who were, are or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of such corporation), by reason of the fact that such person is or was an officer, director, employee or agent of such corporation, or is or was serving at the request of such corporation as a director, officer, employee or agent of another corporation or enterprise. The indemnity may include expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding, provided such person acted in good faith and in a manner he reasonably believed to be in or not opposed to the corporation's best interests and, with respect to any criminal action or proceeding, had no reasonable cause to believe that his conduct was illegal.

Section 145 further authorizes a corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or enterprise, against any liability asserted against him and incurred by him in any such capacity, arising out of his status as such, whether or not the corporation would otherwise have the power to indemnify him under Section 145.

Agilent Technologies' Certificate of Incorporation and Bylaws provide for the indemnification of officers and directors to the fullest extent permitted by the General Corporation Law.

All of Agilent Technologies' directors and officers will be covered by insurance policies maintained by Agilent Technologies against certain liabilities for actions taken in their capacities as such, including liabilities under the Securities Act of 1933, as amended. In addition, the Company has entered into indemnity agreements with its directors and executive

officers (a form of which is filed as Exhibit 10.9 to this Registration Statement) that obligate the Company to indemnify such directors and executive officers to the fullest extent permitted by the General Corporation Law.

Item 15. Recent Sales of Unregistered Securities

In connection with its incorporation and organization, on July 30, 1999, Agilent Technologies issued 10,000,000 shares of common stock to Hewlett-Packard for an aggregate of \$10,000,000. Agilent Technologies

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believes that this issuance was exempt from registration under Section 4(2) of the Securities Act as a transaction not involving any public offering.

Item 16. Exhibits and Financial Statement Schedules

(a) Exhibits

Exhibit Number -----	Description -----
1.1*	Form of Underwriting Agreement.
2.1	Master Separation and Distribution Agreement between Hewlett-Packard and the registrant effective as of August 12, 1999.
2.2	Form of General Assignment and Assumption Agreement between Hewlett-Packard and the registrant.
2.3	Form of Master Technology Ownership and License Agreement between Hewlett-Packard and the registrant.
2.4	Form of Master Patent Ownership and License Agreement between Hewlett-Packard and the registrant.
2.5	Form of Master Trademark Ownership and License Agreement between Hewlett-Packard and the registrant.
2.6	Form of ICBD Technology Ownership and License Agreement between Hewlett-Packard and the registrant.
2.7	Form of Employee Matters Agreement between Hewlett-Packard and the registrant.
2.8	Form of Tax Sharing Agreement between Hewlett-Packard and the registrant.
2.9	Form of Master IT Service Level Agreement between Hewlett-Packard and the registrant.
2.10	Form of Real Estate Matters Agreement between Hewlett-Packard and the registrant.
2.11	Form of Environmental Matters Agreement between Hewlett-Packard and the registrant.
2.12	Form of Master Confidential Disclosure Agreement between Hewlett-Packard and the registrant.
2.13	Form of Indemnification and Insurance Matters Agreement between Hewlett-Packard and the registrant.
3.1	Amended and Restated Certificate of Incorporation.
3.2	Bylaws.
5.1*	Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
10.1*	1999 Employee Stock Purchase Plan.
10.2*	1999 Employee Stock Purchase Plan Agreements.
10.3*	1999 Stock Plan.
10.4*	1999 Stock Plan Agreements.
10.5*	1999 Non-Employee Director Stock Plan.
10.6*	1999 Non-Employee Director Stock Plan Agreements.
10.7*	1999 Variable Pay Plan.
10.8	Yokogawa Electric Corporation and Hewlett-Packard Company Agreement for the Redemption and Sale of Shares and Termination of Joint Venture Relationship.
10.9	Form of Indemnification Agreement entered into by the registrant with

- each of its directors and executive officers.
- 21.1* Subsidiaries of Agilent Technologies.
- 23.1 Consent of PricewaterhouseCoopers LLP.
- 23.2* Consent of Wilson Sonsini Goodrich & Rosati (included in Exhibit 5.1).
- 24.1 Power of Attorney (contained on page II-4).
- 27.1 Financial Data Schedule.

* To be filed by amendment.

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(b) Financial Statement Schedules.

Schedules have been omitted because the information required to be set forth therein is not applicable or is immaterial.

Item 17. Undertakings

The Registrant hereby undertakes to provide the Underwriters at the closing specified in the Underwriting Agreement certificates in such denominations and registered in such names as required by the Underwriters to permit prompt delivery to each purchaser.

Insofar as the indemnification for liabilities arising under the Securities Act of 1933 may be permitted as to directors, officers and controlling persons of the Registrant pursuant to the provisions described in Item 14, or otherwise, the Registrant has been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payments by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned Registrant hereby undertakes that:

(1) for purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective; and

(2) for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and this offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Palo Alto, State of California, on August 16, 1999.

/s/ Edward W. Barnholt

Edward W. Barnholt
President, Chief Executive Officer
and
Director

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Robert R. Walker and D. Craig Nordlund, and each of them, his or her attorneys-in-fact, each with the power of substitution, for him or her in any and all capacities, in any and all capacities, to sign any and all amendments to this Registration Statement (including post-effective statements), and to sign any registration statement for the same offering covered by this Registration Statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act of 1933, and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that such attorneys-in-fact, or his or their substitute or substitutes, may lawfully do or cause to be done by virtue hereof. This Power of Attorney may be signed in several counterparts.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons on August 16, 1999 in the capacities indicated.

Signature -----	Title -----
/s/ Edward W. Barnholt ----- Edward W. Barnholt	President, Chief Executive Officer and Director (Principal Executive Officer)
/s/ Gerald Grinstein ----- Gerald Grinstein	Chairman of the Board
/s/ Robert R. Walker ----- Robert R. Walker	Vice President and Chief Financial Officer (Principal Financial Officer)
/s/ Dorothy D. Hayes ----- Dorothy D. Hayes	Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)
/s/ Thomas E. Everhart ----- Thomas E. Everhart	Director
/s/ Walter B. Hewlett ----- Walter B. Hewlett	Director
/s/ David M. Lawrence ----- David M. Lawrence, M.D.	Director

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INDEX OF EXHIBITS

Exhibit Number	Description
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-
- 1.1* Form of Underwriting Agreement.
 - 2.1 Master Separation and Distribution Agreement between Hewlett-Packard and the registrant effective as of August 12, 1999.
 - 2.2 Form of General Assignment and Assumption Agreement between Hewlett-Packard and the registrant.
 - 2.3 Form of Master Technology Ownership and License Agreement between Hewlett-Packard and the registrant.
 - 2.4 Form of Master Patent Ownership and License Agreement between Hewlett-Packard and the registrant.
 - 2.5 Form of Master Trademark Ownership and License Agreement between Hewlett-Packard and the registrant.
 - 2.6 Form of ICBD Technology Ownership and License Agreement between Hewlett-Packard and the registrant.
 - 2.7 Form of Employee Matters Agreement between Hewlett-Packard and the registrant.
 - 2.8 Form of Tax Sharing Agreement between Hewlett-Packard and the registrant.
 - 2.9 Form of Master IT Service Level Agreement between Hewlett-Packard and the registrant.
 - 2.10 Form of Real Estate Matters Agreement between Hewlett-Packard and the registrant.
 - 2.11 Form of Environmental Matters Agreement between Hewlett-Packard and the registrant.
 - 2.12 Form of Master Confidential Disclosure Agreement between Hewlett-Packard and the registrant.
 - 2.13 Form of Indemnification and Insurance Matters Agreement between Hewlett-Packard and the registrant.
 - 3.1 Amended and Restated Certificate of Incorporation.
 - 3.2 Bylaws.
 - 5.1* Opinion of Wilson Sonsini Goodrich & Rosati, Professional Corporation.
 - 10.1* 1999 Employee Stock Purchase Plan.
 - 10.2* 1999 Employee Stock Purchase Plan Agreements.
 - 10.3* 1999 Stock Plan.
 - 10.4* 1999 Stock Plan Agreements.
 - 10.5* 1999 Non-Employee Director Stock Plan.
 - 10.6* 1999 Non-Employee Director Stock Plan Agreements.
 - 10.7* 1999 Variable Pay Plan.
 - 10.8 Yokogawa Electric Corporation and Hewlett-Packard Company Agreement for the Redemption and Sale of Shares and Termination of Joint Venture Relationship.
 - 10.9 Form of Indemnification Agreement entered into by the registrant with each of its directors and executive officers.
 - 21.1* Subsidiaries of Agilent Technologies, Inc.
 - 23.1 Consent of PricewaterhouseCoopers LLP.
 - 23.2* Consent of Wilson Sonsini Goodrich & Rosati (included in Exhibit 5.1).
 - 24.1 Power of Attorney (contained on page II-4).
 - 27.1 Financial Data Schedule.

* To be filed by amendment.

Master Separation and Distribution Agreement

Between

Hewlett-Packard Company

and

Agilent Technologies, Inc.

Effective As Of

August 12, 1999

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EXHIBITS

Exhibit A	Certificate of Secretary of HP
Exhibit B	Certificate of Secretary of Agilent
Exhibit C	General Assignment and Assumption Agreement
Exhibit D-1	Master Technology Ownership and License Agreement
Exhibit D-2	Master Patent Ownership and License Agreement
Exhibit D-3	Master Trademark Ownership and License Agreement
Exhibit D-4	ICBD Technology Ownership and License Agreement
Exhibit E	Employee Matters Agreement
Exhibit F	Tax Sharing Agreement
Exhibit G	Master IT Service Level Agreement
Exhibit H	Real Estate Agreement
Exhibit I	Environmental Matters Agreement
Exhibit J	Master Confidential Disclosure Agreement
Exhibit K	Indemnification and Insurance Matters Agreement
Exhibit L	Intentionally Omitted
Exhibit M	Reorganization of Operations Outside the US (the Non-US Plan)

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SCHEDULES

Schedule 2.1(b)	Subsidiaries of HP to be Transferred to Agilent
Schedule 2.2(b)	Cash Held in Subsidiaries
Schedule 7.1(a)	Affiliated Companies of HP to be Included in the HP Group
Schedule 7.1(b)	Affiliated Companies of Agilent to be Included in the Agilent Group

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MASTER SEPARATION AND DISTRIBUTION AGREEMENT

This Master Separation and Distribution Agreement (this "Agreement") is entered into as of August 12, 1999, between Hewlett-Packard Company ("HP"), a Delaware corporation, and Agilent Technologies, Inc. ("Agilent"), a Delaware corporation. Capitalized terms used herein and not otherwise defined shall have the meanings ascribed to such terms in Article VII hereof.

RECITALS

WHEREAS, the Boards of Directors of HP and Agilent have each determined that it would be appropriate and desirable for HP to contribute and transfer to Agilent, and for Agilent to receive and assume, directly or indirectly, substantially all of the assets and liabilities currently associated with the Agilent Business and the stock, investments or similar interests currently held by HP in subsidiaries and other entities that conduct such business (the "Separation");

WHEREAS, HP has caused Agilent to be incorporated in order to effect the Separation and HP currently owns all of the issued and outstanding common stock of Agilent;

WHEREAS, HP and Agilent currently contemplate that, following the contribution and assumption of assets and liabilities, Agilent will make an initial public offering ("IPO") of an amount of its common stock pursuant to a registration statement on Form S-1 pursuant to the Securities Act of 1933, as amended (the "IPO Registration Statement"), that will reduce HP's ownership of Agilent to not less than 80.1%;

WHEREAS, Agilent intends to distribute all of the proceeds of the IPO (including the proceeds from the sale of shares pursuant to the exercise of the Underwriters' over-allotment option (the "IPO Over-allotment Option")), net of underwriting discounts and commissions (the "IPO Net Proceeds") to HP by means of a dividend declared prior to the IPO, which IPO Net Proceeds HP ultimately intends to use to satisfy obligations to creditors or to repurchase shares of HP common stock within twelve (12) months following the closing of the IPO (the "IPO Closing Date");

WHEREAS, HP currently contemplates that, several months following such initial public offering, HP will distribute to the holders of its common stock, \$ 0.01 par value, by means of a pro rata distribution, all of the shares of Agilent common stock owned by HP (the "Distribution");

WHEREAS, HP and Agilent intend that the contribution and assumption of assets and liabilities and the Distribution will qualify as a tax-free reorganization under Sections 368(a)(1)(D) and 355 of the Internal Revenue Code of 1986, as amended (the "Code"), and that this Agreement is intended to be, and is hereby adopted as, a plan of reorganization under Section 368 of the Code; and

WHEREAS, the parties intend in this Agreement, including the Exhibits and Schedules hereto, to set forth the principal arrangements between them regarding the separation of the Agilent Business.

NOW, THEREFORE, in consideration of the foregoing and the covenants and agreements set forth below, the parties hereto agree as follows:

ARTICLE I

SEPARATION

Section 1.1 Separation Date. Unless otherwise provided in this Agreement, or in any agreement to be executed in connection with this Agreement, the effective time and date of each transfer of property, assumption of liability, license, undertaking, or agreement in connection with the Separation shall be 12:01 a.m., Pacific Time, November 1, 1999 or such other date as may be fixed by the Board of Directors of HP (the "Separation Date").

Section 1.2 Closing of Transactions. Unless otherwise provided herein, the closing of the transactions contemplated in Article II shall occur by the lodging of each of the executed instruments of transfer, assumptions of liability, undertakings, agreements, instruments or other documents executed or to be executed with Wilson Sonsini Goodrich & Rosati ("WSGR"), 650 Page Mill Road, Palo Alto, California 94304, to be held in escrow for delivery as provided in Section 1.3 of this Agreement.

Section 1.3 Exchange of Secretary's Certificates. Upon receipt of a certificate of the Secretary or an Assistant Secretary of HP in the form attached to this Agreement as Exhibit A, WSGR shall deliver to Agilent on behalf of HP all of the items required to be delivered by HP hereunder pursuant to Section 2.1 of this Agreement and each such item shall be deemed to be delivered to Agilent as of the Separation Date upon delivery of such certificate. Upon receipt of a certificate of the Secretary or an Assistant Secretary of Agilent in the form attached to this Agreement as Exhibit B, WSGR shall deliver to HP on

behalf of Agilent all of the items required to be delivered by Agilent hereunder and each such item shall be deemed to be delivered to HP as of the Separation Date upon receipt of such certificate.

ARTICLE II

DOCUMENTS AND ITEMS TO BE DELIVERED ON THE SEPARATION DATE

Section 2.1 Documents to Be Delivered By HP. On the Separation Date, or such later date as agreed in connection with the Non-US Plan, HP will deliver, or will cause its appropriate Subsidiaries to deliver, to Agilent all of the following items and agreements (collectively, together with all agreements and documents contemplated by such agreements, the "Ancillary Agreements"):

(a) A duly executed General Assignment and Assumption Agreement (the "Assignment Agreement") substantially in the form attached hereto as Exhibit C;

(b) Certificates representing the stock and/or investments in the Subsidiaries and other holdings of HP set forth on Schedule 2.1(b) with duly executed stock powers in the form proper for transfer;

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(c) A duly executed Master Technology Ownership and License Agreement substantially in the form attached hereto as Exhibit D-1, a duly executed Master Patent Ownership and License Agreement substantially in the form attached hereto as Exhibit D-2, a duly executed Master Trademark Ownership and License Agreement substantially in the form attached as Exhibit D-3 and a duly executed ICBD Technology Ownership and License Agreement substantially in the form attached hereto as Exhibit D-4, and;

(d) A duly executed Employee Matters Agreement substantially in the form attached hereto as Exhibit E;

(e) A duly executed Tax Sharing Agreement substantially in the form attached hereto as Exhibit F;

(f) A duly executed Master IT Service Level Agreement substantially in the form attached hereto as Exhibit G;

(g) A duly executed Real Estate Matters Agreement substantially in the form attached hereto as Exhibit H;

(h) A duly executed Environmental Matters Agreement substantially in the form attached hereto as Exhibit I;

(i) A duly executed Master Confidential Disclosure Agreement substantially in the form attached hereto as Exhibit J;

(j) A duly executed Indemnification and Insurance Matters Agreement substantially in the form attached hereto as Exhibit K;

(k) Resignations of each person who is an officer or director of any member of Agilent or its Subsidiaries, immediately prior to the Separation Date, and who will be employees of HP from and after the Separation Date; and

(l) Such other agreements, documents or instruments as the parties may agree are necessary or desirable in order to achieve the purposes hereof, including, without limitation, all service level agreements entered into in accordance with Section 5.3 and those documents referred to in Section 5.8.

Section 2.2 Cash to be Transferred by HP.

(a) Cash Requirements. On or around the Separation Date, HP and its Subsidiaries will provide that Agilent and its Subsidiaries have sufficient cash to satisfy the following obligations or requirements (as adjusted with the

parties' mutual agreement):

(i) (A) HP's obligations under the Agreement for the Redemption and Sale of Shares and Termination of Joint Venture Relationship dated July 6, 1999 by and between HP and Yokogawa Electric Corporation (the "YEW Agreement"), which obligations Agilent will

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assume from HP pursuant to the Assignment Agreement and (B) Hewlett-Packard Japan Ltd.'s obligations under the YEW Agreement;

(ii) Working capital and acquisition requirements of \$250 million;

(iii) An amount equal to:

(1) the Retained Receivables minus the Retained Payables, plus or minus

(2) the liabilities retained by HP Japan related to the HP Business, net of the assets retained by HP Japan related to the HP Business;

(iv) The requirements of Section 5.9 of the Tax Sharing Agreement entitled Japan Restructuring Taxes; and

(v) As described in Section 3.1(a) of the Tax Sharing Agreement, an amount equal to taxes of Agilent Historical Affiliates for periods before their acquisition by the HP Group.

all in accordance with the parties' best estimates on the Separation Date of such amounts as of October 31, 1999; and

(b) Cash Held in Subsidiaries. Additional cash in amounts to be determined by the parties on the Separation Date will be held in certain Subsidiaries of Agilent, all of which are either listed on Schedule 2.2(b) hereto or will be geographical counterparts of Subsidiaries of HP listed on Schedule 2.2(b) hereto.

(c) True-Up. On December 15, 1999, the parties will recalculate the cash payments made pursuant to this Section 2.2, based on the amounts included in the HP balance sheet as of October 31, 1999 and the Agilent balance sheet as of October 31, 1999. To the extent the new calculations differ from the estimates upon which the cash payments made pursuant to this Section 2.2 were based, the parties shall reallocate cash in the amount of such difference.

Section 2.3 Documents to Be Delivered by Agilent. As of the Separation Date, Agilent will or will cause its appropriate Subsidiaries to deliver to HP all of the following:

(a) In each case where Agilent is a party to any agreement or instrument referred to in Section 2.1, a duly executed counterpart of such agreement or instrument; and

(b) Resignations of each person who is an officer or director of any member of HP or its Subsidiaries, immediately prior to the Separation Date, and who will be employees of Agilent from and after the Separation Date.

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ARTICLE III

THE IPO AND ACTIONS PENDING THE IPO

SECTION 3.1 Transactions Prior to the IPO. Subject to the conditions specified in Section 3.4, HP and Agilent shall use their reasonable commercial

efforts to consummate the IPO. Such efforts shall include, but not necessarily be limited to, those specified in this Section 3.1

(a) Registration Statement. Agilent shall file the IPO Registration Statement, and such amendments or supplements thereto, as may be necessary in order to cause the same to become and remain effective as required by law or by the managing underwriters for the IPO (the "Underwriters"), including, but not limited to, filing such amendments to the IPO Registration Statement as may be required by the underwriting agreement to be entered into among Agilent and the Underwriters (the "Underwriting Agreement"), the Securities and Exchange Commission (the "Commission") or federal, state or foreign securities laws. HP and Agilent shall also cooperate in preparing, filing with the Securities and Exchange Commission and causing to become effective a registration statement registering the common stock of Agilent under the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), and any registration statements or amendments thereof which are required to reflect the establishment of, or amendments to, any employee benefit and other plans necessary or appropriate in connection with the IPO, the Separation, the Distribution or the other transactions contemplated by this Agreement.

(b) Underwriting Agreement. Agilent shall enter into the Underwriting Agreement, in form and substance reasonably satisfactory to Agilent, and shall comply with its obligations thereunder.

(c) Other Matters. HP and Agilent shall consult with each other and the Underwriters regarding the timing, pricing and other material matters with respect to the IPO.

(d) Blue Sky. Agilent shall use its reasonable commercial efforts to take all such action as may be necessary or appropriate under state securities and blue sky laws of the United States (and any comparable laws under any foreign jurisdictions) in connection with the IPO.

(e) NYSE or Nasdaq Listing. Agilent shall prepare, file and use reasonable commercial efforts to seek to make effective, an application for listing of the common stock of Agilent issued in the IPO on the New York Stock Exchange (the "NYSE") or the Nasdaq National Market ("Nasdaq"), subject to official notice of issuance.

Section 3.2 Proceeds of the IPO. The IPO will be a primary offering of common stock of Agilent. All of the IPO Net Proceeds will be distributed to HP by means of a dividend declared prior to the IPO, which IPO Net Proceeds HP ultimately intends to use to satisfy obligations to creditors or to repurchase shares of HP common stock within twelve (12) months following the IPO Closing Date.

Section 3.3 Cooperation. Agilent shall consult with, and cooperate in all respects with, HP in connection with the pricing of the common stock of Agilent to be offered in the IPO and shall,

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at HP's direction, promptly take any and all actions necessary or desirable to consummate the IPO as contemplated by the IPO Registration Statement and the Underwriting Agreement.

Section 3.4 Conditions Precedent to Consummation of the IPO. As soon as practicable after the Separation Date, the parties hereto shall use their reasonable commercial efforts to satisfy the conditions listed below to the consummation of the IPO. The IPO Closing Date is currently scheduled to occur prior to December 31, 1999. The obligations of the parties to use their reasonable commercial efforts to consummate the IPO shall be conditioned on the satisfaction, or waiver by HP, of the following conditions:

(a) Registration Statement. The IPO Registration Statement shall have been filed and declared effective by the Commission, and there shall be no stop-order in effect with respect thereto.

(b) Blue Sky. The actions and filings with regard to state securities and blue sky laws of the United States (and any comparable laws under any foreign jurisdictions) described in Section 3.1 shall have been taken and, where applicable, have become effective or been accepted.

(c) NYSE or Nasdaq Listing. The common stock of Agilent to be issued in the IPO shall have been accepted for listing on the NYSE or Nasdaq, on official notice of issuance.

(d) Underwriting Agreement. Agilent shall have entered into the Underwriting Agreement and all conditions to the obligations of Agilent and the Underwriters shall have been satisfied or waived.

(e) Common Stock Ownership. HP shall be satisfied in its sole discretion that it will own at least 80.1% of the outstanding common stock of Agilent following the IPO. All other conditions to permit the Distribution to qualify as a tax-free distribution to HP, Agilent and HP's stockholders shall, to the extent applicable as of the time of the IPO, be satisfied. There shall be no event or condition that is likely to cause any of such conditions not to be satisfied as of the time of the Distribution or thereafter.

(f) No Legal Restraints. No order, injunction or decree issued by any court or agency of competent jurisdiction or other legal restraint or prohibition preventing the consummation of the Separation or the IPO or any of the other transactions contemplated by this Agreement shall be in effect.

(g) Separation. The Separation shall have become effective.

(h) Other Actions. Such other actions as the parties hereto may, based upon the advice of counsel, reasonably request to be taken prior to the IPO in order to assure the successful completion of the IPO shall have been taken.

(i) No Termination. This Agreement shall not have been terminated.

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ARTICLE IV

THE DISTRIBUTION

Section 4.1 The Distribution

(a) Delivery of Shares for Distribution. Subject to Section 4.4 hereof, on or prior to the date the Distribution is effective (the "Distribution Date"), HP will deliver to the distribution agent (the "Distribution Agent") to be appointed by HP to distribute to the stockholders of HP the shares of common stock of Agilent held by HP pursuant to the Distribution for the benefit of holders of record of common stock of HP on the Record Date, a single stock certificate, endorsed by HP in blank, representing all of the outstanding shares of common stock of Agilent then owned by HP, and shall cause the transfer agent for the shares of common stock of HP to instruct the Distribution Agent to distribute on the Distribution Date the appropriate number of such shares of common stock of Agilent to each such holder or designated transferee or transferees of such holder.

(b) Shares Received. Subject to Sections 4.4 and 4.5, each holder of common stock of HP on the Record Date (or such holder's designated transferee or transferees) will be entitled to receive in the Distribution a number of shares of common stock of Agilent equal to the number of shares of common stock of HP held by such holder on the Record Date multiplied by a fraction the numerator of which is the number of shares of common stock of Agilent beneficially owned by HP on the Record Date and the denominator of which is the number of shares of common stock of HP outstanding on the Record Date.

(c) Obligation to Provide Information. Agilent and HP, as the case may be, will provide to the Distribution Agent all share certificates and any

information required in order to complete the Distribution on the basis specified above.

Section 4.2 Actions Prior To The Distribution.

(a) Information Statement. HP and Agilent shall prepare and mail, prior to the Distribution Date, to the holders of common stock of HP, such information concerning Agilent and the Distribution and such other matters as HP shall reasonably determine are necessary and as may be required by law. HP and Agilent will prepare, and Agilent will, to the extent required under applicable law, file with the Commission any such documentation which HP and Agilent determines is necessary or desirable to effectuate the Distribution, and HP and Agilent shall each use its reasonable commercial efforts to obtain all necessary approvals from the Commission with respect thereto as soon as practicable.

(b) Blue Sky. HP and Agilent shall take all such actions as may be necessary or appropriate under the securities or blue sky laws of the United States (and any comparable laws under any foreign jurisdiction) in connection with the Distribution.

(c) NYSE or Nasdaq Listing. Agilent shall prepare and file, and shall use its reasonable commercial efforts to have approved, an application for the listing of the common stock

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of Agilent to be distributed in the Distribution on the NYSE or Nasdaq, subject to official notice of distribution.

(d) Conditions. HP and Agilent shall take all reasonable steps necessary and appropriate to cause the conditions set forth in Section 4.4 to be satisfied and to effect the Distribution on the Distribution Date.

Section 4.3 Sole Discretion of HP. HP currently intends, following the consummation of the IPO, to complete the Distribution by June 1, 2000. HP shall, in its sole and absolute discretion, determine the date of the consummation of the Distribution and all terms of the Distribution, including, without limitation, the form, structure and terms of any transaction(s) and/or offering(s) to effect the Distribution and the timing of and conditions to the consummation of the Distribution. In addition, HP may at any time and from time to time until the completion of the Distribution modify or change the terms of the Distribution, including, without limitation, by accelerating or delaying the timing of the consummation of all or part of the Distribution. Agilent shall cooperate with HP in all respects to accomplish the Distribution and shall, at HP's direction, promptly take any and all actions necessary or desirable to effect the Distribution, including, without limitation, the registration under the Securities Act of the common stock of Agilent on an appropriate registration form or forms to be designated by HP. HP shall select any investment banker(s) and manager(s) in connection with the Distribution, as well as any financial printer, solicitation and/or exchange agent and outside counsel for HP; provided, however, that nothing herein shall prohibit Agilent from engaging (at its own expense) its own financial, legal, accounting and other advisors in connection with the Distribution.

Section 4.4 Conditions To Distribution. The following are conditions to the consummation of the Distribution. The conditions are for the sole benefit of HP and shall not give rise to or create any duty on the part of HP or the HP Board of Directors to waive or not waive any such condition.

(a) IRS Ruling. HP shall have obtained a private letter ruling from the Internal Revenue Service in form and substance satisfactory to HP (in its sole discretion), and such ruling shall remain in effect as of the Distribution Date, to the effect that (i) the transfer by the HP Group to the Agilent Group of the property, subject to liabilities, of the Agilent Business in exchange for the issuance to HP of the stock of Agilent, the distribution of the IPO Net Proceeds and Agilent's assumption of liabilities, followed by the distribution by HP of all of its Agilent stock to the stockholders of HP, will qualify as a

reorganization under Sections 368(a)(1)(D) and 355 of the Code; (ii) no gain or loss will be recognized by HP on its transfer of the property of the Agilent Business to Agilent in exchange for Agilent common stock and the distribution of the IPO Net Proceeds, followed by the transfer of the IPO Net Proceeds to HP's creditors and/or stockholders; (iii) no gain or loss will be recognized by Agilent on its receipt of the property of the Agilent Business from HP in exchange for the issuance of Agilent common stock; and (iv) no gain or loss will be recognized by (and no amount will otherwise be included in the income of) the stockholders of HP upon their receipt of Agilent common stock pursuant to the Distribution.

(b) Government Approvals. Any material governmental approvals and consents necessary to consummate the Distribution shall have been obtained and be in full force and effect;

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(c) No Legal Restraints. No order, injunction or decree issued by any court or agency of competent jurisdiction or other legal restraint or prohibition preventing the consummation of the Distribution shall be in effect and no other event outside the control of HP shall have occurred or failed to occur that prevents the consummation of the Distribution; and

(d) No Material Adverse Effect. No other events or developments shall have occurred subsequent to the IPO Closing Date that, in the judgment of the Board of Directors of HP, would result in the Distribution having a material adverse effect on HP or on the stockholders of HP.

Section 4.5 Fractional Shares. As soon as practicable after the Distribution Date, HP shall direct the Distribution Agent to determine the number of whole shares and fractional shares of common stock of Agilent allocable to each holder of record or beneficial owner of common stock of HP as of the Record Date, to aggregate all such fractional shares and sell the whole shares obtained thereby at the direction of HP, in open market transactions, at then prevailing trading prices, and to cause to be distributed to each such holder or for the benefit of each such beneficial owner to which a fractional share shall be allocable such holder's or owner's ratable share of the proceeds of such sale, after making appropriate deductions of the amount required to be withheld for federal income tax purposes and after deducting an amount equal to all brokerage charges, commissions and transfer taxes attributed to such sale. HP and the Distribution Agent shall use their reasonable commercial efforts to aggregate the shares of common stock of HP that may be held by any beneficial owner thereof through more than one account in determining the fractional share allocable to such beneficial owner.

ARTICLE V

COVENANTS AND OTHER MATTERS

Section 5.1 Other Agreements. In addition to the specific agreements, documents and instruments annexed to this Agreement, HP and Agilent agree to execute or cause to be executed by the appropriate parties and deliver, as appropriate, such other agreements, instruments and other documents as may be necessary or desirable in order to effect the purposes of this Agreement and the Ancillary Agreements.

SECTION 5.2 Further Instruments. At the request of Agilent and without further consideration, HP will execute and deliver, and will cause its applicable Subsidiaries to execute and deliver, to Agilent and its Subsidiaries such other instruments of transfer, conveyance, assignment, substitution and confirmation and take such action as Agilent may reasonably deem necessary or desirable in order more effectively to transfer, convey and assign to Agilent and its Subsidiaries and confirm Agilent's and its Subsidiaries' title to all of the assets, rights and other things of value contemplated to be transferred to Agilent and its Subsidiaries pursuant to this Agreement, the Ancillary Agreements, and any documents referred to therein, to put Agilent and its Subsidiaries in actual possession and operating control thereof and to permit

Agilent and its Subsidiaries to exercise all rights with respect thereto (including, without limitation, rights under contracts and other arrangements as to which the consent of any third party to the transfer thereof shall not have previously been obtained). At the request of HP and without further consideration, Agilent will

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execute and deliver, and will cause its applicable Subsidiaries to execute and deliver, to HP and its Subsidiaries all instruments, assumptions, novations, undertakings, substitutions or other documents and take such other action as HP may reasonably deem necessary or desirable in order to have Agilent fully and unconditionally assume and discharge the liabilities contemplated to be assumed by Agilent under this Agreement or any document in connection herewith and to relieve the HP Group of any liability or obligation with respect thereto and evidence the same to third parties. Neither HP nor Agilent shall be obligated, in connection with the foregoing, to expend money other than reasonable out-of-pocket expenses, attorneys' fees and recording or similar fees. Furthermore, each party, at the request of another party hereto, shall execute and deliver such other instruments and do and perform such other acts and things as may be necessary or desirable for effecting completely the consummation of the transactions contemplated hereby.

Section 5.3 Additional Service Level Agreements. HP and its Subsidiaries and Agilent and its Subsidiaries will enter into interim service level agreements covering the provision of various interim services, including financial, accounting, building services, legal, and other services by HP (and its Subsidiaries) to Agilent (and its Subsidiaries) or, in certain circumstances, vice versa. Such services will generally be provided for a fee equal to the actual Direct Costs and Indirect Costs of providing such services plus five percent (5%). The interim service level agreements will generally provide for a term of two (2) years. However, some interim service level agreements, including those for building services and information technology services, may be extended beyond the initial two-year period. If these agreements are extended, Agilent will reimburse HP at the fair market rental value for the rental component of the building services and cost plus 10% for information technology and other services and the non-rental components of building services. "Direct Costs" shall include compensation and travel expenses attributable to employees, temporary workers, and contractors directly engaged in performing the services as well as materials and supplies consumed in performing the services. "Indirect Costs" shall include occupancy, IT supervision and other overhead burden of the department incurring the direct costs of providing the service.

Section 5.4 Agreement For Exchange of Information. Each of HP and Agilent agrees to provide, or cause to be provided, to each other, at any time before or after the Distribution Date, as soon as reasonably practicable after written request therefor, any Information in the possession or under the control of such party that the requesting party reasonably needs (i) to comply with reporting, disclosure, filing or other requirements imposed on the requesting party (including under applicable securities laws) by a Governmental Authority having jurisdiction over the requesting party, (ii) for use in any other judicial, regulatory, administrative or other proceeding or in order to satisfy audit, accounting, claims, regulatory, litigation or other similar requirements, (iii) to comply with its obligations under this Agreement or any Ancillary Agreement or (iv) in connection with the ongoing businesses of HP or Agilent, as the case may be; provided, however, that in the event that any party determines that any such provision of Information could be commercially detrimental, violate any law or agreement, or waive any attorney-client privilege, the parties shall take all reasonable measures to permit the compliance with such obligations in a manner that avoids any such harm or consequence.

(a) Internal Accounting Controls; Financial Information. After the Separation Date, (i) each party shall maintain in effect at its own cost and expense adequate systems and controls for its business to the extent necessary to enable the other party to satisfy its reporting, accounting, audit

and other obligations, and (ii) each party shall provide, or cause to be provided, to the other party and its Subsidiaries in such form as such requesting party shall request, at no charge to the requesting party, all financial and other data and information as the requesting party determines necessary or advisable in order to prepare its financial statements and reports or filings with any Governmental Authority.

(b) Ownership of Information. Any Information owned by a party that is provided to a requesting party pursuant to this Section 5.4 shall be deemed to remain the property of the providing party. Unless specifically set forth herein, nothing contained in this Agreement shall be construed as granting or conferring rights of license or otherwise in any such Information.

(c) Record Retention. To facilitate the possible exchange of Information pursuant to this Section 5.4 and other provisions of this Agreement after the Distribution Date, each party agrees to use its reasonable commercial efforts to retain all Information in their respective possession or control on the Distribution Date substantially in accordance with the policies of HP as in effect on the Separation Date. However, except as set forth in the Tax Sharing Agreement, at any time after the Distribution Date, each party may amend their respective record retention policies at such party's discretion; provided, however, that if a party desires to effect the amendment within three (3) years after the Distribution Date, the amending party must give thirty (30) days prior written notice of such change in the policy to the other party to this Agreement.

(i) No party will destroy, or permit any of its Subsidiaries to destroy, any Information that exists on the Separation Date (other than Information that is permitted to be destroyed under the current record retention policy of such party) without first using its reasonable commercial efforts to notify the other party of the proposed destruction and giving the other party the opportunity to take possession of such Information prior to such destruction.

(d) Limitation of Liability. No party shall have any liability to any other party in the event that any Information exchanged or provided pursuant to this Section is found to be inaccurate, in the absence of willful misconduct by the party providing such Information. No party shall have any liability to any other party if any Information is destroyed or lost after reasonable commercial efforts by such party to comply with the provisions of Section 5.4(c).

(e) Other Agreements Providing For Exchange of Information. The rights and obligations granted under this Section 5.4 are subject to any specific limitations, qualifications or additional provisions on the sharing, exchange or confidential treatment of Information set forth in this Agreement and any Ancillary Agreement.

(f) Production of Witnesses; Records; Cooperation. After the Distribution Date, except in the case of a legal or other proceeding by one party against another party (which shall be governed by such discovery rules as may be applicable under Section 5.9 or otherwise), each party hereto shall use its reasonable commercial efforts to make available to each other party, upon written request, the former, current and future directors, officers, employees, other personnel and agents of such party as witnesses and any books, records or other documents within its control or which it otherwise has the ability to make available, to the extent that any such person (giving consideration to business demands of such directors, officers, employees, other personnel and agents) or books,

records or other documents may reasonably be required in connection with any legal, administrative or other proceeding in which the requesting party may from

time to time be involved, regardless of whether such legal, administrative or other proceeding is a matter with respect to which indemnification may be sought hereunder. The requesting party shall bear all costs and expenses in connection therewith.

Section 5.5 Auditors and Audits; Annual and Quarterly Statements and Accounting. Each party agrees that, for so long as HP is required in accordance with United States generally accepted accounting principles to consolidate Agilent's results of operations and financial position:

(a) Selection of Auditors. Agilent shall not select a different accounting firm than PricewaterhouseCoopers LLP to serve as its (and its Subsidiaries') independent certified public accountants ("Agilent's Auditors") for purposes of providing an opinion on its consolidated financial statements without HP's prior written consent (which shall not be unreasonably withheld).

(b) Date of Auditors' Opinion and Quarterly Reviews. Agilent shall use its reasonable commercial efforts to enable the Agilent Auditors to complete their audit such that they will date their opinion on Agilent's audited annual financial statements on the same date that HP's independent certified public accountants ("HP's Auditors") date their opinion on HP's audited annual financial statements, and to enable HP to meet its timetable for the printing, filing and public dissemination of HP's annual financial statements. Agilent shall use its reasonable commercial efforts to enable the Agilent Auditors to complete their quarterly review procedures such that they will provide clearance on Agilent's quarterly financial statements on the same date that HP's Auditors provide clearance on HP's quarterly financial statements.

(c) Annual and Quarterly Financial Statements. Agilent shall provide to HP on a timely basis all Information that HP reasonably requires to meet its schedule for the preparation, printing, filing, and public dissemination of HP's annual and quarterly financial statements. Without limiting the generality of the foregoing, Agilent will provide all required financial Information with respect to Agilent and its Subsidiaries to Agilent's Auditors in a sufficient and reasonable time and in sufficient detail to permit Agilent's Auditors to take all steps and perform all reviews necessary to provide sufficient assistance to HP's Auditors with respect to Information to be included or contained in HP's annual and quarterly financial statements. Similarly, HP shall provide to Agilent on a timely basis all Information that Agilent reasonably requires to meet its schedule for the preparation, printing, filing, and public dissemination of Agilent's annual and quarterly financial statements. Without limiting the generality of the foregoing, HP will provide all required financial Information with respect to HP and its Subsidiaries to HP's Auditors in a sufficient and reasonable time and in sufficient detail to permit HP's Auditors to take all steps and perform all reviews necessary to provide sufficient assistance to Agilent's Auditors with respect to Information to be included or contained in Agilent's annual and quarterly financial statements.

(d) Identity of Personnel Performing the Annual Audit and Quarterly Reviews. Agilent shall authorize Agilent's Auditors to make available to HP's Auditors both the personnel who performed or are performing the annual audits and quarterly reviews of Agilent and work papers related to the annual audits and quarterly reviews of Agilent, in all cases within a reasonable time prior to Agilent's Auditors' opinion date, so that HP's Auditors are able to perform the

procedures they consider necessary to take responsibility for the work of Agilent's Auditors as it relates to HP's Auditors' report on HP's financial statements, all within sufficient time to enable HP to meet its timetable for the printing, filing and public dissemination of HP's annual and quarterly statements. Similarly, HP shall authorize HP's Auditors to make available to Agilent's Auditors both the personnel who performed or are performing the annual audits and quarterly reviews of HP and work papers related to the annual audits and quarterly reviews of HP, in all cases within a reasonable time prior to HP's Auditors' opinion date, so that Agilent's Auditors are able to perform the procedures they consider necessary to take responsibility for the work of HP's

Auditors as it relates to Agilent's Auditors' report on Agilent's statements, all within sufficient time to enable Agilent to meet its timetable for the printing, filing and public dissemination of Agilent's annual and quarterly financial statements.

(e) Access to Books and Records. Agilent shall provide HP's internal auditors and their designees access to Agilent's and its Subsidiaries' books and records so that HP may conduct reasonable audits relating to the financial statements provided by Agilent pursuant hereto as well as to the internal accounting controls and operations of Agilent and its Subsidiaries. Similarly, HP shall provide Agilent's internal auditors and their designees access to HP's and its Subsidiaries' books and records so that Agilent may conduct reasonable audits relating to the financial statements provided by HP pursuant hereto as well as to the internal accounting controls and operations of HP and its Subsidiaries

(f) Notice of Change in Accounting Principles. Agilent shall give HP as much prior notice as reasonably practical of any proposed determination of, or any significant changes in, its accounting estimates or accounting principles from those in effect on the Separation Date. Agilent will consult with HP and, if requested by HP, Agilent will consult with HP's independent public accountants with respect thereto. HP shall give Agilent as much prior notice as reasonably practical of any proposed determination of, or any significant changes in, its accounting estimates or accounting principles from those in effect on the Separation Date.

(g) Conflict with Third-Party Agreements. Nothing in Sections 5.4 and 5.5 shall require Agilent to violate any agreement with any third parties regarding the confidentiality of confidential and proprietary information relating to that third party or its business; provided, however, that in the event that Agilent is required under Sections 5.4 and 5.5 to disclose any such information, Agilent shall use all commercially reasonable efforts to seek to obtain such customer's consent to the disclosure of such information.

Section 5.6 Consistency with Past Practices. At all times HP will cause the Agilent Business before the Separation Date to continue to ship products, invoice customers, make payments, maintain properties and otherwise conduct business in the ordinary course, consistent with past practices and will not undertake or permit any arrangement with any third party which is intended to or has the effect of delaying the payment of any account receivable beyond the Separation Date or delaying or accelerating the payment of any account payable before the Separation Date.

Section 5.7 Payment of Expenses. Except as otherwise provided in this Agreement, the Ancillary Agreements or any other agreement between the parties relating to the Separation, the IPO

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or the Distribution, all costs and expenses of the parties hereto in connection with the IPO (excluding underwriting discounts and commissions) and the Distribution and certain costs and expenses of the parties hereto in connection with the Separation shall be paid by HP. Notwithstanding the foregoing, Agilent shall pay any internal fees, costs and expenses incurred by Agilent in connection with the Separation, the IPO and the Distribution.

Section 5.8 Foreign Subsidiaries. HP and Agilent shall cause each of their foreign subsidiaries to execute such local transfer agreements, assignments, assumptions, novations and other documents as shall be necessary to carry out the plan of reorganization described in Exhibit M (the "Non-US Plan") hereto to effect the purposes of this Agreement with respect to their respective operations outside the United States.

Section 5.9 Dispute Resolution. Except as otherwise set forth in the Ancillary Agreements, resolution of any and all disputes arising from or in connection with this Agreement, whether based on contract, tort, or otherwise (collectively, "Disputes"), shall be exclusively governed by and settled in

accordance with the provisions of this Section 5.9.

(a) Negotiation. The parties shall make a good faith attempt to resolve any Dispute arising out of or relating to this Agreement through negotiation. Within thirty (30) days after notice of a Dispute is given by either party to the other party, each party shall select a first tier negotiating team comprised of general manager level employees of such party and shall meet and make a good faith attempt to resolve such Dispute and shall continue to negotiate in good faith in an effort to resolve the Dispute or renegotiate the applicable section or provision without the necessity of any formal proceedings. If the first tier negotiating teams are unable to agree within thirty (30) days of their first meeting, then each party shall select a second tier negotiating team comprised of vice president level employees of such party and shall meet within thirty (30) days after the end of the first thirty (30) day negotiating period to attempt to resolve the matter. During the course of negotiations under this Section 5.9(a), all reasonable requests made by one party to the other for information, including requests for copies of relevant documents, will be honored. The specific format for such negotiations will be left to the discretion of the designated negotiating teams but may include the preparation of agreed upon statements of fact or written statements of position furnished to the other party.

(b) Non-Binding Mediation. In the event that any Dispute arising out of or related to this Agreement is not settled by the parties within fifteen (15) days after the first meeting of the second tier negotiating teams under Section 5.9(a), the parties will attempt in good faith to resolve such Dispute by non-binding mediation in accordance with the American Arbitration Association Commercial Mediation Rules. The mediation shall be held within thirty (30) days of the end of such fifteen (15) day negotiation period of the second tier negotiating teams. Except as provided below in Section 5.9(c), no litigation for the resolution of such dispute may be commenced until the parties try in good faith to settle the dispute by such mediation in accordance with such rules and either party has concluded in good faith that amicable resolution through continued mediation of the matter does not appear likely. The costs of mediation shall be shared equally by the parties to the mediation. Any settlement reached by mediation shall be recorded in writing, signed by the parties, and shall be binding on them.

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(c) Proceedings. Nothing herein, however, shall prohibit either party from initiating litigation or other judicial or administrative proceedings if such party would be substantially harmed by a failure to act during the time that such good faith efforts are being made to resolve the Dispute through negotiation or mediation. In the event that litigation is commenced under this Section 5.9(c), the parties agree to continue to attempt to resolve any Dispute according to the terms of Sections 5.9(a) and 5.9(b) during the course of such litigation proceedings under this Section 5.9(c).

(d) Pay and Dispute. Except as provided herein or in any Ancillary Agreement, in the event of any dispute regarding payment of a third-party invoice (subject to standard verification of receipt of products or services), the party named in a third party's invoice must make timely payment to such third party, even if the party named in the invoice desires to pursue the dispute resolution procedures outlined in this Section 5.9. If the party that paid the invoice is found pursuant to this Section 5.9 to not be responsible for such payment, such paying party shall be entitled to reimbursement, with interest accrued at a compound annual rate of the Prime Rate plus 2%, from the party found responsible for such payment.

Section 5.10 Governmental Approvals. To the extent that the Separation requires any Governmental Approvals, the parties will use their reasonable commercial efforts to obtain any such Governmental Approvals.

Section 5.11 No Representation or Warranty. HP does not, in this Agreement or any other agreement, instrument or document contemplated by this Agreement, make any representation as to, warranty of or covenant with respect

to:

- (a) the value of any asset or thing of value to be transferred to Agilent;
- (b) the freedom from encumbrance of any asset or thing of value to be transferred to Agilent;
- (c) the absence of defenses or freedom from counterclaims with respect to any claim to be transferred to Agilent; or
- (d) the legal sufficiency of any assignment, document or instrument delivered hereunder to convey title to any asset or thing of value upon its execution, deliver and filing.

Except as may expressly be set forth herein or in any Ancillary Agreement, all assets to be transferred to Agilent shall be transferred "AS IS, WHERE IS" and Agilent shall bear the economic and legal risk that any conveyance shall prove to be insufficient to vest in Agilent good and marketable title, free and clear of any lien, claim, equity or other encumbrance.

Section 5.12 Non-Solicitation of Employees. Each party agrees not to directly solicit or recruit the other party's employees for a period of two years following the Distribution Date if such solicitation or recruitment would be disruptive or damaging or would interfere with the operation or business of the other party. This prohibition on solicitation does not apply to actions taken by a party (i) as a result of an employee's affirmative response to a general recruitment effort carried out through a public solicitation or a general solicitation or (ii) as a result of an employee's initiative.

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Section 5.13 Employee Agreements. Definition. As used in this Section 5.13, "Employee Agreement" means the Agreement Regarding Confidential Information and Proprietary Developments and corresponding agreements in foreign countries.

(a) Survival of HP Employee Agreement Obligations and HP's Common Law Rights. The HP Employee Agreements of all former HP employees transferred to Agilent as of the Distribution Date shall remain in full force and effect according to their terms; provided, however, that none of the following acts committed by former HP employees within the scope of their Agilent employment shall constitute a breach of such HP Employee Agreements: (i) the use or disclosure of Confidential Information (as that term is defined in the former HP employee's HP Employee Agreement) for or on behalf of Agilent, if such disclosure is consistent with the license rights granted to Agilent and restrictions imposed on Agilent under this Agreement, any other Ancillary Agreement or any other agreement between the parties, (ii) the disclosure and assignment to Agilent of rights in Proprietary Developments authored or conceived by the former HP employee after the Separation Date and resulting from the use of, or based upon intellectual property (whether patented or not) which is retained by HP (as Proprietary Developments are defined in the former HP employee's HP Employee Agreement); provided, however, that in no event shall such disclosure and assignment be regarded as assigning the underlying intellectual property to Agilent, (iii) the rendering of any services, directly or indirectly, to Agilent to the extent such services are consistent with the assignment or license of rights granted to Agilent and the restrictions imposed on Agilent under this Agreement, any other Ancillary Agreement or any other agreement between the parties and (iv) solicitation of the employees of one party by the other party prior to the Distribution Date. Further, HP retains any rights it has under statute or common law with respect to actions by its former employees to the extent such actions are inconsistent with the rights granted to Agilent and restrictions imposed on Agilent under this Agreement, any other Ancillary Agreement or any other agreement between the parties.

(b) Assignment, Cooperation for Compliance and Enforcement.

(i) HP retains all rights under the HP Employee Agreements of all former HP employees necessary to permit HP to protect the rights and interests of HP, but hereby transfers and assigns to Agilent its rights under the HP Employee Agreements of all former HP employees to the extent required to permit Agilent to enjoin, restrain, recover damages from or obtain specific performance of the HP Employee Agreements or obtain other remedies against any employee who breaches his/her HP Employee Agreement, and to the extent necessary to permit Agilent to protect the rights and interests of the businesses being transferred to Agilent on the Separation Date.

(ii) HP and Agilent agree, at their own respective cost and expense, to use their reasonable efforts to cooperate as follows: (A) Agilent shall advise HP of: (1) any violation(s) of the HP Employee Agreement by former HP employees, and (2) any violation(s) of the Agilent Employee Agreement which affect HP's rights; and (B) HP shall advise Agilent of any violations of the HP Employee Agreement by current or former HP employees which affect Agilent's rights; provided, however, that the foregoing obligations shall only apply to violations which become known to an attorney within the legal department of the party obligated to provide notice thereof.

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(iii) HP and Agilent each may separately enforce the HP Employee Agreements of former HP employees to the extent necessary to reasonably protect their respective interests, provided, however, that (i) Agilent shall not commence any litigation relating thereto without first consulting with HP's Director of Intellectual Property or his/her designee and (ii) HP shall not commence any litigation relating thereto against any former HP employee who is at the time an Agilent employee without first consulting with Agilent's Director of Intellectual Property or his/her designee. If either party, in seeking to enforce any HP Employee Agreement, notifies the other party that it requires, or desires, the other party to join in such action, then the other party shall do so. In addition, if either party commences or becomes a party to any action to enforce a HP Employee Agreement of a former HP employee, the other party shall, whether or not it becomes a party to the action, cooperate with the other party by making available its files and employees who have information or knowledge relevant to the dispute, subject to appropriate measures to protect the confidentiality of any proprietary or confidential information that may be disclosed in the course of such cooperation or action and subject to any relevant privacy laws and regulations. Any such action shall be conducted at the expense of the party bringing the action and the parties shall agree on a case by case basis on compensation, if any, of the other party for the value of the time of such other party's employees as reasonably required in connection with the action.

(iv) HP and Agilent understand and acknowledge that matters relating to the making, performance, enforcement, assignment and termination of employee agreements are typically governed by the laws and regulations of the national, federal, state or local governmental unit where an employee resides, or where an employee's services are rendered, and that such laws and regulations may supersede or limit the applicability or enforceability of this Section 5.13. In such circumstances, HP and Agilent agree to take action with respect to the employee agreements that best accomplishes the parties' objectives as set forth in this Section 5.13 and that is consistent with applicable law.

Section 5.14 Cooperation in Obtaining New Agreements. HP understands that, prior to the Separation Date, Agilent has derived benefits under certain agreements between HP and third parties, which agreements are not being assigned to Agilent in connection with the Separation. Upon the request of Agilent, HP agrees to make introductions to appropriate Agilent personnel to HP's contacts at such third parties, and agrees to provide reasonable assistance to Agilent, at HP's own expense, so that Agilent may obtain agreements from such third parties under substantially equivalent terms and conditions, including financial terms and conditions, that apply to HP. Such assistance may include, but is not limited to, (i) requesting and encouraging such third parties to enter into such agreements with Agilent, (ii) attending meetings and negotiating sessions with Agilent and such third parties, and (iii) participating in buying consortiums

with Agilent. HP also understands that there are certain agreements between HP and third parties, which agreements are being assigned to Agilent in connection with the Separation but which may require the consent of the applicable third party. Upon the request of Agilent, HP agrees to assist Agilent in seeking and obtaining the consent of such third parties to such assignment. The parties expect that the activities contemplated by this Section will be substantially completed by the Distribution Date, but in no event will HP have any obligations hereunder after the first anniversary of the Distribution Date.

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Section 5.16 Newly Discovered Environmental Conditions at Agilent Schedule 1 Facilities. If between the date of this Agreement and the Separation Date, Environmental Conditions (as defined in Section 4.21 of the Indemnification and Insurance Matters Agreement) are discovered on an Agilent Schedule 1 Facility (as defined in Section 4.11 of the Indemnification and Insurance Matters Agreement) for which HP, consistent with its past practices, would accrue a reserve, then HP and Agilent shall determine the allocation of responsibility for any Environmental Actions (as defined in Section 4.20 of the Indemnification and Insurance Matters Agreement) arising, whether before or after the Separation Date, out of such Environmental Conditions, in a manner consistent with the provisions of Section 1.4 of the Indemnification and Insurance Matters Agreement.

ARTICLE VI

MISCELLANEOUS

Section 6.1 Limitation of Liability. IN NO EVENT SHALL ANY MEMBER OF THE HP GROUP OR AGILENT GROUP BE LIABLE TO ANY OTHER MEMBER OF THE HP GROUP OR AGILENT GROUP FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, INCIDENTAL OR PUNITIVE DAMAGES OR LOST PROFITS, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (INCLUDING NEGLIGENCE) ARISING IN ANY WAY OUT OF THIS AGREEMENT, WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; PROVIDED, HOWEVER, THAT THE FOREGOING LIMITATIONS SHALL NOT LIMIT EACH PARTY'S INDEMNIFICATION OBLIGATIONS FOR LIABILITIES TO THIRD PARTIES AS SET FORTH IN THE INDEMNIFICATION AND INSURANCE MATTERS AGREEMENT.

Section 6.2 Entire Agreement. This Agreement, the other Ancillary Agreements and the Exhibits and Schedules referenced or attached hereto and thereto, constitutes the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof.

Section 6.3 Governing Law. This Agreement shall be governed and construed and enforced in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under the principles of conflicts of laws applicable thereto.

Section 6.4 Termination. This Agreement and all Ancillary Agreements may be terminated and the Distribution abandoned at any time prior to the IPO Closing Date by and in the sole discretion of HP without the approval of Agilent. This Agreement may be terminated at any time after the IPO Closing Date and before the Distribution Date by mutual consent of HP and Agilent. In the event of termination pursuant to this Section, no party shall have any liability of any kind to the other party.

Section 6.5 Notices. Any notice, demand, offer, request or other communication required or permitted to be given by either party pursuant to the terms of this Agreement shall be in writing and shall be deemed effectively given the earlier of (i) when received, (ii) when delivered personally, (iii) one (1) business day after being delivered by facsimile (with receipt of appropriate confirmation), (iv) one (1) business day after being deposited with an overnight courier service or (v) four (4) days after being deposited in the

U.S. mail, First Class with postage prepaid, and addressed to the attention of the party's General Counsel at the address of its principal executive office or such other address as a party may request by notifying the other in writing.

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Section 6.6 Counterparts. This Agreement, including the Schedules and Exhibits hereto and the other documents referred to herein, may be executed in counterparts, each of which shall be deemed to be an original but all of which shall constitute one and the same agreement.

Section 6.7 Binding Effect; Assignment. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective legal representatives and successors, and nothing in this Agreement, express or implied, is intended to confer upon any other Person any rights or remedies of any nature whatsoever under or by reason of this Agreement. This Agreement may not be assigned by any party hereto. This Agreement may be enforced separately by each member of the HP Group and each member of the Agilent Group.

Section 6.8 Severability. If any term or other provision of this Agreement or the Schedules or Exhibits attached hereto is determined by a nonappealable decision by a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that transactions contemplated hereby are fulfilled to the fullest extent possible.

Section 6.9 Failure or Indulgence Not Waiver; Remedies Cumulative. No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right. All rights and remedies existing under this Agreement or the Schedules or Exhibits attached hereto are cumulative to, and not exclusive of, any rights or remedies otherwise available.

Section 6.10 Amendment. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to such agreement.

Section 6.11 Authority. Each of the parties hereto represents to the other that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other actions, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is a legal, valid and binding obligation, enforceable against it in accordance with its terms subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

Section 6.12 Interpretation. The headings contained in this Agreement, in any Exhibit or Schedule hereto and in the table of contents to this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. Any capitalized term used in any Schedule or Exhibit but not otherwise defined therein, shall have the meaning assigned to such term in this Agreement. When a reference is made in this Agreement to an Article or a

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Section, Exhibit or Schedule, such reference shall be to an Article or Section of, or an Exhibit or Schedule to, this Agreement unless otherwise indicated.

Section 6.13 Conflicting Agreements. In the event of conflict between this Agreement and any Ancillary Agreement or other agreement executed in connection herewith, the provisions of such other agreement shall prevail.

ARTICLE VII

DEFINITIONS

Section 7.1 Affiliated Company. "Affiliated Company" means, with respect to HP, any entity in which HP holds a 50% or less ownership interest and that is listed on Schedule 7.1(a) hereto and, with respect to Agilent, any entity in which Agilent holds a 50% or less ownership interest and that is listed on Schedule 7.1(b) hereto. Schedules 7.1(a) and 7.1(b) may be amended from time to time after the date hereof upon mutual written consent of the parties.

Section 7.2 Agilent Assets. "Agilent Assets" has the meaning set forth in Section 1.2 of the Assignment Agreement.

Section 7.3 Agilent Business. "Agilent Business" means (a) the business and operations of the business entities of HP currently known under the following names, as described in the IPO Registration Statement and as such business and operations will continue following the Separation Date: (i) the Test and Measurement Organization, (ii) the Semiconductor Products Group, (iii) the Chemical Analysis Group, (iv) the Healthcare Solutions Group and (v) the portion of HP Labs and infrastructure organizations related to these businesses and (b) except as otherwise expressly provided herein, any terminated, divested or discontinued businesses or operations that at the time of termination, divestiture or discontinuation primarily related to the Agilent Business as then conducted.

Section 7.4 Agilent Group. "Agilent Group" means Agilent, each Subsidiary and Affiliated Company of Agilent immediately after the Separation Date or that is contemplated to be a Subsidiary or Affiliated Company of Agilent pursuant to the Non-US Plan and each Person that becomes a Subsidiary or Affiliate Company of Agilent after the Separation Date.

Section 7.5 Agilent Pro Forma Balance Sheet. "Agilent Pro Forma Balance Sheet" means the unaudited pro forma condensed consolidated balance sheet appearing in the IPO Registration Statement.

Section 7.6 Agilent's Auditors. "Agilent's Auditors" means Agilent's independent certified public accountants.

Section 7.7 Ancillary Agreements. "Ancillary Agreements" has the meaning set forth in Section 2.1 hereof.

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Section 7.8 Assignment Agreement. "Assignment Agreement" has the meaning set forth in Section 2.1(a) hereof.

Section 7.9 Business Day. "Business Day" means a day other than a Saturday, a Sunday or a day on which banking institutions located in the State of California are authorized or obligated by law or executive order to close.

Section 7.10 Code. "Code" means the Internal Revenue Code of 1986, as amended from time to time.

Section 7.11 Commission. "Commission" means the Securities and Exchange Commission.

Section 7.12 Disputes. "Disputes" has the meaning set forth in Section 5.9 hereof.

Section 7.13 Distribution. "Distribution" has the meaning set forth in the Recitals hereof.

Section 7.14 Distribution Agent. "Distribution Agent" has the meaning set forth in Section 4.1 hereof.

Section 7.15 Distribution Date. "Distribution Date" has the meaning set forth in Section 4.1 hereof.

Section 7.16 Employee Agreement. "Employee Agreement" has the meaning set forth in Section 5.13(a) hereof.

Section 7.17 Exchange Act. "Exchange Act" means the Securities and Exchange Act of 1934, as amended.

Section 7.18 Governmental Approvals. "Governmental Approvals" means any notices, reports or other filings to be made, or any consents, registrations, approvals, permits or authorizations to be obtained from, any Governmental Authority.

Section 7.19 Governmental Authority. "Governmental Authority" shall mean any federal, state, local, foreign or international court, government, department, commission, board, bureau, agency, official or other regulatory, administrative or governmental authority.

Section 7.20 HP Business. "HP Business" means any business of HP other than the Agilent Business.

Section 7.21 HP Group. "HP Group" means HP, each Subsidiary and Affiliated Company of HP (other than any member of the Agilent Group) immediately after the Separation Date, after giving effect to the Non-US Plan and each Person that becomes a Subsidiary or Affiliate Company of HP after the Separation Date.

Section 7.22 HP's Auditors. "HP's Auditors" means HP's independent certified public accountants.

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Section 7.23 Information. "Information" means information, whether or not patentable or copyrightable, in written, oral, electronic or other tangible or intangible forms, stored in any medium, including studies, reports, records, books, contracts, instruments, surveys, discoveries, ideas, concepts, know-how, techniques, designs, specifications, drawings, blueprints, diagrams, models, prototypes, samples, flow charts, data, computer data, disks, diskettes, tapes, computer programs or other software, marketing plans, customer names, communications by or to attorneys (including attorney-client privileged communications), memos and other materials prepared by attorneys or under their direction (including attorney work product), and other technical, financial, employee or business information or data.

Section 7.24 IPO. "IPO" has the meaning set forth in the Recitals hereof.

Section 7.25 IPO Closing Date. "IPO Closing Date" has the meaning set forth in the Recitals hereof.

Section 7.26 IPO Net Proceeds. "IPO Net Proceeds" has the meaning set forth in the Recitals hereof.

Section 7.27 IPO Over-allotment Option. "IPO Over-allotment Option" has the meaning set forth in the Recitals hereof.

Section 7.28 IPO Registration Statement. "IPO Registration Statement" means the registration statement on Form S-1 pursuant to the Securities Act of 1933, as amended, to be filed with the Commission registering the shares of common stock of Agilent to be issued in the IPO, together with all amendments thereto.

Section 7.29 Nasdaq. "Nasdaq" means the Nasdaq National Market.

Section 7.30 Non-US Plan. "Non-US Plan" has the meaning set forth in Section 5.8 hereof.

Section 7.31 NYSE. "NYSE" means the New York Stock Exchange.

Section 7.32 Person. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization and a governmental entity or any department, agency or political subdivision thereof.

Section 7.33 Prime Rate. "Prime Rate" means the prime rate as published in the Wall Street Journal on the date of determination.

Section 7.34 Record Date. "Record Date" means the close of business on the date to be determined by the Board of Directors of HP as the record date for determining the stockholders of HP entitled to receive shares of common stock of Agilent in the Distribution.

Section 7.35 Retained Payables. "Retained Payables" means (i) all accounts payable and other obligations of payment for goods or services purchased, leased or otherwise received in the

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conduct of the Agilent Business that as of the Separation Date are payable to a third Person by HP or any of HP's Subsidiaries, whether past due, due or to become due, including any interest, sales or use taxes, finance charges, late or returned check charges and other obligations of HP or any of HP's Subsidiaries with respect thereto, and any obligations related to any of the foregoing and (ii) all employee compensation Liabilities and other miscellaneous Liabilities for which an adjustment is made in the Agilent Pro Forma Balance Sheet.

Section 7.36 Retained Receivables. "Retained Receivables" means (i) all accounts receivable and other rights to payment for goods or services sold, leased or otherwise provided in the conduct of the Agilent Business that as of the Separation Date are payable by a third Person to HP or any of HP's Subsidiaries, whether past due, due or to become due, including any interest, sales or use taxes, finance charges, late or returned check charges and other obligations of the account debtor with respect thereto, and any proceeds of any of the foregoing and (ii) all other miscellaneous Assets for which an adjustment is made in the Agilent Pro Forma Balance Sheet.

Section 7.37 Separation. "Separation" has the meaning set forth in the Recitals hereof.

Section 7.38 Separation Date. "Separation Date" has the meaning set forth in Section 1.1 hereof.

Section 7.39 Subsidiary. "Subsidiary" means with respect to any specified Person, any corporation, any limited liability company, any partnership or other legal entity of which such Person or its Subsidiaries owns, directly or indirectly, more than 50% of the stock or other equity interest entitled to vote on the election of the members of the board of directors or similar governing body. Unless context otherwise requires, reference to HP and its Subsidiaries shall not include the subsidiaries of HP that will be transferred to Agilent after giving effect to the Separation, including the actions taken pursuant to the Non-US Plan.

Section 7.40 Underwriters. "Underwriters" means the underwriters of the IPO.

Section 7.41 Underwriting Agreement. "Underwriting Agreement" has the meaning set forth in Section 3.1(a) hereof.

Section 7.42 WSGR. "WSGR" means Wilson Sonsini Goodrich & Rosati, Professional Corporation.

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WHEREFORE, the parties have signed this Master Separation and Distribution Agreement effective as of the date first set forth above.

HEWLETT-PACKARD COMPANY

AGILENT TECHNOLOGIES, INC.

By: /s/ Robert Wayman

By: /s/ Edward W. Barnholt

Name: Robert P. Wayman

Name: Edward W. Barnholt

Title: Executive Vice President of
Finance and Administration,
Chief Financial Officer

Title: President and Chief Executive
Officer

Schedule 2.1(b)

Subsidiaries and Other Holdings of HP to be Transferred to Agilent

Subsidiaries

Agilent Technologies World Trade, Inc.
Heartstream, Inc.
Pete, Inc.
Rockland Technologies Inc.
Scope Communications, Inc.
Telegra Corporation

Other Holdings

Candescent Technologies Corporation
Cascade Microtech Inc.
HP-Sci Tech Joint Software Development Center Co. Ltd.
i-Stat Corporation
Microelectronics & Computer Technology Group

Schedule 2.2(b)

Cash Held in Subsidiaries

China Hewlett-Packard Company Limited
Heartstream, Inc.
Hewlett-Packard Belgium SA/NV
Hewlett-Packard Coordination Center, S.C.
Hewlett-Packard Espanola, S.A.
Hewlett-Packard Japan, Ltd.
Hewlett-Packard Malaysia Sdn Bhd
Hewlett-Packard Microwave Products (M) Sdn Bhd
Hewlett-Packard Oy
Hewlett-Packard S.A.S.
Hewlett-Packard Taiwan Ltd.
Yokogawa Analytical Systems, Inc.

Schedule 7.1 (a)

Affiliated Companies of HP to be Included in the HP Group

Ericsson-HP Telecom (Sweden)

Ericsson-HP Telecom (France)

Hua-Pua

Hugin Expert

Idea LLC

ImagineCard

Intria-HP

Intria-HP Potomac

Liquidity Management Group

PT Berka Services

Putial Ome

Sopura Systems

Syc

Schedule 7.1(b)

Affiliated Companies of Agilent to be Included in the Agilent Group

Chartered Semiconductor Partners Singapore

LumiLEDs

General Assignment and Assumption Agreement

between

Hewlett-Packard Company

and

Agilent Technologies, Inc.

_____, 1999

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SCHEDULES

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Schedule 1.3(b) (i)	Excluded Liabilities

GENERAL ASSIGNMENT AND ASSUMPTION AGREEMENT

This General Assignment and Assumption Agreement (this "Agreement") is entered into on _____, 1999 between Hewlett-Packard Company, a Delaware corporation ("HP"), and Agilent Technologies, Inc., a Delaware corporation ("Agilent"). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to such terms in Article IV hereof.

RECITALS

WHEREAS, HP hereby and by certain other instruments of even date herewith

transfers or will transfer to Agilent effective as of the Separation Date, substantially all of the business and assets of the Agilent Business owned by HP in accordance with the Master Separation and Distribution Agreement dated as of August 12, 1999 between the parties (the "Separation Agreement"). It is the intent of the parties hereto, by this Agreement and the other agreements and instruments provided for in the Separation Agreement, that HP and its Subsidiaries convey to Agilent and its Subsidiaries substantially all of the business and assets of the Agilent Business.

WHEREAS, it is further intended between the parties that Agilent assume certain of the liabilities related to the Agilent Business, as provided in this Agreement, the Separation Agreement or the other agreements and instruments provided for in the Separation Agreement.

NOW, THEREFORE, in consideration of the foregoing and the covenants and agreements set forth below, the parties hereto agree as follows:

ARTICLE I

CONTRIBUTION AND ASSUMPTION

Section 1.1 Contribution Of Assets And Assumption Of Liabilities.

(a) Transfer of Assets. Effective on the Separation Date, HP hereby assigns, transfers, conveys and delivers to Agilent, and agrees to cause its applicable Subsidiaries to assign, transfer, convey and deliver to Agilent's applicable Subsidiaries pursuant to the relevant Local Transfer Agreements, and Agilent hereby accepts from HP, and agrees to cause its applicable Subsidiaries to accept from HP's applicable Subsidiaries, all of HP's and its applicable Subsidiaries' respective right, title and interest in all Agilent Assets, other than the Delayed Transfer Assets; provided, however, that any Agilent Assets that are specifically assigned or transferred pursuant to another Ancillary Agreement shall not be assigned or transferred pursuant to this Section 1.1(a).

(b) Assumption of Liabilities. Effective on the Separation Date, Agilent hereby assumes and agrees faithfully to perform and fulfill, all the Agilent Liabilities held by HP, other than the Delayed Transfer Liabilities, in accordance with their respective terms, and agrees to cause its applicable Subsidiaries to assume, perform and fulfill all the Agilent Liabilities held by its Subsidiaries (other than the Delayed Transfer Liabilities), in accordance with their respective terms. Agilent shall be

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responsible for all Agilent Liabilities held by HP, regardless of when or where such Liabilities arose or arise, or whether the facts on which they are based occurred prior to, on or after the date hereof, regardless of where or against whom such Liabilities are asserted or determined (including any Agilent Liabilities arising out of claims made by HP's or Agilent's respective directors, officers, consultants, independent contractors, employees or agents against any member of the HP Group or the Agilent Group) or whether asserted or determined prior to the date hereof, and regardless of whether arising from or alleged to arise from negligence, recklessness, violation of law, fraud or misrepresentation by any member of the HP Group or the Agilent Group or any of their respective directors, officers, employees or agents.

(c) Delayed Transfer Assets and Liabilities. Each of the parties hereto agrees that the Delayed Transfer Assets will be assigned, transferred, conveyed and delivered, and the Delayed Transfer Liabilities will be assumed, in accordance with the terms of the agreements that provide for such assignment, transfer, conveyance and delivery, or such assumption, after the date of this Agreement or as otherwise set forth on Schedule 1.1(c). Following such assignment, transfer, conveyance and delivery of any Delayed Transfer Asset, or the assumption of any Delayed Transfer Liability, the applicable Delayed Transfer Asset or Delayed Transfer Liability shall be treated for all purposes of this Agreement and the Ancillary Agreements as an Agilent Asset or as an Agilent Liability, as the case may be.

(d) Misallocated Assets. In the event that at any time or from time to time (whether prior to, on or after the Separation Date), any party hereto (or any member of such party's respective Group), shall receive or otherwise possess any Asset that is allocated to any other Person pursuant to this Agreement or any Ancillary Agreement, such party shall promptly transfer, or cause to be transferred, such Asset to the Person so entitled thereto. Prior to any such transfer, the Person receiving or possessing such Asset shall hold such Asset in trust for any such other Person.

Section 1.2 Agilent Assets.

(a) Included Assets. For purposes of this Agreement, "Agilent Assets" shall mean (without duplication) the following Assets, except as otherwise provided for in any Ancillary Agreement or other express agreement of the parties:

(i) all Assets reflected in the Agilent Balance Sheet, subject to any dispositions of such Assets subsequent to the date of the Agilent Balance Sheet;

(ii) all Assets that have been written off, expensed or fully depreciated that, had they not been written off, expensed or fully depreciated, would have been reflected in the Agilent Balance Sheet in accordance with the principles and accounting policies under which the Agilent Balance Sheet was prepared;

(iii) all Assets acquired by HP or its Subsidiaries after the date of the Agilent Balance Sheet that would be reflected in the consolidated balance sheet of Agilent as of the

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Separation Date if such consolidated balance sheet was prepared using the same principles and accounting policies under which the Agilent Balance Sheet was prepared;

(iv) all Assets that are used primarily by the Agilent Business at the Separation Date but are not reflected in the Agilent Balance Sheet due to mistake or unintentional omission; provided, however, that no Asset shall be an Agilent Asset unless Agilent or its Subsidiaries has, on or before the first anniversary of the Distribution Date, given HP or its Subsidiaries notice that such Asset is an Agilent Asset;

(v) all Agilent Contingent Gains;

(vi) all Agilent Contracts;

(vii) all issued and outstanding capital stock of Agilent World Trade;

(viii) all issued and outstanding stock, investments or similar interests of HP and the Subsidiaries of HP listed on Schedule 2.1(b) of the Separation Agreement;

(ix) all computers, desks, equipment (including equipment used for research and development) and other Assets used primarily by employees of HP that will become employees of Agilent in connection with the Separation; and

(x) cash, as set forth in Section 2.2 of the Separation Agreement;

(xi) to the extent permitted by law and subject to the Indemnification and Insurance Matters Agreement, all rights of any member of the Agilent Group under any of HP's Insurance Policies or other insurance policies issued by Persons unaffiliated with HP; and

(xii) all Assets that are expressly contemplated by this Agreement, the Separation Agreement or any other Ancillary Agreement (or Schedule 1.2(a)(xii) or any other Schedule hereto or thereto) as Assets to be transferred to Agilent or any other member of the Agilent Group.

Notwithstanding the foregoing, any Assets held directly or indirectly by Agilent World Trade or any Subsidiaries of HP listed on Schedule 2.1(b) of the Separation Agreement shall not be assigned or transferred pursuant to Section 1.1(a), and the Agilent Assets shall not in any event include the Excluded Assets referred to in Section 1.2(b) below.

(b) Excluded Assets. For the purposes of this Agreement, "Excluded Assets" shall mean:

- (i) the Assets listed or described on Schedule 1.2(b) (i);
- (ii) the Retained Receivables; and

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(iii) any Assets that are expressly contemplated by the Separation Agreement, this Agreement or any other Ancillary Agreement (or the Schedules hereto or thereto) as Assets to be retained by HP or any other member of the HP Group.

Section 1.3 Agilent Liabilities.

(a) Included Liabilities. For the purposes of this Agreement, "Agilent Liabilities" shall mean (without duplication) the following Liabilities, except as otherwise provided for in any Ancillary Agreement or other express agreement of the parties:

(i) all Liabilities reflected in the Agilent Balance Sheet, subject to any discharge of such Liabilities subsequent to the date of the Agilent Balance Sheet;

(ii) all Liabilities of HP or its Subsidiaries that arise after the date of the Agilent Balance Sheet that would be reflected in the consolidated balance sheet of Agilent as of the Separation Date if such consolidated balance sheet was prepared using the same principles and accounting policies under which the Agilent Balance Sheet was prepared;

(iii) all Liabilities that are related primarily to the Agilent Business at the Separation Date but are not reflected in the Agilent Balance Sheet due to mistake or unintentional omission; provided, however, that no Liability shall be an Agilent Liability unless HP or its Subsidiaries, on or before the first anniversary of the Distribution Date, has given Agilent or its Subsidiaries notice that such Liability is an Agilent Liability;

(iv) all Agilent Contingent Liabilities;

(v) all Liabilities (other than Liabilities for Taxes), whether arising before, on or after the Separation Date, primarily relating to, arising out of or resulting from:

(1) the operation of the Agilent Business, as conducted at any time prior to, on or after the Separation Date (including any Liability relating to, arising out of or resulting from any act or failure to act by any director, officer, employee, agent or representative (whether or not such act or failure to act is or was within such Person's authority));

(2) the operation of any business conducted by any member of the Agilent Group at any time after the Separation Date (including any Liability relating to, arising out of or resulting from any act or failure to act by any director, officer, employee, agent or representative (whether or not such act or failure to act is or was within such Person's authority)); or

(3) any Agilent Assets;

(vi) all Liabilities relating to, arising out of or resulting from any of the terminated, divested or discontinued businesses and operations listed

or described on Schedule 1.3(a)(vi); and

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(vii) all Liabilities that are expressly contemplated by this Agreement, Schedule 1.3(a)(vii), the Separation Agreement or any other Ancillary Agreement (or the Schedules hereto or thereto) as Liabilities to be assumed by Agilent or any member of the Agilent Group, and all agreements, obligations and Liabilities of any member of the Agilent Group under this Agreement or any of the Ancillary Agreements.

Notwithstanding the foregoing, any Liabilities of Agilent World Trade or any Subsidiaries of HP listed on Schedule 2.1(b) of the Separation Agreement shall not be assumed pursuant to Section 1.2(a), and the Agilent Liabilities shall not include the Excluded Liabilities referred to in Section 1.3(b) below.

(b) Excluded Liabilities. For the purposes of this Agreement, "Excluded Liabilities" shall mean:

(i) all Liabilities listed or described in Schedule 1.3(b)(i);

(ii) the Retained Payables;

(iii) all Insured Agilent Liabilities;

(iv) all Environmental Actions set forth in Section 1.4(b) of the Indemnification and Insurance Matters Agreement; and

(v) all Liabilities that are expressly contemplated by this Agreement, the Separation Agreement or any other Ancillary Agreement (or the Schedules hereto or thereto) as Liabilities to be retained or assumed by HP or any other member of the HP Group, and all agreements and obligations of any member of the HP Group under the Separation Agreement, this Agreement or any other Ancillary Agreement.

Section 1.4 The Non-us Plan.

(a) Consummation of Non-US Plan. Each of HP and Agilent shall take, and shall cause each member of its respective Group to take, such action as reasonably necessary to consummate the transactions contemplated by the Non-US Plan (whether prior to, on or after the Separation Date). Notwithstanding anything in this Agreement, the Separation Agreement or in any other Ancillary Agreement to the contrary, no party to a Local Transfer Agreement shall be entitled to receive or retain any Asset unless such party shall have paid any consideration contemplated to be paid in connection therewith pursuant to the Non-US Plan.

(b) Transfer of Stock. Effective on the Separation Date, HP shall transfer all of its right, title and interest in and to all of the issued and outstanding capital stock in Agilent World Trade and the other Subsidiaries listed in Schedule 2.1(b) of the Separation Agreement, to Agilent by means of a contribution of such capital stock by HP to Agilent. The parties hereto shall execute, or cause to be

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executed, such transfer instruments as they mutually deem appropriate to effectuate and evidence such transfer.

Section 1.5 Methods Of Transfer And Assumption.

(a) Terms of Other Ancillary Agreements Govern. The parties shall enter into the other Ancillary Agreements, on or about the date of this Agreement. To the extent that the transfer of any Agilent Asset or the assumption of any Agilent Liability is expressly provided for by the terms of any other Ancillary Agreement, the terms of such other Ancillary Agreement shall effect, and

determine the manner of, the transfer or assumption. It is the intent of the parties that pursuant to Sections 1.1, 1.2 and 1.3, the transfer and assumption of all other Agilent Assets and Agilent Liabilities, other than Delayed Transfer Assets and Delayed Transfer Liabilities, shall be made effective as of the Separation Date; provided, however, that circumstances in various jurisdictions outside the United States may require the transfer of certain Assets and the assumption of certain Liabilities to occur in such other manner and at such other time as the parties shall agree, as provided in Section 1.4 hereof.

(b) Mistaken Assignments and Assumptions. In addition to those transfers and assumptions accurately identified and designated by the parties to take place but which the parties are not able to effect prior to the Separation Date, there may exist (i) Assets that the parties discover were, contrary to the agreements between the parties, by mistake or omission, transferred to Agilent or retained by HP or (ii) Liabilities that the parties discover were, contrary to the agreements between the parties, by mistake or omission, assumed by Agilent or not assumed by Agilent. The parties shall cooperate in good faith to effect the transfer or re-transfer of such Assets, and/or the assumption or re-assumption of such Liabilities, to or by the appropriate party and shall not use the determination that remedial actions need to be taken to alter the original intent of the parties hereto with respect to the Assets to be transferred to or Liabilities to be assumed by Agilent. Each party shall reimburse the other or make other financial adjustments (e.g., without limitation, cash reserves) or other adjustments to remedy any mistakes or omissions relating to any of the Assets transferred hereby or any of the Liabilities assumed hereby.

(c) Transfer of Assets and Liabilities Not Included in Agilent Assets and Agilent Liabilities. In the event the parties discover Assets and Liabilities that relate primarily to the Agilent Business but do not constitute Agilent Assets under Section 1.2 or Agilent Liabilities under Section 1.3, the parties shall cooperate in good faith to effect the transfer of such Assets at book value, or the assumption of such Liabilities, to Agilent or its Subsidiaries and shall not use the determination of remedial actions contemplated in the Separation Agreement to alter the original intent of the parties hereto with respect to the Assets to be transferred to or Liabilities to be assumed by Agilent. Each party shall reimburse the other or make other financial adjustments (e.g., without limitation, cash reserves) or other adjustments to remedy any mistakes or omissions relating to any of the Assets transferred hereby or any of the Liabilities assumed hereby.

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(d) Documents Relating to Other Transfers of Assets and Assumption of Liabilities. In furtherance of the assignment, transfer and conveyance of Agilent Assets and the assumption of Agilent Liabilities set forth in Sections 1.5(a), (b) and (c) and certain Ancillary Agreements, simultaneously with the execution and delivery hereof or as promptly as practicable thereafter, (i) HP shall execute and deliver, and shall cause its Subsidiaries in accordance with Local Transfer Agreements to execute and deliver, such bills of sale, stock powers, certificates of title, assignments of contracts and other instruments of transfer, conveyance and assignment as and to the extent necessary to evidence the transfer, conveyance and assignment of all of HP's and its Subsidiaries' right, title and interest in and to the Agilent Assets to Agilent and (ii) Agilent shall execute and deliver, to HP and its Subsidiaries such bills of sale, stock powers, certificates of title, assumptions of contracts and other instruments of assumption as and to the extent necessary to evidence the valid and effective assumption of the Agilent Liabilities by Agilent.

Section 1.6 Governmental Approvals And Consents.

(a) Transfer In Violation of Laws. If and to the extent that the valid, complete and perfected transfer assignment or novation to the Agilent Group of any Agilent Assets and Agilent Liabilities (or from the Agilent Group of any Non-Agilent Assets) would be a violation of applicable laws or require any Consent or Governmental Approval in connection with the Separation, the IPO or the Distribution, then, unless HP shall otherwise determine, the transfer, assignment or novation to or from the Agilent Group, as the case may be, of such

Agilent Assets or Non-Agilent Assets, respectively, shall be automatically deemed deferred and any such purported transfer, assignment or novation shall be null and void until such time as all legal impediments are removed and/or such Consents or Governmental Approvals have been obtained. Notwithstanding the foregoing, such Asset shall still be considered an Agilent Asset for purposes of determining whether any Liability is an Agilent Liability; provided, however, that if such covenants or Governmental Approvals have not been obtained within six months of the Distribution Date, the parties will use their reasonable commercial efforts to achieve an alternative solution in accordance with the parties' intentions.

(b) Transfers Not Consummated Prior to Separation Date. If the transfer, assignment or novation of any Assets intended to be transferred or assigned hereunder, including pursuant to the Non-US Plan, is not consummated prior to or on the Separation Date, whether as a result of the provisions of Section 1.6(a) or for any other reason, then the Person retaining such Asset shall thereafter hold such Asset for the use and benefit, insofar as reasonably possible, of the Person entitled thereto (at the expense of the Person entitled thereto). In addition, the Person retaining such Asset shall take such other actions as may be reasonably requested by the Person to whom such Asset is to be transferred in order to place such Person, insofar as reasonably possible, in the same position as if such Asset had been transferred as contemplated hereby and so that all the benefits and burdens relating to such Agilent Assets (or such Non-Agilent Assets, as the case may be), including possession, use, risk of loss, potential for gain, and dominion, control and command over such Assets, are to inure from and after the Separation Date to the Agilent Group (or the HP Group, as the case may be). If and when the Consents and/or Governmental Approvals, the absence of which caused the deferral of transfer of any Asset pursuant to Section 1.6(a), are obtained, the transfer of

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the applicable Asset shall be effected in accordance with the terms of this Agreement and/or the applicable Ancillary Agreement.

(c) Expenses. The Person retaining an Asset due to the deferral of the transfer of such Asset shall not be obligated, in connection with the foregoing, to expend any money unless the necessary funds are advanced by the Person entitled to the Asset, other than reasonable out-of-pocket expenses, attorneys' fees and recording or similar fees, all of which shall be promptly reimbursed by the Person entitled to such Asset.

Section 1.7 Nonrecurring Costs And Expenses. Notwithstanding anything herein to the contrary, any nonrecurring costs and expenses incurred by the parties hereto to effect the transactions contemplated hereby which are not allocated pursuant to the terms of the Separation Agreement, this Agreement or any other Ancillary Agreement shall be the responsibility of the party which incurs such costs and expenses.

Section 1.8 Novation Of Assumed Agilent Liabilities.

(a) Reasonable Commercial Efforts. Each of HP and Agilent, at the request of the other, shall use their reasonable commercial efforts to obtain, or to cause to be obtained, any consent, substitution, approval or amendment required to novate (including with respect to any federal government contract) or assign all rights and obligations under agreements, leases, licenses and other obligations or Liabilities (including Agilent OFLs) of any nature whatsoever that constitute Agilent Liabilities or to obtain in writing the unconditional release of all parties to such arrangements other than any member of the Agilent Group, so that, in any such case, Agilent and its Subsidiaries will be solely responsible for such Liabilities; provided, however, that neither HP, Agilent nor their Subsidiaries shall be obligated to pay any consideration therefor to any third party from whom such consents, approvals, substitutions and amendments are requested.

(b) Inability to Obtain Novation. If HP or Agilent is unable to obtain, or to cause to be obtained, any such required consent, approval, release,

substitution or amendment, the applicable member of the HP Group shall continue to be bound by such agreements, leases, licenses and other obligations and, unless not permitted by law or the terms thereof (except to the extent expressly set forth in this Agreement, the Separation Agreement or any other Ancillary Agreement), Agilent shall, as agent or subcontractor for HP or such other Person, as the case may be, pay, perform and discharge fully, or cause to be paid, transferred or discharged all the obligations or other Liabilities of HP or such other Person, as the case may be, thereunder from and after the date hereof. HP shall, without further consideration, pay and remit, or cause to be paid or remitted, to Agilent or its appropriate Subsidiary promptly all money, rights and other consideration received by it or any member of its respective Group in respect of such performance (unless any such consideration is an Excluded Asset). If and when any such consent, approval, release, substitution or amendment shall be obtained or such agreement, lease, license or other rights or obligations shall otherwise become assignable or able to be novated, HP shall thereafter assign, or cause to be assigned, all its rights, obligations and other Liabilities thereunder or any rights or obligations of any member of its

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respective Group to Agilent without payment of further consideration and Agilent shall, without the payment of any further consideration, assume such rights and obligations.

ARTICLE II

LITIGATION

Section 2.1 Allocation.

(a) Litigation to Be Transferred to Agilent. Notwithstanding any contrary provisions in the provisions of the Indemnification and Insurance Matters Agreement, on the Separation Date, the responsibilities for management of the litigation identified in Section 2.1(a) of a litigation disclosure letter (the "Litigation Disclosure Letter"), which will be delivered by HP to Agilent on the Separation Date, shall be transferred in their entirety from HP and its Subsidiaries to Agilent and its Subsidiaries. As of the Separation Date and thereafter, Agilent shall manage the defense of this litigation and shall cause its applicable Subsidiaries to do the same. HP and its Subsidiaries must first obtain the prior consent of Agilent or its applicable Subsidiary for any action taken subsequent to the Separation Date in connection with the litigation identified in the Litigation Disclosure Letter, which consent cannot be unreasonably withheld or delayed. All other matters relating to such litigation, including but not limited to indemnification for such claims, shall be governed by the provisions of the Indemnification and Insurance Matters Agreement.

(b) Litigation to be Defended by HP at Agilent's Expense. Notwithstanding any contrary provisions in the Indemnification and Insurance Matters Agreement, HP shall defend, and shall cause its applicable Subsidiaries to defend, the litigation identified in Section 2.1(b) of the Litigation Disclosure Letter. All other matters relating to such litigation, including but not limited to indemnification for such claims, shall be governed by the provisions of the Indemnification and Insurance Matters Agreement.

(c) All Other Litigation. All other litigation outstanding at the Separation Date not included in the Litigation Disclosure Letter shall remain with HP, and Agilent shall have no liability in connection with, or responsibility for defending, such litigation.

Section 2.2 Cooperation. HP and Agilent and their respective Subsidiaries shall cooperate with each other in the defense of any litigation covered under this Article II and afford to each other reasonable access upon reasonable advance notice to witnesses and information (other than information protected from disclosure by applicable privileges) that is reasonably required to defend this litigation as set forth in Section 5.4 of the Separation Agreement. The foregoing agreement to cooperate includes, but is not limited to, an obligation to provide access to qualified assistance to provide information, witnesses and

documents to respond to discovery requests in specific lawsuits. In such cases, cooperation shall be timely so that the party responding to discovery may meet all court-imposed deadlines. The party requesting information shall reimburse the party providing information consistent with the terms of Section 5.4 of the Separation

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Agreement. The obligations set forth in this paragraph are more clearly defined in Section 5.4 of the Separation Agreement, to which reference is hereby made.

ARTICLE III

MISCELLANEOUS

Section 3.1 Entire Agreement. This Agreement, the Master Separation Agreement, the other Ancillary Agreements and the Exhibits and Schedules referenced or attached hereto and thereto, constitutes the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof.

Section 3.2 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto.

Section 3.3 Notices. Any notice, demand, offer, request or other communication required or permitted to be given by either party pursuant to the terms of this Agreement shall be in writing and shall be deemed effectively given the earlier of (i) when received, (ii) when delivered personally, (iii) one (1) business day after being delivered by facsimile (with receipt of appropriate confirmation), (iv) one (1) business day after being deposited with an overnight courier service or (v) four (4) days after being deposited in the US mail, First Class with postage prepaid, and addressed to the attention of the party's General Counsel at the address of its principal executive office or such other address as a party may request by notifying the other in writing.

Section 3.4 Parties In Interest. This Agreement, including the Schedules and Exhibits hereto, and the other documents referred to herein, shall be binding upon and inure solely to the benefit of each party hereto and their legal representatives and successors, and nothing in this Agreement, express or implied, is intended to confer upon any other Person any rights or remedies of any nature whatsoever under or by reason of this Agreement.

Section 3.5 Counterparts. This Agreement, including the Schedules and Exhibits hereto, and the other documents referred to herein, may be executed in counterparts, each of which shall be deemed to be an original but all of which shall constitute one and the same agreement.

Section 3.6 Assignment. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective legal representatives and successors. This Agreement may not be assigned by any party hereto.

Section 3.7 Severability. If any term or other provision of this Agreement or the Schedules or Exhibits attached hereto is determined by a nonappealable decision by a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of

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law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties

hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that transactions contemplated hereby are fulfilled to the fullest extent possible.

SECTION 3.8 Failure or Indulgence Not Waiver; Remedies Cumulative. No failure or delay on the part of any party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right. All rights and remedies existing under this Agreement or the Schedules or Exhibits attached hereto are cumulative to, and not exclusive of, any rights or remedies otherwise available.

SECTION 3.9 Amendment. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to such agreement.

SECTION 3.10 Authority. Each of the parties hereto represents to the other that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other action, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is a legal, valid and binding obligation, enforceable against it in accordance with its terms subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

SECTION 3.11 Interpretation. The headings contained in this Agreement, in any Exhibit or Schedule hereto and in the table of contents to this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. Any capitalized term used in any Schedule or Exhibit but not otherwise defined therein, shall have the meaning assigned to such term in this Agreement. When a reference is made in this Agreement to an Article or a Section, Exhibit or Schedule, such reference shall be to an Article or Section of, or an Exhibit or Schedule to, this Agreement unless otherwise indicated.

SECTION 3.12 Conflicting Agreements. In the event of conflict between this Agreement and any other Ancillary Agreement or other agreement executed in connection herewith, the provisions of Ancillary Agreement and such other agreement shall prevail.

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ARTICLE IV

DEFINITIONS

SECTION 4.1 Action. "Action" means any demand, action, suit, countersuit, arbitration, inquiry, proceeding or investigation by or before any federal, state, local, foreign or international governmental authority or any arbitration or mediation tribunal.

SECTION 4.2 Affiliated Company. "Affiliated Company" means, with respect to HP, any entity in which HP holds a 50% or less ownership interest and that is listed on Schedule 7.1(a) to the Separation Agreement and, with respect to Agilent, any entity in which Agilent holds a 50% or less ownership interest and that is listed on Schedule 7.1(b) to the Separation Agreement. Schedules 7.1(a) and 7.1(b) may be amended from time to time after the date hereof upon mutual written consent of the parties.

SECTION 4.3 Agilent Assets. "Agilent Assets" has the meaning set forth in Section 1.2 of this Agreement.

SECTION 4.4 Agilent Balance Sheet. "Agilent Balance Sheet" means the audited consolidated balance sheet (including the notes thereto) of the Agilent

Business as of July 31, 1999 that is included in the IPO Registration Statement.

SECTION 4.5 Agilent Business. "Agilent Business" the business and operations of the business entities of HP currently known under the following names, as described in the IPO Registration Statement and as such business and operations will continue following the Separation Date: (i) the Test and Measurement Organization, (ii) the Semiconductor Products Group, (iii) the Chemical Analysis Group, (iv) the Healthcare Solutions Group and (v) the portion of HP Labs and infrastructure organizations related to these businesses and (b) except as otherwise expressly provided herein, any terminated, divested or discontinued businesses or operations that at the time of termination, divestiture or discontinuation primarily related to the Agilent Business as then conducted.

SECTION 4.6 Agilent Contingent Gain. "Agilent Contingent Gain" means any claim or other right of a member of the HP Group or the Agilent Group that primarily relates to the Agilent Business, whenever arising, against any Person other than a member of the HP Group or the Agilent Group, if and to the extent that (i) such claim or right arises out of the events, acts or omissions occurring as of the Separation Date (based on then existing law) and (ii) the existence or scope of the obligation of such other Person as of the Separation Date was not acknowledged, fixed or determined in any material respect, due to a dispute or other uncertainty as of the Separation Date or as a result of the failure of such claim or other right to have been discovered or asserted as of the Separation Date. A claim or right meeting the foregoing definition shall be considered an Agilent Contingent Gain regardless of whether there was any Action pending, threatened or contemplated as of the Separation Date with respect thereto. In the case of any claim or right a portion of which

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arises out of events, acts or omissions occurring prior to the Separation Date and a portion of which arises out of events, acts or omissions occurring on or after the Separation Date, only that portion that arises out of events, acts or omissions occurring prior to the Separation Date shall be considered an Agilent Contingent Gain. For purposes of the foregoing, a claim or right shall be deemed to have accrued as of the Separation Date if all the elements of the claim necessary for its assertion shall have occurred on or prior to the Separation Date, such that the claim or right, were it asserted in an Action on or prior to the Separation Date, would not be dismissed by a court on ripeness or similar grounds. Notwithstanding the foregoing, none of (i) any Insurance Proceeds, (ii) any Excluded Assets, (iii) any reversal of any litigation or other reserve, or (iv) any matters relating to Taxes (which are governed by the Tax Sharing Agreement) shall be deemed to be an Agilent Contingent Gain.

SECTION 4.7 Agilent Contingent Liability. "Agilent Contingent Liability" means any Liability, other than Liabilities for Taxes (which are governed by the Tax Sharing Agreement), of a member of the HP Group or the Agilent Group that primarily relates to the Agilent Business, whenever arising, to any Person other than a member of the HP Group or the Agilent Group, if and to the extent that (i) such Liability arises out of the events, acts or omissions occurring as of the Separation Date and (ii) the existence or scope of the obligation of a member of the HP Group or the Agilent Group as of the Separation Date with respect to such Liability was not acknowledged, fixed or determined in any material respect, due to a dispute or other uncertainty as of the Separation Date or as a result of the failure of such Liability to have been discovered or asserted as of the Separation Date (it being understood that the existence of a litigation or other reserve with respect to any Liability shall not be sufficient for such Liability to be considered acknowledged, fixed or determined). In the case of any Liability a portion of which arises out of events, acts or omissions occurring prior to the Separation Date and a portion of which arises out of events, acts or omissions occurring on or after the Separation Date, only that portion that arises out of events, acts or omissions occurring prior to the Separation Date shall be considered an Agilent Contingent Liability. For purposes of the foregoing, a Liability shall be deemed to have arisen out of events, acts or omissions occurring prior to the Separation Date if all the elements necessary for the assertion of a claim with respect to such

Liability shall have occurred on or prior to the Separation Date, such that the claim, were it asserted in an Action on or prior to the Separation Date, would not be dismissed by a court on ripeness or similar grounds. For purposes of clarification of the foregoing, the parties agree that no Liability relating to, arising out of or resulting from any obligation of any Person to perform the executory portion of any contract or agreement existing as of the Separation Date, or to satisfy any obligation accrued under any Plan (as defined in the Employee Matters Agreement) as of the Separation Date, shall be deemed to be an Agilent Contingent Liability. For purposes of determining whether a claim relating to the Year 2000 problem is an Agilent Contingent Liability, claims relating to products shipped prior to the Separation Date shall be deemed to have arisen prior to the Separation Date.

SECTION 4.8 Agilent Contracts. "Agilent Contracts" means the following contracts and agreements to which HP is a party or by which it or any of its Assets is bound, whether or not in

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writing, except for any such contract or agreement that is contemplated to be retained by HP or any member of the HP Group pursuant to any provision of this Agreement or any other Ancillary Agreement:

- (i) any contract or agreement entered into in the name of, or expressly on behalf of, any division or business unit of Agilent;
- (ii) any contract or agreement that relates primarily to the Agilent Business;
- (iii) any contracts or agreements related to the computers, desks, equipment and other Assets used or managed primarily by employees of HP that will become employees of Agilent in connection with the Separation;
- (iv) any contract or agreement that is otherwise expressly contemplated pursuant to this Agreement, the Separation Agreement or any of the other Ancillary Agreements to be assigned to Agilent;
- (v) any guarantee, indemnity, representation, warranty or other Liability of any member of the Agilent Group or the HP Group in respect of any other Agilent Contract, any Agilent Liability or the Agilent Business (including guarantees of financing incurred by customers or other third parties in connection with purchases of products or services from the Agilent Business); and
- (vi) any Agilent OFL.

SECTION 4.9 Agilent Group. "Agilent Group" means Agilent, each Subsidiary and Affiliated Company of Agilent immediately after the Separation Date or that is contemplated to be a Subsidiary or Affiliated Company of Agilent pursuant to the Non-US Plan and each Person that becomes a Subsidiary or Affiliate Company of Agilent after the Separation Date.

SECTION 4.10 Agilent Liabilities. "Agilent Liabilities" has the meaning set forth in Section 1.3 of this Agreement.

SECTION 4.11 Agilent Pro Forma Balance Sheet. "Agilent Pro Forma Balance Sheet" means the unaudited pro forma condensed consolidated balance sheet appearing in the IPO Registration Statement.

SECTION 4.12 Agilent World Trade. "Agilent World Trade" refers to Agilent World Trade, Inc., a Delaware corporation.

SECTION 4.13 Ancillary Agreement. "Ancillary Agreement" has the meaning set forth in Section 2.1 of the Separation Agreement.

SECTION 4.14 Assets. "Assets" means assets, properties and rights (including goodwill), wherever located (including in the possession of vendors

or other third parties or elsewhere),

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whether real, personal or mixed, tangible, intangible or contingent, in each case whether or not recorded or reflected or required to be recorded or reflected on the books and records or financial statements of any Person, including the following:

(i) all accounting and other books, records and files whether in paper, microfilm, microfiche, computer tape or disc, magnetic tape or any other form;

(ii) all apparatus, computers and other electronic data processing equipment, fixtures, machinery, equipment, furniture, office equipment, automobiles, trucks, aircraft, rolling stock, vessels, motor vehicles and other transportation equipment, special and general tools, test devices, prototypes and models and other tangible personal property;

(iii) all inventories of materials, parts, raw materials, supplies, work-in-process and finished goods and products;

(iv) all interests in real property of whatever nature, including easements, whether as owner, mortgagee or holder of a Security Interest, lessor, sublessor, lessee, sublessee or otherwise;

(v) all interests in any capital stock or other equity interests of any Subsidiary or any other Person; all bonds, notes, debentures or other securities issued by any Subsidiary or any other Person; all loans, advances or other extensions of credit or capital contributions to any Subsidiary or any other Person; and all other investments in securities of any Person;

(vi) all license agreements, leases of personal property, open purchase orders for raw materials, supplies, parts or services, unfilled orders for the manufacture and sale of products and other contracts, agreements or commitments;

(vii) all deposits, letters of credit and performance and surety bonds;

(viii) all written technical information, data, specifications, research and development information, engineering drawings, operating and maintenance manuals, and materials and analyses prepared by consultants and other third parties;

(ix) all Intellectual Property and licenses from third Persons granting the right to use any Intellectual Property;

(x) all computer applications, programs and other software, including operating software, network software, firmware, middleware, design software, design tools, systems documentation and instructions;

(xi) all cost information, sales and pricing data, customer prospect lists, supplier records, customer and supplier lists, customer and vendor data, correspondence and lists, product literature, artwork, design, development and manufacturing files, vendor and customer drawings,

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formulations and specifications, quality records and reports and other books, records, studies, surveys, reports, plans and documents;

(xii) all prepaid expenses, trade accounts and other accounts and notes receivables;

(xiii) all rights under contracts or agreements, all claims or rights against any Person arising from the ownership of any Asset, all rights in

connection with any bids or offers and all claims, choses in action or similar rights, whether accrued or contingent;

(xiv) all rights under insurance policies and all rights in the nature of insurance, indemnification or contribution;

(xv) all licenses (including radio and similar licenses), permits, approvals and authorizations which have been issued by any Governmental Authority;

(xvi) cash or cash equivalents, bank accounts, lock boxes and other deposit arrangements; and

(xvii) interest rate, currency, commodity or other swap, collar, cap or other hedging or similar agreements or arrangements.

SECTION 4.15 Consents. "Consents" means any consents, waivers or approvals from, or notification requirements to, any third parties.

SECTION 4.16 Contracts. "Contracts" means any contract, agreement, lease, license, sales order, purchase order, instrument or other commitment that is binding on any Person or any part of its property under applicable law.

SECTION 4.17 Delayed Transfer Assets. "Delayed Transfer Assets" means any Agilent Assets that are expressly provided in this Agreement, the Separation Agreement or any other Ancillary Agreement to be transferred after the date of this Agreement.

SECTION 4.18 Distribution. "Distribution" means HP's pro rata distribution to the holders of its common stock, \$0.01 par value, several months following the IPO, of all of the shares of Agilent common stock owned by HP.

SECTION 4.19 Distribution Date. "Distribution Date" has the meaning set forth in Section 4.1 of the Separation Agreement.

SECTION 4.20 Environmental Actions. "Environmental Actions" has the meaning set forth in Section 4.15 of the Indemnification and Insurance Matters Agreement.

SECTION 4.21 Excluded Assets. "Agilent Assets" has the meaning set forth in Section 1.2(b) of this Agreement.

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SECTION 4.22 Excluded Liabilities. "Agilent Liabilities" has the meaning set forth in Section 1.3(b) of this Agreement.

SECTION 4.23 Governmental Approvals. "Governmental Approvals" means any notices, reports or other filings to be made, or any consents, registrations, approvals, permits or authorizations to be obtained from, any Governmental Authority.

SECTION 4.24 Governmental Authority. "Governmental Authority" means any federal, state, local, foreign or international court, government, department, commission, board, bureau, agency, official or other regulatory, administrative or governmental authority.

SECTION 4.25 HP Group. "HP Group" means HP, each Subsidiary and Affiliated Company of HP (other than any member of the Agilent Group) immediately after the Separation Date, after giving effect to the Non-US Plan and each Person that becomes a Subsidiary or Affiliate Company of HP after the Separation Date.

SECTION 4.26 Indemnification and Insurance Matters Agreement.. "Indemnification and Insurance Matters Agreement" means the Indemnification and Insurance Matters Agreement attached as Exhibit K to the Separation Agreement.

SECTION 4.27 Insurance Policies. "Insurance Policies". means insurance policies pursuant to which a Person makes a true risk transfer to an insurer.

SECTION 4.28 Insured Agilent Liability. "Insured Agilent Liability" means any Agilent Liability to the extent that (i) it is covered under the terms of HP's Insurance Policies in effect prior to the Distribution Date and (ii) Agilent is not a named insured under, or otherwise entitled to the benefits of, such Insurance Policies.

SECTION 4.29 Intellectual Property. "Intellectual Property" means all domestic and foreign patents and patent applications, together with any continuations, continuations-in-part or divisional applications thereof, and all patents issuing thereon (including reissues, renewals and re-examinations of the foregoing); design patents, invention disclosures; mask works; copyrights, and copyright applications and registrations; Web addresses, trademarks, service marks, trade names, and trade dress, in each case together with any applications and registrations therefor and all appurtenant goodwill relating thereto; trade secrets, commercial and technical information, know-how, proprietary or confidential information, including engineering, production and other designs, notebooks, processes, drawings, specifications, formulae, and technology; computer and electronic data processing programs and software (object and source code), data bases and documentation thereof; inventions (whether patented or not); utility models; registered designs, certificates of invention and all other intellectual property under the laws of any country throughout the world.

SECTION 4.30 IPO Registration Statement. "IPO Registration Statement" means the registration statement on Form S-1 pursuant to the Securities Act of 1933, as amended, to be filed

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with the Securities and Exchange Commission registering the shares of common stock of Agilent to be issued in the initial public offering, together with all amendments thereto.

SECTION 4.31 Liabilities. "Liabilities" means all debts, liabilities, guarantees, assurances, commitments and obligations, whether fixed, contingent or absolute, asserted or unasserted, matured or unmatured, liquidated or unliquidated, accrued or not accrued, known or unknown, due or to become due, whenever or however arising (including, without limitation, whether arising out of any Contract or tort based on negligence or strict liability) and whether or not the same would be required by generally accepted principles and accounting policies to be reflected in financial statements or disclosed in the notes thereto.

SECTION 4.32 Litigation Disclosure Letter. "Litigation Disclosure Letter" has the meaning set forth in Section 2.1(a) of this Agreement.

SECTION 4.33 Local Transfer Agreements. "Local Transfer Agreements" means the agreements necessary to effect the Non-US Plan (as defined in the Separation Agreement).

SECTION 4.34 Non-US Plan. "Non-US Plan" has the meaning set forth in Section 5.8 of the Separation Agreement.

SECTION 4.35 OFLs. "OFLs" mean all liabilities, obligations, contingencies, instruments and other Liabilities of any member of the HP Group of a financial nature with third parties existing on the date hereof or entered into or established between the date hereof and the Separation Date, including any of the following:

- (i) foreign exchange contracts;
- (ii) letters of credit;
- (iii) guarantees of third party loans to customers;

- (iv) surety bonds (excluding surety for workers' compensation self-insurance);
- (v) interest support agreements on third party loans to customers;
- (vi) performance bonds or guarantees issued by third parties;
- (vii) swaps or other derivatives contracts; and
- (viii) recourse arrangements on the sale of receivables or notes.

SECTION 4.36 Person. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an

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unincorporated organization and a governmental entity or any department, agency or political subdivision thereof.

SECTION 4.37 Retained Payables. "Retained Payables" means (i) all accounts payable and other obligations of payment for goods or services purchased, leased or otherwise received in the conduct of the Agilent Business that as of the Separation Date are payable to a third Person by HP or any of HP's Subsidiaries, whether past due, due or to become due, including any interest, sales or use taxes, finance charges, late or returned check charges and other obligations of HP or any of HP's Subsidiaries with respect thereto, and any obligations related to any of the foregoing and (ii) all employee compensation Liabilities and other miscellaneous Liabilities for which an adjustment is made in the Agilent Pro Forma Balance Sheet.

SECTION 4.38 Retained Receivables. "Retained Receivables" means (i) all accounts receivable and other rights to payment for goods or services sold, leased or otherwise provided in the conduct of the Agilent Business that as of the Separation Date are payable by a third Person to HP or any of HP's Subsidiaries, whether past due, due or to become due, including any interest, sales or use taxes, finance charges, late or returned check charges and other obligations of the account debtor with respect thereto, and any proceeds of any of the foregoing and (ii) all other miscellaneous Assets for which an adjustment is made in the Agilent Pro Forma Balance Sheet.

SECTION 4.39 Security Interest. "Security Interest" means any mortgage, security interest, pledge, lien, charge, claim, option, right to acquire, voting or other restriction, right-of-way, covenant, condition, easement, encroachment, restriction on transfer, or other encumbrance of any nature whatsoever.

SECTION 4.40 Separation. "Separation" means the transfer and contribution from HP to Agilent, and Agilent's receipt and assumption of, directly or indirectly, substantially all of the Assets and Liabilities currently associated with the Agilent Business and the stock, investments or similar interests currently held by HP in subsidiaries and other entities that conduct such business.

SECTION 4.41 Separation Agreement. "Separation Agreement" means the Master Separation and Distribution Agreement dated as of August 12, 1999, of which this is an Exhibit thereto.

SECTION 4.42 Separation Date. "Separation Date" means the effective date and time of each transfer of property, assumption of liability, license, undertaking, or agreement in connection with the Separation, which shall be 12:01 a.m., Pacific Time, November 1, 1999, or such date as may be fixed by the Board of Directors of HP.

SECTION 4.43 Subsidiary. "Subsidiary" means with respect to any specified Person, any corporation, any limited liability company, any partnership or other

legal entity of which such Person or its Subsidiaries owns, directly or indirectly, more than 50% of the stock or other equity interest entitled to vote on the election of the members of the board of directors or similar governing

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body. Unless context otherwise requires, reference to HP and its Subsidiaries shall not include the subsidiaries of HP that will be transferred to Agilent after giving effect to the Separation, including the actions taken pursuant to the Non-US Plan.

SECTION 4.44 Taxes. "Taxes" has the meaning set forth in the Tax Sharing Agreement.

[SIGNATURES ON FOLLOWING PAGE]

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IN WITNESS WHEREOF, each of the parties has caused this Agreement to be executed on its behalf by its officers thereunto duly authorized on the day and year first above written.

HEWLETT PACKARD COMPANY

By: _____
Name:
Title: President and Chief Executive Officer

AGILENT TECHNOLOGIES, INC.

By: _____
Name:
Title: President and Chief Executive Officer

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Schedule 1.1(c) Delayed Transfer Assets and Liabilities

None.

Schedule 1.2(a)(xii) Specific Agilent Assets to be Transferred

None.

Schedule 1.2(b)(i) Excluded Assets

None.

Schedule 1.3(a)(vi) Divested Businesses Which Contain Liabilities to be Transferred to Agilent

1. Businesses divested by HP pursuant to the Master Asset Purchase Agreement, dated February 12, 1998, by and between Hewlett-Packard Company and Lucent Technologies, Inc, as amended by Amendment No. 1 to the Master Asset Purchase Agreement, dated March 9, 1998.
2. Businesses divested by HP pursuant to the Amended and Restated Asset Purchase Agreement, dated October 9, 1998, by and between Hewlett-Packard Company and Powerwave Technologies, Inc.

3. Divestiture of certain assets of the Video Communications Division to Pinnacle Systems.

Schedule 1.3(a) (vii) Specific Agilent Liabilities

Schedule 1.3(b) (i) Excluded Liabilities

None.

MASTER TECHNOLOGY OWNERSHIP AND
LICENSE AGREEMENT

between

HEWLETT-PACKARD COMPANY

and

AGILENT TECHNOLOGIES, INC.

Effective as of _____, 1999

MASTER TECHNOLOGY OWNERSHIP AND LICENSE AGREEMENT

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EXHIBIT A: AFFILIATED COMPANIES

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MASTER TECHNOLOGY OWNERSHIP AND LICENSE AGREEMENT

This Master Technology Ownership and License Agreement (the "Agreement") is effective as of _____, 1999 (the "Effective Date"), between Hewlett-Packard Company, a Delaware corporation ("HP"), having an office at 3000 Hanover Street, Palo Alto, California 94304, and Agilent Technologies, Inc., a Delaware corporation ("Agilent"), having an office at 3000 Hanover Street, Palo Alto, California 94304.

WHEREAS, the Board of Directors of HP has determined that it is in the best interest of HP and its stockholders to separate HP's existing businesses into two independent businesses;

WHEREAS, as part of the foregoing, HP and Agilent have entered into a Master Separation Agreement (as defined below), which provides, among other things, for the separation of certain Agilent assets and Agilent liabilities, the initial public offering of Agilent stock, the distribution of such stock and the execution and delivery of certain other agreements in order to facilitate and provide for the foregoing;

WHEREAS, also as part of the foregoing, HP desires to assign to Agilent ownership of certain technology and each party desires to license to the other party certain of its technology; and

WHEREAS, also as part of the foregoing, the parties have also entered into an ICBT Technology Ownership and License Agreement (the "ICBT Technology Agreement") which provides for the ownership and licensing of certain integrated circuit technology.

NOW, THEREFORE, in consideration of the mutual promises of the parties, and of good and valuable consideration, it is agreed by and between the parties as follows:

ARTICLE I

DEFINITIONS

For the purpose of this Agreement the following capitalized terms are defined in this Article I and shall have the meaning specified herein:

1.1 AFFILIATED COMPANY. "Affiliated Company" means, with respect to HP, any entity in which HP holds a 50% or less ownership interest and that is listed on Exhibit A hereto and, with respect to Agilent, any entity in which Agilent holds a 50% or less ownership interest and that is listed on Exhibit A hereto; provided, however, that any such entity listed in Exhibit A shall be considered to be an Affiliated Company under this Agreement only if it agrees in writing to be bound by the terms and conditions of this Agreement. Exhibit A may be amended from time to time after the date hereof upon mutual consent of the parties.

1.2 AGILENT BUSINESS. "Agilent Business" means (a) the business and operations of the following business entities of HP, as described in the IPO Registration Statement (as defined in

the Master Separation Agreement): (i) the Test and Measurement Organization, (ii) the Semiconductor Products Group, (iii) the Chemical Analysis Group, (iv) the Healthcare Solutions Group and (v) any related infrastructure organizations and (b) except as otherwise expressly provided herein, any terminated, divested or discontinued businesses or operations that at the time of termination, divestiture or discontinuation primarily related to the Agilent Business as then conducted.

1.3 AGILENT OWNED TECHNOLOGY. "Agilent Owned Technology" means (i) all Technology associated with the development, design, testing, manufacture, maintenance, support, debugging, quality control, repair, use, marketing and sale of the products listed in the Agilent Products Database and the products developed or being developed primarily by the Agilent Business as of the Separation Date, (ii) all Technology developed or being developed primarily by the Agilent Business as of the Separation Date and (iii) all other Technology used exclusively by the Agilent Business.

1.4 AGILENT PRODUCTS. "Agilent Products" means any and all products and services of the businesses in which Agilent or any of its Subsidiaries or Affiliated Companies is now or hereafter engaged (including the business of making (but not having made) Third Party products for Third Parties when Agilent, its Subsidiaries or Affiliated Companies is acting as a contract

manufacturer or foundry for such Third Parties).

1.5 AGILENT PRODUCTS DATABASE. "Agilent Products Database" means the Agilent Products Database, as it may be updated by the parties upon mutual agreement to add products as of the Separation Date.

1.6 COPYRIGHTS. "Copyrights" mean (i) any copyright in any original works of authorship fixed in any tangible medium of expression as set forth in 17 U.S.C. Section 101 et. seq., whether registered or unregistered, including any applications for registration thereof, (ii) any corresponding foreign copyrights under the laws of any jurisdiction, in each case, whether registered or unregistered, and any applications for registration thereof, and (iii) moral rights under the laws of any jurisdiction.

1.7 DATABASE RIGHTS. "Database Rights" means any rights in databases under the laws of the United States or any other jurisdiction, whether registered or unregistered, and any applications for registration thereof.

1.8 HP PRODUCTS. "HP Products" means any and all products and services of the businesses in which HP or any of its Subsidiaries or Affiliated Companies is now or hereafter engaged (including the business of making (but not having made) Third Party products for Third Parties when HP, its Subsidiaries or Affiliated Companies is acting as a contract manufacturer or foundry for such Third Parties).

1.9 IMPROVEMENTS. "Improvements" to Technology means (i) with respect to Copyrights, any modifications, derivative works, and translations of works of authorship, (ii) with respect to Database Rights, any database that is created by extraction or re-utilization of another

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database, and (iii) with respect to Mask Work Rights, trade secrets and other intellectual property rights included within the definition of Technology and not covered by Sections 1.9(i) - (ii) above, any improvements of Technology. For the purposes of clarification, an item of Technology will be deemed to be an Improvement of another item of Technology only if it is actually derived from such other item of Technology and not merely because it may have the same or similar functionality or use as such other item of Technology.

1.10 INVENTION DISCLOSURE. "Invention Disclosure" means a disclosure of an invention (i) written for the purpose of allowing legal and business people to determine whether to file a Patent application with respect to such invention and (ii) recorded with a control number in the owning party's records.

1.11 LICENSED AGILENT TECHNOLOGY. "Licensed Agilent Technology" means any Technology:

(a) which, as of the Separation Date, Agilent or any Subsidiary or Affiliated Company of Agilent (i) owns or controls or (ii) otherwise has the right to grant any licenses of the type and on the terms herein granted to HP without the obligation to pay royalties or other consideration to Third Parties; and

(b) which is known to or in the possession of HP or its Subsidiaries or Affiliated Companies as of the Separation Date.

1.12 LICENSED HP TECHNOLOGY. "Licensed HP Technology" means any Technology:

(a) which, as of the Separation Date, HP or any Subsidiary or Affiliated Company of HP (i) owns or controls or (ii) otherwise has the right to grant any licenses of the type and on the terms herein granted to Agilent without the obligation to pay royalties or other consideration to Third Parties; and

(b) which is known to or in the possession of Agilent, its

Subsidiaries or Affiliated Companies as of the Separation Date.

1.13 MASK WORK RIGHTS. "Mask Work Rights" means (i) any rights in mask works, as defined in 17 U.S.C. Section 901, whether registered or unregistered, including applications for registration thereof, and (ii) any foreign rights in semiconductor topologies under the laws of any jurisdiction, whether registered or unregistered, including applications for registration thereof.

1.14 MASTER SEPARATION AGREEMENT. "Master Separation Agreement" means the Master Separation and Distribution Agreement between the parties.

1.15 PATENTS. "Patents" means patents, utility models, design patents, design registrations, certificates of invention and other governmental grants for the protection of inventions

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or industrial designs anywhere in the world and all reissues, renewals, re-examinations and extensions of any of the foregoing.

1.16 PERSON. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization, and a governmental entity or any department, agency or political subdivision thereof.

1.17 SELL. To "Sell" a product means to sell, transfer, lease or otherwise dispose of a product. "Sale" and "Sold" have the corollary meanings ascribed thereto.

1.18 SEPARATION DATE. "Separation Date" means 12:01 a.m., Pacific Time, November 1, 1999 or such other date as may be fixed by the Board of Directors of HP.

1.19 SUBSIDIARY. "Subsidiary" means with respect to any specified Person, any corporation, any limited liability company, any partnership or other legal entity of which such Person owns, directly or indirectly, more than 50% of the stock or other equity interest entitled to vote on the election of the members of the board of directors or similar governing body. Unless the context otherwise requires, reference to HP and its Subsidiaries shall not include the subsidiaries of HP that will be transferred to Agilent after giving effect to the Separation (as defined in the Master Separation Agreement), including the actions taken pursuant to the Non-US Plan (as defined in the Master Separation Agreement). For example, if HP owns 70% of the stock of another corporation, and that corporation owns 60% of the equity interest of a limited liability company, then that corporation is a Subsidiary of HP but that limited liability company is not. However, if such corporation owns 90% of the equity interest of a limited liability company, then that limited liability company is a Subsidiary of HP. For the avoidance of doubt, this definition of Subsidiary is different from the definition of Subsidiary in the Master Separation Agreement.

1.20 TECHNOLOGY. "Technology" means technological models, algorithms, manufacturing processes, design processes, behavioral models, logic diagrams, schematics, test vectors, know-how, computer and electronic data processing and other apparatus programs and software (object code and source code), optical, hydraulic and fluidic apparatus and processes, medical chemical, biochemical, biological, macro-molecular and genetic compounds, processes, cell lines, detection and analytical devices, databases and documentation thereof, trade secrets, technical information, specifications, drawings, records, documentation, works of authorship or other creative works, websites, ideas, knowledge, data or the like. The term Technology includes Copyrights, Database Rights, Mask Work Rights, trade secrets and any other intellectual property right, but expressly does not include (i) any trademark, trade name, trade dress or service mark, or applications for registration thereof or (ii) any Patents or applications therefor, including any of the foregoing that may be based on Invention Disclosures that are covered by the Master Patent Ownership and Assignment Agreement between the parties, but does include trade secret rights in and to inventions disclosed in such Patent applications and Invention

Disclosures. Notwithstanding the generality of the foregoing provisions of this Section 1.20, however, the term "Technology" does not include ICB Technology as such term is defined in the ICB Technology Agreement.

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1.21 THIRD PARTY. "Third Party" means a Person other than HP and its Subsidiaries and Affiliated Companies and Agilent and its Subsidiaries and Affiliated Companies.

ARTICLE II

ALLOCATION OF OWNERSHIP

2.1 ASSIGNMENT. Subject to Sections 2.2 and 2.3 below, HP hereby grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent, by execution hereof (or, where appropriate or required, by execution of separate instruments of assignment), all its (and their) right, title and interest in and to the Agilent Owned Technology, to be held and enjoyed by Agilent, its successors and assigns. HP further grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent all its (and their) right, title and interest in and to any and all causes of action and rights of recovery for past infringement of Copyrights, Database Rights and Mask Work Rights in and to the Agilent Owned Technology, and for past misappropriation of trade secrets in and to the Agilent Owned Technology. HP further covenants that HP will, without demanding any further consideration therefor, at the request and expense of Agilent (except for the value of the time of HP employees), do (and cause its Subsidiaries to do) all lawful and just acts that may be or become necessary for evidencing, maintaining, recording and perfecting Agilent's rights to such Agilent Owned Technology consistent with HP's general business practice as of the Separation Date, including but not limited to, execution and acknowledgement of (and causing its Subsidiaries to execute and acknowledge) assignments and other instruments in a form reasonably required by Agilent for each Copyright, Mask Work Right or Database Right jurisdiction.

2.2 PRIOR GRANTS. Agilent acknowledges and agrees that the foregoing assignment is subject to any and all licenses or other rights that may have been granted by HP or its Subsidiaries with respect to the Agilent Owned Technology prior to the Separation Date. HP shall respond to reasonable inquiries from Agilent regarding any such prior grants.

2.3 ASSIGNMENT DISCLAIMER. AGILENT ACKNOWLEDGES AND AGREES THAT THE FOREGOING ASSIGNMENTS ARE MADE ON AN "AS IS," QUITCLAIM BASIS AND THAT NEITHER HP NOR ANY SUBSIDIARY OR AFFILIATED COMPANY OF HP HAS MADE OR WILL MAKE ANY WARRANTY WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, ENFORCEABILITY OR NON-INFRINGEMENT.

2.4 COPIES IN ITS POSSESSION. Notwithstanding the allocation of ownership in this Article II, each party has the right to retain copies of any Technology that it has in its possession as of the Separation Date.

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ARTICLE III

LICENSE GRANTS

3.1 LICENSE TO HP.

(a) Agilent grants (and agrees to cause its appropriate Subsidiaries or Affiliated Companies to grant) to HP the following personal, irrevocable, nonexclusive, worldwide, fully paid, royalty-free and non-transferable (except as specified in Section 8.9 below) licenses:

(i) under its and their Copyrights in and to the Licensed Agilent Technology, (A) to reproduce and have reproduced the works of authorship included in the Licensed Agilent Technology and Improvements thereof prepared by or for HP, in whole or in part, as part of HP Products, (B) to prepare Improvements or have Improvements prepared for it based upon the works of authorship included in the Licensed Agilent Technology in order to create HP Products, (C) to distribute (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) copies of the works of authorship included in the Licensed Agilent Technology and Improvements thereof prepared by or for HP to the public by sale or other transfer of ownership or by rental, lease or lending, as part of HP Products, and (D) to perform (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) and display the works of authorship included in the Licensed Agilent Technology and Improvements thereof prepared by or for HP, as part of HP Products;

(ii) under its and their Database Rights in and to the Licensed Agilent Technology, to extract data from the databases included in the Licensed Agilent Technology and to re-utilize such data to design, develop, manufacture and have manufactured HP Products and to Sell such HP Products that incorporate such data, databases and Improvements thereof prepared by or for HP;

(iii) under its and their Mask Work Rights in and to the Licensed Agilent Technology, (A) to reproduce and have reproduced mask works and semiconductor topologies included in the Licensed Agilent Technology and embodied in HP Products by optical, electronic or any other means, (B) to import or distribute a product in which any such mask work or semiconductor topology is embodied, and (C) to induce or knowingly to cause a Third Party to do any of the acts described in Sections 3.1(a)(iii)(A) and (B) above; and

(iv) under its and their trade secrets and other intellectual property rights in and to the Licensed Agilent Technology (except the intellectual property rights excluded from the definition of Technology), to use the Licensed Agilent Technology and Improvements thereof prepared by or for HP to design, develop, manufacture and have manufactured HP Products and to Sell such HP Products.

(b) Without limiting the generality of the foregoing licenses granted in Section 3.1(a) above, with respect to software included within the Licensed Agilent Technology,

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such licenses include the right to use, modify, and reproduce such software and Improvements thereof made by or for HP to create HP Products, in source code and object code form, and to Sell such software and Improvements thereof made by or for HP, in source code and object code form, as part of HP Products; provided, however, that,

(i) with respect to Agilent's software products that are commercially released as of the Separation Date, HP shall be limited to using no more than ten percent (10%) of the lines of code of any such commercially released software product in any HP Product Sold by HP to a Third Party. Any other rights of HP to Sell such commercially released software products of Agilent shall be solely as set forth in a separate written agreement. For purposes of this Section 3.1(b), a "commercially released" product shall mean a product that has been placed on an Agilent corporate price list or released by Agilent to Third Parties for beta testing; and

(ii) with respect to Agilent software that is only used internally, HP recognizes that such software was not designed for use in products that are Sold to Third Parties and that Agilent has no obligation whatsoever to support such software. Accordingly, HP agrees to use reasonable care in selecting any such software for use in HP Products, taking into account that such software will be difficult to support.

(c) The foregoing licenses in this Section 3.1 include the right to

have contract manufacturers and foundries manufacture HP Products for HP.

(d) HP may grant sublicenses within the scope of the licenses granted under Sections 3.1(a) and (b) above as follows:

(i) HP may grant sublicenses to its Subsidiaries for so long as they remain its Subsidiaries, with no right to grant further sublicenses other than, in the case of a sublicensed Subsidiary, to another Subsidiary of such party and as described in Section 3.1(d)(iii) below; provided that any such sublicense may be made effective retroactively but not prior to the sublicensee's becoming a Subsidiary;

(ii) HP may grant sublicenses to its Affiliated Companies for so long as HP holds at least thirty percent (30%) ownership interest in the Affiliated Companies, with no right to grant further sublicenses other than, in the case of a sublicensed Affiliated Company, to the Affiliated Company's wholly owned subsidiaries and as described in Section 3.1(d)(iii) below; provided that any such sublicense may be made effective retroactively but not prior to the sublicensee's becoming an Affiliated Company;

(iii) HP may grant sublicenses with respect to HP Products in the form of software, in object code and source code form, to its distributors, resellers, OEM customers, VAR customers, VAD customers, systems integrators and other channels of distribution and to its end user customers; and

(iv) HP may grant sublicenses with respect to the relevant Licensed Agilent Technology to the Transferee (as defined below), in the event that HP transfers, after the

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Separation Date, a going business (but not all or substantially all of its business or assets), provided that such transfer includes at least one marketable product and tangible assets having a net value of at least ten million U.S. Dollars (\$10,000,000.00), regardless of whether such transfer is part of (A) an asset sale to any Third Party, (B) a sale of shares or securities in a Subsidiary or Affiliated Company to a Third Party such that (x) in the case of a Subsidiary, the Subsidiary ceases to be a Subsidiary, or in the case of an Affiliated Company, HP ceases to hold at least thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (y) the Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority, or (C) a sale of shares or securities in a Subsidiary or Affiliated Company to a Third Party such that (x) in the case of a Subsidiary, the Subsidiary ceases to be a Subsidiary, or in the case of an Affiliated Company, Agilent ceases to hold at least thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (y) no single Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority of such ex-Subsidiary or ex-Affiliated Company; provided that:

(1) the Transferee shall have no right to grant further sublicenses except as described in Section 3.1(d)(iii) above and except that the Transferee shall have the right to grant sublicenses to any Third Party at least eighty percent (80%) of whose outstanding shares or securities representing the right to vote for the election of directors or other managing authority are, directly or indirectly, owned by the Transferee, only for so long as such ownership exists;

(2) such sublicenses shall not come into effect unless and until such Transferee agrees in writing for the benefit of Agilent to be bound by the terms of this Agreement, including but not limited to the confidentiality obligations under Article IV;

(3) this Section 3.1(d)(iv) shall be excluded from such sublicense in any event; and

(4) HP shall give Agilent prompt written notice of any such sublicense and a copy of the portions of the relevant agreement between HP and such Transferee containing the sublicense terms.

(5) As used in this Section 3.1(d)(iv), "Transferee" in the case of Sections 3.1(d)(iv)(A) and (B) means the Third Party acquiring the going business or eighty percent (80%) of the Subsidiary or Affiliated Company and in the case of Section 3.1(d)(iv)(C) means the ex-Subsidiary or ex-Affiliated Company only.

(6) The licenses granted above to the Licensed Agilent Technology shall continue in perpetuity (or, in the case of Copyrights, Database Rights and Mask Work Rights, until the expiration of the term thereof).

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3.2 LICENSE TO AGILENT.

(a) HP grants (and agrees to cause its appropriate Subsidiaries or Affiliated Companies to grant) to Agilent the following personal, irrevocable, nonexclusive, worldwide, fully paid, royalty-free and non-transferable (except as specified in Section 8.9 below) licenses:

(i) under its and their Copyrights in and to the Licensed HP Technology, (A) to reproduce and have reproduced the works of authorship included in the Licensed HP Technology and Improvements thereof prepared by or for Agilent, in whole or in part, as part of Agilent Products, (B) to prepare Improvements or have Improvements prepared for it based upon the works of authorship included in the Licensed HP Technology in order to create Agilent Products, (C) to distribute (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) copies of the works of authorship included in the Licensed HP Technology and Improvements thereof prepared by or for Agilent to the public by sale or other transfer of ownership or by rental, lease or lending, as part of Agilent Products, and (D) to perform (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) and display the works of authorship included in the Licensed HP Technology and Improvements thereof prepared by or for Agilent, as part of Agilent Products;

(ii) under its and their Database Rights in and to the Licensed HP Technology, to extract data from the databases included in the Licensed HP Technology and to re-utilize such data to design, develop, manufacture and have manufactured Agilent Products and to Sell such Agilent Products that incorporate such data, databases and Improvements thereof prepared by or for Agilent;

(iii) under its and their Mask Work Rights in and to the Licensed HP Technology, (A) to reproduce and have reproduced mask works and semiconductor topologies included in the Licensed HP Technology and embodied in Agilent Products by optical, electronic or any other means, (B) to import or distribute a product in which any such mask work or semiconductor topology is embodied, and (C) to induce or knowingly to cause a Third Party to do any of the acts described in Sections 3.2(a)(iii)(A) and (B) above; and

(iv) under its and their trade secrets and other intellectual property rights in and to the Licensed HP Technology (except the intellectual property rights excluded from the definition of Technology), to use the Licensed HP Technology and Improvements thereof prepared by or for Agilent to design, develop, manufacture and have manufactured Agilent Products and to Sell such Agilent Products.

(b) Without limiting the generality of the foregoing licenses granted in Section 3.2(a) above, with respect to software included within the Licensed HP Technology, such licenses include the right to use, modify, and reproduce such software and Improvements thereof made by or for Agilent to create Agilent Products, in source code and object code form, and to Sell such software and Improvements thereof made by or for Agilent, in source code and object code

form, as part of Agilent Products; provided, however, that,

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(i) with respect to HP's software products that are commercially released as of the Separation Date, Agilent shall be limited to using no more than ten percent (10%) of the lines of code of any such commercially released software product in any Agilent Product Sold by Agilent to a Third Party. Any other rights of Agilent to Sell such commercially released software products of HP shall be solely as set forth in a separate written agreement. For purposes of this Section 3.2(b), a "commercially released" product shall mean a product that has been placed on an HP corporate price list or released by HP to Third Parties for beta testing; and

(ii) with respect to HP software that is only used internally, Agilent recognizes that such software was not designed for use in products that are Sold to Third Parties and that HP has no obligation whatsoever to support such software. Accordingly, Agilent agrees to use reasonable care in selecting any such software for use in Agilent Products, taking into account that such software will be difficult to support.

(c) The foregoing licenses in this Section 3.2 include the right to have contract manufacturers and foundries manufacture Agilent Products for Agilent.

(d) Agilent may grant sublicenses within the scope of the licenses granted under Sections 3.2(a) and (b) above as follows:

(i) Agilent may grant sublicenses to its Subsidiaries for so long as they remain its Subsidiaries, with no right to grant further sublicenses other than, in the case of a sublicensed Subsidiary, to another Subsidiary of such party and as described in Section 3.2(d)(iii) below; provided that any such sublicense may be made effective retroactively but not prior to the sublicensee's becoming a Subsidiary;

(ii) Agilent may grant sublicenses to its Affiliated Companies for so long as Agilent holds at least thirty percent (30%) ownership interest in the Affiliated Companies with no right to grant further sublicenses other than, in the case of a sublicensed Affiliated Company, to the Affiliated Company's wholly owned subsidiaries and as described in Section 3.2(d)(iii) below; provided that any such sublicense may be made effective retroactively but not prior to the sublicensee's becoming an Affiliated Company;

(iii) Agilent may grant sublicenses with respect to Agilent Products in the form of software, in object code and source code form, to its distributors, resellers, OEM customers, VAR customers, VAD customers, systems integrators and other channels of distribution and to its end user customers; and

(iv) Agilent may grant sublicenses with respect to the relevant Licensed HP Technology to the Transferee (as defined below), in the event that Agilent transfers, after the Separation Date, a going business (but not all or substantially all of its business or assets), provided that such transfer includes at least one marketable product and tangible assets having a net value of at least ten million U.S. Dollars (\$10,000,000.00), regardless of whether such transfer is part of (A) an asset sale to any Third Party, (B) a sale of shares or securities in a Subsidiary or Affiliated Company to a Third Party such that (x) in the case of a Subsidiary, the Subsidiary ceases to be a

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Subsidiary, or in the case of an Affiliated Company, Agilent ceases to hold at least thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (y) the Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority, or (C) a sale of shares

or securities in a Subsidiary or Affiliated Company to a Third Party such that (x) in the case of a Subsidiary, the Subsidiary ceases to be a Subsidiary, or in the case of an Affiliated Company, Agilent ceases to hold at least thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (y) no single Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority of such ex-Subsidiary or ex-Affiliated Company; provided that:

(1) the Transferee shall have no right to grant further sublicenses except as described in Section 3.2(d)(iii) above and except that the Transferee shall have the right to grant sublicenses to any Third Party at least eighty percent (80%) of whose outstanding shares or securities representing the right to vote for the election of directors or other managing authority are, directly or indirectly, owned by the Transferee, only for so long as such ownership exists;

(2) such sublicenses shall not come into effect unless and until such Transferee agrees in writing for the benefit of HP to be bound by the terms of this Agreement including but not limited to the confidentiality obligations under Article IV;

(3) this Section 3.2(d)(iv) shall be excluded from such sublicense in any event; and

(4) Agilent shall give HP prompt written notice of any such sublicense and a copy of the portions of the relevant agreement between Agilent and such Transferee containing the sublicense terms.

(5) As used in this Section 3.2(d)(iv), "Transferee" in the case of Sections 3.2(d)(iv)(A) and (B) means the Third Party acquiring the going business or eighty percent (80%) of the Subsidiary or Affiliated Company and in the case of Section 3.2(d)(iv)(C) means the ex-Subsidiary or ex-Affiliated Company only.

(e) The licenses granted above to the Licensed HP Technology shall continue in perpetuity (or, in the case of Copyrights, Database Rights and Mask Work Rights, until the expiration of the term thereof).

3.3 HAVE MADE RIGHTS. Each party understands and acknowledges that the "have made" rights granted to it in Section 3.1 or 3.2, as applicable, and the sublicenses of such "have made" rights granted pursuant to Sections 3.1(d)(i) and (ii) and 3.2(d)(i) and (ii), as applicable, are intended to cover only the products of such party, its Subsidiaries and Affiliated Companies (including private label or OEM versions of such products), and are not intended to cover foundry or contract manufacturing activities that such party may undertake through Third Parties for Third Parties.

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3.4 IMPROVEMENTS. As between the parties, after the Separation Date, Agilent hereby retains all right, title and interest, including all intellectual property rights, in and to any Improvements to Licensed HP Technology made by or for Agilent in the exercise of the licenses granted to it hereunder, subject only to the ownership of HP in the underlying Licensed HP Technology, and HP hereby retains all right, title and interest, including all intellectual property rights, in and to any Improvements to Licensed Agilent Technology made by or for HP in the exercise of the licenses granted to it hereunder, subject only to the ownership of Agilent in the underlying Licensed Agilent Technology. Neither party shall have any obligation under this Agreement to notify the other party of any Improvements made by or for it or to disclose or license any such Improvements to the other party.

3.5 DURATION OF SUBLICENSES TO SUBSIDIARIES AND AFFILIATED COMPANIES. A sublicense to a particular Subsidiary or Affiliated Company of a party hereto granted pursuant to Section 3.1(d)(i) or (ii) or 3.2(d)(i) or (ii) shall terminate upon the date that, in the case of a Subsidiary of a party, such

Subsidiary ceases to be a Subsidiary of such party, or, in the case of an Affiliated Company of a party, such party ceases to hold at least a thirty percent (30%) ownership interest in such Affiliated Company; provided, however, that such cessation shall not affect such party's rights to grant further sublicenses to such terminated Subsidiary or Affiliated Company as set forth in Section 3.1(d)(iv) or 3.2(d)(iv) above. In the event that, at the time of such cessation, such Subsidiary or Affiliated Company owns any Technology to which the other party is licensed, such license shall continue for the term thereof.

3.6 NO PATENT LICENSES. Nothing contained in this Agreement shall be construed as conferring to either party by implication, estoppel or otherwise any license or right under any Patent or applications therefor, whether or not the exercise of any right herein granted necessarily employs an invention of any existing or later issued Patent. The applicable licenses granted between HP and Agilent with respect to Patents are set forth in a separate Master Patent Ownership and License Agreement.

3.7 THIRD PARTY TECHNOLOGY. The assignment of any applicable license agreements with respect to Third Party Technology are set forth in a separate General Assignment and Assumption Agreement between the parties.

ARTICLE IV

CONFIDENTIALITY

The terms of the Master Confidential Disclosure Agreement between the parties shall apply to any Confidential Information (as defined therein) which is the subject matter of this Agreement.

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ARTICLE V

TERMINATION

5.1 VOLUNTARY TERMINATION. By written notice to the other party, each party may voluntarily terminate all or a specified portion of the licenses and rights granted to it hereunder by such other party. Such notice shall specify the effective date of such termination and shall clearly specify any affected Technology, product or service.

5.2 SURVIVAL. Any voluntary termination of licenses and rights of a party under Section 5.1 shall not affect such party's licenses and rights with respect to any licensed product made or service furnished prior to such termination, and shall not affect the licenses and rights granted to the other party hereunder.

5.3 NO OTHER TERMINATION. Each party acknowledges and agrees that its remedy for breach by the other party of the licenses granted to it hereunder or of any other provision hereof shall be, subject to the requirements of Article VI, to bring a claim to recover damages subject to the limits set forth in this Agreement and to seek any other appropriate equitable relief, other than termination of the licenses granted by it in this Agreement.

ARTICLE VI

DISPUTE RESOLUTION

6.1 NEGOTIATION. The parties shall make a good faith attempt to resolve any dispute or claim arising out of or related to this Agreement through negotiation. Within thirty (30) days after notice of a dispute or claim is given by either party to the other party, the parties' first tier negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet and make a good faith attempt to resolve such dispute or claim and shall continue to negotiate in good faith in an effort to resolve the dispute or claim or renegotiate the applicable section or provision without the necessity of any formal proceedings. If the first tier negotiating teams are unable to agree within thirty (30) days of their first meeting, then the

parties' second tier negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet within thirty (30) days after the end of the first thirty (30) day negotiating period to attempt to resolve the matter. During the course of negotiations under this Section 6.1, all reasonable requests made by one party to the other for information, including requests for copies of relevant documents, will be honored. The specific format for such negotiations will be left to the discretion of the designated negotiating teams but may include the preparation of agreed upon statements of fact or written statements of position furnished to the other party.

6.2 NONBINDING MEDIATION. In the event that any dispute or claim arising out of or related to this Agreement is not settled by the parties within fifteen (15) days after the first meeting of the second tier negotiating teams under Section 6.1, the parties will attempt in good faith

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to resolve such dispute or claim by nonbinding mediation in accordance with the American Arbitration Association Commercial Mediation Rules. The mediation shall be held within thirty (30) days of the end of such fifteen (15) day negotiation period of the second tier negotiating teams. Except as provided below in Section 6.3, no litigation for the resolution of such dispute may be commenced until the parties try in good faith to settle the dispute by such mediation in accordance with such rules and either party has concluded in good faith that amicable resolution through continued mediation of the matter does not appear likely. The costs of mediation shall be shared equally by the parties to the mediation. Any settlement reached by mediation shall be recorded in writing, signed by the parties, and shall be binding on them.

6.3 PROCEEDINGS. Nothing herein, however, shall prohibit either party from initiating litigation or other judicial or administrative proceedings if such party would be substantially harmed by a failure to act during the time that such good faith efforts are being made to resolve the dispute or claim through negotiation or mediation. In the event that litigation is commenced under this Section 6.3, the parties agree to continue to attempt to resolve any dispute or claim according to the terms of Sections 6.1 and 6.2 during the course of such litigation proceedings under this Section 6.3.

ARTICLE VII

LIMITATION OF LIABILITY

IN NO EVENT SHALL EITHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES BE LIABLE TO THE OTHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, INCIDENTAL OR PUNITIVE DAMAGES OR LOST PROFITS, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (INCLUDING NEGLIGENCE) ARISING IN ANY WAY OUT OF THIS AGREEMENT, WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; PROVIDED, HOWEVER, THAT THE FOREGOING LIMITATIONS SHALL NOT LIMIT DAMAGES FOR INFRINGEMENT AVAILABLE TO EITHER PARTY UNDER APPLICABLE LAW IN THE EVENT OF BREACH BY THE OTHER PARTY OF SECTIONS 3.1(a) OR 3.2(a) AND SHALL NOT LIMIT EACH PARTY'S OBLIGATIONS EXPRESSLY ASSUMED IN EXHIBIT K OF THE MASTER SEPARATION AGREEMENT; PROVIDED FURTHER THAT THE EXCLUSION OF PUNITIVE DAMAGES SHALL APPLY IN ANY EVENT.

ARTICLE VIII

MISCELLANEOUS PROVISIONS

8.1 DISCLAIMER. EACH PARTY ACKNOWLEDGES AND AGREES THAT ALL TECHNOLOGY AND ANY OTHER INFORMATION OR MATERIALS LICENSED OR PROVIDED HEREUNDER IS LICENSED OR PROVIDED ON AN "AS IS" BASIS, AND THAT NEITHER PARTY NOR ANY OF ITS SUBSIDIARIES OR AFFILIATED COMPANIES MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES WHATSOEVER, EXPRESS,

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IMPLIED OR STATUTORY, WITH RESPECT THERETO, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, ENFORCEABILITY OR NON-INFRINGEMENT. Without limiting the generality of the foregoing, neither party nor any of its Subsidiaries or Affiliated Companies makes any warranty or representation that any manufacture, use, importation, offer for sale or sale of any product or service will be free from infringement of any Patent or other intellectual property right of any Third Party.

8.2 NO IMPLIED LICENSES. Nothing contained in this Agreement shall be construed as conferring any rights by implication, estoppel or otherwise, under any intellectual property right, other than the rights expressly granted in this Agreement with respect to the Licensed Agilent Technology and the Licensed HP Technology. Neither party is required hereunder to furnish or disclose to the other any technical or other information (including copies of the Licensed Agilent Technology and the Licensed HP Technology), except as specifically provided herein.

8.3 INFRINGEMENT SUITS. Neither party shall have any obligation hereunder to institute any action or suit against Third Parties for infringement of any Copyrights, Database Rights or Mask Work Rights or misappropriation of any trade secret rights in or to any Technology licensed to the other party hereunder, or to defend any action or suit brought by a Third Party which challenges or concerns the validity of any of such rights or which claims that any Technology assigned or licensed to the other party hereunder infringes any Patent, Copyright, Database Right, Mask Work Right or other intellectual property right of any Third Party or constitutes a misappropriated trade secret of any Third Party. HP shall not have any right to institute any action or suit against Third Parties for infringement of any of the Copyrights, Database Rights or Mask Work Rights in or to the Licensed Agilent Technology and Agilent shall not have any right to institute any action or suit against Third Parties for infringement of any of the Copyrights, Database Rights or Mask Work Rights in or to the Licensed HP Technology.

8.4 NO OTHER OBLIGATIONS. NEITHER PARTY ASSUMES ANY RESPONSIBILITIES OR OBLIGATIONS WHATSOEVER, OTHER THAN THE RESPONSIBILITIES AND OBLIGATIONS EXPRESSLY SET FORTH IN THIS AGREEMENT OR A SEPARATE WRITTEN AGREEMENT BETWEEN THE PARTIES. Without limiting the generality of the foregoing, neither party, nor any of its Subsidiaries or Affiliated Companies, is obligated to provide any technical assistance.

8.5 ENTIRE AGREEMENT. This Agreement, the Master Separation Agreement and the other Ancillary Agreements (as defined in the Master Separation Agreement) constitute the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof. This Agreement shall prevail in the event of any conflicting terms or legends which may appear on any portion of the Agilent Owned Technology, Licensed Agilent Technology or Licensed HP Technology. To the extent there is a conflict between this Agreement and the Master Assignment and Assumption Agreement between the parties, the terms of this Agreement shall govern.

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8.6 GOVERNING LAW. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto.

8.7 DESCRIPTIVE HEADINGS. The descriptive headings herein are inserted for convenience of reference only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

8.8 NOTICES. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given when delivered in person, by telecopy with answer back, by express or overnight mail delivered by a

nationally recognized air courier (delivery charges prepaid), by registered or certified mail (postage prepaid, return receipt requested) or by e-mail with receipt confirmed by return e-mail to the respective parties as follows:

if to HP:

c/o Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304
Attention: Associate General Counsel and
Director of Intellectual Property
Telecopy: (650) 852-8194

if to Agilent:

c/o Agilent Technologies, Inc.
3000 Hanover Street
Palo Alto, CA 94304
Attention: Assistant General Counsel and
Director of Intellectual Property
Telecopy: (650) 813-3095

or to such other address as the party to whom notice is given may have previously furnished to the other in writing in the manner set forth above. Any notice or communication delivered in person shall be deemed effective on delivery. Any notice or communication sent by e-mail, telecopy or by air courier shall be deemed effective on the first Business Day following the day on which such notice or communication was sent. Any notice or communication sent by registered or certified mail shall be deemed effective on the third Business Day following the day on which such notice or communication was mailed. As used in this Section 8.8, "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions located in the State of California are authorized or obligated by law or executive order to close.

8.9 NONASSIGNABILITY. Neither party may, directly or indirectly, in whole or in part, whether by operation of law or otherwise, assign or transfer this Agreement, without the other party's prior written consent, and any attempted assignment, transfer or delegation without such

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prior written consent shall be voidable at the sole option of such other party. Notwithstanding the foregoing, each party (or its permitted successive assignees or transferees hereunder) may assign or transfer this Agreement as a whole without consent to a Person that succeeds to all or substantially all of the business or assets of such party. Without limiting the foregoing, this Agreement will be binding upon and inure to the benefit of the parties and their permitted successors and assigns.

8.10 SEVERABILITY. If any term or other provision of this Agreement is determined by a nonappealable decision of a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent possible.

8.11 FAILURE OR INDULGENCE NOT WAIVER; REMEDIES CUMULATIVE. No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise

thereof or of any other right. All rights and remedies existing under this Agreement are cumulative to, and not exclusive of, any rights or remedies otherwise available.

8.12 AMENDMENT. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to such agreement.

8.13 COUNTERPARTS. This Agreement may be executed in two or more counterparts, all of which, taken together, shall be considered to be one and the same instrument.

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WHEREFORE, the parties have signed this Master Technology Ownership and License Agreement effective as of the date first set forth above.

HEWLETT-PACKARD COMPANY

AGILENT TECHNOLOGIES, INC.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

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EXHIBIT A
TO MASTER TECHNOLOGY OWNERSHIP AND LICENSE AGREEMENT

AFFILIATED COMPANIES

1. HP Affiliated Companies

ImagineCard

Idea LLC

Intria-HP

Intria-HP Potomac

Ericsson-HP Telecom (Sweden)

Ericsson-HP Telecom (France)

Hua-Pua

Putial Ome

PT Berka Services

Liquidity Management Group

Hugin Expert

Syc

Sopura Systems

2. Agilent Affiliated Companies

MASTER PATENT OWNERSHIP AND LICENSE AGREEMENT

Between

HEWLETT-PACKARD COMPANY

AND

AGILENT TECHNOLOGIES, INC.

Effective as of _____, 1999

MASTER PATENT OWNERSHIP AND LICENSE AGREEMENT

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MASTER PATENT OWNERSHIP AND LICENSE AGREEMENT

This Master Patent Ownership and License Agreement (the "Agreement") is effective as of _____, 1999 (the "Effective Date"), between Hewlett-Packard Company, a Delaware corporation ("HP"), having an office at 3000 Hanover Street, Palo Alto, California 94304 and Agilent Technologies, Inc., a Delaware corporation ("Agilent"), having an office at 3000 Hanover Street, Palo Alto, California 94304.

WHEREAS, the Board of Directors of HP has determined that it is in the best interest of HP and its stockholders to separate HP's existing businesses into two independent businesses;

WHEREAS, as part of the foregoing, HP and Agilent have entered into a Master Separation Agreement (as defined below), which provides, among other things, for the separation of certain Agilent assets and Agilent liabilities, the initial public offering of Agilent stock, the distribution of such stock and the execution and delivery of certain other agreements in order to facilitate and provide for the foregoing;

WHEREAS, also as part of the foregoing, HP desires to assign to Agilent certain patents, patent applications and invention disclosures that are owned or controlled by HP prior to the Effective Date;

WHEREAS, the parties desire to facilitate such transaction by exchanging licenses under certain of the patents and patent applications owned or controlled by them;

WHEREAS, HP desires to receive and Agilent is willing to grant to HP certain licenses and rights under patents and patent applications owned by Agilent; and

WHEREAS, Agilent desires to receive and HP is willing to grant to Agilent certain licenses and rights under patents and patent applications owned by HP.

NOW, THEREFORE, in consideration of the mutual promises of the parties, and of good and valuable consideration, it is agreed by and between the parties as follows:

ARTICLE I

DEFINITIONS

For the purpose of this Agreement the following capitalized terms are defined in this Article I and shall have the meaning specified herein:

1.1 AFFILIATED COMPANY. "Affiliated Company" means, with respect to HP, any entity in which HP holds a 50% or less ownership interest and that is listed on Exhibit A hereto and, with respect to Agilent, any entity in which Agilent holds a 50% or less ownership interest and that is listed on Exhibit A hereto; provided, however, that any such entity listed in Exhibit A shall be

considered to be an Affiliated Company under this Agreement only if it agrees in writing to be bound by the terms and conditions of this Agreement. Exhibit A may be amended from time to time after the date hereof upon mutual consent of the parties.

1.2 AGILENT PATENTS. "Agilent Patents" means:

(a) the Assigned Patents; except for design patents and design registrations (other than typeface design patents and typeface design registrations) with a First Effective Filing Date after the Separation Date; and

(b) every Non-Design Patent to the extent entitled to a First

Effective Filing Date prior to the expiration of the Capture Period, provided that, at any time after the First Effective Filing Date of any such Non-Design Patent and prior to the expiration of the Capture Period, Agilent (or any Subsidiary or Affiliated Company of Agilent):

(i) has ownership or control of any such Non-Design Patent, or

(ii) otherwise has the right under such Non-Design Patent to grant any licenses of the type and on the terms herein granted by Agilent without the obligation to pay royalties or other consideration to Third Parties; and

(c) applications for the foregoing Non-Design Patents described in Section 1.2(b), including without limitation any continuations, continuations-in-part, divisions and substitutions; but

(d) excluding from any Non-Design Patent or Non-Design Patent application described in Sections 1.2(b) and (c) any claim (i) directed to subject matter that does not appear in any Non-Design Patent application having a First Effective Filing Date prior to the expiration of the Capture Period and (ii) of which neither Agilent nor any person having a legal duty to assign his/her interest therein to Agilent is entitled to be named as an inventor.

1.3 AGILENT PRODUCTS. "Agilent Products" means any and all products and services of the businesses in which Agilent or any of its Subsidiaries or Affiliated Companies is now or hereafter engaged (including the business of making (but not having made) Third Party products for Third Parties when Agilent is acting as a contract manufacturer or foundry for such Third Parties).

1.4 ALLOCATED PATENT ASSETS DATABASE. "Allocated Patent Assets Database" means the Allocated Patent Assets Database, as it may be updated by the parties upon mutual agreement to add Patents, Patent applications and Invention Disclosures as of the Separation Date.

1.5 ASSIGNED PATENTS. "Assigned Patents" means only those

(a) Patents, Patent applications and Invention Disclosures allocated to Agilent in the Allocated Patent Assets Database;

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(b) Patent applications filed on the foregoing Invention Disclosures described in Section 1.5(a);

(c) continuations, continuations-in-part, divisions and substitutions of any of the foregoing Patent applications described in Sections 1.5(a) and (b);

(d) Patents which may issue on any of the foregoing Patent applications described in Sections 1.5(a)-(c);

(e) renewals, reissues, reexaminations and extensions of the foregoing Patents described in Sections 1.5(a) and (d); and

(f) foreign Patent applications and Patents that are counterparts of any of the foregoing Patent applications or Patents described in Sections 1.5(a)-(e), including any Patent application or Patent to the extent that it claims priority from any of the foregoing Patent applications or Patents described in Sections 1.5(a)-(e); but

(g) excluding from any Patent or Patent application described in Sections 1.5(c)-(f) any claim (i) directed to subject matter that does not appear in any Patent application having a First Effective Filing Date prior to the Separation Date and (ii) of which neither Agilent nor any person having a legal duty to assign his/her interest therein to Agilent is entitled to be named as an inventor.

1.6 CAPTURE PERIOD. "Capture Period" means the period ending five (5) years from the Separation Date.

1.7 DISTRIBUTION DATE. "Distribution Date" has the meaning set forth in the Master Separation Agreement.

1.8 FIRST EFFECTIVE FILING DATE. "First Effective Filing Date" means the earliest effective filing date in the particular country for any Patent or any application for any Patent. By way of example, it is understood that the First Effective Filing Date for a United States Patent is the earlier of (i) the actual filing date of the United States Patent application which issued into such Patent, (ii) the priority date under 35 U.S.C. (S) 119 for such Patent, or (iii) the priority date under 35 U.S.C. (S) 120 for such Patent.

1.9 HP PATENTS. "HP Patents" means:

(a) every Non-Design Patent to the extent entitled to a First Effective Filing Date prior to the expiration of the Capture Period, provided that, at any time after the First Effective Filing Date of any such Non-Design Patent and prior to the expiration of the Capture Period, HP (or any Subsidiary or Affiliated Company of HP):

(i) has ownership or control of any such Non-Design Patent, or

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(ii) otherwise has the right under such Non-Design Patent to grant any licenses of the type and on the terms herein granted by HP without the obligation to pay royalties or other consideration to Third Parties; and

(b) applications for the foregoing Non-Design Patents described in Section 1.9(a), including without limitation any continuations, continuations-in-part, divisions and substitutions; but

(c) excluding from any Non-Design Patent or Non-Design Patent application described in Sections 1.9(a) and (b) any claim (i) directed to subject matter that does not appear in any Patent application having a First Effective Filing Date prior to the expiration of the Capture Period and (ii) of which neither HP nor any person having a legal duty to assign his/her interest therein to HP is entitled to be named as an inventor.

(d) Notwithstanding the foregoing, the term "HP Patents" does not include Agilent Patents.

1.10 HP PRODUCTS. "HP Products" means any and all products and services of the businesses in which HP or any of its Subsidiaries or Affiliated Companies is now or hereafter engaged (including the business of making (but not having made) Third Party products for Third Parties when HP is acting as a contract manufacturer or foundry for such Third Parties).

1.11 INVENTION DISCLOSURE. "Invention Disclosure" means a disclosure of an invention (i) written for the purpose of allowing legal and business people to determine whether to file a Patent application with respect to such invention and (ii) recorded with a control number in the owning party's records) with a First Effective Filing Date after the Separation Date.

1.12 JOINT PATENTS. "Joint Patents" means:

(a) Patents, Patent applications and Invention Disclosures allocated to the parties jointly in the Allocated Patent Assets Database;

(b) Patent applications filed on the foregoing Invention Disclosures described in Section 1.12 (a);

(c) continuations, continuations-in-part, divisions and substitutions of any of the foregoing Patent applications described in Sections 1.12 (a) and (b);

(d) Patents which may issue on any of the foregoing Patent applications described in Sections 1.12 (a)-(c);

(e) renewals, reissues and extensions of the foregoing Patents described in Sections 1.12(a) and (d); and

(f) foreign Patent applications and Patents that are counterparts of any of the foregoing Patent applications or Patents described in Sections 1.12 (a)-(e), including any Patent

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application or Patent that takes priority from any of the foregoing Patent applications or Patents described in Sections 1.12 (a)-(e); but

(g) excluding from any Patent or Patent application described in Sections 1.12 (c)-(f) any claim (i) directed to subject matter that does not appear in any Patent application having a First Effective Filing Date prior to the Separation Date and (ii) of which there is no joint inventorship including at least one Agilent employee and at least one HP employee.

1.13 NON-DESIGN PATENTS. "Non-Design Patents" means Patents except for design patents (other than typeface design patents and typeface design registrations) to the extent that such design patents have a First Effective Filing Date after the Separation Date.

1.14 MASTER SEPARATION AGREEMENT. "Master Separation Agreement" means the Master Separation and Distribution Agreement between the parties.

1.15 PATENT FIELD DEFINITION DATABASE. "Patent Field Definition Database" means the Patent Field Definition Database, as it may be updated by the parties as of the Separation Date.

1.16 PATENTS. "Patents" means patents, utility models, design patents, design registrations, certificates of invention and other governmental grants for the protection of inventions or industrial designs anywhere in the world and all reissues, renewals, re-examinations and extensions of any of the foregoing.

1.17 PERSON. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization and a governmental entity or any department, agency or political subdivision thereof.

1.18 SEPARATION DATE. "Separation Date" means 12:01 a.m., Pacific Time, November 1, 1999 or such other date as may be fixed by the Board of Directors of HP.

1.19 SUBSIDIARY. "Subsidiary" means with respect to any specified Person, any corporation, any limited liability company, any partnership or other legal entity of which such Person owns, directly or indirectly, more than 50% of the stock or other equity interest entitled to vote on the election of the members of the board of directors or similar governing body. Unless the context otherwise requires, reference to HP and its Subsidiaries shall not include the subsidiaries of HP that will be transferred to Agilent after giving effect to the Separation (as defined in the Master Separation Agreement), including the actions taken pursuant to the Non-US Plan (as defined in the Master Separation Agreement). For example, if HP owns 70% of the stock of another corporation, and that corporation owns 60% of the equity interest of a limited liability company, then that corporation is a Subsidiary of HP but that limited liability company is not. However, if such corporation owns 90% of the equity interest of a limited liability company, then that limited liability company is a Subsidiary of HP. For the avoidance of doubt, this definition of Subsidiary is different from the definition of Subsidiary in the Master Separation Agreement.

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1.20 THIRD PARTY. "Third Party" means a Person other than HP and its Subsidiaries and Affiliated Companies and Agilent and its Subsidiaries and Affiliated Companies.

ARTICLE II

ASSIGNMENTS

2.1 ASSIGNED PATENTS. Subject to Sections 2.3 and 2.4 below, HP hereby grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent, by execution hereof (or, where appropriate or required, by execution of separate instruments of assignment), all its (and their) right, title and interest in and to the Assigned Patents, to be held and enjoyed by Agilent, its successors and assigns. HP further grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent all its (and their) right, title and interest in and to any and all causes of action and rights of recovery for past infringement of the Assigned Patents and the right to claim priority from the Assigned Patents. HP will, without demanding any further consideration therefor, at the request and expense of Agilent (except for the value of the time of HP employees), do (and cause its Subsidiaries to do) all lawful and just acts, that may be or become necessary for prosecuting, sustaining, obtaining continuations of, or reissuing said Assigned Patents and for evidencing, maintaining, recording and perfecting Agilent's rights to said Assigned Patents, consistent with HP's general business practice as of the Separation Date, including but not limited to execution and acknowledgement of (and causing its Subsidiaries to execute and acknowledge) assignments and other instruments in a form reasonably required by Agilent for each Patent jurisdiction.

2.2 JOINT PATENTS. Subject to Sections 2.3, 2.4, 3.8 and 4.3 below, HP hereby grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent, by execution hereof (or, where appropriate or required, by execution of separate instruments of assignment), an undivided one-half interest in and to the Joint Patents, to be held and enjoyed by Agilent, its successors and assigns. HP further grants, conveys, and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent an undivided one-half interest in and to any and all causes of action and rights of recovery for past infringement of the Joint Patents and the right to claim priority from the Joint Patents. HP will, without demanding any further consideration therefor, at the request and expense of Agilent (except for the value of the time of HP employees), do (and cause its Subsidiaries to do) all lawful and just acts, that may be or become necessary for evidencing, maintaining, recording and perfecting Agilent's rights to said Joint Patents consistent with HP's general business practice as of the Separation Date, including but not limited to execution and acknowledgement of (and causing its Subsidiaries to execute and acknowledge) assignments and other instruments in a form reasonably required by Agilent for each Patent jurisdiction.

2.3 PRIOR GRANTS. Agilent acknowledges and agrees that the foregoing assignments are subject to any and all licenses or other rights that may have been granted by HP or its Subsidiaries with respect to the Assigned Patents and the Joint Patents prior to the Separation Date. HP shall respond to reasonable inquiries from Agilent regarding any such prior grants.

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2.4 ASSIGNMENT DISCLAIMER. AGILENT ACKNOWLEDGES AND AGREES THAT THE FOREGOING ASSIGNMENTS ARE MADE ON AN "AS-IS," QUITCLAIM BASIS AND THAT NEITHER HP NOR ANY SUBSIDIARY OR AFFILIATED COMPANY OF HP HAS MADE OR WILL MAKE ANY WARRANTY WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, ENFORCEABILITY, NON-INFRINGEMENT, OR VALIDITY OF PATENT CLAIMS (ISSUED OR PENDING).

ARTICLE III

LICENSES AND RIGHTS

3.1 LICENSE GRANTS TO HP. Agilent grants (and agrees to cause its appropriate Subsidiaries or Affiliated Companies to grant) to HP, under the Agilent Patents, a personal, irrevocable, nonexclusive, worldwide, fully-paid, royalty-free and non-transferable (except as set forth in Section 9.9) license to make (including the right to practice methods, processes and procedures), have made, use, lease, sell, offer for sale and import HP Products in all fields of use except in the fields of use set forth on Exhibit B. In addition, the foregoing license grants are subject to the special contract terms, if any, set forth in the Allocated Patent Assets Database.

3.2 LICENSE GRANTS TO AGILENT. HP grants (and agrees to cause its appropriate Subsidiaries or Affiliated Companies to grant) to Agilent, under the HP Patents, a personal, irrevocable, nonexclusive, worldwide, fully-paid, royalty-free and non-transferable (except as set forth in Section 9.9) license to make (including the right to practice methods, processes and procedures), have made, use, lease, sell, offer for sale and import Agilent Products in all fields of use except in the fields of use set forth on Exhibit C. In addition, the foregoing license grants are subject to the special contract terms, if any, set forth in the Allocated Patent Assets Database.

3.3 SUBLICENSE RIGHTS.

(a) Subject to Sections 3.5 and 3.6, each party may grant sublicenses to its respective Subsidiaries within the scope of its respective license hereunder (with no right to grant further sublicenses other than, in the case of a sublicensed Subsidiary, to another Subsidiary of such party and as described in Sections 3.3(e) and (f) below).

(b) Subject to Sections 3.5 and 3.6, each party may grant sublicenses to its respective Affiliated Companies within the scope of its respective license hereunder (with no right to grant further sublicenses other than, in the case of a sublicensed Affiliated Company, to such Affiliated Company's wholly-owned subsidiaries and as described in Sections 3.3(e) and (f) below).

(c) Any sublicense under Section 3.3(a) or 3.3(b) may be made effective retroactively, but not prior to the sublicensee's becoming a Subsidiary or Affiliated Company of the granting party.

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(d) Each party may grant sublicenses to Third Parties within the scope of their respective licenses hereunder with respect to the Patents identified as sublicensable in the Allocated Patent Assets Database, subject to prior written approval by the other party. Such sublicense shall be deemed approved if not disapproved in writing within thirty (30) days of written request to such other party. Such sublicense shall be subject to any special contract terms applicable to Third Party sublicenses set forth in the Allocated Patent Assets Database. The sublicense agreement between the sublicensor and the Third Party sublicensee shall provide that the owner of the sublicensed Patent may terminate the sublicense for breach upon written notice to the sublicensee, subject to a cure period of not less than thirty (30) days, and may seek immediate injunctive relief in the event of any breach.

(e) Any licenses granted by HP to its distributors, resellers, OEM customers, VAR customers, VAD customers, systems integrators and other channels of distribution and to its end user customers with respect to any HP Product in the form of software, may include a sublicense under the Agilent Patents within the scope of HP's license hereunder, provided that the scope of such sublicense is limited to the exercise of the rights granted by HP with respect to the HP Product.

(f) Any licenses granted by Agilent to its distributors, resellers, OEM customers, VAR customers, VAD customers, systems integrators and other channels of distribution and to its end user customers with respect to any

Agilent Product in the form of software may include a sublicense under the HP Patents within the scope of Agilent's license hereunder, provided that the scope of such sublicense is limited to the exercise of the rights granted by Agilent with respect to the Agilent Product.

3.4 HAVE MADE RIGHTS. Each party understands and acknowledges that the "have made" rights granted to it in Section 3.1 or 3.2, as applicable, and the sublicenses of such "have made" rights granted pursuant to Sections 3.3(a) and (b), as applicable, are intended to cover only the products of such party, its Subsidiaries and Affiliated Companies (including private label or OEM versions of such products), and are not intended to cover foundry or contract manufacturing activities that such party may undertake through Third Parties for Third Parties.

3.5 DURATION.

(a) All licenses granted herein with respect to each Patent shall expire upon the expiration of the term of such Patent; provided, however, that licenses for Patents falling within Section 1.2(b)(ii) or Section 1.9(a)(ii) shall expire upon the expiration of the term of the grantor's license under such Patent.

(b) All sublicenses granted pursuant to this Agreement to a particular Subsidiary or Affiliated Company of a party hereto shall terminate the date that, in the case of a Subsidiary of a party, the Subsidiary ceases to be a Subsidiary of such party, or, in the case of an Affiliated Company of a party, such party ceases to hold at least a thirty percent (30%) ownership interest in such Affiliated Company; provided however, that the foregoing shall not affect the other party's obligations under Section 3.6 below. The licenses granted to such other party hereunder with respect

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to Patents and Patent applications of such Subsidiary or Affiliated Company with a First Effective Filing Date prior to the date of such cessation shall remain in effect notwithstanding such cessation.

3.6 SALE OF A BUSINESS, SUBSIDIARY OR AFFILIATED COMPANY.

(a) If either party (the "Transferring Party"), after the Separation Date, transfers a going business (but not all or substantially all of its business or assets), and such transfer includes at least one marketable product and tangible assets having a net value of at least ten million U.S. dollars (\$10,000,000.00), regardless of whether such transfer is part of (i) an asset sale to any Third Party, (ii) a sale of shares or securities in a Subsidiary or Affiliated Company to a Third Party such that (A) in the case of a Subsidiary, the Subsidiary ceases to be a Subsidiary, or in the case of an Affiliated Company, the Transferring Party ceases to hold at least a thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (B) the Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority, or (iii) a sale of shares or securities in a Subsidiary or Affiliated Company such that (A) in the case of a Subsidiary, the Subsidiary ceases to be a Subsidiary, or in the case of an Affiliated Company, the Transferring Party ceases to hold at least thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (B) no single Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority of such ex-Subsidiary or ex-Affiliated Company;

(b) then, upon written request to the other party (the "Non-Transferring Party") jointly by the Transferring Party and the Transferee (as defined below) within sixty (60) days following the transfer, the Non-Transferring Party shall grant a royalty-free license to the Transferee under the same terms as the license granted to the Transferring Party under this Agreement subject to the following:

(i) the effective date of such license shall be the effective date of such transfer,

(ii) the products, services and processes of the Transferee that are subject to such license shall be limited to the products, services and processes of the Subsidiary or Affiliated Company or the products, services and processes in the transferred business that are commercially released or for which substantial steps have been taken to commercialization and for new versions that have merely minor incremental differences from such products, services and processes,

(iii) the Patents of the Non-Transferring Party that are subject to such license shall be limited to HP Patents or Agilent Patents, as the case may be, that are entitled to a First Effective Filing Date on or before the date of such transfer,

(iv) the Transferee shall have no right to grant sublicenses (except as set forth in Sections 3.3(e) and (f) above) except that the Transferee shall have the right to grant sublicenses to any Person at least eighty percent (80%) of whose outstanding shares or securities representing the right to vote for the election of directors or other managing authority are, directly or

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indirectly, owned by the Transferee ("Transferee Subsidiaries"), only for so long as such ownership exists, and

(v) this Section 3.6 shall be excluded from such license in any event;

(c) provided, further, that the Transferee shall grant to the Non-Transferring Party a royalty-free license under the same terms as the license granted to the Non-Transferring Party by the Transferring Party under this Agreement, subject to the following:

(i) the effective date of such license shall be the effective date of the transfer,

(ii) the products, services and processes of the Non-Transferring Party that are subject to such license shall be all the products, services and processes that are subject to the license from the Transferring Party to the Non-Transferring Party as of the effective date of the transfer, and

(iii) the Patents of the Transferee that are subject to such license shall be limited to all the Non-Design Patents that are entitled to a First Effective Filing Date on or before the date of such transfer and under which, at any time commencing with the date of the transfer, the Transferee or any of the Transferee Subsidiaries has ownership or control or otherwise has the right to grant such license without the obligation to pay royalties or other consideration to Third Parties; and

(d) provided, further, that in the event that the Non-Transferring Party and the Transferee are engaged in litigation, arbitration or other formal dispute resolution proceedings covering Patent infringement (pending in any court, tribunal, or administrative agency or before any appointed or agreed upon arbitrator in any jurisdiction worldwide), then the Non-Transferring Party shall have no obligation to enter into a license with the Transferee under this Section 3.6.

(e) Each party may exercise its rights as the Transferring Party under this Section 3.6 no more than eight (8) times unless otherwise agreed to in writing by the other party. Notwithstanding the foregoing limitation, however, in any license granted by a Non-Transferring Party to a Transferee under this Section 3.6, the Transferring Party may elect to relinquish its license under this Agreement in the field of use covered by the license, and such license

shall not count toward the limit. In making such election, the Transferring Party promptly shall notify the Non-Transferring Party. All notices of transfer and all consents by HP and Agilent shall be effective only if provided to or by the Director of Intellectual Property of the applicable party.

(f) As used above in this Section 3.6, "Transferee" in the case of Sections 3.6(a)(i) and (ii) means the Third Party acquiring the going business or eighty percent (80%) of the Subsidiary or Affiliated Company and in the case of Section 3.6(a)(iii) means the ex-Subsidiary or ex-Affiliated Company only.

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3.7 SALE OF A PARTY OR ALL ASSETS OF A PARTY.

(a) Each party (or its permitted successive assignees or transferees hereunder) may assign or transfer this Agreement as a whole without consent in connection with a corporate reorganization which leaves such party substantially equivalent in terms of business, assets and ownership as before the reorganization (e.g., a reincorporation in another state).

(b) Each party (or its permitted successive assignees or transferees hereunder) (the "Acquired Party") may assign or transfer this Agreement as a whole without consent to a Person that succeeds to all or substantially all of the business or assets of such party (the "Acquiring Party"); provided, however, that in the event of any assignment or transfer under this Section 3.7(b) that is not covered by Section 3.7(a) above:

(i) the Acquired Party promptly shall give notice of such acquisition to the other party (the "Non-Acquired Party"),

(ii) the license granted to the Acquired Party by the Non-Acquired Party pursuant to this Agreement, and any sublicenses granted by the Acquired Party to its Subsidiaries and Affiliated Companies, shall automatically become limited to the products, processes and services of the Acquired Party or its Subsidiaries or Affiliated Companies that are commercially released or for which substantial steps have been taken to commercialization as of the effective date of the acquisition and for new versions that have merely minor incremental differences from such products, processes and services and shall not in any event include any products, processes or services of the Acquiring Party, and the Capture Period for Patents under such license shall expire as of the effective date of the acquisition; provided, however, that in any event such license shall be terminable at will by the Non-Acquired Party if the Non-Acquired Party and the Acquiring Party are engaged in litigation, arbitration or other formal dispute resolution proceedings covering Patent infringement (pending in any court, tribunal, or administrative agency or before any appointed or agreed upon arbitrator in any jurisdiction worldwide) at the time that the acquisition agreement is entered into, or if such proceedings are initiated by the Acquiring Party within one hundred twenty-one days (121) days after the date that the acquisition agreement is entered into, and

(iii) the license granted by the Acquired Party to the Non-Acquired Party pursuant to this Agreement shall remain in place unchanged except that the Capture Period for Patents under such license shall expire as of the effective date of the acquisition.

3.8 RIGHTS TO JOINT PATENTS.

(a) Subject to the further restrictions in this Section 3.8(a), each party has the right to practice the Joint Patents without restriction and without the consent of the other party. Certain Joint Patents are subject to the restriction that each party may not practice such Joint Patents, in certain fields of use as indicated in the Allocated Patent Assets Database.

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(b) Each party may license the Joint Patents only with the prior

written consent of the other party, which consent will not be unreasonably withheld. Such consent shall be deemed given if not withheld in writing within thirty (30) days of written request to such other party.

(c) In the event that either party (the "Transferring Party") desires to transfer its ownership interest in any or all Joint Patents to any Third Party, it shall first give the other party (the "Non-Transferring Party") notice and the opportunity to acquire any such Joint Patents for the same consideration as that offered to the Third Party. The Non-Transferring Party shall have fifteen (15) Business Days (as such term is defined in Section 9.8 below) to determine whether to acquire such Joint Patents for the same consideration as that offered to the Third Party. In the event that the Non-Transferring Party fails to respond within such fifteen (15) Business Day period or declines to accept such offer, then the Transferring Party may transfer its interest in such Joint Patents to the Third Party on the same terms offered to the Non-Transferring Party. If the Transferring Party desires to offer more favorable terms to such Third Party or to any other Third Party, then the process set forth in this Section 3.8(c) shall be repeated.

3.9 PATENT APPLICATIONS AND INVENTION DISCLOSURES. Each party agrees, at its own expense, to provide to the other party copies of any Patents, Patent applications and Invention Disclosures that are listed in the Allocated Patent Assets Database in the form that such Patents, Patent applications and Invention Disclosures exist as of the Separation Date. Neither party has any obligation to disclose or provide copies to the other party any other Patents, Patent applications or Invention Disclosures. The licenses granted under this Agreement cover only statutory rights under Patents and statutory rights (if any) under Patent applications. Trade secret and other non-Patent licenses with respect to inventions described in Invention Disclosures and Patent applications shall be solely as set forth in the Master Technology Ownership and License Agreement or the ICBT Technology Ownership and License Agreement between the parties, as applicable.

3.10 TURBO COOLER PATENTS. Certain Patents related to turbo coolers, as identified in the Allocated Patent Assets Database, are subject to additional terms as set forth in a separate written agreement between the parties.

3.11 DISPLAY PATENTS. In the event that either party (the "Transferring Party") desires to transfer to any Third Party its ownership interest in any Patents that are specifically identified as "Display Patents" in the Allocated Patent Assets Database ("Display Patents"), it shall first give the other party (the "Non-Transferring Party") notice and the opportunity to acquire those Display Patents for the same consideration as that offered to the Third Party. The Non-Transferring Party shall have fifteen (15) Business Days (as such term is defined in Section 9.8 below) to determine whether to acquire such Display Patents for the same consideration as that offered to the Third Party. In the event that the Non-Transferring Party fails to respond within such fifteen (15) Business Day period or declines to accept such offer, then the Transferring Party may transfer its interest in those Display Patents to the Third Party on the same terms offered to the Non-Transferring Party. If the Transferring Party desires to offer more favorable terms to such Third Party or to any other Third Party, then the process set forth in this Section 3.11 shall be repeated.

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ARTICLE IV

ADDITIONAL OBLIGATIONS

4.1 ADDITIONAL OBLIGATIONS WITH REGARD TO ASSIGNED PATENTS.

(a) The parties will cooperate to effect a smooth transfer of the responsibility for prosecution, maintenance and enforcement of the Assigned Patents from HP to Agilent. Until such transfer has been effected, HP agrees to continue the prosecution and maintenance of, and ongoing litigation (if any) with respect to, the Assigned Patents (including payment of maintenance fees), and to maintain its files and records relating to the Assigned Patents using the

same standard of care and diligence that it uses with respect to the HP Patents. Agilent will reimburse HP for all actual and reasonable expenses (excluding the value of the time of HP employees) to continue to prosecute and maintain the Assigned Patents after the Separation Date until the transfer of responsibility for the Assigned Patents has been completed and to continue any such ongoing litigation. The parties shall agree on a case by case basis on compensation, if any, of HP for the value of time of HP's employees as reasonably required in connection with any such litigation. HP will provide Agilent with the originals or copies of its files relating to the Assigned Patents upon such transfer or at such earlier time as the parties may agree.

(b) HP shall provide continuing reasonable support to Agilent with respect to the Assigned Patents, including by way of example the following:

(i) executing all documents prepared by Agilent necessary for prosecution, maintenance, and litigation of the Assigned Patents,

(ii) making available to Agilent or its counsel, inventors and other persons employed by HP for interviews and/or testimony to assist in good faith in further prosecution, maintenance or litigation of the Assigned Patents, including the signing of documents related thereto,

(iii) forwarding copies of all correspondence sent and received concerning the Assigned Patents within a reasonable period of time after receipt by HP, and

(iv) making all relevant documents in the possession or control of HP and corresponding to the Assigned Patents, or any licenses thereunder, available to Agilent or its counsel.

Any actual and reasonable out-of-pocket expenses associated with any such assistance shall be borne by Agilent, expressly excluding the value of the time of such HP employees; provided, however, that in the case of assistance with litigation, the parties shall agree on a case by case basis on compensation, if any, of HP for the value of the time of HP's employees as reasonably required in connection with such litigation.

4.2 ADDITIONAL OBLIGATIONS WITH REGARD TO HP PATENTS. Agilent acknowledges that its employees and contractors who are former HP employees and contractors

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have a continuing duty to assist HP with the prosecution of HP Patent applications and, accordingly, Agilent agrees to make available, to HP or its counsel, inventors and other persons employed by Agilent for interviews and/or testimony to assist in good faith in further prosecution, maintenance or litigation of the HP Patents, including the signing of documents related thereto. Any actual and reasonable out-of-pocket expenses associated with such assistance shall be borne by HP, expressly excluding the value of the time of such Agilent personnel; provided, however, that in the case of assistance with litigation, the parties shall agree on a case by case basis on compensation, if any, of Agilent for the value of the time of Agilent's employees as reasonably required in connection with such litigation.

4.3 ADDITIONAL OBLIGATIONS WITH REGARD TO JOINT PATENTS.

(a) The parties shall agree, through their respective Directors of Intellectual Property or delegates thereof, from time to time on which party shall be responsible for filing, prosecuting and maintaining any Joint Patents and such party shall conduct such prosecution by generally accepted good Patent filing and prosecution practices. The parties shall share equally any actual and reasonable out-of-pocket expenses (expressly excluding the value of the time of either party's employees) incurred in connection with such prosecution and maintenance. From time to time, upon the request of the party responsible for prosecuting and maintaining a particular Joint Patent application or Joint Patent, the other party will provide the responsible party with copies of all

relevant filings and correspondence and will respond to reasonable inquiries with respect thereto. The party not responsible for prosecuting and maintaining a particular Joint Patent shall provide the following additional assistance to the responsible party:

(i) executing all documents prepared by the responsible party necessary for prosecution and maintenance of the Joint Patent,

(ii) making available to the responsible party or its counsel, inventors and other persons employed by the other party for interviews and/or testimony to assist in good faith in further prosecution or maintenance of the Joint Patent, including the signing of documents related thereto,

(iii) forwarding copies of all correspondence sent and received concerning the Joint Patent within a reasonable period of time after receipt, and

(iv) making all relevant documents in the possession or control of such other party and corresponding to the Joint Patent, or any licenses thereunder, available to the responsible party or its counsel.

(b) Subject to Section 3.8(b), each party or any of its Subsidiaries may, at its own expense, in good faith enforce any Joint Patents against any Third Party infringer (including but not limited to past infringements) only with the prior written consent of the other party, which consent will not be unreasonably withheld. Such consent shall be deemed given if not withheld in writing within thirty (30) days of written request. The parties shall agree on a case by case basis on compensation, if any, of the other party for the value of the time of such other party's employees as

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reasonably required in connection with the action. If the enforcing party or any of its Subsidiaries recovers any damages or compensation for any action which the enforcing party or any of the Subsidiaries of the enforcing party solely takes hereunder, including any settlement, the enforcing party or the Subsidiaries of the enforcing party shall retain one hundred percent (100%) of such damages or compensation. If the parties cooperate in any such enforcement action, then any recovery of damages or compensation shall be allocated pursuant to mutual written agreement.

4.4 DEFENSIVE PROTECTION MEASURES. For a period of five (5) years from the Separation Date, the parties shall cooperate reasonably and in good faith to the extent consistent with each party's own business objectives in the event that either party is involved in Patent litigation or controversies in which it would be helped in some way by the other party's Patents or relevant knowledge. Such cooperation may include, by way of example, (i) cooperation with respect to knowledge of prior art (whether the other party's or a Third Party's), (ii) consent to the granting of licenses to such other party's Patents, and (iii) assignment to such party of such other party's Patents for the purpose of bringing a counterclaim against a Third Party. The party requesting such cooperation shall bear the actual and reasonable out-of-pocket expenses of the cooperating party (except for the value of the time of the cooperating party's employees).

4.5 STANDARDS BODIES. For a period of five (5) years from the Separation Date, the parties agree to cooperate reasonably and in good faith with each other with respect to the licensing of each party's Patents in the context of standards bodies, to the extent consistent with each party's own business objectives.

4.6 ASSIGNMENT OF PATENTS. HP shall not assign or grant any rights under any of the HP Patents unless such assignment or grant is made subject to the licenses granted in this Agreement. Agilent shall not assign or grant any rights under any of the Agilent Patents unless such assignment or grant is made subject to the licenses granted in this Agreement.

4.7 RESPONSE TO REQUESTS. Each party shall, upon a request from the other party sufficiently identifying any Patent or Patent application, inform the other party as to the extent to which said Patent or Patent application is subject to the licenses and other rights granted hereunder. If such licenses or other rights under said Patent or Patent application are restricted in scope, copies of all pertinent provisions of any contract or other arrangement creating such restrictions shall, upon request, be furnished to the party making such request, unless such disclosure is prevented by such contract or other arrangement, and in such event, a statement of the nature of such restriction shall be provided.

4.8 RECORDATION OF LICENSES.

(a) For any country, now or in the future, that requires the express consent of all inventors or their assignees to the grant of licenses or rights under Patents issued in such countries for joint inventions:

(i) each party shall give such consent, or shall obtain such consent from its employees, its Subsidiaries or employees of any of its Subsidiaries, as required to make full and

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effective any such licenses and rights respecting any joint invention granted to a grantee hereunder by such party; and

(ii) each party shall take steps that are reasonable under the circumstances to obtain from Third Parties whatever other consents are necessary to make full and effective such licenses and rights respecting any joint invention purported to be granted by it hereunder. If, in spite of such reasonable steps, such party is unable to obtain the requisite consents from such Third Parties, the resulting inability of such party to make full and effective its purported grant of such licenses and rights shall not be considered to be a breach of this Agreement.

(b) Each party agrees, without demanding any further consideration, to execute (and to cause its Subsidiaries or Affiliated Companies to execute) all documents reasonably requested by the other party to effect recordation of the license relationship between the parties created by this Agreement.

ARTICLE V

CONFIDENTIALITY

The terms of the Master Confidential Disclosure Agreement between the parties shall apply to any Confidential Information (as defined therein) which is the subject matter of this Agreement.

ARTICLE VI

TERMINATION

6.1 VOLUNTARY TERMINATION. By written notice to the other party, each party may voluntarily terminate all or a specified portion of the licenses and rights granted to it hereunder by such other party. Such notice shall specify the effective date of such termination and shall clearly specify any affected Patent, Patent application, Invention Disclosure, product or service.

6.2 SURVIVAL. Any voluntary termination of licenses and rights of a party under Section 6.1 shall not affect such party's licenses and rights with respect to any licensed product made or service furnished prior to such termination, and shall not affect the licenses and rights granted to the other party hereunder.

6.3 NO OTHER TERMINATION. Each party acknowledges and agrees that its remedy for breach by the other party of the licenses granted to it hereunder or of any other provision hereof, shall be, subject to the requirements of Article VII, to bring a claim to recover damages subject to the limits set forth in this

Agreement and to seek any other appropriate equitable relief, other than termination of the licenses granted by it in this Agreement.

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ARTICLE VII

DISPUTE RESOLUTION

7.1 NEGOTIATION. The parties shall make a good faith attempt to resolve any dispute or claim arising out of or related to this Agreement through negotiation. Within thirty (30) days after notice of a dispute or claim is given by either party to the other party, the parties' first tier negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet and make a good faith attempt to resolve such dispute or claim and shall continue to negotiate in good faith in an effort to resolve the dispute or claim or renegotiate the applicable section or provision without the necessity of any formal proceedings. If the first tier negotiating teams are unable to agree within thirty (30) days of their first meeting, then the parties' second tier negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet within thirty (30) days after the end of the first thirty (30) day negotiating period to attempt to resolve the matter. During the course of negotiations under this Section 7.1, all reasonable requests made by one party to the other for information, including requests for copies of relevant documents, will be honored. The specific format for such negotiations will be left to the discretion of the designated negotiating teams but may include the preparation of agreed upon statements of fact or written statements of position furnished to the other party.

7.2 NONBINDING MEDIATION. In the event that any dispute or claim arising out of or related to this Agreement is not settled by the parties within fifteen (15) days after the first meeting of the second tier negotiating teams under Section 7.1, the parties will attempt in good faith to resolve such dispute or claim by nonbinding mediation in accordance with the American Arbitration Association Commercial Mediation Rules. The mediation shall be held within thirty (30) days of the end of such fifteen (15) day negotiation period of the second tier negotiating teams. Except as provided below in Section 7.3, no litigation for the resolution of such dispute may be commenced until the parties try in good faith to settle the dispute by such mediation in accordance with such rules and either party has concluded in good faith that amicable resolution through continued mediation of the matter does not appear likely. The costs of mediation shall be shared equally by the parties to the mediation. Any settlement reached by mediation shall be recorded in writing, signed by the parties, and shall be binding on them.

7.3 PROCEEDINGS. Nothing herein, however, shall prohibit either party from initiating litigation or other judicial or administrative proceedings if such party would be substantially harmed by a failure to act during the time that such good faith efforts are being made to resolve the dispute or claim through negotiation or mediation. In the event that litigation is commenced under this Section 7.3, the parties agree to continue to attempt to resolve any dispute according to the terms of Sections 7.1 and 7.2 during the course of such litigation proceedings under this Section 7.3.

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ARTICLE VIII

LIMITATION OF LIABILITY

IN NO EVENT SHALL EITHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES BE LIABLE TO THE OTHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, INCIDENTAL OR PUNITIVE DAMAGES OR LOST PROFITS, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (INCLUDING NEGLIGENCE) ARISING IN ANY WAY OUT OF THIS AGREEMENT, WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; PROVIDED, HOWEVER, THAT THE

FOREGOING LIMITATIONS SHALL NOT LIMIT DAMAGES FOR INFRINGEMENT AVAILABLE TO EITHER PARTY UNDER APPLICABLE LAW IN THE EVENT OF BREACH BY THE OTHER PARTY OF SECTIONS 3.1, 3.2 OR 3.8(a) AND SHALL NOT LIMIT EACH PARTY'S OBLIGATIONS EXPRESSLY ASSUMED IN EXHIBIT K OF THE MASTER SEPARATION AGREEMENT; PROVIDED FURTHER THAT THE EXCLUSION OF PUNITIVE DAMAGES SHALL APPLY IN ANY EVENT.

ARTICLE IX
MISCELLANEOUS PROVISIONS

9.1 DISCLAIMER. EACH PARTY ACKNOWLEDGES AND AGREES THAT ALL PATENTS AND ANY OTHER INFORMATION OR MATERIALS LICENSED OR PROVIDED HEREUNDER ARE LICENSED OR PROVIDED ON AN "AS IS" BASIS AND THAT NEITHER PARTY NOR ANY OF ITS SUBSIDIARIES OR AFFILIATED COMPANIES MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY, WITH RESPECT THERETO INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, ENFORCEABILITY OR NON-INFRINGEMENT. Without limiting the generality of the foregoing, neither party nor any of its Subsidiaries or Affiliated Companies makes any warranty or representation as to the validity and/or scope of any Patent licensed by it to the other party hereunder or any warranty or representation that any manufacture, use, importation, offer for sale or sale of any product or service will be free from infringement of any Patent or other intellectual property right of any Third Party.

9.2 NO IMPLIED LICENSES. Nothing contained in this Agreement shall be construed as conferring any rights by implication, estoppel or otherwise, under any intellectual property right, other than the rights expressly granted in this Agreement with respect to the Agilent Patents and the HP Patents. Neither party is required hereunder to furnish or disclose to the other any technical or other information (including copies of the Agilent Patents and the HP Patents, Patent applications or Invention Disclosures) except as specifically provided herein.

9.3 INFRINGEMENT SUITS. Neither party shall have any obligation hereunder to institute any action or suit against Third Parties for infringement of any of the Agilent Patents or the HP Patents or to defend any action or suit brought by a Third Party which challenges or concerns the

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validity of any of the Agilent Patents or the HP Patents. Unless the parties otherwise agree pursuant to Section 4.4, HP shall not have any right to institute any action or suit against Third Parties for infringement of any of the Agilent Patents, and Agilent shall not have any right to institute any action or suit against Third Parties for infringement of any of the HP Patents.

9.4 NO OTHER OBLIGATIONS. NEITHER PARTY ASSUMES ANY RESPONSIBILITIES OR OBLIGATIONS WHATSOEVER, OTHER THAN THE RESPONSIBILITIES AND OBLIGATIONS EXPRESSLY SET FORTH IN THIS AGREEMENT OR A SEPARATE WRITTEN AGREEMENT BETWEEN THE PARTIES. Without limiting the generality of the foregoing, neither party, nor any of its Subsidiaries or Affiliated Companies is obligated to (i) file any Patent application, or to secure any Patent or Patent rights, (ii) to maintain any Patent in force, or (iii) provide any technical assistance, except for the obligations expressly assumed in this Agreement.

9.5 ENTIRE AGREEMENT. This Agreement, the Master Separation Agreement and the other Ancillary Agreements (as defined in the Master Separation Agreement) constitute the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof. To the extent there is a conflict between this Agreement and the Master Assignment and Assumption Agreement between the parties, the terms of this Agreement shall govern.

9.6 GOVERNING LAW. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto.

9.7 DESCRIPTIVE HEADINGS. The descriptive headings herein are inserted for convenience of reference only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

9.8 NOTICES. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given when delivered in person, by telecopy with answer back, by express or overnight mail delivered by a nationally recognized air courier (delivery charges prepaid), by registered or certified mail (postage prepaid, return receipt requested) or by e-mail with receipt confirmed by return e-mail to the respective parties as follows:

if to HP:c/o Hewlett Packard Company
3000 Hanover Street
Palo Alto, CA 94304
Attention: Associate General Counsel and
Director of Intellectual Property
Telecopy: (650) 852-8194

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if to Agilent:

c/o Agilent Technologies, Inc.
3000 Hanover Street
Palo Alto, CA 94304
Attention: Assistant General Counsel and
Director of Intellectual Property
Telecopy: (650) 813-3095

or to such other address as the party to whom notice is given may have previously furnished to the other in writing in the manner set forth above. Any notice or communication delivered in person shall be deemed effective on delivery. Any notice or communication sent by e-mail, telecopy or by air courier shall be deemed effective on the first Business Day following the day on which such notice or communication was sent. Any notice or communication sent by registered or certified mail shall be deemed effective on the third Business Day following the day on which such notice or communication was mailed. As used in this Section 9.8, "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions located in the State of California are authorized or obligated by law or executive order to close.

9.9 NONASSIGNABILITY. Except as set forth in Section 3.7, neither party may, directly or indirectly, in whole or in part, whether by operation of law or otherwise, assign or transfer this Agreement, without the other party's prior written consent, and any attempted assignment, transfer or delegation without such prior written consent shall be voidable at the sole option of such other party. Without limiting the foregoing, this Agreement will be binding upon and inure to the benefit of the parties and their permitted successors and assigns.

9.10 SEVERABILITY. If any term or other provision of this Agreement is determined by a nonappealable decision of a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent possible.

9.11 FAILURE OR INDULGENCE NOT WAIVER; REMEDIES CUMULATIVE. No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any

single or partial exercise of any such right preclude other or further exercise thereof or of any other right. All rights and remedies existing under this Agreement are cumulative to, and not exclusive of, any rights or remedies otherwise available.

9.12 AMENDMENT. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to such agreement.

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9.13 COUNTERPARTS. This Agreement may be executed in two or more counterparts, all of which, taken together, shall be considered to be one and the same instrument.

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WHEREFORE, the parties have signed this Master Patent Ownership and License Agreement effective as of the date first set forth above.

HEWLETT-PACKARD COMPANY

AGILENT TECHNOLOGIES, INC.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

EXHIBIT A

TO MASTER PATENT OWNERSHIP AND LICENSE AGREEMENT

AFFILIATED COMPANIES

1. HP Affiliated Companies

ImagineCard

Idea LLC

Intria-HP

Intria-HP Potomac

Ericsson-HP Telecom (Sweden)

Ericsson-HP Telecom (France)

Hua-Pua

Putial Ome

PT Berka Services

Liquidity Management Group

Hugin Expert

Syc

Sopura Systems

2. Agilent Affiliated Companies

Chartered Semiconductor Partners Singapore

Lumileds

EXHIBIT B
TO MASTER PATENT OWNERSHIP AND LICENSE AGREEMENT

HP FIELD RESTRICTIONS

1. Biological and Chemical Deposition (as such terms are defined in the Patent Field Definition Database)
2. Health Care (as such term is defined in the Patent Field Definition Database)

EXHIBIT C
TO MASTER PATENT OWNERSHIP AND LICENSE AGREEMENT

AGILANT FIELD RESTRICTIONS

1. Printing Devices, Printer Supplies, Components and Accessories and Document Scanners (as such terms are defined in the Patent Field Definition Database)
2. Computing Devices (as such term is defined in the Patent Field Definition Database)

MASTER TRADEMARK OWNERSHIP AND LICENSE AGREEMENT

BETWEEN

HEWLETT-PACKARD COMPANY

AND

AGILENT TECHNOLOGIES, INC.

Effective as of _____, 1999

MASTER TRADEMARK OWNERSHIP AND LICENSE AGREEMENT

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MASTER TRADEMARK OWNERSHIP AND LICENSE AGREEMENT

This Master Trademark Ownership and License Agreement (the "Agreement") is effective as of _____, 1999 (the "Effective Date"), between Hewlett-Packard Company, a Delaware corporation ("HP"), having an office at 3000 Hanover Street, Palo Alto, California 94304, and Agilent Technologies, Inc., a Delaware corporation ("Agilent"), having an office at 3000 Hanover Street, Palo Alto, California 94304.

WHEREAS, the Board of Directors of HP has determined that it is in the best interest of HP and its stockholders to separate HP's existing businesses into two independent businesses;

WHEREAS, as part of the foregoing, HP and Agilent have entered into a Master Separation Agreement (as defined below) which provides, among other things, for the separation of certain Agilent assets and Agilent liabilities, the initial public offering of Agilent stock, the distribution of such stock and the execution and delivery of certain other agreements in order to facilitate and provide for the foregoing;

WHEREAS, the parties desire that HP assign and transfer to Agilent the Agilent Business Marks (as defined below); and

WHEREAS, the parties further desire that HP license the Licensed Marks (as defined below) to Agilent after the separation of the Agilent businesses.

NOW, THEREFORE, in consideration of the mutual promises of the parties, and of good and valuable consideration, it is agreed by and between the parties as follows:

ARTICLE I
DEFINITIONS

For the purpose of this Agreement, the following capitalized terms are defined in this Article I and shall have the meaning specified herein:

1.1 AFFILIATED COMPANY. "Affiliated Company" means, with respect to HP, any entity in which HP holds a 50% or less ownership interest and that is listed on Exhibit A hereto and, with respect to Agilent, any entity in which Agilent holds a 50% or less ownership interest and that is listed on Exhibit A hereto; provided, however, that any such entity listed in Exhibit A shall be considered to be an Affiliated Company under this Agreement only if it agrees in writing to be bound by the terms and conditions of this Agreement. Exhibit A may be amended from time to time after the date hereof upon mutual consent of the parties.

1.2 AGILENT BUSINESS. "Agilent Business" means (a) the business and operations of the following business entities of HP, as described in the IPO Registration Statement (as defined in the Master Separation Agreement): (i) the Test and Measurement Organization, (ii) the Semiconductor Products Group, (iii) the Chemical Analysis Group, (iv) the Healthcare Solutions Group and (v) any related infrastructure organizations and (b) except as otherwise expressly provided herein, any terminated, divested or discontinued businesses or operations that at the time of

termination, divestiture or discontinuation primarily related to the Agilent Business as then conducted.

1.3 AGILENT BUSINESS MARKS. "Agilent Business Marks" means the Marks listed in the Agilent Business Marks Database.

1.4 AGILENT BUSINESS MARKS DATABASE. "Agilent Business Marks Database" means the Agilent Business Marks Database, as it may be updated by the parties upon mutual agreement to add additional Marks as of the Separation Date.

1.5 AUTHORIZED DEALERS. "Authorized Dealers" means any distributor, dealer, OEM customer, VAR customer, VAD customer, systems integrator or other agent that on or after the Separation Date is authorized to market, advertise, sell, lease, rent, service or otherwise offer Measurement Products. Agilent will provide HP a list of the then current Authorized Dealers within a reasonable period after HP's request.

1.6 COLLATERAL MATERIALS. "Collateral Materials" means all packaging, tags, labels, advertising, promotions, display fixtures, instructions, warranties and other materials of any and all types associated with the Measurement Products that are marked with at least one of the Licensed Marks.

1.7 CORPORATE IDENTITY MATERIALS. "Corporate Identity Materials" means materials that are not products or product-related and that Agilent may now or hereafter use to communicate its identity, including, by way of example and without limitation, business cards, letterhead, stationery, paper stock and other supplies, signage on real property, buildings, fleet and uniforms.

1.8 DISTRIBUTION DATE. "Distribution Date" has the meaning set forth in the Master Separation Agreement.

1.9 LICENSED MARKS. "Licensed Marks" means the Marks set forth on Exhibit A hereto.

1.10 MAINTENANCE CONTRACTS. "Maintenance Contracts" means agreements pursuant to which Agilent, its Subsidiaries or Affiliated Companies or its or their Authorized Dealers or their designees provide repair and maintenance services (whether preventive, diagnostic, remedial, warranty or non-warranty) in

connection with Measurement Products, including without limitation agreements entered into by HP prior to the Separation Date and assigned to Agilent pursuant to the Master Separation Agreement or the Ancillary Agreements (as such term is defined in the Master Separation Agreement).

1.11 MARK. "Mark" means any trademark, service mark, trade name, domain name, and the like, or other word, name, symbol or device, or any combination thereof, used or intended to be used by a Person to identify and distinguish the products or services of that Person from the products or services of others and to indicate the source of such goods or services, including without

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limitation all registrations and applications therefor throughout the world and all common law and other rights therein throughout the world.

1.12 MASTER SEPARATION AGREEMENT. "Master Separation Agreement" means the Master Separation and Distribution Agreement between the parties.

1.13 MEASUREMENT PRODUCT. "Measurement Product" means any Agilent product that is listed on an Agilent corporate price list as of the Distribution Date, and new versions thereof that have merely minor incremental differences from any such product. Measurement Products shall also include maintenance (whether diagnostic, preventive, remedial, warranty or non-warranty), support and similar services associated with Measurement Products, pursuant to Maintenance Contracts or otherwise.

1.14 PERSON. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization, and a governmental entity or any department, agency or political subdivision thereof.

1.15 QUALITY STANDARDS. "Quality Standards" means standards of quality applicable to the Measurement Products, as in use immediately prior to the Separation Date, unless otherwise communicated in writing by HP from time to time.

1.16 SELL. To "Sell" a product means to sell, transfer, lease or otherwise dispose of a product. "Sale" and "Sold" have the corollary meanings ascribed thereto.

1.17 SEPARATION DATE. "Separation Date" means 12:01 a.m., Pacific Time, November 1, 1999 or such other date as may be fixed by the Board of Directors of HP.

1.18 SUBSIDIARY. "Subsidiary" means with respect to any specified Person, any corporation, any limited liability company, any partnership or other legal entity of which such Person owns, directly or indirectly, more than 50% of the stock or other equity interest entitled to vote on the election of the members of the board of directors or similar governing body. Unless the context otherwise requires, reference to HP and its Subsidiaries shall not include the subsidiaries of HP that will be transferred to Agilent after giving effect to the Separation (as defined in the Master Separation Agreement), including the actions taken pursuant to the Non-US Plan (as defined in the Master Separation Agreement). For example, if HP owns 70% of the stock of another corporation, and that corporation owns 60% of the equity interest of a limited liability company, then that corporation is a Subsidiary of HP but that limited liability company is not. However, if such corporation owns 90% of the equity interest of a limited liability company, then that limited liability company is a Subsidiary of HP. For the avoidance of doubt, this definition of Subsidiary is different from the definition of Subsidiary in the Master Separation Agreement.

1.19 THIRD PARTY. "Third Party" means a Person other than HP and its Subsidiaries and Affiliated Companies and Agilent and its Subsidiaries and Affiliated Companies.

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1.20 TRADEMARK USAGE GUIDELINES. "Trademark Usage Guidelines" means the guidelines for proper usage of the Licensed Marks, as in use immediately prior to the Separation Date, as such guidelines may be revised and updated in writing by HP from time to time.

ARTICLE II
ASSIGNMENT

2.1 ASSIGNMENT OF AGILENT BUSINESS MARKS. Subject to Sections 2.2 and 2.3 below, HP hereby grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent, by execution hereof (or, where appropriate or required, by execution of separate instruments of assignment), all its (and their) right, title and interest in and to the Agilent Business Marks, including all goodwill of the Agilent Business appurtenant thereto, to be held and enjoyed by Agilent, its successors and assigns. HP further grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent all its (and their) right, title and interest in and to any and all causes of action and rights of recovery for past infringement of the Agilent Business Marks. HP will, without demanding any further consideration therefor, at the request and expense of Agilent (except for the value of the time of HP employees), do (and to cause its Subsidiaries to do) all lawful and just acts that may be or become necessary for evidencing, maintaining, recording and perfecting Agilent's rights to such Agilent Business Marks consistent with HP's general business practice as of the Separation Date, including but not limited to execution and acknowledgement of (and causing its Subsidiaries to execute and acknowledge) assignments and other instruments in a form reasonably required by Agilent or the relevant governmental or other authorities for each Mark in all jurisdictions in which HP owns rights thereto.

2.2 PRIOR GRANTS. Agilent acknowledges and agrees that the foregoing assignment is subject to any and all licenses or other rights that may have been granted by HP or its Subsidiaries with respect to the Agilent Business Marks prior to the Separation Date. HP shall respond to reasonable inquiries from Agilent regarding any such prior grants.

2.3 ASSIGNMENT DISCLAIMER. AGILENT ACKNOWLEDGES AND AGREES THAT THE FOREGOING ASSIGNMENTS ARE MADE ON AN "AS-IS," QUITCLAIM BASIS AND THAT NEITHER HP NOR ANY SUBSIDIARY OR AFFILIATED COMPANY OF HP HAS MADE OR WILL MAKE ANY WARRANTY WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF TITLE, ENFORCEABILITY OR NON-INFRINGEMENT.

ARTICLE III
LICENSES

3.1 LICENSE GRANT. HP grants (and agrees to cause its appropriate Subsidiaries to grant) to Agilent a personal, irrevocable, nonexclusive, perpetual, worldwide, fully-paid and non-transferable (except as set forth in Section 14.9) license to use the Licensed Marks on the Measurement Products and in connection with the Sale and offer for Sale of Measurement Products (or, in the case of Measurement Products in the form of software, in connection with licensing of

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Measurement Products) and to use the Licensed Marks in the advertisement and promotion of such Measurement Products.

3.2 LICENSE RESTRICTIONS.

(a) Once Agilent abandons the use of all of the Licensed Marks on a particular Measurement Product, then Agilent agrees that its license granted hereunder with respect to that Measurement Product shall thereupon terminate.

(b) Agilent may not make any use whatsoever, in whole or in part, of

the Licensed Marks, or any other Mark owned by HP, in connection with Agilent's corporate, doing business as, or fictitious name, or on Corporate Identity Materials without the prior written consent of HP, except as expressly set forth in this Section 3.2(b) or in Section 3.4 below. Notwithstanding the foregoing, Agilent may use any business cards, letterhead, stationery, paper stock and other supplies, uniforms and the like throughout their useful life in connection with the conduct of the Agilent Business, to the extent that, as of the Separation Date, they are in use, in inventory or on order.

(c) Agilent may not use any Licensed Mark in direct association with another Mark such that the two Marks appear to be a single Mark or in any other composite manner with any Marks of Agilent or any Third Party (other than the Agilent Business Marks as permitted herein).

(d) In all respects, Agilent's usage of the Licensed Marks pursuant to the license granted hereunder shall be in a manner consistent with the high standards, reputation and prestige represented by the Licensed Marks, and any usage by Agilent that is inconsistent with the foregoing shall be deemed to be outside the scope of the license granted hereunder. As a condition to the license granted hereunder, Agilent shall at all times present, position and promote the Measurement Products marked with one or more of the Licensed Marks in a manner consistent with the high standards and prestige represented by the Licensed Marks.

3.3 LICENSEE UNDERTAKINGS. As a condition to the licenses granted hereunder, Agilent undertakes to HP that:

(a) Agilent shall not use the Licensed Marks (or any other Mark of HP) in any manner contrary to public morals, in any manner which is deceptive or misleading, which ridicules or is derogatory to the Licensed Marks, or which compromises or reflects unfavorably upon the goodwill, good name, reputation or image of HP or the Licensed Marks, or which might jeopardize or limit HP's proprietary interest therein.

(b) Agilent shall not use the Licensed Marks in connection with any products or services other than the Measurement Products, including, without limitation, any other Agilent Business products.

(c) Agilent shall not (i) misrepresent to any Person the scope of its authority under this Agreement, (ii) incur or authorize any expenses or liabilities chargeable to HP, or (iii) take

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any actions that would impose upon HP any obligation or liability to a Third Party other than obligations under this Agreement, or other obligations which HP expressly approves in writing for Agilent to incur on its behalf.

(d) All press releases and corporate advertising and promotions that embody the Licensed Marks and messages conveyed thereby shall be consistent with the high standards and prestige represented by the Licensed Marks.

3.4 NON-TRADEMARK USE.

(a) Each party may make appropriate and truthful references to the other party and the other party's products and technology.

(b) The parties acknowledge that the letters "HP" are a part of several well-known generic acronyms, (for example, "HPLC" for "high performance liquid chromatography", and "HPCE" for "high pressure capillary electrophoresis"), or are part of the name of certain concepts or principles (such as "the HP Way"). This Agreement does not apply to the proper use of such acronyms or names.

(c) This Agreement does not apply to Agilent's use of "HP-IB" with regard to the IEEE-488 Interface Bus.

3.5 RESERVATION OF RIGHTS. Except as otherwise expressly provided in this Agreement, HP shall retain all rights in and to the Licensed Marks, including without limitation:

(a) All rights of ownership in and to the Licensed Marks;

(b) The right to use (including the right of HP's Subsidiaries and Affiliated Companies to use) the Licensed Marks, either alone or in combination with other Marks, in connection with the marketing, offer or provision of any product or service, including any product or service which competes with Agilent Business products; and

(c) The right to license Third Parties to use the Licensed Marks.

3.6 THIRD PARTY LICENSES. HP agrees that it and its Subsidiaries and Affiliated Companies will not license or transfer the Licensed Marks to Third Parties (other than to and among Subsidiaries of HP) for use in connection with products or services which compete with Measurement Products that are listed on an Agilent corporate price list as of the Distribution Date until three (3) years after the Separation Date. Such restriction shall be binding on any successors and assigns of the Licensed Marks. The foregoing shall not, in any event, limit any of the following: (i) any licenses that may have been granted by HP with respect to the Licensed Marks prior to the Separation Date or (ii) licenses granted to Third Parties in connection with any co-branding program (including, by way of example and not by way of limitation, the OpenView program). For purposes of clarification, a product will not necessarily be deemed to compete with another product if it is merely complementary or merely has some functions in common. Each party promptly will respond

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to requests from the other party regarding whether it considers one product to compete with another product. Except as set forth in this Section 3.6, nothing in this Agreement shall be construed to prevent HP from granting any licenses for the use of the Licensed Marks, or from utilizing the Licensed Marks in any manner whatsoever other than as provided in this Section 3.6.

ARTICLE IV PERMITTED SUBLICENSES

4.1 SUBLICENSES

(a) SUBLICENSES TO SUBSIDIARIES AND AFFILIATED COMPANIES. Subject to the terms and conditions of this Agreement, including all applicable Quality Standards and Trademark Usage Guidelines and other restrictions in this Agreement, Agilent may grant sublicenses to its Subsidiaries and Affiliated Companies to use the Licensed Marks in accordance with the license grant in Section 3.1 above; provided, that (i) Agilent enters into a written sublicense agreement with each such Subsidiary and Affiliated Company sublicensee, and (ii) such agreement does not include the right to grant further sublicenses other than, in the case of a sublicensed Subsidiary of Agilent, to another Subsidiary of Agilent. Agilent shall provide copies of such written sublicense agreements to HP upon request. If Agilent grants any sublicense rights pursuant to this Section 4.1(a) and any such sublicensed Subsidiary ceases to be a Subsidiary or Agilent ceases to hold at least a thirty percent (30%) ownership interest in such sublicensed Affiliated Company, then the sublicense granted to such Subsidiary or Affiliated Company pursuant to this Section 4.1(a) shall terminate one hundred eighty (180) days from the date of such cessation.

(b) SUBLICENSES TO TRANSFEREES. In addition, if Agilent, within five (5) years after the Separation Date, transfers a going business (but not all or substantially all of its business or assets), and such transfer includes at least one marketable product and tangible assets having a net value of at least ten million U.S. dollars (\$10,000,000.00) then, subject to the terms and conditions of this Agreement, including all applicable Quality Standards and Trademark Usage Guidelines and other restrictions in this Agreement, Agilent may grant sublicenses to the transferee of such business to use the Licensed Marks

on the Measurement Products that are in the transferred business as of the effective date of the transfer in accordance with the license grant in Section 3.1 above; provided, that (i) Agilent enters into a written sublicense agreement with the sublicensee, (ii) such agreement does not include the right to grant further sublicenses and (iii) in any event, such sublicense shall terminate one hundred eighty (180) days after the effective date of the transfer. Agilent shall provide copies of such written sublicense agreements to HP upon request.

4.2 AUTHORIZED DEALERS' USE OF MARKS. Subject to the terms and conditions of this Agreement, including all applicable Quality Standards and Trademark Usage Guidelines and other restrictions in this Agreement, Agilent (and those Subsidiaries and Affiliated Companies sublicensed to use the Licensed Marks pursuant to Section 4.1) may allow Authorized Dealers to, and may allow such Authorized Dealers to allow other Authorized Dealers to, use the Licensed Marks in the advertisement and promotion of Measurement Products Sold by such Authorized Dealers.

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4.3 ENFORCEMENT OF AGREEMENTS. Agilent shall take all appropriate measures at Agilent's expense promptly and diligently to enforce the terms of any sublicense agreement or other agreement with any Subsidiary, Affiliated Company or Authorized Dealer, or of any existing agreement with any Authorized Dealer, and shall restrain any such Subsidiary, Affiliated Company or Authorized Dealer from violating such terms, including without limitation (i) monitoring the Subsidiaries', Affiliated Companies' and Authorized Dealers' compliance with the relevant Trademark Usage Guidelines and Quality Standards and causing any noncomplying Subsidiary, Affiliated Company or Authorized Dealer promptly to remedy any failure, (ii) terminating such agreement and/or (iii) commencing legal action, in each case, using a standard of care consistent with HP's practices as of the Separation Date. In the event that HP determines that Agilent has failed promptly and diligently to enforce the terms of any such agreement using such standard of care, HP reserves the right to enforce such terms, and Agilent shall reimburse HP for its fully allocated direct costs and expenses incurred in enforcing such agreement, plus all out-of-pocket costs and expenses, plus five percent (5%) (or, if such costs and expenses are incurred more than two (2) years after the Separation Date, ten percent (10%)).

ARTICLE V ROYALTIES

5.1 ROYALTIES.

(a) Upon (i) any Sale occurring more than five (5) years after the Separation Date by Agilent, its Subsidiaries or Affiliated Companies of tangible Measurement Products that are marked with one or more of the Licensed Marks (other than repaired, refurbished or reconstructed Measurement Products or repair parts and other than Sales to HP, its Subsidiaries and its Affiliated Companies), and (ii) the use by Agilent, its Subsidiaries or Affiliated Companies of one or more of the Licensed Marks as a service mark in connection with the sale of services associated with Measurement Products (other than repair, maintenance and calibration services and other than sales to HP, its Subsidiaries and its Affiliated Companies), Agilent shall pay to HP a royalty on the Net Sales earned by Agilent in each Agilent fiscal quarter as a result of such sale. The royalty rate shall be the standard royalty rate that is charged by HP to the Agilent Business as of the Separation Date for use of the Licensed Marks.

(b) As used in this Article V, "Net Sales" means the gross invoice price from (i) royalty-bearing Sales under Section 5.1(a)(i) above and (ii) royalty-bearing sales of services under Section 5.1(a)(ii) above, in any case less (A) charges for handling, freight, sales taxes, insurance costs and import duties where such items are included in the invoiced price, (B) point-of-sale credits (or other similar adjustments to price) granted to independent distributors and (C) credits actually granted or refunds actually given for returns during such Agilent fiscal quarter. In the event that the foregoing Measurement Products are Sold for no or nominal consideration or to a Subsidiary

or Affiliated Company or in any other circumstances in which the selling price is established on other than an arms-length basis, the Net Sales on such Sales shall be determined on the average selling price earned by Agilent during the preceding Agilent fiscal quarter on Sales of like volumes of the applicable Measurement Products to unaffiliated customers in arms-length sales. However, in

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the event that the foregoing Measurement Products are Sold to Agilent's Subsidiaries or Affiliated Companies for resale to Third Parties, then the royalties will be based on Net Sales from the Subsidiaries or Affiliated Companies to the Third Parties and no royalties will be due on the Sales to the Subsidiaries and Affiliated Companies.

(c) For the purposes of clarification, no royalty is due under this Article V for uses of the Licensed Marks that are covered by Section 3.4.

5.2 PAYMENTS AND ACCOUNTING.

(a) With respect to the royalties set forth herein, Agilent shall keep full, clear and accurate records until otherwise provided in Section 5.2(b). These records shall be retained for a period of three (3) years from the date of payment notwithstanding the expiration or other termination of this Agreement. HP shall have the right, through a mutually agreed upon independent certified public accountant (consent to which shall not be unreasonably withheld or delayed by Agilent), and at HP's expense, to examine and audit, not more than once a year, and during normal business hours, all such records and such other records and accounts as may under recognized accounting practices contain information bearing upon the amount of royalty payable to HP under this Agreement. Prompt adjustment shall be made by either party to compensate for any errors and/or omissions disclosed by such examination or audit. Should any such error and/or omission result in an underpayment of more than five percent (5%) of the total royalties due for the period under audit, Agilent shall upon HP's request pay for the cost of the audit and pay HP an additional fee equal to a compound annual interest rate of ten percent (10%) of such error and/or omission.

(b) Within forty-five (45) days after the end of each Agilent fiscal quarter, Agilent shall furnish to HP a statement in suitable form showing all Measurement Products and related services subject to royalties that were sold, during such quarter, and the amount of royalty payable thereon. If no products or services subject to royalty have been sold, that fact shall be shown on such statement. Also, within such forty-five (45) days, Agilent shall pay to HP the royalties payable hereunder for such quarter. HP and Agilent will determine the form of the statement prior to submission of the first such statement. All royalty and other payments to HP hereunder shall be in United States dollars. Royalties based on sales in other currencies shall be converted to United States dollars according to the official rate of exchange for that currency, as published in the Wall Street Journal on the last day of the calendar month in which the royalty accrued (or, if not published on that day, the last publication day for the Wall Street Journal during that month). If two consecutive Agilent fiscal quarters pass in which no royalties are due under this Agreement and Agilent reasonably believes no royalties will be due, the obligations pursuant to this Article V shall terminate. If Agilent resumes sale of Measurement Products or related services that are subject to royalties, the obligations of this Article V shall automatically resume.

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ARTICLE VI TRADEMARK USAGE GUIDELINES

6.1 TRADEMARK USAGE GUIDELINES. Agilent and its Subsidiaries, Affiliated Companies and Authorized Dealers shall use the Licensed Marks only in a manner that is consistent with the Trademark Usage Guidelines.

6.2 TRADEMARK REVIEWS. At HP's request, Agilent agrees to furnish or make available for inspection to HP samples of all Measurement Products and Collateral Materials of Agilent, its Subsidiaries, Affiliated Companies and Authorized Dealers that are marked with one or more of the Licensed Marks (to the extent that Agilent has the right to obtain such samples). If Agilent is notified or determines that it or any of its Subsidiaries, Affiliated Companies or Authorized Dealers is not complying with any Trademark Usage Guidelines, it shall notify HP and the provisions of Article VII and Section 4.3 shall apply to such noncompliance.

ARTICLE VII
TRADEMARK USAGE GUIDELINE ENFORCEMENT

7.1 INITIAL CURE PERIOD. If HP becomes aware that Agilent or any Subsidiary, Affiliated Company or Authorized Dealer is not complying with any Trademark Usage Guidelines, HP shall notify Agilent in writing, setting forth in reasonable detail a written description of the noncompliance and any requested action for curing such noncompliance. Agilent shall then have sixty (60) days with regard to noncompliance by Authorized Dealers and thirty (30) days with regard to noncompliance by Agilent or any Subsidiary or Affiliated Company after receipt of such notice ("Guideline Initial Cure Period") to correct such noncompliance or submit to HP a written plan to correct such noncompliance which written plan is reasonably acceptable to HP.

7.2 SECOND CURE PERIOD. If noncompliance with the Trademark Usage Guidelines continues beyond the Guideline Initial Cure Period, Agilent and HP shall each promptly appoint a representative to negotiate in good faith actions that may be necessary to correct such noncompliance. The parties shall have thirty (30) days following the expiration of the Guideline Initial Cure Period to agree on corrective actions, and Agilent shall have thirty (30) days from the date of an agreement of corrective actions to implement such corrective actions and cure or cause the cure of such noncompliance ("Second Guideline Cure Period").

7.3 FINAL CURE PERIOD. If the noncompliance with the Trademark Usage Guidelines remains uncured after the expiration of the Second Guideline Cure Period, then at HP's election, Agilent, or the noncomplying Subsidiary, Affiliated Company or Authorized Dealer, whichever is applicable, promptly shall cease using the noncomplying Collateral Materials until HP determines that Agilent, or the noncomplying Subsidiary, Affiliated Company or Authorized Dealer, whichever is applicable, has demonstrated its ability and commitment to comply with the Trademark Usage Guidelines. Nothing in this Article VII shall be deemed to limit Agilent's obligations under Section 4.3 above or to preclude HP from exercising any rights or remedies under Section 4.3 above.

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ARTICLE VIII
QUALITY STANDARDS

8.1 GENERAL. Agilent acknowledges that the Measurement Products permitted by this Agreement to be marked with one or more of the Licensed Marks must continue to be of sufficiently high quality as to provide protection of the Licensed Marks and the goodwill they symbolize, and Agilent further acknowledges that the maintenance of the high quality standards associated with such products is of the essence of this Agreement.

8.2 QUALITY STANDARDS. Agilent and its Authorized Dealers, Affiliated Companies and Subsidiaries shall use the Licensed Marks only on and in connection with Measurement Products that meet or exceed in all respects the Quality Standards.

8.3 QUALITY CONTROL REVIEWS. At HP's request, Agilent agrees to furnish or make available to HP for inspection sample Measurement Products marked with one or more of the Licensed Marks. HP may also independently conduct customer satisfaction surveys to determine if Agilent and its Subsidiaries, Affiliated Companies and Authorized Dealers are meeting the Quality Standards. Agilent

shall cooperate with HP fully in the distribution of such surveys. In the event of a challenge by HP, HP shall, at the request of Agilent, provide Agilent with copies of customer surveys used by HP to determine if Agilent is meeting the Quality Standards. If Agilent is notified or determines that it or any of its Subsidiaries, Affiliated Companies or Authorized Dealers is not complying with any Quality Standards, it shall notify HP and the provisions of Article IX and Section 4.3 shall apply to such noncompliance.

8.4 PRODUCT DISCONTINUATION. If, at any time during or after the term of this Agreement, Agilent discontinues the sale of a Measurement Product that has been marked with one or more of the Licensed Marks, Agilent shall substantially comply with the discontinuation procedure used by HP for such or similar products immediately prior to Separation Date.

ARTICLE IX QUALITY STANDARD ENFORCEMENT

9.1 INITIAL CURE PERIOD. If HP becomes aware that Agilent or any Subsidiary, Affiliated Company or Authorized Dealer sublicensee is not complying with any Quality Standards, HP shall notify Agilent in writing, setting forth in reasonable detail a written description of the noncompliance and any requested action for curing such noncompliance. Agilent shall then have thirty (30) days after receipt of such notice ("Initial Cure Period") to correct such noncompliance or submit to HP a written plan to correct such noncompliance which written plan is reasonably acceptable to HP.

9.2 SECOND CURE PERIOD. If noncompliance with the Quality Standards continues beyond the Initial Cure Period, Agilent and HP shall each promptly appoint a representative to negotiate in good faith actions that may be necessary to correct such noncompliance. The parties shall have thirty (30) days following the expiration of the Initial Cure Period to agree on corrective actions, and Agilent shall have thirty (30) days from the date of an agreement of corrective actions to

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implement such corrective actions and cure or cause the cure of such noncompliance ("Second Cure Period").

9.3 FINAL CURE PERIOD. If the noncompliance with the Quality Standards remains uncured after the expiration of the Second Cure Period, then at HP's election, Agilent, or the noncomplying Subsidiary, Affiliated Company or Authorized Dealer, whichever is applicable, promptly shall cease offering the noncomplying Measurement Products under the Licensed Marks until HP determines that Agilent, or the noncomplying Subsidiary, Affiliated Company or Authorized Dealer, whichever is applicable, has demonstrated its ability and commitment to comply with the Quality Standards. Nothing in this Article IX shall be deemed to limit Agilent's obligations under Section 4.3 above or to preclude HP from exercising any rights or remedies under Section 4.3 above.

ARTICLE X PROTECTION OF LICENSED MARKS

10.1 OWNERSHIP AND RIGHTS. Agilent agrees not to challenge the ownership or validity of the Licensed Marks. Agilent shall not disparage, dilute or adversely affect the validity of the Licensed Marks. Agilent's use of the Licensed Marks shall inure exclusively to the benefit of HP, and Agilent shall not acquire or assert any rights therein. Agilent recognizes the value of the goodwill associated with the Licensed Marks, and that the Licensed Marks may have acquired secondary meaning in the minds of the public.

10.2 PROTECTION OF MARKS. Agilent shall assist HP, at HP's request and expense, in the procurement and maintenance of HP's intellectual property rights in the Licensed Marks. Agilent will not grant or attempt to grant a security interest in the Licensed Marks, or to record any such security interest in the United States Patent and Trademark Office or elsewhere, against any trademark application or registration belonging to HP. Agilent agrees to, and to cause its

Subsidiaries and Affiliated Companies to, execute all documents reasonably requested by HP to effect further registration of, maintenance and renewal of the Licensed Marks, recordation of the license relationship between HP and Agilent, and recordation of Agilent as a registered user. HP makes no warranty or representation that trademark registrations have been or will be applied for, secured or maintained in the Licensed Marks throughout, or anywhere within, the world. Agilent shall cause to appear on all Measurement Products, and all Collateral Materials, such legends, markings and notices as may be required by applicable law or reasonably requested by HP.

10.3 SIMILAR MARKS. Agilent agrees not to use or register in any country any Mark that infringes HP's rights in the Licensed Marks, or any element thereof. If any application for registration is, or has been, filed in any country by Agilent which relates to any Mark that infringes HP's rights in the Licensed Marks, Agilent shall immediately abandon any such application or registration or assign it to HP. Agilent shall not challenge HP's ownership of or the validity of the Licensed Marks or any application for registration thereof throughout the world. Agilent shall not use or register in any country any copyright, domain name, telephone number or any other intellectual property right, whether recognized currently or in the future, or other designation which

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would affect the ownership or rights of HP in and to the Licensed Marks, or otherwise to take any action which would adversely affect any of such ownership rights, or assist anyone else in doing so. Agilent shall cause its Subsidiaries, Affiliated Companies and Authorized Dealers to comply with the provisions of this Section 10.3.

10.4 INFRINGEMENT PROCEEDINGS. In the event that the Agilent Director of Intellectual Property or Agilent Trademark Counsel learns of any infringement or threatened infringement of the Licensed Marks, or any unfair competition, passing-off or dilution with respect to the Licensed Marks, Agilent shall notify HP or its authorized representative giving particulars thereof, and Agilent shall provide necessary information and assistance to HP or its authorized representatives at HP's expense in the event that HP decides that proceedings should be commenced. Notwithstanding the foregoing, Agilent is not obligated to monitor or police use of the Licensed Marks by Third Parties other than as specifically set forth in Section 4.3. HP shall have exclusive control of any litigation, opposition, cancellation or related legal proceedings. The decision whether to bring, maintain or settle any such proceedings shall be at the exclusive option and expense of HP, and all recoveries shall belong exclusively to HP. Agilent shall not and shall have no right to initiate any such litigation, opposition, cancellation or related legal proceedings in its own name, but, at HP's request, agrees to be joined as a party in any action taken by HP to enforce its rights in the Licensed Marks. HP shall incur no liability to Agilent or any other Person under any legal theory by reason of HP's failure or refusal to prosecute or by HP's refusal to permit Agilent to prosecute, any alleged infringement by Third Parties, nor by reason of any settlement to which HP may agree.

ARTICLE XI TERMINATION

11.1 VOLUNTARY TERMINATION. By written notice to HP, Agilent may voluntarily terminate all or a specified portion of the licenses and rights granted to it hereunder by HP. Such notice shall specify the effective date of such termination and shall clearly specify any affected Licensed Marks, Measurement Products or services.

11.2 SURVIVAL. Any voluntary termination of licenses and rights of Agilent under Section 11.1 shall not affect Agilent's licenses and rights with respect to any Measurement Products made or furnished prior to such termination.

11.3 OTHER TERMINATION. HP acknowledges and agrees that its rights to terminate the licenses granted to Agilent hereunder are solely as set forth in Section 4.3 and Articles VII and IX.

ARTICLE XII
DISPUTE RESOLUTION

12.1 NEGOTIATION. The parties shall make a good faith attempt to resolve any dispute or claim arising out of or related to this Agreement through negotiation. Within thirty (30) days after notice of a dispute or claim is given by either party to the other party, the parties' first tier

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negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet and make a good faith attempt to resolve such dispute or claim and shall continue to negotiate in good faith in an effort to resolve the dispute or claim or renegotiate the applicable section or provision without the necessity of any formal proceedings. If the first tier negotiating teams are unable to agree within thirty (30) days of their first meeting, then the parties' second tier negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet within thirty (30) days after the end of the first thirty (30) day negotiating period to attempt to resolve the matter. During the course of negotiations under this Section 12.1, all reasonable requests made by one party to the other for information, including requests for copies of relevant documents, will be honored. The specific format for such negotiations will be left to the discretion of the designated negotiating teams but may include the preparation of agreed upon statements of fact or written statements of position furnished to the other party.

12.2 NONBINDING MEDIATION. In the event that any dispute or claim arising out of or related to this Agreement is not settled by the parties within fifteen (15) days after the first meeting of the second tier negotiating teams under Section 12.1, the parties will attempt in good faith to resolve such dispute or claim by nonbinding mediation in accordance with the American Arbitration Association Commercial Mediation Rules. The mediation shall be held within thirty (30) days of the end of such fifteen (15) day negotiation period of the second tier negotiating teams. Except as provided below in Section 12.3, no litigation for the resolution of such dispute may be commenced until the parties try in good faith to settle the dispute by such mediation in accordance with such rules, and either party has concluded in good faith that amicable resolution through continued mediation of the matter does not appear likely. The costs of mediation shall be shared equally by the parties to the mediation. Any settlement reached by mediation shall be recorded in writing, signed by the parties, and shall be binding on them.

12.3 PROCEEDINGS. Nothing herein, however, shall prohibit either party from initiating litigation or other judicial or administrative proceedings if such party would be substantially harmed by a failure to act during the time that such good faith efforts are being made to resolve the dispute or claim through negotiation or mediation. In the event that litigation is commenced under this Section 12.3, the parties agree to continue to attempt to resolve any dispute or claim according to the terms of Sections 12.1 and 12.2 during the course of such litigation proceedings under this Section 12.3.

ARTICLE XIII
LIMITATION OF LIABILITY

IN NO EVENT SHALL EITHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES BE LIABLE TO THE OTHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES FOR ANY DAMAGES, INCLUDING WITHOUT LIMITATION SPECIAL, CONSEQUENTIAL, INDIRECT, INCIDENTAL OR PUNITIVE DAMAGES OR LOST PROFITS OR ANY OTHER DAMAGES, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (INCLUDING NEGLIGENCE) ARISING IN ANY WAY OUT OF THIS AGREEMENT, WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH

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DAMAGES; PROVIDED, HOWEVER, THAT THE FOREGOING LIMITATIONS SHALL NOT LIMIT EACH PARTY'S OBLIGATIONS EXPRESSLY ASSUMED IN EXHIBIT K OF THE MASTER SEPARATION AGREEMENT; PROVIDED FURTHER THAT THE EXCLUSION OF PUNITIVE DAMAGES SHALL APPLY IN ANY EVENT.

ARTICLE XIV
MISCELLANEOUS PROVISIONS

14.1 DISCLAIMER. EACH PARTY ACKNOWLEDGES AND AGREES THAT ALL LICENSED MARKS AND ANY OTHER INFORMATION OR MATERIALS LICENSED OR PROVIDED HEREUNDER ARE LICENSED OR PROVIDED ON AN "AS IS" BASIS AND THAT NEITHER PARTY NOR ANY OF ITS SUBSIDIARIES OR AFFILIATED COMPANIES MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY, WITH RESPECT THERETO INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF TITLE, ENFORCEABILITY OR NON-INFRINGEMENT. Without limiting the generality of the foregoing, neither HP nor any of its Subsidiaries or Affiliated Companies makes any warranty or representation as to the validity of any Mark licensed by it to Agilent or any warranty or representation that any use of any Mark with respect to any product or service will be free from infringement of any rights of any Third Party.

14.2 NO IMPLIED LICENSES. Nothing contained in this Agreement shall be construed as conferring any rights by implication, estoppel or otherwise, under any intellectual property right, other than the rights expressly granted in this Agreement with respect to the Licensed Marks. Neither party is required hereunder to furnish or disclose to the other any information (including copies of registrations of the Marks), except as specifically provided herein.

14.3 INFRINGEMENT SUITS. Except as set forth in Section 4.3, (i) neither party shall have any obligation hereunder to institute any action or suit against Third Parties for infringement of any of the Licensed Marks or to defend any action or suit brought by a Third Party which challenges or concerns the validity of any of the Licensed Marks and (ii) Agilent shall not have any right to institute any action or suit against Third Parties for infringement of any of the Licensed Marks.

14.4 NO OTHER OBLIGATIONS. NEITHER PARTY ASSUMES ANY RESPONSIBILITIES OR OBLIGATIONS WHATSOEVER, OTHER THAN THE RESPONSIBILITIES AND OBLIGATIONS EXPRESSLY SET FORTH IN THIS AGREEMENT OR A SEPARATE WRITTEN AGREEMENT BETWEEN THE PARTIES. Without limiting the generality of the foregoing, neither party, nor any of its Subsidiaries or Affiliated Companies, is obligated to (i) file any application for registration of any Mark, or to secure any rights in any Marks, (ii) to maintain any Mark registration, or (iii) provide any assistance, except for the obligations expressly assumed in this Agreement.

14.5 ENTIRE AGREEMENT. This Agreement, the Master Separation Agreement and the other Ancillary Agreements (as defined in the Master Separation Agreement) constitute the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior

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written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof. To the extent there is a conflict between this Agreement and the General Assignment and Assumption Agreement between the parties, the terms of this Agreement shall govern.

14.6 GOVERNING LAW. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto.

14.7 DESCRIPTIVE HEADINGS. The descriptive headings herein are inserted for convenience of reference only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

14.8 NOTICES. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given when delivered in person, by

telecopy with answer back, by express or overnight mail delivered by a nationally recognized air courier (delivery charges prepaid), by registered or certified mail (postage prepaid, return receipt requested) or by e-mail with receipt confirmed by return e-mail to the respective parties as follows:

if to HP:

c/o Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304
Attention: Associate General Counsel and
Director of Intellectual Property
Telecopy: (650) 852-8194

if to Agilent:

c/o Agilent Technologies, Inc.
3000 Hanover Street
Palo Alto, CA 94304
Attention: Assistant General Counsel and
Director of Intellectual Property
Telecopy: (650) 813-3095

or to such other address as the party to whom notice is given may have previously furnished to the other in writing in the manner set forth above. Any notice or communication delivered in person shall be deemed effective on delivery. Any notice or communication sent by e-mail, telecopy or by air courier shall be deemed effective on the first Business Day following the day on which such notice or communication was sent. Any notice or communication sent by registered or certified mail shall be deemed effective on the third Business Day following the day on which such notice or communication was mailed. As used in this Section 14.8, "Business Day" means day other than a

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Saturday, a Sunday or a day on which banking institutions located in the State of California are authorized or obligated by law or executive order to close.

14.9 NONASSIGNABILITY. Neither party may, directly or indirectly, in whole or in part, whether by operation of law or otherwise, assign or transfer this Agreement, without the other party's prior written consent, and any attempted assignment, transfer or delegation without such prior written consent shall be voidable at the sole option of such other party. Notwithstanding the foregoing, each party (or its permitted successive assignees or transferees hereunder) may assign or transfer this Agreement as a whole without consent to a Person that succeeds to all or substantially all of the business or assets of such party. Without limiting the foregoing, this Agreement will be binding upon and inure to the benefit of the parties and their permitted successors and assigns.

14.10 SEVERABILITY. If any term or other provision of this Agreement is determined by a nonappealable decision of a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent possible.

14.11 FAILURE OR INDULGENCE NOT WAIVER; REMEDIES CUMULATIVE. No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein,

nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right. All rights and remedies existing under this Agreement are cumulative to, and not exclusive of, any rights or remedies otherwise available.

14.12 AMENDMENT. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to such agreement.

14.13 COUNTERPARTS. This Agreement may be executed in two or more counterparts, all of which, taken together, shall be considered to be one and the same instrument.

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WHEREFORE, the parties have signed this Trademark Ownership and License Agreement effective as of the date first set forth above.

HEWLETT-PACKARD COMPANY

AGILENT TECHNOLOGIES, INC.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

EXHIBIT A
TO MASTER TRADEMARK OWNERSHIP AND LICENSE AGREEMENT

LICENSED MARKS

HP

Hewlett Packard

HP Symbol

EXHIBIT B
TO MASTER TRADEMARK OWNERSHIP AND LICENSE AGREEMENT

AFFILIATED COMPANIES

1. HP Affiliated Companies

ImagineCard

Idea LLC

Intria-HP

Intria-HP Potomac

Ericsson-HP Telecom (Sweden)

Ericsson-HP Telecom (France)

Hua-Pua

Putial Ome

PT Berka Services

Liquidity Management Group

Hugin Expert

Syc

Sopura Systems

2. Agilent Affiliated Companies

Chartered Semiconductor Partners Singapore

LumiLEDs

ICBD TECHNOLOGY OWNERSHIP AND
LICENSE AGREEMENT

between

HEWLETT-PACKARD COMPANY

and

AGILENT TECHNOLOGIES, INC.

Effective as of _____, 1999

ICBD TECHNOLOGY OWNERSHIP AND LICENSE AGREEMENT

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EXHIBIT A: AFFILIATED COMPANIES
EXHIBIT B: FIELD RESTRICTIONS

ICBD TECHNOLOGY OWNERSHIP AND LICENSE AGREEMENT

This ICBD Technology Ownership and License Agreement (the "Agreement") is effective as of _____, 1999 (the "Effective Date"), between Hewlett-Packard Company, a Delaware corporation ("HP"), having an office at 3000 Hanover Street, Palo Alto, California 94304 and Agilent Technologies, Inc., a Delaware corporation ("Agilent"), having an office at 3000 Hanover Street, Palo Alto, California 94304.

WHEREAS, the Board of Directors of HP has determined that it is in the best interest of HP and its stockholders to separate HP's existing businesses into two independent businesses;

WHEREAS, as part of the foregoing, HP and Agilent have entered into a Master Separation Agreement (as defined below), which provides, among other things, for the separation of certain Agilent assets and Agilent liabilities, the initial public offering of Agilent stock, the distribution of such stock and the execution and delivery of certain other agreements in order to facilitate and provide for the foregoing;

WHEREAS, also as part of the foregoing, HP and Agilent desire to confirm HP's and Agilent's ownership of certain technology related to integrated circuits; and

WHEREAS, each party further desires to receive, and the other party is willing to grant, certain rights to use certain of such technology.

NOW, THEREFORE, in consideration of the mutual promises of the parties, and of good and valuable consideration, it is agreed by and between the parties as follows:

ARTICLE I

DEFINITIONS

For the purpose of this Agreement the following capitalized terms are

defined in this Article I and shall have the meaning specified herein:

1.1 AFFILIATED COMPANY. "Affiliated Company" means, with respect to HP, any entity in which HP holds a 50% or less ownership interest and that is listed on Exhibit A hereto and, with respect to Agilent, any entity in which Agilent holds a 50% or less ownership interest and that is listed on Exhibit A hereto; provided, however, that any such entity listed in Exhibit A shall be considered to be an Affiliated Company under this Agreement only if it agrees in writing to be bound by the terms and conditions of this Agreement. Exhibit A may be amended from time to time after the date hereof upon mutual consent of the parties.

1.2 AGILENT ICBD PRODUCTS. "Agilent ICBD Products" means any and all semiconductor devices, at whatever stage of completion in the manufacturing process, in die, wafer, packaged or chip form, integrated circuit modules incorporating such semiconductor devices, and related software (whether embedded in such devices or modules or Sold or licensed in connection

with such devices or modules) that are used or Sold now or hereafter by Agilent, its Subsidiaries or Affiliated Companies and are based on or incorporate the Licensed HP ICBD Technology (including Third Party semiconductor devices, integrated circuit modules and related software when Agilent, its Subsidiaries or Affiliated Companies are making (but not having made) such products as a contract manufacturer or foundry for such Third Parties).

1.3 AGILENT OWNED ICBD TECHNOLOGY. "Agilent Owned ICBD Technology" means the ICBD Technology listed or described as such in the ICBD Technology Database.

1.4 COPYRIGHTS. "Copyrights" mean (i) any copyright in any original works of authorship fixed in any tangible medium of expression as set forth in 17 U.S.C. Section 101 et. seq., whether registered or unregistered, including any applications for registration thereof, (ii) any corresponding foreign copyrights under the laws of any jurisdiction, in each case, whether registered or unregistered, and any applications for registration thereof and (iii) moral rights under the laws of any jurisdiction.

1.5 DATABASE RIGHTS. "Database Rights" means any rights in databases under the laws of the United States or any other jurisdiction, whether registered or unregistered, and any applications for registration thereof.

1.6 HP ICBD PRODUCTS. "HP ICBD Products" means any and all semiconductor devices, at whatever stage of completion in the manufacturing process, in die, wafer, packaged or chip form, integrated circuit modules incorporating such semiconductor devices, and related software (whether embedded in such devices or modules or Sold or licensed in connection with such devices or modules) that are used or Sold now or hereafter by HP, its Subsidiaries or Affiliate Companies and are based on or incorporate the Licensed Agilent ICBD Technology (including Third Party semiconductor devices, integrated circuit modules and related software when HP, its Subsidiaries or Affiliated Companies are making (but not having made) such products as a contract manufacturer or foundry for such Third Parties).

1.7 HP OWNED ICBD TECHNOLOGY. "HP Owned ICBD Technology" means ICBD Technology listed or described as such in the ICBD Technology Database.

1.8 ICBD TECHNOLOGY. "ICBD Technology" means semiconductor topologies, cell libraries, cores or other similar elements, logic modules, algorithms, manufacturing processes, design processes, behavioral models, logic diagrams, schematics, test vectors, know-how, computer and electronic data processing and other apparatus programs and software (object code and source code), databases and documentation thereof, trade secrets, technical information, specifications, drawings, records, documentation, works of authorship or other creative works, ideas, knowledge, data or the like, solely to the extent that any of the foregoing are listed or described in the ICBD Technology Database. The term ICBD Technology includes Copyrights, Database Rights, Mask Work Rights, trade secrets and any other intellectual property right, but expressly does not include (i) any trademark, trade name, trade dress or service mark or applications for registration thereof, or (ii) any Patents, or applications therefor, including

any of the foregoing that may be based on Invention Disclosures that are covered by the Master Patent Ownership and Assignment Agreement

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between the parties, but does include trade secret rights in and to inventions disclosed in such applications and Invention Disclosures.

1.9 ICBT TECHNOLOGY DATABASE. "ICBD Technology Database" means the ICBT Technology Database, as it may be updated by the parties upon mutual agreement to add ICBT Technology as of the Separation Date.

1.10 ICBT TECHNOLOGY FIELD DEFINITION DATABASE. "ICBD Technology Field Definition Database" means the ICBT Technology Field Definition Database, as it may be updated by the parties as of the Separation Date.

1.11 IMPROVEMENTS. "Improvements" to ICBT Technology means (i) with respect to Copyrights, any modifications, derivative works, and translations of works of authorship, (ii) with respect to Database Rights, any database that is created by extraction or re-utilization of another database, and (iii) with respect to Mask Work Rights, trade secrets and other intellectual property rights included within the definition of ICBT Technology and not covered by Sections 1.11(i) and (ii) above, any improvements of ICBT Technology. For the purposes of clarification, an item of ICBT Technology will be deemed to be an Improvement of another item of ICBT Technology only if it is actually derived from such other item of ICBT Technology and not merely because it may have the same or similar functionality or use as such other item of ICBT Technology.

1.12 INVENTION DISCLOSURE. "Invention Disclosure" means a disclosure of an invention (i) written for the purpose of allowing legal and business people to determine whether to file a Patent application with respect to such invention and (ii) recorded with a control number in the owning party's records.

1.13 JOINT ICBT TECHNOLOGY. "Joint ICBT Technology" means the ICBT Technology listed or described as such in the ICBT Technology Database.

1.14 LICENSED AGILENT ICBT TECHNOLOGY. "Licensed Agilent ICBT Technology" means the ICBT Technology listed or described as such in the ICBT Technology Database and:

(a) which, as of the Separation Date, Agilent or any Subsidiary or Affiliated Company of Agilent (i) owns or controls or (ii) otherwise has the right to grant any licenses of the type and on the terms herein granted to HP without the obligation to pay royalties or other consideration to Third Parties; and

(b) which is known to or in the possession of HP, its Subsidiaries or Affiliated Companies as of the Separation Date.

1.15 LICENSED HP ICBT TECHNOLOGY. "Licensed HP ICBT Technology" means the ICBT Technology listed or described as such in the ICBT Technology Database and:

(a) which, as of the Separation Date, HP or any Subsidiary or Affiliated Company of HP (i) owns or controls or (ii) otherwise has the right to grant any licenses of the type and on the

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terms herein granted to Agilent without the obligation to pay royalties or other consideration to Third Parties; and

(b) which is known to or in the possession of Agilent, its Subsidiaries or Affiliated Companies as of the Separation Date.

1.16 MASK WORK RIGHTS. "Mask Work Rights" means (i) any rights in mask works, as defined in 17 U.S.C. Section 901, whether registered or unregistered,

including applications for registration thereof, and (ii) any foreign rights in semiconductor topologies under the laws of any jurisdiction, whether registered or unregistered, including applications for registration thereof.

1.17 MASTER SEPARATION AGREEMENT. "Master Separation Agreement" means the Master Separation and Distribution Agreement between the parties.

1.18 PATENTS. "Patents" means patents, utility models, design patents, design registrations, certificates of invention and other governmental grants for the protection of inventions or industrial designs anywhere in the world and all reissues, renewals, re-examinations and extensions of any of the foregoing.

1.19 PERSON. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization, and a governmental entity or any department, agency, or political subdivision thereof.

1.20 SELL. To "Sell" a product means to sell, transfer, lease, or otherwise dispose of a product. "Sale" and "Sold" have the corollary meanings ascribed thereto.

1.21 SEPARATION DATE. "Separation Date" means 12:01 a.m., Pacific Time, November 1, 1999 or such other date as may be fixed by the Board of Directors of HP.

1.22 SUBSIDIARY. "Subsidiary" means with respect to any specified Person, any corporation, any limited liability company, any partnership or other legal entity of which such Person owns, directly or indirectly, more than 50% of the stock or other equity interest entitled to vote on the election of the members of the board of directors or similar governing body. Unless the context otherwise requires, reference to HP and its Subsidiaries shall not include the subsidiaries of HP that will be transferred to Agilent after giving effect to the Separation (as defined in the Master Separation Agreement), including the actions taken pursuant to the Non-US Plan (as defined in the Master Separation Agreement). For example, if HP owns 70% of the stock of another corporation, and that corporation owns 60% of the equity interest of a limited liability company, then that corporation is a Subsidiary of HP but that limited liability company is not. However, if such corporation owns 90% of the equity interest of a limited liability company, then that limited liability company is a Subsidiary of HP. For the avoidance of doubt, this definition of Subsidiary is different from the definition of Subsidiary in the Master Separation Agreement.

1.23 THIRD PARTY. "Third Party" means a Person other than HP and its Subsidiaries and Affiliated Companies and Agilent and its Subsidiaries and Affiliated Companies.

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ARTICLE II

ALLOCATION OF OWNERSHIP

2.1 CONFIRMATION OF OWNERSHIP. The parties hereby agree and confirm that, as between the parties, HP retains for itself all right, title and interest in and to the HP Owned ICBD Technology (except for any licenses expressly granted in Article III) and that no transfer or assignment of ownership rights is intended by the parties. At any time during the period beginning on the Separation Date and until a reasonable period after Agilent ceases to manufacture a particular HP ICBD Product for HP, HP shall have the right to access and to copy or have Agilent copy for HP any and all portions of the HP Owned ICBD Technology related to such HP ICBD Product in the possession of Agilent. Such access and copying shall be in accordance with a reasonable request and schedule to be mutually agreed upon between Agilent and HP. All costs associated with the assembling, copying and delivering of the HP Owned ICBD Technology shall be borne by HP (except for the value of the time of Agilent employees). HP shall respond to reasonable requests by Agilent concerning whether a particular HP ICBD Product will continue to be manufactured

by Agilent.

2.2 ASSIGNMENT. Subject to Sections 2.4-2.6 below and to Article IV, HP hereby grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent, by execution hereof (or, where appropriate or required, by execution of separate instruments of assignment), all its (and their) right, title and interest in and to the Agilent Owned ICB Technology, to be held and enjoyed by Agilent, its successors and assigns. HP further grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent all its (and their) right, title and interest in and to any and all causes of action and rights of recovery for past infringement of Copyrights, Database Rights and Mask Work Rights in and to the Agilent Owned ICB Technology, and for past misappropriation of trade secrets in and to the Agilent Owned ICB Technology. HP further covenants that HP will, without demanding any further consideration therefor, at the request and expense of Agilent (except for the value of the time of HP employees), do (and cause its Subsidiaries to do) all lawful and just acts, that may be or become necessary for evidencing, maintaining, recording and perfecting Agilent's rights to such Agilent Owned ICB Technology consistent with HP's general business practice as of the Separation Date, including but not limited to, execution and acknowledgement of (and causing its Subsidiaries to execute and acknowledge) assignments and other instruments in a form reasonably required by Agilent for each Copyright, Mask Work Right, or Database Right jurisdiction.

2.3 JOINT ICB TECHNOLOGY. Subject to Sections 2.4-2.6 below and to Article IV, HP hereby grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent an undivided one-half interest in and to the Joint ICB Technology to be held and enjoyed by Agilent, its successors and assigns. HP further grants, conveys and assigns (and agrees to cause its appropriate Subsidiaries to grant, convey and assign) to Agilent an undivided one-half interest in and to any and all causes of action and rights of recovery for past infringement of Copyrights, Database Rights and Mask Work Rights in and to the Joint ICB Technology, and for past misappropriation of trade secrets in and to the Joint ICB Technology. HP further covenants that HP will, without demanding any consideration therefor, at the request and expense of Agilent (except for the value of the time of HP employees), do (and cause its Subsidiaries to do) all lawful

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and just acts including the execution and acknowledgement of instruments, that may be or become necessary for evidencing, maintaining and perfecting Agilent's rights to such Joint ICB Technology consistent with HP's general business practice as of the Separation Date, including but not limited to, execution and acknowledgement of (and causing its Subsidiaries to execute and acknowledge) assignments and other instruments in a form reasonably required by Agilent for each Copyright, Mask Work Right or Database Right jurisdiction.

2.4 PRIOR GRANTS. Agilent acknowledges and agrees that the foregoing assignments are subject to any and all licenses or other rights that may have been granted by HP or its Subsidiaries with respect to the Agilent Owned ICB Technology prior to the Separation Date. HP shall respond to reasonable inquiries from Agilent regarding any such prior grants.

2.5 ASSIGNMENT DISCLAIMER. AGILENT ACKNOWLEDGES AND AGREES THAT THE FOREGOING ASSIGNMENTS ARE MADE ON AN "AS IS," QUITCLAIM BASIS AND THAT NEITHER HP NOR ANY SUBSIDIARY OR AFFILIATED COMPANY OF HP HAS MADE OR WILL MAKE ANY WARRANTY WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, ENFORCEABILITY OR NON-INFRINGEMENT.

2.6 PRIOR AGREEMENTS. Notwithstanding the foregoing provisions of this Article II, the parties agree that this Agreement does not supersede any existing agreements that may have been entered into before the Separation Date regarding the allocation of ownership to any ICB Technology as between HP and Agilent.

2.7 COPIES IN ITS POSSESSION. Notwithstanding the allocation of ownership in this Article II, each party has the right to retain copies of any ICB Technology that it has in its possession as of the Separation Date.

ARTICLE III

LICENSES AND RIGHTS

3.1 LICENSE TO HP UNDER THE LICENSED AGILENT ICB TECHNOLOGY.

(a) Agilent grants (and agrees to cause its appropriate Subsidiaries or Affiliated Companies to grant) to HP the following personal, irrevocable, nonexclusive, worldwide, fully paid, royalty-free and non-transferable (except as specified in Section 9.9 below) licenses:

(i) under its and their Copyrights in and to the Licensed Agilent ICB Technology, (A) to reproduce and have reproduced the works of authorship included in the Licensed Agilent ICB Technology and Improvements thereof prepared by or for HP, in whole or in part, as part of HP ICB Products, (B) to prepare Improvements or have Improvements prepared for it based upon the works of authorship included in the Licensed Agilent ICB Technology in order to create HP ICB Products, (C) to distribute (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) copies of the works of authorship

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included in the Licensed Agilent ICB Technology and Improvements thereof prepared by or for HP to the public by sale or other transfer of ownership or by rental, lease or lending, as part of HP ICB Products, and (D) to perform (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) and display the works of authorship included in the Licensed Agilent ICB Technology and Improvements thereof prepared by or for HP, as part of HP ICB Products;

(ii) under its and their Database Rights in and to the Licensed Agilent ICB Technology, to extract data from the databases included in the Licensed Agilent ICB Technology and to re-utilize such data to design, develop, manufacture and have manufactured HP ICB Products and to Sell such HP ICB Products that incorporate such data, databases and Improvements thereof prepared by or for HP;

(iii) under its and their Mask Work Rights in and to the Licensed Agilent ICB Technology, (A) to reproduce and have reproduced mask works and semiconductor topologies included in the Licensed Agilent ICB Technology and embodied in HP ICB Products by optical, electronic or any other means, (B) to import or distribute a product in which any such mask work or semiconductor topology is embodied, and (C) to induce or knowingly to cause another Person to do any of the acts described in Sections 3.1(a)(iii)(A) and (B) above; and

(iv) under its and their trade secrets and other intellectual property rights in and to the Licensed Agilent ICB Technology (except the intellectual property rights excluded from the definition of ICB Technology), to use the Licensed Agilent ICB Technology and Improvements thereof prepared by or for HP to design, develop, manufacture and have manufactured HP ICB Products and to Sell such HP ICB Products.

(b) Without limiting the generality of the foregoing licenses granted in Section 3.1(a) above,

(i) with respect to cores or other similar elements included within the Licensed Agilent ICB Technology, such licenses include the right to synthesize, simulate, design, verify, monitor, analyze, compile, incorporate, embed and integrate the cores or other similar elements and Improvements thereof made by or for HP to design, develop and manufacture HP ICB Products, and to Sell HP ICB Products worldwide;

(ii) with respect to software included within the Licensed Agilent ICBD Technology, such licenses include the right to use, modify, and reproduce such software and Improvements thereof made by or for HP to create HP ICBD Products, in source code and object code form, and to Sell such software and Improvements thereof made by or for HP, in source code and object code form, as part of HP ICBD Products; and

(iii) the foregoing licenses include the right to have contract manufacturers and foundries manufacture HP ICBD Products for HP.

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(c) HP may grant sublicenses within the scope of the licenses granted under Sections 3.1(a) and (b) above as follows:

(i) HP may grant sublicenses to its Subsidiaries for so long as they remain its Subsidiaries, with no right to grant further sublicenses other than, in the case of a sublicensed Subsidiary, to another Subsidiary of such party and as described in Section 3.1(c) (iii) below; provided that any such sublicense may be made effective retroactively but not prior to the sublicensee's becoming a Subsidiary;

(ii) HP may grant sublicenses to its Affiliated Companies for so long as HP holds at least thirty percent (30%) ownership interest in the Affiliated Companies, with no right to grant further sublicenses other than, in the case of a sublicensed Affiliated Company, to the Affiliated Company's wholly owned subsidiaries and as described in Section 3.1(c) (iii) below; provided that any such sublicense may be made effective retroactively but not prior to the sublicensee's becoming an Affiliated Company;

(iii) HP may grant sublicenses with respect to HP ICBD Products in the form of software, in object code and source code form, to its distributors, resellers, OEM customers, VAR customers, VAD customers, systems integrators and other channels of distribution and to its end user customers; and

(iv) HP may grant sublicenses with respect to the relevant Licensed Agilent ICBD Technology to the Transferee (as defined below), in the event that HP transfers, after the Separation Date, a going business (but not all or substantially all of its business or assets), provided that such transfer includes at least one marketable product and tangible assets having a net value of at least ten million U.S. Dollars (\$10,000,000.00), regardless of whether such transfer is part of (A) an asset sale to any Third Party, (B) a sale of shares or securities in a Subsidiary or Affiliated Company to a Third Party such that (x) in the case of a Subsidiary, the Subsidiary ceases to be a Subsidiary, or in the case of an Affiliated Company, HP ceases to hold at least thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (y) the Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority, or (C) a sale of shares or securities in a Subsidiary or Affiliated Company to a Third Party such that (x) in the case of a Subsidiary, the Subsidiary ceases to be a Subsidiary, or in the case of an Affiliated Company, Agilent ceases to hold at least thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (y) no single Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority of such ex-Subsidiary or ex-Affiliated Company; provided that:

(1) the Transferee shall have no right to grant further sublicenses except as described in Section 3.1(c) (iii) above and except that the Transferee shall have the right to grant sublicenses to any Person at least eighty percent (80%) of whose outstanding shares or securities representing the right to vote for the election of directors or other managing authority are, directly or indirectly, owned by the Transferee, only for so long as such ownership exists;

(2) such sublicenses shall not come into effect unless and until such Transferee agrees in writing for the benefit of Agilent to be bound by the terms of this Agreement, including but not limited to the use restrictions in Article IV and the confidentiality obligations under Article V;

(3) this Section 3.1(c) (iv) shall be excluded from such sublicense in any event; and

(4) HP shall give Agilent prompt written notice of any such sublicense and a copy of the portions of the relevant agreement between HP and such Transferee containing the sublicense terms.

(5) HP may exercise its rights under this Section 3.1(c) (iv) no more than eight (8) times unless otherwise agreed to in writing by Agilent. Notwithstanding the foregoing limitation, however, in any sublicense granted by HP to a Transferee under this Section 3.1(c) (iv), HP may elect to relinquish its license under this Agreement in the field of use covered by the sublicense, and such sublicense shall not count toward the limit. In making such election, HP promptly shall notify Agilent. All notices of transfer by HP and all consents by Agilent shall be effective only if provided to or by the Director of Intellectual Property of the applicable party.

(6) As used in this Section 3.1(c) (iv), "Transferee" in the case of Sections 3.1(c) (iv) (A) and (B) means the Third Party acquiring the going business or eighty percent (80%) of the Subsidiary or Affiliated Company and in the case of Section 3.1(c) (iv) (C) means the ex-Subsidiary or ex-Affiliated Company only.

(d) The licenses granted above to the Licensed Agilent ICBD Technology shall continue in perpetuity (or, in the case of Copyrights, Database Rights and Mask Work Rights, until the expiration of the term thereof).

3.2 LICENSE TO AGILENT UNDER THE HP OWNED ICBD TECHNOLOGY WITH RESPECT TO HP ICBD PRODUCTS.

(a) HP grants (and agrees to cause its appropriate Subsidiaries or Affiliated Companies to grant) to Agilent the following personal, irrevocable, nonexclusive, worldwide, fully paid, royalty-free and non-transferable (except as specified in Section 9.9 below) licenses:

(i) under its and their Copyrights in and to the HP Owned ICBD Technology, (A) to reproduce and have reproduced the works of authorship included in the HP Owned ICBD Technology and Improvements prepared for HP, in whole or in part, as part of HP ICBD Products, (B) to prepare Improvements or have Improvements prepared for HP based upon the works of authorship included in the HP Owned ICBD Technology in order to create HP ICBD Products, (C) to distribute (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) copies of the works of authorship included in the HP Owned ICBD Technology and Improvements thereof prepared for HP to HP and

such Subsidiaries and Affiliated Companies of HP and Third Parties as HP may designate in writing to Agilent from time to time, by sale or other transfer of ownership or by rental, lease or lending, as part of HP ICBD Products, and (D) to perform (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) and display the works of authorship included in the HP Owned ICBD Technology and Improvements thereof prepared for HP, as part of HP ICBD Products;

(ii) under its and their Database Rights in and to the HP Owned ICBD Technology, to extract data from the databases included in the HP Owned

ICBD Technology and to re-utilize such data to design, develop, and manufacture HP ICBD Products for HP and to Sell such HP ICBD Products that incorporate such data, databases and Improvements thereof prepared for HP to HP and such Subsidiaries and Affiliated Companies of HP and Third Parties as HP may designate in writing to Agilent from time to time;

(iii) under its and their Mask Work Rights in and to the HP Owned ICBD Technology, (A) to reproduce and have reproduced mask works and semiconductor topologies included in the HP Owned ICBD Technology and embodied in HP ICBD Products by optical, electronic or any other means, (B) to import or distribute a product in which any such mask work or semiconductor topology is embodied to HP and such Subsidiaries and Affiliated Companies of HP and Third Parties as HP may designate in writing to Agilent from time to time, and (C) to induce or knowingly to cause another Person to do any of the acts described in Sections 3.2(a)(iii)(A) and (B) above solely on behalf of HP; and

(iv) under its and their trade secrets and other intellectual property rights in and to the HP Owned ICBD Technology (except the intellectual property rights excluded from the definition of ICBD Technology), to use the HP Owned ICBD Technology and Improvements thereof prepared for HP to design, develop and manufacture HP ICBD Products and to Sell such HP ICBD Products to HP and such Subsidiaries and Affiliated Companies of HP and Third Parties as HP may designate in writing to Agilent from time to time.

(b) Without limiting the generality of the foregoing licenses granted in Section 3.2(a) above,

(i) with respect to cores or other similar elements included within the HP Owned ICBD Technology, such licenses include the right to synthesize, simulate, design, verify, monitor, analyze, compile, incorporate, embed and integrate the cores or other similar elements and Improvements thereof made for HP to design, develop and manufacture HP ICBD Products, and to Sell HP ICBD Products to HP and such Subsidiaries and Affiliated Companies of HP and Third Parties as HP may designate in writing to Agilent from time to time;

(ii) with respect to software included within the HP Owned ICBD Technology, such licenses include the right to use, modify, and reproduce such software and Improvements thereof made for HP to create HP ICBD Products, in source code and object code form, and to Sell such software and Improvements thereof made for HP, in source code and object

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code form, as part of HP ICBD Products to HP and such Subsidiaries and Affiliated Companies of HP and Third Parties as HP may designate in writing to Agilent from time to time; and

(iii) the foregoing licenses include the right to have contract manufacturers and foundries including, but not limited to, Chartered Silicon Partners, Ltd. and Chartered Silicon Manufacturing, manufacture HP ICBD Products for HP.

(c) Agilent may grant sublicenses (with no further right to sublicense) to its Subsidiaries and Affiliated Companies within the scope of the license granted under Section 3.2(a) above for so long as, in the case of Subsidiaries, they remain its Subsidiaries, or, in the case of Affiliated Companies, Agilent holds at least thirty percent (30%) ownership interest in such Affiliated Companies. Any such sublicense may be made effective retroactively, but not prior to the sublicensee's becoming a Subsidiary or Affiliated Company.

(d) The licenses granted in this Section 3.2 to the HP Owned ICBD Technology shall continue only for so long as Agilent is making HP ICBD Products for Sale to HP, its Subsidiaries, Affiliated Companies or Third Parties designated by HP in writing.

(e) This Section 3.2 does not limit the licenses granted in Section

3.3 below with respect to Licensed HP ICBD Technology.

3.3 LICENSE TO AGILENT UNDER THE LICENSED HP ICBD TECHNOLOGY.

(a) Subject to Article IV, HP grants (and agrees to cause its appropriate Subsidiaries or Affiliated Companies to grant) to Agilent the following personal, irrevocable, nonexclusive, worldwide, fully paid, royalty-free and non-transferable (except as specified in Section 9.9 below) licenses:

(i) under its and their Copyrights in and to the Licensed HP ICBD Technology, (A) to reproduce and have reproduced the works of authorship included in the Licensed HP ICBD Technology and Improvements thereof prepared by or for Agilent, in whole or in part, as part of Agilent ICBD Products, (B) to prepare Improvements or have Improvements prepared for it based upon the works of authorship included in the Licensed HP ICBD Technology in order to create Agilent ICBD Products, (C) to distribute (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) copies of the works of authorship included in the Licensed HP ICBD Technology and Improvements thereof prepared by or for Agilent to the public by sale or other transfer of ownership or by rental, lease or lending, as part of Agilent ICBD Products, and (D) to perform (by any means and using any technology, whether now known or unknown, including without limitation electronic transmission) and display the works of authorship included in the Licensed HP ICBD Technology and Improvements thereof prepared by or for Agilent, as part of Agilent ICBD Products;

(ii) under its and their Database Rights in and to the Licensed HP ICBD Technology, to extract data from the databases included in the Licensed HP ICBD Technology and to re-utilize such data to design, develop, manufacture and have manufactured Agilent ICBD

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Products and to Sell such Agilent ICBD Products that incorporate such data, databases and Improvements thereof prepared by or for Agilent;

(iii) under its and their Mask Work Rights in and to the Licensed HP ICBD Technology, (A) to reproduce and have reproduced mask works and semiconductor topologies included in the Licensed HP ICBD Technology and embodied in Agilent ICBD Products by optical, electronic or any other means, (B) to import or distribute a product in which any such mask work or semiconductor topology is embodied, and (C) to induce or knowingly to cause another Person to do any of the acts described in Sections 3.3(a)(iii)(A) and (B) above; and

(iv) under its and their trade secrets and other intellectual property rights in and to the Licensed HP ICBD Technology (except the intellectual property rights excluded from the definition of ICBD Technology), to use the Licensed HP ICBD Technology and Improvements thereof prepared by or for Agilent to design, develop, manufacture and have manufactured Agilent ICBD Products and to Sell such Agilent ICBD Products.

(b) Without limiting the generality of the foregoing licenses granted in Section 3.3(a) above,

(i) with respect to cores or other similar elements included within the Licensed HP ICBD Technology, such licenses include the right to synthesize, simulate, design, verify, monitor, analyze, compile, incorporate, embed and integrate the cores or other similar elements and Improvements thereof made by or for Agilent to design, develop and manufacture Agilent ICBD Products, and to Sell Agilent ICBD Products worldwide;

(ii) with respect to software included within the Licensed HP ICBD Technology, such licenses include the right to use, modify, and reproduce such software and Improvements thereof made by or for Agilent to create Agilent ICBD Products, in source code and object code form, and to Sell such software and Improvements thereof made by or for Agilent, in source code and object code form, as part of Agilent ICBD Products; and

(iii) the foregoing licenses include the right to have contract manufacturers and foundries manufacture Agilent ICBD Products for Agilent.

(c) Agilent may grant sublicenses within the scope of the licenses granted under Sections 3.3(a) and (b) above as follows:

(i) Agilent may grant sublicenses to its Subsidiaries for so long as they remain its Subsidiaries, with no right to grant further sublicenses other than, in the case of a sublicensed Subsidiary, to another Subsidiary of such party, and as described in Section 3.3(c)(iii) below; provided that any such sublicense may be made effective retroactively but not prior to the sublicensee's becoming a Subsidiary;

(ii) Agilent may grant sublicenses to its Affiliated Companies for so long as Agilent holds at least thirty percent (30%) ownership interest in the Affiliated Companies, with no right to grant further sublicenses other than, in the case of a sublicensed Affiliated Company, to the

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Affiliated Company's wholly owned subsidiaries and as described in Section 3.3(c)(iii) below; provided that any such sublicense may be made effective retroactively but not prior to the sublicensee's becoming an Affiliated Company;

(iii) Agilent may grant sublicenses with respect to Agilent ICBD Products in the form of software, in object code and source code form, to its distributors, resellers, OEM customers, VAR customers, VAD customers, systems integrators and other channels of distribution and to its end user customers; and

(iv) Agilent may grant sublicenses with respect to the relevant Licensed HP ICBD Technology to the Transferee (as defined below), in the event that Agilent transfers, after the Separation Date, a going business (but not all or substantially all of its business or assets), provided that such transfer includes at least one marketable product and tangible assets having a net value of at least ten million U.S. Dollars (\$10,000,000.00), regardless of whether such transfer is part of (A) an asset sale to any Third Party, (B) a sale of shares or securities in a Subsidiary or Affiliated Company to a Third Party such that (x) in the case of a Subsidiary, the Subsidiary ceases to be a Subsidiary, or in the case of an Affiliated Company, Agilent ceases to hold at least thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (y) the Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority, or (C) a sale of shares or securities in a Subsidiary or Affiliated Company to a Third Party such that (x) in the case of a Subsidiary, the Subsidiary ceases to be a Subsidiary, or in the case of an Affiliated Company, Agilent ceases to hold at least thirty percent (30%) of the outstanding shares or securities in such Affiliated Company and (y) no single Third Party owns at least eighty percent (80%) of the outstanding shares or securities representing the right to vote for the election of directors or other managing authority of such ex-Subsidiary or ex-Affiliated Company; provided that:

(1) the Transferee shall have no right to grant further sublicenses except as described in Section 3.3(c)(iii) above and except that the Transferee shall have the right to grant sublicenses to any Person at least eighty percent (80%) of whose outstanding shares or securities representing the right to vote for the election of directors or other managing authority are, directly or indirectly, owned by the Transferee, only for so long as such ownership exists;

(2) such sublicenses shall not come into effect unless and until such Transferee agrees in writing for the benefit of HP to be bound by the terms of this Agreement, including but not limited to the use restrictions in Article IV and the confidentiality and obligations under Article V;

(3) this Section 3.3(c)(iv) shall be excluded from such sublicense in any event; and

(4) Agilent shall give HP prompt written notice of any such sublicense and a copy of the portions of the relevant agreement between Agilent and such Transferee containing the sublicense terms.

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(5) Agilent may exercise its rights under this Section 3.3(c)(iv) no more than eight (8) times unless otherwise agreed to in writing by HP. Notwithstanding the foregoing limitation, however, in any sublicense granted by Agilent to a Transferee under this Section 3.3(c)(iv), Agilent may elect to relinquish its license under this Agreement in the field of use covered by the sublicense, and such sublicense shall not count toward the limit. In making such election, Agilent promptly shall notify HP. All notices of transfer by Agilent and all consents by HP shall be effective only if provided to or by the Director of Intellectual Property of the applicable party.

(6) As used in this Section 3.3(c)(iv), "Transferee" in the case of Sections 3.3(c)(iv)(A) and (B) means the Third Party acquiring the going business or eighty percent (80%) of the Subsidiary or Affiliated Company and in the case of Section 3.3(c)(iv)(C) means the ex-Subsidiary or ex-Affiliated Company only.

(d) The licenses granted above to the Licensed HP ICBD Technology shall continue in perpetuity (or, in the case of Copyrights, Database Rights and Mask Work Rights, until the expiration of the term thereof).

3.4 HAVE MADE RIGHTS. Each party understands and acknowledges that the "have made" rights granted to it in Section 3.1 or 3.3, as applicable, and the sublicenses of such "have made" rights granted pursuant to Sections 3.1(c)(i) and (ii) and 3.3(c)(i) and (ii), as applicable, are intended to cover only the products of such party, its Subsidiaries and Affiliated Companies (including private label or OEM versions of such products), and are not intended to cover foundry or contract manufacturing activities that such party may undertake through Third Parties for Third Parties.

3.5 RIGHTS TO JOINT ICBD TECHNOLOGY.

(a) Each party has the right to (i) use and exploit the Joint ICBD Technology, (ii) license the Joint ICBD Technology to Third Parties and (iii) transfer its ownership interest in any or all Joint ICBD Technology to any Third Party, in each case (x) without restriction, (y) without the consent of the other party and (z) without the obligation to account to the other party for profits derived therefrom.

(b) Should either party (the "Registering Party") desire at any time to register Copyrights, Database Rights or Mask Work Rights in and to the Joint ICBD Technology in any jurisdiction, such party shall notify the other party (the "Non-Registering Party") in writing of its intent and the reasons therefor. The Non-Registering Party promptly shall communicate in writing any objections it may have. In the absence of any written objections within thirty (30) days after the date of its notice, the Registering Party shall be free to proceed with the desired registration in the name of both HP and Agilent. In the event of any such objections by the Non-Registering Party, the parties shall discuss and negotiate reasonably and in good faith to resolve the objections based on each party's business objectives with respect to the relevant item of Joint ICBD Technology. The parties shall share equally any actual and reasonable out-of-pocket expenses (expressly excluding the value of the time of either party's employees) incurred in connection with any such registration. The

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Registering Party promptly shall provide the Non-Registering Party with copies of each application and issued registration under this Section 3.5(b).

(c) Should either party become aware of any actual infringement or misappropriation of Joint ICBD Technology, such party shall promptly communicate the details to the other party and the parties will meet and confer regarding any enforcement action with respect to such Joint ICBD Technology. If the parties decide jointly to bring an action for infringement or misappropriation of such Joint ICBD Technology, the parties shall equally share all actual and reasonable expenses associated therewith (except for the value of the time of each party's employees in connection with the action; each party shall alone bear its employee expenses) and any resulting damages or compensation, including any amounts paid in settlement. If the parties decide not to jointly bring such an action, either party or any of its Subsidiaries may, at its own expense (including, as the parties shall agree on a case by case basis, compensation, if any, of the other party for the value of time of the other party's employees as reasonably required in connection with the action), enforce any Joint ICBD Technology against any Third Party infringer or misappropriating Person without the consent of the other party, subject to the following: (i) neither party shall have any obligation to be joined as a party plaintiff in such action without its prior written consent, which may be granted or withheld in its sole discretion, regardless of whether such joinder is required in order to confer jurisdiction in the jurisdiction in which the action is to be brought, (ii) if either party brings any such action on its own, including cases in which the other party consents to be named as party plaintiff, the party bringing the action agrees to defend, indemnify and hold harmless the other party for all losses, costs, liabilities and expenses arising out of or related to the bringing of such action, and (iii) the party bringing such action may not take any action, or make any admissions, that may affect the validity of any registration for Copyrights, Database Rights or Mask Work Rights covering Joint ICBD Technology without the prior written consent of the other party. If the enforcing party or its Subsidiaries recovers any damages or compensation for any action the enforcing party or the Subsidiaries of the enforcing party takes hereunder, including any settlement, the enforcing party or the Subsidiaries of the enforcing party shall retain one hundred percent (100%) of such damages. If the parties cooperate in any such enforcement action, then any recovery of damages or compensation shall be allocated pursuant to mutual agreement.

3.6 IMPROVEMENTS.

(a) As between the parties, after the Separation Date, Agilent hereby retains all right, title and interest, including all intellectual property rights, in and to any Improvements to Licensed HP ICBD Technology or HP Owned ICBD Technology made by or for Agilent in the exercise of the licenses granted to it hereunder, subject only to the ownership of HP in the underlying Licensed HP ICBD Technology and HP Owned ICBD Technology, and HP hereby retains all right, title and interest, including all intellectual property rights, in and to any Improvements to Licensed Agilent ICBD Technology made by or for HP in the exercise of the licenses granted to it hereunder, subject only to the ownership of Agilent in the underlying Licensed Agilent ICBD Technology. Unless otherwise agreed by the parties in writing, Agilent has no obligation to disclose or license to HP any Improvements to the Agilent Owned ICBD Technology, Licensed Agilent ICBD Technology, HP Owned ICBD Technology, Licensed HP ICBD Technology or Joint ICBD Technology made by or for Agilent and HP has no obligation to disclose or license to

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Agilent any Improvements to HP Owned ICBD Technology, Licensed HP ICBD Technology, Licensed Agilent ICBD Technology or Joint ICBD Technology made by or for HP; provided, however, that each party agrees promptly to respond to requests from the other party regarding any such Improvements that may have been made by or for it in a defined technical area, and to negotiate in good faith disclosing and licensing such Improvements to the other party.

(b) Notwithstanding the foregoing provisions of Section 3.6 (a), the parties agree that this Agreement does not supersede any existing arrangements that may have been made before the Separation Date regarding the allocation of

ownership to any Improvements as between HP and Agilent.

3.7 SUBSIDIARIES AND AFFILIATED COMPANIES. A sublicense to a particular Subsidiary or Affiliated Company of a party hereto granted pursuant to Sections 3.1(c)(i) or (ii) or 3.3(c)(i) or (ii) shall terminate upon the date that, in the case of a Subsidiary of a party, such Subsidiary ceases to be a Subsidiary of such party, or, in the case of an Affiliated Company of a party, such party ceases to hold at least a thirty percent (30%) ownership interest in such Affiliated Company; provided, however, that such cessation shall not affect such party's rights to grant further sublicenses to such terminated Subsidiary or Affiliated Company as set forth in Sections 3.1(c)(iv) or 3.3(c)(iv) above. In the event that, at the time of such cessation, such Subsidiary or Affiliated Company owns any ICB Technology to which the other party is licensed, such license shall continue for the term thereof.

3.8 NO PATENT LICENSES. Nothing contained in this Agreement shall be construed as conferring to either party by implication, estoppel or otherwise any license or right under any Patent, or applications therefor, whether or not the exercise of any right herein granted necessarily employs an invention of any existing or later issued Patent. The applicable licenses granted between HP and Agilent with respect to Patents are set forth in a separate Master Patent Ownership and License Agreement.

3.9 THIRD PARTY TECHNOLOGY. The assignment of any applicable license agreements with respect to Third Party ICB Technology are set forth in a separate General Assignment and Assumption Agreement between the parties.

ARTICLE IV USE RESTRICTIONS

Agilent agrees that, other than HP ICB Products for Sale to HP (or its Subsidiaries or Affiliated Companies or Third Parties designated in writing by HP), Agilent and its sublicensees will not use the Agilent Owned ICB Technology or Licensed HP ICB Technology to design, develop, make, have made, import, offer for Sale or Sell products in the fields of use set forth in Exhibit B. The foregoing limitations shall terminate three (3) or ten (10) years after the Separation Date, as indicated in the ICB Technology Field Definition Database. The foregoing restrictions in this Article IV shall not restrict Agilent or its Subsidiaries or Affiliated Companies from continuing to design, develop, make, have made, import, offer for Sale or Sell Agilent ICB Products that are being shipped by Agilent or its Subsidiaries or Affiliated Companies as of the Separation Date in

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volumes comparable to (or less than) the volumes in which they are shipped as of the Separation Date.

ARTICLE V CONFIDENTIALITY

The terms of the Master Confidential Disclosure Agreement between the parties shall apply to any Confidential Information (as defined therein) which is the subject matter of this Agreement.

ARTICLE VI TERMINATION

6.1 VOLUNTARY TERMINATION. By written notice to the other party, each party may voluntarily terminate all or a specified portion of the licenses and rights granted to it hereunder by such other party. Such notice shall specify the effective date of such termination and shall clearly specify any affected ICB Technology, product or service.

6.2 SURVIVAL. Any voluntary termination of licenses and rights of a party under Section 6.1 shall not affect such party's licenses and rights with respect to any licensed product made or service furnished prior to such termination, and

shall not affect the licenses and rights granted to the other party hereunder.

6.3 NO OTHER TERMINATION. Each party acknowledges and agrees that its remedy for breach by the other party of the licenses granted to it hereunder or of any other provision hereof shall be, subject to the requirements of Article VII, to bring a claim to recover damages subject to the limits set forth in this Agreement and to seek any other appropriate equitable relief, other than termination of the licenses granted by it in this Agreement.

ARTICLE VII
DISPUTE RESOLUTION

7.1 NEGOTIATION. The parties shall make a good faith attempt to resolve any dispute or claim arising out of or related to this Agreement through negotiation. Within thirty (30) days after notice of a dispute or claim is given by either party to the other party, the parties' first tier negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet and make a good faith attempt to resolve such dispute or claim and shall continue to negotiate in good faith in an effort to resolve the dispute or claim or renegotiate the applicable section or provision without the necessity of any formal proceedings. If the first tier negotiating teams are unable to agree within thirty (30) days of their first meeting, then the parties' second tier negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet within thirty (30) days after the end of the first thirty (30) day negotiating period to attempt to resolve the matter. During the course of negotiations under this Section 7.1, all reasonable requests made by one party to the other for information, including requests for copies of relevant documents, will be honored. The specific format for such

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negotiations will be left to the discretion of the designated negotiating teams but may include the preparation of agreed upon statements of fact or written statements of position furnished to the other party.

7.2 NONBINDING MEDIATION. In the event that any dispute or claim arising out of or related to this Agreement is not settled by the parties within fifteen (15) days after the first meeting of the second tier negotiating teams under Section 7.1, the parties will attempt in good faith to resolve such dispute or claim by nonbinding mediation in accordance with the American Arbitration Association Commercial Mediation Rules. The mediation shall be held within thirty (30) days of the end of such fifteen (15) day negotiation period of the second tier negotiating teams. Except as provided below in Section 7.3, no litigation for the resolution of such dispute may be commenced until the parties try in good faith to settle the dispute by such mediation in accordance with such rules and either party has concluded in good faith that amicable resolution through continued mediation of the matter does not appear likely. The costs of mediation shall be shared equally by the parties to the mediation. Any settlement reached by mediation shall be recorded in writing, signed by the parties, and shall be binding on them.

7.3 PROCEEDINGS. Nothing herein, however, shall prohibit either party from initiating litigation or other judicial or administrative proceedings if such party would be substantially harmed by a failure to act during the time that such good faith efforts are being made to resolve the dispute or claim through negotiation or mediation. In the event that litigation is commenced under this Section 7.3, the parties agree to continue to attempt to resolve any dispute or claim according to the terms of Sections 7.1 and 7.2 during the course of such litigation proceedings under this Section 7.3.

ARTICLE VIII
LIMITATION OF LIABILITY

IN NO EVENT SHALL EITHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES BE LIABLE TO THE OTHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, INCIDENTAL OR PUNITIVE DAMAGES OR LOST

PROFITS, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (INCLUDING NEGLIGENCE) ARISING IN ANY WAY OUT OF THIS AGREEMENT, WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; PROVIDED, HOWEVER, THAT THE FOREGOING LIMITATIONS SHALL NOT LIMIT DAMAGES FOR INFRINGEMENT AVAILABLE TO EITHER PARTY UNDER APPLICABLE LAW IN THE EVENT OF BREACH BY THE OTHER PARTY OF SECTIONS 3.1(a), 3.2(a), 3.3(a) OR ARTICLE IV AND SHALL NOT LIMIT EACH PARTY'S OBLIGATIONS EXPRESSLY ASSUMED IN EXHIBIT K OF THE MASTER SEPARATION AGREEMENT; PROVIDED FURTHER THAT THE EXCLUSION OF PUNITIVE DAMAGES SHALL APPLY IN ANY EVENT.

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ARTICLE IX
MISCELLANEOUS PROVISIONS

9.1 DISCLAIMER. EACH PARTY ACKNOWLEDGES AND AGREES THAT ALL ICBT TECHNOLOGY AND ANY OTHER INFORMATION OR MATERIALS LICENSED OR PROVIDED HEREUNDER IS LICENSED OR PROVIDED ON AN "AS IS" BASIS, AND THAT NEITHER PARTY NOR ANY OF ITS SUBSIDIARIES OR AFFILIATED COMPANIES MAKES ANY REPRESENTATIONS OR EXTENDS ANY WARRANTIES WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY, WITH RESPECT THERETO, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, ENFORCEABILITY OR NON-INFRINGEMENT. Without limiting the generality of the foregoing, neither party nor any of its Subsidiaries or Affiliated Companies makes any warranty or representation that any manufacture, use, importation, offer for sale or sale of any product or service will be free from infringement of any Patent or other intellectual property right of any Third Party.

9.2 NO IMPLIED LICENSES. Nothing contained in this Agreement shall be construed as conferring any rights by implication, estoppel or otherwise, under any intellectual property right, other than the rights expressly granted in this Agreement with respect to the Licensed Agilent ICBT Technology, the Licensed HP ICBT Technology and the HP Owned ICBT Technology. Neither party is required hereunder to furnish or disclose to the other any technical or other information (including copies of the Licensed Agilent ICBT Technology and the Licensed HP ICBT Technology), except as specifically provided herein.

9.3 INFRINGEMENT SUITS. Neither party shall have any obligation hereunder to institute any action or suit against Third Parties for infringement of any Copyrights, Database Rights or Mask Work Rights or misappropriation of any trade secret rights in or to any ICBT Technology licensed to the other party hereunder, or to defend any action or suit brought by a Third Party which challenges or concerns the validity of any of such rights or which claims that any ICBT Technology assigned or licensed to the other party hereunder infringes any Patent, Copyright, Database Right, Mask Work Right or other intellectual property right of any Third Party or constitutes a misappropriated trade secret of any Third Party. HP shall not have any right to institute any action or suit against Third Parties for infringement of any of the Copyrights, Database Rights or Mask Work Rights in or to the Licensed Agilent ICBT Technology and Agilent shall not have any right to institute any action or suit against Third Parties for infringement of any of the Copyrights, Database Rights or Mask Work Rights in or to the Licensed HP ICBT Technology.

9.4 NO OTHER OBLIGATIONS. NEITHER PARTY ASSUMES ANY RESPONSIBILITIES OR OBLIGATIONS WHATSOEVER, OTHER THAN THE RESPONSIBILITIES AND OBLIGATIONS EXPRESSLY SET FORTH IN THIS AGREEMENT OR A SEPARATE WRITTEN AGREEMENT BETWEEN THE PARTIES. Without limiting the generality of the foregoing: (i) neither the execution of this Agreement nor anything in it or in the HP Owned ICBT Technology shall be construed as an obligation upon Agilent to make or Sell HP ICBT Products; any such obligation shall be set forth in a separate written agreement between the

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parties and (ii) neither party or any of its Subsidiaries or Affiliated Companies is obligated to provide any technical assistance.

9.5 ENTIRE AGREEMENT. This Agreement, the Master Separation Agreement and the other Ancillary Agreements (as defined in the Master Separation Agreement) constitute the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof. This Agreement shall prevail in the event of any conflicting terms or legends which may appear on any portion of the Agilent Owned ICBD Technology, Licensed Agilent ICBD Technology, HP Owned ICBD Technology or Licensed HP ICBD Technology. To the extent there is a conflict between this Agreement and the Master Assignment and Assumption Agreement between the parties, the terms of this Agreement shall govern.

9.6 GOVERNING LAW. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto.

9.7 DESCRIPTIVE HEADINGS. The descriptive headings herein are inserted for convenience of reference only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

9.8 NOTICES. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given when delivered in person, by telecopy with answer back, by express or overnight mail delivered by a nationally recognized air courier (delivery charges prepaid), by registered or certified mail (postage prepaid, return receipt requested) or by e-mail with receipt confirmed by return e-mail to the respective parties as follows:

if to HP:

c/o Hewlett Packard Company
3000 Hanover Street
Palo Alto, CA 94304
Attention: Associate General Counsel and
Director of Intellectual Property
Telecopy: (650) 852-8194

if to Agilent:

c/o Agilent Technologies, Inc.
3000 Hanover Street
Palo Alto, CA 94304
Attention: Assistant General Counsel and
Director of Intellectual Property
Telecopy: (650) 813-3095

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or to such other address as the party to whom notice is given may have previously furnished to the other in writing in the manner set forth above. Any notice or communication delivered in person shall be deemed effective on delivery. Any notice or communication sent by e-mail, telecopy or by air courier shall be deemed effective on the first Business Day following the day on which such notice or communication was sent. Any notice or communication sent by registered or certified mail shall be deemed effective on the third Business Day following the day on which such notice or communication was mailed. As used in this Section 9.8, "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions located in the State of California are authorized or obligated by law or executive order to close.

9.9 NONASSIGNABILITY. Neither party may, directly or indirectly, in whole or in part, whether by operation of law or otherwise, assign or transfer this Agreement, without the other party's prior written consent, and any attempted assignment, transfer or delegation without such prior written consent shall be voidable at the sole option of such other party. Notwithstanding the foregoing, each party (or its permitted successive assignees or transferees hereunder) may

assign or transfer this Agreement as a whole without consent to a Person that succeeds to all or substantially all of the business or assets of such party. Without limiting the foregoing, this Agreement will be binding upon and inure to the benefit of the parties and their permitted successors and assigns.

9.10 SEVERABILITY. If any term or other provision of this Agreement is determined by a nonappealable decision of a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent possible.

9.11 FAILURE OR INDULGENCE NOT WAIVER; REMEDIES CUMULATIVE. No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right. All rights and remedies existing under this Agreement are cumulative to, and not exclusive of, any rights or remedies otherwise available.

9.12 AMENDMENT. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to such agreement.

9.13 COUNTERPARTS. This Agreement may be executed in two or more counterparts, all of which, taken together, shall be considered to be one and the same instrument.

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WHEREFORE, the parties have signed this ICBT Technology Ownership and License Agreement effective as of the date first set forth above.

HEWLETT-PACKARD COMPANY

AGILENT TECHNOLOGIES, INC.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

EXHIBIT A
TO ICBT TECHNOLOGY OWNERSHIP AND LICENSE AGREEMENT

AFFILIATED COMPANIES

1. HP Affiliated Companies

ImagineCard

Idea LLC

Intria-HP

Intria-HP Potomac

Ericsson-HP Telecom (Sweden)

Ericsson-HP Telecom (France)

Hua-Pua

Putial Ome

PT Berka Services

Liquidity Management Group

Hugin Expert

Syc

Sopura Systems

2. Agilent Affiliated Companies

Chartered Semiconductor Partners Singapore

LumiLEDs

EXHIBIT B
TO ICBD TECHNOLOGY OWNERSHIP AND LICENSE AGREEMENT

FIELD RESTRICTIONS

1. Printing Devices, Printer Supplies, Components and Accessories, and Document Scanners (as such terms are defined in the ICBD Technology Field Definition Database).

2. Computing Devices (as such term is defined in the ICBD Technology Field Definition Database).

EMPLOYEE MATTERS AGREEMENT

BETWEEN

HEWLETT-PACKARD COMPANY

AND

AGILENT TECHNOLOGIES, INC.

DATED AS OF

_____, 1999

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EMPLOYEE MATTERS AGREEMENT

This EMPLOYEE MATTERS AGREEMENT (this "Agreement") is entered into on _____, 1999, between Hewlett-Packard Company ("HP"), a Delaware corporation, and Agilent Technologies, Inc. ("Agilent"), a Delaware corporation. Capitalized terms used herein (other than the formal names of HP Plans (as defined below) and related trusts of HP) and not otherwise defined, shall have the respective meanings assigned to them in Article I hereof.

WHEREAS, the Board of Directors of HP has determined that it is in the best interests of HP and its shareholders to separate HP's existing businesses into two (2) independent businesses, HP and the Agilent Business;

WHEREAS, in furtherance of the foregoing, HP and Agilent have agreed to enter into this Agreement to allocate between them assets, liabilities and responsibilities with respect to certain employee compensation, benefit plans and programs, and certain employment matters;

WHEREAS, the foreign subsidiaries of Agilent and HP, as applicable, have or will enter into separate agreements to specify the terms under which HP and Agilent agree to allocate between them all assets, liabilities and responsibilities relating to, and arising from Foreign Plans and certain employment matters ("Local Agreements"); and

NOW, THEREFORE, in consideration of the foregoing and the covenants and agreements set forth below, the parties hereto agree as follows:

ARTICLE I

DEFINITIONS

Wherever used in this Agreement, the following terms shall have the meanings indicated below, unless a different meaning is plainly required by the

context. The singular shall include the plural, unless the context indicates otherwise. Headings of sections are used for convenience of reference only, and in case of conflict, the text of this Agreement, rather than such headings, shall control:

1.1 Affiliate. "Affiliate" means, with respect to HP, any entity in which

HP holds a fifty percent (50%) or less ownership (as listed on Schedule 7.1(a) of the Separation Agreement), and with respect to Agilent, any entity in which Agilent holds a fifty percent (50%) or less ownership (as listed on Schedule 7.1(b) of the Separation Agreement).

1.2 Agilent. "Agilent" means Agilent Technologies, Inc., a Delaware

corporation. In all such instances in which Agilent is referred to in this Agreement, it shall also be deemed to include a reference to each member of the Agilent Group, unless it specifically provides otherwise; Agilent

shall be solely responsible to HP for ensuring that each member of the Agilent Group complies with the applicable terms of this Agreement.

1.3 Agilent Business. "Agilent Business" means (a) the business and

operations of the business entities of HP currently known under the following names, as described in the IPO Registration Statement and as such business and operations will continue following the Separation Date: (i) the Test and Measurement Organization, (ii) the Semiconductor Products Group, (iii) the Chemical Analysis Group, (iv) the Healthcare Solutions Group, (v) a portion of HP Labs, and (vi) any related infrastructure organizations, and (b) except as otherwise expressly provided in the General Assignment and Assumption Agreement, any terminated, divested, or discontinued businesses or operations that at the time of termination, divestiture or discontinuation primarily related to the Agilent Business as then conducted.

1.4 Agilent Employee. "Agilent Employee" means any individual who is: (a)

either actively employed by, or on leave of absence from, the Agilent Group on the Payroll Date; (b) either actively employed by, or on leave of absence from, the HP Group as either part of a work group or organization, or common support function that, at any time after the Payroll Date and before the Distribution Date, moves to the employ of the Agilent Group from the employ of the HP Group; (c) an Agilent Terminated Employee; (d) employed by the Agilent Group; (e) any other employee or group of employees designated as Agilent Employees (as of the specified date) by HP and Agilent by mutual agreement; or (f) an alternate payee under a QDRO, alternate recipient under a QMCSO, beneficiary, covered dependent, or qualified beneficiary (as such term is defined under COBRA), in each case, of an employee or former employee, described in Subsections 1.4(a) through (e) with respect to that employee's or former employee's benefit under the applicable Plan(s) (unless specified otherwise in this Agreement, such an alternate payee, alternate recipient, beneficiary, covered dependent, or qualified beneficiary shall not otherwise be considered an Agilent Employee with respect to any benefits he or she accrues or accrued under any applicable Plan(s), unless he or she is an Agilent Employee by virtue of Subsections 1.4(a) through (e)).

1.5 Agilent Group. "Agilent Group" means Agilent and each Subsidiary and

Affiliate of Agilent as of the Payroll Date, or that is contemplated to be a Subsidiary or Affiliate of Agilent after the Payroll Date pursuant to the Non-U.S. Plan other than any Subsidiary or Affiliate that is contemplated not to be controlled by Agilent pursuant to the Non-U.S. Plan.

1.6 Agilent Master Trust. "Agilent Master Trust" is defined in Subsection

3.1(b).

1.7 Agilent Stock Value. "Agilent Stock Value" means the opening per-

share price of Agilent common stock as listed on the NYSE or Nasdaq, as applicable, on the first trading day after the Distribution Date.

1.8 Agilent Terminated Employee. "Agilent Terminated Employee" means any

individual who is: (a) a former employee of the HP Group who was terminated from the Agilent Business on or before the Payroll Date; or (b) a former employee of the Agilent Group.

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Notwithstanding the foregoing, "Agilent Terminated Employee" shall not, unless otherwise expressly provided to the contrary in this Agreement, include: (a) an individual who is an HP Employee at the Distribution Date; or (b) an individual who is otherwise an Agilent Terminated Employee, but who is subsequently employed by the HP Group prior to the Distribution Date.

1.9 Agilent Transferred Employee. "Agilent Transferred Employee" means

any individual who, as of the Distribution Date, is: (a) either actively employed by, or on a leave of absence from, the Agilent Group; (b) an Agilent Terminated Employee; (c) an alternate payee under a QDRO, alternate recipient under a QMCSO, beneficiary, covered dependent, or qualified beneficiary (as such term is defined under COBRA), in each case, of an employee or former employee, described in Subsection 1.9(a) or (b) with respect to that employee's or former employee's benefit under the applicable Plan(s) (unless specified otherwise in this Agreement, such an alternate payee, alternate recipient, beneficiary, covered dependent, or qualified beneficiary shall not otherwise be considered an Agilent Transferred Employee with respect to any benefits he or she accrues or accrued under any applicable Plan(s), unless he or she is an Agilent Transferred Employee by virtue of Subsection 1.9(a) or (b)); or (d) an employee or group of employees designated by HP and Agilent, by mutual agreement, as Agilent Transferred Employees. An employee may be an Agilent Transferred Employee pursuant to this Section regardless of whether such employee is, as of the Distribution Date, alive, actively employed, on a temporary leave of absence from active employment, on layoff, terminated from employment, retired or on any other type of employment or post-employment status relative to an HP Plan, and regardless of whether, as of the Distribution Date, such employee is then receiving any benefits from an HP Plan.

1.10 Agilent WCP Claims. "Agilent WCP Claims" is defined in Subsection

6.15(a) (i).

1.11 Agreement. "Agreement" means this Employee Matters Agreement,

including all the Addendums, Schedules and Exhibits hereto, and all amendments made hereto from time to time.

1.12 Ancillary Agreement. "Ancillary Agreements" means all of the

underlying agreements, documents and instruments referred to, contemplated by, or made a part of the Separation Agreement.

1.13 ASO Contracts. "ASO Contracts" is defined in Subsection 6.5(a) and

the Schedule 6.5(a).

1.14 Benefits Committee. "Benefits Committee" means the benefits

committee established pursuant to Section 2.6.

1.15 Cash Profit Sharing Program. "Cash Profit Sharing Program," when

immediately preceded by "HP," means the HP Cash Profit Sharing Program. When immediately preceded by "Agilent," "Cash Profit Sharing Program" means the cash

profit sharing program to be established by Agilent pursuant to Sections 2.2 and 7.6 that corresponds to the HP Cash Profit Sharing Plan.

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1.16 COBRA. "COBRA" means the continuation coverage requirements for

"group health plans" under Title X of the Consolidated Omnibus Budget Reconciliation Act of 1985, as amended from time to time, and as codified in Code Section 4980B and ERISA Sections 601 through 608.

1.17 Code. "Code" means the Internal Revenue Code of 1986, as amended from

time to time.

1.18 DCR Plan. "DCR Plan," when immediately preceded by "HP," means the HP

Dependent Care Reimbursement Plan. When immediately preceded by "Agilent," "DCR Plan" means the dependent care reimbursement plan to be established by Agilent pursuant to Sections 2.2 and 6.10 that corresponds to the HP DCR Plan.

1.19 Distribution. "Distribution" means HP's pro rata distribution to the

holders of its common stock, \$0.01 par value, several months following the IPO, of all the shares of Agilent common stock owned by HP.

1.20 Distribution Date. "Distribution Date" means the date that the

Distribution is effective.

1.21 DOL. "DOL" means the United States Department of Labor.

1.22 DPSP. "DPSP," when immediately preceded by "HP," means the HP

Deferred Profit-Sharing Plan, a defined contribution plan. When immediately preceded by "Agilent," "DPSP" means the profit-sharing plan to be established by Agilent pursuant to Sections 2.2 and 4.2 and that corresponds to the HP DPSP.

1.23 DPSP Transfer Date. "DPSP Transfer Date" is defined in Subsection

4.2(e) (ii).

1.24 ERISA. "ERISA" means the Employee Retirement Income Security Act of

1974, as amended from time to time.

1.25 Excess Benefit Plan. "Excess Benefit Plan," when immediately preceded

by "HP," means the HP Excess Benefit Retirement Plan. When immediately preceded by "Agilent," "Excess Benefit Plan" means the non-qualified supplemental excess benefit retirement plan to be established by Agilent pursuant to Sections 2.2 and 5.1 that corresponds to the HP Excess Benefit Plan.

1.26 Excluded Options. "Excluded Options" is defined in Section 7.2(b).

1.27 Executive Deferred Compensation Plan. "Executive Deferred

Compensation Plan," when immediately preceded by "HP," means the HP Executive Deferred Compensation Plan. When immediately preceded by "Agilent," "Executive Deferred Compensation Plan" means the deferred compensation plan to be established by Agilent pursuant to Sections 2.2 and 5.2 that corresponds to the HP Executive Deferred Compensation Plan.

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1.28 Flexible Benefits Plan. "Flexible Benefits Plan," when immediately

preceded by "HP," means the HP Premium Plan, the HP HCR Plan, and the HP DCR
Plan. When immediately preceded by "Agilent," Flexible Benefits Plan means the
Agilent Premium Plan, the Agilent HCR Plan, and the Agilent DCR Plan to be
established by Agilent pursuant to Sections 2.2 and 6.10 that correspond to the
respective HP Flexible Benefits Plan.

1.29 FMLA. "FMLA" means the Family and Medical Leave Act of 1993, as

amended from time to time.

1.30 Food Subsidy Programs. "Food Subsidy Programs" is defined in Section

8.4.

1.31 Foreign Plan. "Foreign Plan," when immediately preceded by "HP,"

means a Plan maintained by the HP Group for the benefit of its employees outside
the U.S. When immediately preceded by "Agilent," "Foreign Plan" means a Plan to
be established by Agilent for the benefit of its employees outside the U.S.

1.32 Fringe Benefits. "Fringe Benefits," when immediately preceded by "HP"

means the HP employee assistance program, the educational assistance program and
other fringe benefits, plans, programs and arrangements sponsored and maintained
by HP (as set forth in Article VIII and the Schedule attached thereto). When
immediately preceded by "Agilent," "Fringe Benefits" means the fringe benefits,
plans, programs and arrangements to be established by Agilent pursuant to
Section 2.2 and Article VIII that correspond to the respective HP Fringe
Benefits.

1.33 FTO. "FTO," when immediately preceded by "HP," means the HP Flexible

Time Off Policy. When immediately preceded by "Agilent," "FTO" means the Agilent
flexible time off policy to be established by Agilent pursuant to Sections 2.2
and 10.6 that corresponds to the HP FTO Policy.

1.34 General Assignment and Assumption Agreement. "General Assignment and

Assumption Agreement" means the Ancillary Agreement which is Exhibit C to the
Separation Agreement.

1.35 Group Insurance Policies. "Group Insurance Policies" is defined in

Subsection 6.5(b) and the Schedule thereto.

1.36 Group Trust. "Group Trust" is defined in Subsection 3.1(a).

1.37 GUL. "GUL," when immediately preceded by "HP," means the HP Group

Universal Life Insurance Program. When immediately preceded by "Agilent," "GUL"
means the group universal life insurance program to be established by Agilent
pursuant to Sections 2.2 and 6.7 that corresponds to the HP GUL.

1.38 HCFA. "HCFA" means the United States Health Care Financing

Administration.

1.39 HCR Plan. "HCR Plan," when immediately preceded by "HP," means the HP

Health Care Reimbursement Plan. When immediately preceded by "Agilent," "HCR
Plan" means the health care reimbursement plan to be established by Agilent

pursuant to Sections 2.2 and 6.10 that corresponds to the HP HCR Plan.

1.40 Health and Welfare Plans. "Health and Welfare Plans," when

immediately preceded by "HP," means the HP Health Plans, the HP Flexible Benefit Plan, and the health and welfare plans listed on Schedule 1.40 established and maintained by HP for the benefit of employees and retirees of the HP Group, and such other welfare plans or programs as may apply to such employees and retirees as of the Distribution Date. When immediately preceded by "Agilent," "Health and Welfare Plans" means the Agilent Health Plans, the Agilent Flexible Benefit Plan, and the health and welfare plans to be established by Agilent pursuant to Section 2.2 and Article VI that correspond to the respective HP Health and Welfare Plans.

1.41 Health Plans. "Health Plans," when immediately preceded by "HP,"

means the Medical Plan Option A, Medical Plan Option B, HMO, Regular Dental Plan, Dental Plan II, Community Dental Network ("CDN") (available in San Diego, California only), Continued Group Medical and SeniorMed Programs, and any similar or successor plans, programs or arrangements. When immediately preceded by "Agilent," "Health Plans" means the health plans, programs and arrangements to be established by Agilent pursuant to Section 2.2 and Article VI that correspond to the respective HP Health Plans.

1.42 HMO. "HMO" means a health maintenance organization that provides

benefits under the HP Health Plans or the Agilent Health Plans.

1.43 HMO Agreements. "HMO Agreements" is defined in Subsection 6.5(c) and

Schedule 6.5(c).

1.44 HP. "HP" means Hewlett-Packard Company, a Delaware corporation. In
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all such instances in which HP is referred to in this Agreement, it shall also be deemed to include a reference to each member of the HP Group, unless it specifically provides otherwise; HP shall be solely responsible to Agilent for ensuring that each member of the HP Group complies with the applicable terms of this Agreement.

1.45 HP Employee. "HP Employee" means an individual who, on the

Distribution Date, is: (a) either actively employed by, or on leave of absence from, the HP Group; (b) an HP Terminated Employee; or (c) an employee or group of employees designated as HP Employees by HP and Agilent, by mutual agreement.

1.46 HP Group. "HP Group" means HP and each Subsidiary and Affiliate of HP

(or any predecessor organization thereof).

1.47 HP GUL Transfer Date. "HP GUL Transfer Date" is defined in Subsection

6.7(c) (iii).

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1.48 HP L-T Care Plan Transfer Date. "HP L-T Care Plan Transfer Date" is

defined in Subsection 6.6(b) (ii).

1.49 HP Master Trust. "HP Master Trust" is defined in Subsection 3.1(c).

1.50 HP Stock Value. "HP Stock Value" means the closing per-share price of

HP common stock as listed on the NYSE on the last trading day before the Distribution Date.

1.51 HP Terminated Employee. "HP Terminated Employee" means any individual

who is a former employee of the HP Group and who, on the Distribution Date, is
not an Agilent Transferred Employee.

1.52 HP WCP. "HP WCP" means the HP Workers' Compensation Program,

comprised of the various arrangements established by a member of the HP Group to
comply with the workers' compensation requirements of the states in which the HP
Group conducts business.

1.53 Income Protection Plan. "Income Protection Plan" or "IPP," when

immediately preceded by "HP," means the HP Income Protection Plan for short-term
and long-term disabilities which is offered through the HP Employee Benefits
Organization Trust (or, where an employee works in a state that offers a
statutory state disability plan, then "Income Protection Plan" refers to the
alternative voluntary state disability plan offered under the Income Protection
Plan). When immediately preceded by "Agilent," "Income Protection Plan" or "IPP"
means the Income Protection Plan to be established by Agilent pursuant to
Section 2.2 and Article VI that corresponds to the HP IPP Plan.

1.54 IPO. "IPO" means the initial public offering of Agilent common stock

pursuant to a registration statement on Form S-1 pursuant to the Securities Act
of 1933, as amended.

1.55 IPO Closing Date. "IPO Closing Date" means the closing of the IPO

which is currently scheduled to occur prior to December 31, 1999.

1.56 IPO Registration Statement. "IPO Registration Statement" means the

registration statement on Form S-1 pursuant to the Securities Act of 1933 as
amended, to be filed with the SEC registering the shares of common stock of
Agilent to be issued in the IPO, together with all amendments thereto.

1.57 IRG. "IRG," when immediately preceded by "HP," means the HP

International Retirement Guaranty. When immediately preceded by "Agilent," "IRG"
means the international retirement guarantee program to be established by
Agilent pursuant to Sections 2.2 and 5.4.

1.58 IRS. "IRS" means the United States Internal Revenue Service.

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1.59 L-T Care Plan. "L-T Care Plan," when immediately preceded by "HP,"

means the HP Group Long-Term Care Plan. When immediately preceded by "Agilent,"
"L-T Care Plan" means the group long-term care plan to be established by Agilent
pursuant to Sections 2.2 and 6.6 that corresponds to the HP L-T Care Plan.

1.60 Leave of Absence Programs. "Leave of Absence Programs," when

immediately preceded by "HP," means the personal, medical, military and FMLA
leave offered from time to time under the personnel policies and practices of
HP. When immediately preceded by "Agilent," "Leave of Absence Programs" means
the leave of absence programs to be established by Agilent pursuant to Sections
2.2 and 6.13 that correspond to the respective HP Leave of Absence Programs.

1.61 Legally Permissible. "Legally Permissible" is defined in Subsection

6.15(a) (iv).

1.62 Liabilities. "Liabilities" means all debts, liabilities, guarantees,

assurances, commitments, and obligations, whether fixed, contingent or absolute,
asserted or unasserted, matured or unmatured, liquidated or unliquidated,
accrued or not accrued, known or unknown, due or to become due, whenever or
however arising (including, without limitation, whether arising out of any
Contract or tort based on negligence or strict liability) and whether or not the
same would be required by generally accepted principles and accounting policies
to be reflected in financial statements or disclosed in the notes thereto.
"Contract" means any contract, agreement, lease, license, sales order, purchase
order, instrument or other commitment that is binding on any Person or any part
of its property under applicable law.

1.63 Local Agreement. "Local Agreement" is defined in Section 2.7.

1.64 Material Feature. "Material Feature" means any feature of a Plan that

could reasonably be expected to be of material importance to the sponsoring
employer or the participants (or their dependents or beneficiaries) (in the
aggregate) of that Plan, which could include, depending on the type and purpose
of the particular Plan, the class or classes of employees eligible to
participate in such Plan, the nature, type, form, source, and level of benefits
provided under such Plan and the amount or level of contributions, if any,
required to be made by participants (or their dependents or beneficiaries) to
such Plan.

1.65 Non-Qualified Plans. "Non-Qualified Plans" when immediately preceded

by "HP," means the HP Excess Benefit Plan, the HP Executive Deferred
Compensation Plan, and the HP Officers Early Retirement Plan. When immediately
preceded by "Agilent," "Non-Qualified Plan" means the deferred compensation and
excess benefit plans, programs, or arrangements to be established by Agilent
pursuant to Section 2.2 and Article V.

1.66 Non-U.S. Plan. "Non-U.S. Plan" means the local transfer agreements,

assignments, assumptions, novations and other documents executed by the foreign
subsidiaries of HP and Agilent as shall be necessary to carry out the plan of
reorganization described in Exhibit M to the Separation

Agreement to effect the purposes of the Separation Agreement with respect to HP
and Agilent's respective operations outside the U.S.

1.67 Option. "Option," when immediately preceded by "HP," means an option

to purchase HP common stock pursuant to a Stock Plan. When immediately preceded
by "Agilent," "Option" means an option to purchase Agilent common stock pursuant
to a Stock Plan.

1.68 Outsource. "Outsource" is defined in Subsections 6.3(b) and

6.15(a)(iii) for purposes of each such respective section.

1.69 Participating Company. "Participating Company" means: (a) HP; (b) any

Person (other than an individual) that HP has approved for participation in, has
accepted participation in, and which is participating in, a Plan sponsored by
HP; or (c) any Person (other than an individual) which, by the terms of such
Plan, participates in such Plan or any employees of which, by the terms of such
Plan, participate in or are covered by such Plan.

1.70 Payroll Date. "Payroll Date" means November 1, 1999, or such later

date on which Agilent Employees are first added to Agilent's U.S. payroll.

1.71 PBGC. "PBGC" means the Pension Benefit Guaranty Corporation.

1.72 Person. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization, and a governmental entity or any department, agency or political subdivision thereof.

1.73 Plan. "Plan," means any plan, policy, program, payroll practice, arrangement, contract, trust, insurance policy, or any agreement or funding vehicle providing compensation or benefits to employees, former employees or directors of HP or Agilent.

1.74 Post-Employment Programs. "Post-Employment Programs," when immediately preceded by "HP," means the HP Continued Group Medical, HP SeniorMed, and HP Retiree Life Programs that permit certain retirees and former employees of the HP Group, and their eligible spouses, domestic partners, and dependents to continue to receive coverage and benefits under certain HP Health and Welfare Plans (other than dental plans) for a designated period of time. When immediately preceded by "Agilent," "Post-Employment Programs" means such continuation programs to be established by Agilent pursuant to Sections 2.2 and 6.14 that correspond to the HP Post-Employment Programs.

1.75 Premium Plan. "Premium Plan," when immediately preceded by "HP," means the HP Medical/Dental Pre-Tax Premium Plan. When immediately preceded by "Agilent," "Premium Plan" means the medical/dental pre-tax premium plan to be established by Agilent pursuant to Sections 2.2 and 6.10 that corresponds to the HP Premium Plan.

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1.76 QDRO. "QDRO" means a domestic relations order which qualifies under Code Section 414(p) and ERISA Section 206(d) and which creates or recognizes an alternate payee's right to, or assigns to an alternate payee, all or a portion of the benefits payable to a participant under any of the HP Retirement Plans.

1.77 QMCSO. "QMCSO" means a medical child support order which qualifies under ERISA Section 609(a) and which creates or recognizes the existence of an alternate recipient's right to, or assigns to an alternate recipient the right to, receive benefits for which a participant or beneficiary is eligible under any of the Health Plans.

1.78 Rabbi Trust. "Rabbi Trust," when immediately preceded by "HP," means the rabbi trust established for purposes of holding assets under the HP Executive Deferred Compensation Plan. When immediately preceded by "Agilent," "Rabbi Trust" means the grantor trust to be established by Agilent pursuant to Section 5.2 that corresponds to the HP Rabbi Trust.

1.79 Ratio. "Ratio" means the ratio determined by dividing the Agilent Stock Value by the HP Stock Value.

1.80 Record Date. "Record Date" means the close of business on the date to be determined by the Board of Directors of HP as the record date for determining the stockholders of HP entitled to receive shares of common stock of Agilent in the Distribution.

1.81 Redeployment/Alternate Offer Program. "Redeployment/Alternate Offer

Program," when immediately preceded by "HP," means the HP Redeployment/Alternate Offer Program. When immediately preceded by "Agilent," "Redeployment/Alternate Offer Program" means the redeployment/alternate offer program to be established by Agilent pursuant to Sections 2.2 and 6.11 that corresponds to the HP Redeployment/Alternate Offer Program.

1.82 Restricted Stock. "Restricted Stock" when immediately preceded by

"HP," means shares of HP common stock that are subject to transfer restrictions or to employment and/or performance vesting conditions, pursuant to an HP Stock Plan. When immediately preceded by "Agilent," "Restricted Stock" means shares of Agilent common stock that are subject to transfer restrictions or to employment and/or performance vesting conditions, pursuant to an Agilent Stock Plan.

1.83 Retirement Plans. "Retirement Plans," when immediately preceded by

"HP," means the HP TAXCAP, the HP DPSP and the HP RP. When immediately preceded by "Agilent," "Retirement Plans" means all defined contribution and defined benefit plans to be established by Agilent pursuant to Section 2.2, and Articles III and IV that correspond to the respective HP Retirement Plan.

1.84 RP. "RP," when immediately preceded by "HP," means the HP Retirement

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Plan, a defined benefit plan. When immediately preceded by "Agilent," "RP" means the defined benefit

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plan to be established by Agilent pursuant to Section 2.2 and Article III that corresponds to the HP RP.

1.85 RP Transfer Date. "RP Transfer Date" is defined in Subsection

3.2(b) (iv).

1.86 SEC. "SEC" means the United States Securities and Exchange

Commission.

1.87 Separation. "Separation" means the contribution and transfer from HP

to Agilent, and Agilent's receipt and assumption of, directly or indirectly, substantially all of the assets and liabilities (as defined in Section 1.3 of the General Assignment and Assumption Agreement) currently associated with the Agilent Business and the stock, investments or similar interests currently held by HP in subsidiaries and other entities that conduct such business.

1.88 Separation Agreement. "Separation Agreement" means the Master

Separation and Distribution Agreement of which this is an Exhibit thereto.

1.89 Separation Date. "Separation Date" means the effective date and time

of each transfer of property, assumption of liability, license, undertaking, or agreement in connection with the Separation which shall be 12:01 a.m., Pacific Time, November 1, 1999, or such other date as may be fixed by the Board of Directors of HP.

1.90 Stock Plan. "Stock Plan," when immediately preceded by "HP," means

any plan, program or arrangement, other than the Stock Purchase Plan, pursuant to which employees and other service providers hold Options, HP Restricted Stock, or other HP equity incentives. When immediately preceded by "Agilent," "Stock Plan" means substantially similar plans, programs or arrangements to be

established by Agilent pursuant to Section 2.2 and Article VIII.

1.91 Stock Purchase Plan. "Stock Purchase Plan," when immediately

preceded by "HP," means the HP Employee Stock Purchase Plan. When immediately
preceded by "Agilent," "Stock Purchase Plan" means the employee stock purchase
plan to be established by Agilent pursuant to Sections 2.2 and 7.4 that
corresponds to the HP Stock Purchase Plan.

1.92 Subsidiary. "Subsidiary" means, with respect to any specified

Person, any corporation, any limited liability company, any partnership or other
legal entity of which such Person or its Subsidiaries owns, directly or
indirectly, more than fifty percent (50%) of the stock or other equity interest
entitled to vote on the election of the members of the board of directors or
similar governing body. Unless the context otherwise requires, reference to HP
and its Subsidiaries shall not include the subsidiaries of HP that will be
transferred to Agilent after giving effect to the Separation, including the
actions taken pursuant to the Non-U.S. Plans.

1.93 Survivor Protection Plan. "Survivor Protection Plan," when

immediately preceded by "HP," means the HP Accidental Death and Dismemberment
("AD&D") Plan, the HP LIFE Insurance Plan, the HP Retiree Survivor's Benefit
Plan, and any other similar or successor programs, plans or arrangements. When
immediately preceded by "Agilent," "Survivor Protection Plan" means the life

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insurance programs, plans and arrangements to be established by Agilent pursuant
to Section 2.2 that correspond to the HP Survivor Protection Plan.

1.94 Tax Sharing Agreement. "Tax Sharing Agreement" means the Ancillary

Agreement which is Exhibit F to the Separation Agreement.

1.95 TAXCAP. "TAXCAP," when immediately preceded by "HP," means the HP

Tax Saving Capital Accumulation Plan, a stock bonus, defined contribution plan.
When immediately preceded by "Agilent," "TAXCAP" means the stock bonus, defined
contribution plan to be established by Agilent pursuant to Sections 2.2 and 4.1
that corresponds to the HP TAXCAP.

1.96 Transition Period. "Transition Period" means, for each designated

Plan, the period beginning as of the Distribution Date and ending on the date
that no member of the Agilent Group is using HP benefit delivery and
administrative services with respect to that Plan.

1.97 Unemployment Insurance Program. "Unemployment Insurance Program,"

when immediately preceded by "HP," means the group unemployment insurance
policies purchased by HP from time to time. When immediately preceded by
"Agilent," "Unemployment Insurance Program" means any group unemployment
insurance policies to be established by Agilent pursuant to Section 10.10.

1.98 Variable Pay Plan. "Variable Pay Plan," when immediately preceded by

"HP," means the HP Variable Pay Plan. When immediately preceded by "Agilent,"
"Variable Pay Plan" means the variable pay plan to be established by Agilent
pursuant to Sections 2.2 and 7.1 that corresponds to the HP Variable Pay Plan.

1.99 VEBA. "VEBA," when immediately preceded by "HP," means the HP

Employee Benefits Organization Trust which is intended to be a voluntary employees' beneficiary association under Code Section 501(c)(9). When immediately preceded by "Agilent," "VEBA" means any voluntary employees' beneficiary association trust to be established by Agilent pursuant to Sections 2.2 and 6.1 that corresponds to the HP VEBA.

1.100 VEBA Transfer Date. "VEBA Transfer Date" is defined in Subsection

6.1(b)(ii).

1.101 Voluntary Severance Incentive Plan. "Voluntary Severance Incentive

Plan" when immediately preceded by "HP," means the HP Voluntary Severance Incentive Plan, an ERISA severance program. When immediately preceded by "Agilent," "Voluntary Severance Incentive Plan" means the severance program to be established by Agilent pursuant to Section 2.2.

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ARTICLE II

GENERAL PRINCIPLES -----

2.1 Assumption of Agilent Liabilities. Except as specified otherwise in

this Agreement, or as mutually agreed upon by Agilent and HP from time to time, Agilent hereby assumes and agrees to pay, perform, fulfill and discharge, in accordance with their respective terms, all of the following: (a) all Liabilities to or relating to Agilent Transferred Employees, in each case relating to, arising out of or resulting from employment by the HP Group before becoming Agilent Transferred Employees, respectively (including Liabilities arising under or relating to HP Plans and Agilent Plans); (b) all other Liabilities to or relating to Agilent Employees or Agilent Transferred Employees, to the extent relating to, arising out of, or resulting from future, present or former employment with the Agilent Group (including Liabilities arising under or relating to HP Plans and Agilent Plans); (c) all Liabilities relating to, arising out of or resulting from any other actual or alleged employment relationship with the Agilent Group; and (d) all other Liabilities relating to, arising out of, or resulting from obligations, liabilities and responsibilities expressly assumed or retained by the Agilent Group, or an Agilent Plan pursuant to this Agreement. Except as specified otherwise in this Agreement or as otherwise mutually agreed upon by HP and Agilent from time to time, HP shall transfer to Agilent amounts equal to trust assets, insurance reserves, and other related assets as consistent with the applicable Plan transition that arises out of or relates to Agilent's pro rata interest in each HP Plan.

2.2 Establishment of Agilent Plans.

(a) VEBA/Health and Welfare Plans. Except as specified otherwise in

this Agreement, effective as of the Distribution Date or such other date(s) as HP and Agilent may mutually agree, Agilent shall adopt the Agilent VEBA and the Agilent Health and Welfare Plans. The foregoing Agilent Plans as in effect as of the Distribution Date shall be substantially identical in all Material Features to the comparable HP Plans as in effect on the Distribution Date.

(b) Retirement Plans and Fringe Benefits. Except as specified

otherwise in this Agreement, effective as of the Distribution Date or such other date(s) as HP and Agilent may mutually agree, Agilent shall adopt the Agilent Retirement Plans and the Agilent Fringe Benefits. The foregoing Agilent Plans as in effect as of the Distribution Date shall be substantially identical in all

Material Features to the comparable HP Plans as in effect on the Distribution Date.

(c) Equity and Other Compensation. Except as specified otherwise in

this Agreement, effective on or before the Payroll Date or such other date(s) as HP and Agilent may mutually agree, Agilent shall adopt the Agilent Stock Plans, the Agilent Variable Pay Plan and the Agilent Cash Profit Sharing Program. Effective on or before the IPO or such other date as HP and Agilent may mutually agree, Agilent shall adopt the Agilent Stock Purchase Plan. The foregoing Agilent Plans as in effect as of the Payroll Date (IPO in the case of the Stock Purchase Plan) shall be

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substantially identical in all Material Features to the comparable HP Plans as in effect on the Payroll Date (IPO in the case of the Stock Purchase Plan).

(d) Other Plans. Except as specified otherwise in this Agreement,

effective as of the Payroll Date or such other date(s) as HP and Agilent may mutually agree, Agilent shall adopt such Plans that are directly associated with Agilent's U.S. payroll system or as otherwise may be determined to be appropriate, including, without limitation, the Agilent Executive Deferred Compensation Plan and the Agilent Leave of Absence Programs. The foregoing Agilent Plans as in effect as of the Payroll Date shall be substantially identical in all Material Features to the comparable HP Plans as in effect on the Payroll Date.

(e) Agilent Under No Obligation to Maintain Plans. Except as

specified otherwise in this Agreement, nothing in this Agreement shall preclude Agilent, at any time after the Distribution Date from amending, merging, modifying, terminating, eliminating, reducing, or otherwise altering in any respect any Agilent Plan, any benefit under any Agilent Plan or any trust, insurance policy or funding vehicle related to any Agilent Plan (to the extent permitted by law).

2.3 Agilent's Participation in HP Plans.

(a) Participation in HP Plans. Except as specified otherwise in this

Agreement, or as HP and Agilent may mutually agree, effective as of the Payroll Date, Agilent shall become a Participating Company in the HP Plans in effect as of the Payroll Date, to the extent that Agilent has not yet established a comparable Plan. Effective as of any date on or after the Payroll Date and before the Distribution Date (or such other date as HP or Agilent may mutually agree upon), any member of the Agilent Group not described in the preceding sentence may, at its request and with the consent of HP and Agilent, become a Participating Company in any or all of the HP Plans, to the extent that Agilent has not yet established a comparable Plan.

(b) HP's General Obligations as Plan Sponsor. To the extent that

Agilent is a Participating Company in any HP Plan(s), HP shall continue to administer, or cause to be administered, in accordance with their terms and applicable law, such HP Plan(s), and shall have the sole and absolute discretion and authority to interpret the HP Plan(s), as set forth therein. HP shall not, without first consulting with Agilent, amend any Material Feature of any HP Plan in which Agilent is a Participating Company, except to the extent such amendment would not affect any benefits of Agilent Employees or Agilent Transferred Employees under such Plan or as may be necessary or appropriate to comply with applicable law.

(c) Agilent's General Obligations as Participating Company. Agilent

shall perform with respect to its participation in the HP Plans, the duties of a Participating Company as set forth in each such Plan or any procedures adopted pursuant thereto, including (without limitation): (i) assisting in the administration of claims, to the extent requested by the claims administrator of the applicable HP Plan; (ii) cooperating fully with HP Plan auditors, benefit personnel and benefit vendors; (iii) preserving the confidentiality of all financial arrangements HP has or may have with

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any vendors, claims administrators, trustees or any other entity or individual with whom HP has entered into an agreement relating to the HP Plans; and (iv) preserving the confidentiality of participant information (including, without limitation, health information in relation to FMLA leaves) to the extent not specified otherwise in this Agreement.

(d) Termination of Participating Company Status. Except as otherwise

may be mutually agreed upon by HP and Agilent, effective as of the Distribution Date or such other date as Agilent establishes a comparable Plan (as specified in Section 2.2 or otherwise in this Agreement), Agilent shall automatically cease to be a Participating Company in the corresponding HP Plan.

2.4 Terms of Participation by Agilent Transferred Employees in Agilent

Plans.

(a) Non-Duplication of Benefits. As of the Distribution Date or such

later date that applies to the particular Agilent Plan established thereafter, the Agilent Plans shall be, with respect to Agilent Transferred Employees, in all respects the successors in interest to, and shall not provide benefits that duplicate benefits provided by, the corresponding HP Plans. HP and Agilent shall agree on methods and procedures, including amending the respective Plan documents, to prevent Agilent Transferred Employees from receiving duplicate benefits from the HP Plans and the Agilent Plans.

(b) Service Credit. Except as specified otherwise in this Agreement,

with respect to Agilent Transferred Employees, each Agilent Plan shall provide that all service, all compensation and all other benefit-affecting determinations that, as of the Distribution Date, were recognized under the corresponding HP Plan shall, as of the Distribution Date, receive full recognition and credit and be taken into account under such Agilent Plan to the same extent as if such items occurred under such Agilent Plan, except to the extent that duplication of benefits would result. Notwithstanding the foregoing, HP and Agilent shall recognize service with either HP or Agilent that was recognized as of the Distribution Date, except to the extent provided in Subsection 2.4(a) above. The service crediting provisions shall be subject to any respectively applicable "service bridging," "break in service," "employment date," or "eligibility date" rules under the Agilent Plans and the HP Plans.

(c) Assumption of Liabilities. The provisions of this Agreement for

the transfer of assets relating to HP Plans to Agilent and/or the appropriate Agilent Plans are based upon the understanding of the parties that Agilent and/or the appropriate Agilent Plan will assume all Liabilities of the corresponding HP Plan to or relating to Agilent Transferred Employees, as provided for herein. If any such Liabilities are not effectively assumed by Agilent and/or the appropriate Agilent Plan, then the amount of transferred assets shall be recomputed accordingly, taking into account the retention of such Liabilities by such HP Plan, and assets shall be transferred from Agilent and/or the appropriate Agilent Plan to HP and/or the appropriate HP Plan so as to place Agilent and/or the appropriate Agilent Plan in the position it would have been in, had the initial asset transfer been made in accordance with such

recomputed amount of assets.

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2.5 Allocation of Costs and Expenses. Except as otherwise provided in

this Agreement or in any underlying service level agreement between HP and Agilent (as discussed in Section 9.1) relating to the Separation, the IPO, or the Distribution, all costs and expenses of either party hereto in connection with the IPO (excluding underwriting discounts and commissions) and the Distribution, and certain costs and expenses of the parties hereto in connection with the Separation, shall be paid by HP. Notwithstanding the foregoing, Agilent shall pay any internal fees, costs and expenses incurred by Agilent in connection with the Separation, the IPO and the Distribution.

2.6 Benefits Committee and Dispute Resolution. From the date of this

Agreement through the later of the Distribution Date or the end of the Transition Period, as applicable, the management of the Plans shall be conducted under the supervision of the Benefits Committee. The Benefits Committee shall be comprised of an equal number of representatives from HP and Agilent as appointed by their respective Vice President, Human Resources, and shall provide strategic oversight and direction of the cohesive administration of the Plans. Issues that cannot be resolved by the Benefits Committee shall be decided, at the request of either party, by the Agilent Vice President, Human Resources (or his or her authorized delegate) and the HP Vice President, Human Resources (or his or her authorized delegate). After the exhaustion of the process, as specified herein, any outstanding issue shall be resolved in accordance with Section 5.9, entitled "Dispute Resolution," of the Separation Agreement.

2.7 Foreign Plans. Agilent and HP each authorize their non-U.S.

subsidiaries to enter into separate local agreements with the counterpart of the other party ("Local Agreements"). Agilent and HP intend that the Local Agreements will generally specify the terms under which HP and Agilent agree to allocate between them all assets, liabilities and responsibilities relating to, and arising from Foreign Plans and certain employment matters. To the extent, however, that any such Local Agreement does not address a particular principle or plan, then the intent of the parties relating to comparable U.S. matters or issues as reflected in this Agreement shall govern (to the extent permitted by law).

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ARTICLE III

DEFINED BENEFIT PLAN

3.1 Establishment of Group Trust and Master RP Trust.

(a) Group Trust. Prior to the Distribution Date, HP shall cause the

Master Trust Agreement pursuant to the HP DPSP and HP RP to qualify as a group trust under IRS Revenue Ruling 81-100 (the "Group Trust").

(b) Agilent Master Trust. Effective as of the Distribution Date,

Agilent shall establish, or cause to be established, a separate master trust which is intended to be qualified under Code Section 401(a) and exempt from taxation under Code Section 501(a)(1) (the "Agilent Master Trust"), to hold the assets of the Agilent RP and the Agilent DPSP.

(c) HP Master Trust. Effective as of the Distribution Date, HP shall

establish, or cause to be established, a new separate master trust which is intended to be qualified under Code Section 401(a) and exempt from taxation under Code Section 501(a)(1) (the "HP Master Trust"), to hold the assets of the HP RP and the HP DPSP.

(d) Share of Group Trust Assets. Effective as of the Distribution

Date, the HP Master Trust and the Agilent Master Trust each shall own a pro rata share of the portion of the assets of the Group Trust attributable to the HP RP and the Agilent RP, as described in Subsection 3.2(b) below. The assets shall remain in the Group Trust until such later date or dates that one or both of the HP RP and the Agilent RP request to transfer from the Group Trust of some or all of their pro rata shares of such Group Trust assets to the respective HP Master Trust and Agilent Master Trust.

(e) Investment Management of Group Trust Assets. Effective as of the

Distribution Date, HP and Agilent shall establish procedures to jointly manage and invest the assets of the HP Master Trust and the Agilent Master Trust held in the Group Trust that are attributable to the HP RP and the Agilent RP. Such procedures may include the management of some or all of the Group Trust Assets by employees of HP or Agilent, or by outside investment managers.

3.2 Assumption of RP Liabilities and Allocation of Interests in the Group

Trust.

(a) Assumption of Liabilities by Agilent RP. Effective as of the

Distribution Date, all accrued benefits of Agilent Transferred Employees under the HP RP will be transferred to the Agilent RP. The Agilent RP shall assume and be solely responsible for all Liabilities for or relating to the accrued benefits of the Agilent Transferred Employees under the HP RP as of the Distribution Date.

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(b) Asset Allocation and Transfers.

(i) As soon as reasonably practicable after the Distribution Date, HP shall engage actuaries and cause to be determined for the HP RP: (A) the total accrued benefit Liabilities as of the Distribution Date (without regard to any benefit Liabilities funded through the Code Section 401(h) account in the HP RP) for all participants in the HP RP, calculated on a projected benefit obligation basis in accordance with Statement of Financial Accounting Standards 87 ("FAS 87"), and (B) the present value of all of the retiree health benefit Liabilities that are funded in part through the Code Section 401(h) account portion of the HP RP as of the Distribution Date, calculated on an accumulated post-retirement benefit obligation basis in accordance with Statement of Financial Accounting Standards 106 ("FAS 106"). The particular actuarial assumptions that will be used to value the benefit Liabilities described in the preceding sentence shall be generally consistent with the actuarial assumptions used by HP in prior valuations for purposes of satisfying, respectively, its FAS 87 and FAS 106 reporting obligations, and shall be agreed to by HP and Agilent prior to the Distribution Date.

(ii) The Agilent RP's share of the HP RP assets (other than those HP RP assets attributable to the Code Section 401(h) account in the HP RP) shall be equal to the percentage that the benefit Liabilities for the Agilent Transferred Employees bears to the total benefit Liabilities determined under Subsection 3.2 (b) (i) (A) above.

(iii) The Agilent RP's share of the HP RP assets in the Code Section 401(h) account portion of the HP RP shall be equal to the percentage that the retiree health benefit Liabilities for the Agilent Transferred

Employees bears to the total retiree health benefit Liabilities determined under Subsection 3.2(b)(i)(B) above.

(iv) As soon as reasonably practicable after the Distribution Date (the "RP Transfer Date"), the proportions calculated in Subsection 3.2(b)(ii) and (b)(iii) above of the respective retirement and 401(h) assets of the HP RP valued as of the RP Transfer Date shall be transferred to the Agilent RP. In this regard, no contributions shall be made by HP or Agilent to either the HP RP or the Agilent RP between the Distribution Date and the RP Transfer Date.

3.3 No Distributions to Agilent Transferred Employees. The HP RP and the

Agilent RP shall provide that no distribution of retirement benefits shall be made to any Agilent Transferred Employee on account of the Agilent Group ceasing to be an Affiliate of the HP Group as of the Distribution Date.

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ARTICLE IV

DEFINED CONTRIBUTION PLANS -----

4.1 TAXCAP. -----

(a) TAXCAP Trust. Effective as of the Distribution Date, Agilent

shall establish, or cause to be established, a separate trust, which is intended to be qualified under Code Section 401(a), exempt from taxation under Code Section 501(a)(1), and forming the Agilent TAXCAP.

(b) TAXCAP: Assumption of Liabilities and Transfer of Assets.

Effective as of the Distribution Date: (i) the Agilent TAXCAP shall assume and be solely responsible for all Liabilities for or relating to Agilent Transferred Employees under the HP TAXCAP; and (ii) HP shall cause the accounts of the Agilent Transferred Employees under the HP TAXCAP that are held by its related trust as of the Distribution Date to be transferred to the Agilent TAXCAP and its related trust, and Agilent shall cause such transferred accounts to be accepted by such plan and its related trust. As soon as reasonably practicable after the Distribution Date, Agilent shall use its commercially reasonable best efforts to enter into agreements satisfactory to Agilent to accomplish such assumption and transfer, the maintenance of the necessary participant records, the appointment of Fidelity Management Trust Company as the initial trustee under the Agilent TAXCAP, and the engagement of Fidelity Institutional Retirement Services Company as the initial recordkeeper under the Agilent TAXCAP. Agilent and HP each agree to use their commercially reasonable best efforts to accomplish this spin-off.

(c) TAXCAP: Stock Bonus Plan Considerations. As a result of the

spin-off of the HP TAXCAP, both the resulting HP TAXCAP and Agilent TAXCAP shall be comprised in part of HP and Agilent employer securities. Agilent and HP shall assume sole responsibility for ensuring that their respective company stock funds, and underlying employer securities held in each such fund, are maintained in compliance with all requirements of the SEC including, without limitation, filing Forms S-8 and 11-K, and the prospectus requirements for such funds.

(d) No Distribution to Agilent Transferred Employees. The HP TAXCAP

and the Agilent TAXCAP shall provide that no distribution of account balances shall be made to any Agilent Transferred Employee on account of the Agilent Group ceasing to be an Affiliate of the HP Group as of the Distribution Date.

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4.2 DPSP.

(a) Agilent Master Trust. Effective as of the Distribution Date, the

Agilent Master Trust established under Subsection 3.1(b) shall hold the assets of the Agilent DPSP and the Agilent RP.

(b) Share Group Trust Assets. Effective as of the Distribution Date,

the HP Master Trust and the Agilent Master Trust each shall own a pro rata share of the portion of the assets of the Group Trust attributable to the HP DPSP and the Agilent DPSP as described in Subsection 4.2(e) below. The assets shall remain in the Group Trust until such later date or dates that one or both of the HP DPSP and Agilent DPSP request a transfer from the Group Trust of some or all of their pro rata shares of such Group Trust assets to the respective HP Master Trust and Agilent Master Trust.

(c) Investment Management of Group Trust Assets. Effective as of the

Distribution Date, HP and Agilent shall establish procedures to jointly manage and invest the assets of the HP Master Trust and the Agilent Master Trust held in the Group Trust that are attributable to the HP DPSP and the Agilent DPSP. Such procedures may include the management of some or all of the Group Trust assets by employees of HP or Agilent, or by outside investment managers.

(d) Assumption of Liabilities by Agilent DPSP. Effective as of the

Distribution Date, all accrued benefits of the Agilent Transferred Employees under the HP DPSP will be transferred to the Agilent DPSP. The Agilent DPSP shall assume and be solely responsible for all Liabilities for or relating to Agilent Transferred Employees under the HP DPSP as of the Distribution Date.

(e) Asset Allocation and Transfers.

(i) The Agilent DPSP assets shall be equal to the percentage that the value of the accounts of Agilent Transferred Employees in the HP DPSP bears to the total value of all participant accounts in the HP DPSP as of the Distribution Date, adjusted to reflect the amounts of any HP DPSP and Agilent DPSP benefit payments, if any, made to participants between the Distribution Date and the DPSP Transfer Date described in Subsection 4.2(e)(ii) below.

(ii) As soon as reasonably practicable after the Distribution Date (the "DPSP Transfer Date"), the percentage calculated in Subsection 4.2(e)(i) above of the assets of the HP DPSP valued as of the DPSP Transfer Date shall be transferred to the Agilent DPSP.

(f) No Distribution to Agilent Transferred Employees. The HP DPSP

and the Agilent DPSP shall provide that no distribution of account balances shall be made to any Agilent Transferred Employee on account of the Agilent Group ceasing to be an Affiliate of the HP Group as of the Distribution Date.

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ARTICLE V

NON-QUALIFIED AND OTHER PLANS

5.1 Excess Benefit Plan.

(a) Establishment of Agilent Excess Benefit Plan. Effective as of the

Distribution Date, Agilent shall establish the Agilent Excess Benefit Plan which

shall be substantially identical in all Material Features to the HP Excess Benefit Plan.

(b) Assumption of Liabilities by Agilent Excess Benefit Plan.

Effective as of the Distribution Date, all accrued benefits of Agilent Transferred Employees under the HP Excess Benefit Plan will be transferred to the Agilent Excess Benefit Plan. The Agilent Excess Benefit Plan shall assume and be solely responsible for all Liabilities for or relating to the accrued benefits of the Agilent Transferred Employees under the HP Excess Benefit Plan as of the Distribution Date. To the extent not attributable to accounts maintained for the Agilent Transferred Employees under the HP Excess Benefit Plan, such HP Excess Benefit Plan Liabilities shall be determined as described in Subsection 3.2(b)(i)(A). Otherwise, such HP Excess Benefit Plan Liabilities shall be equal to the value as of the Distribution Date of the accounts maintained for the Agilent Transferred Employees under the HP Excess Benefit Plan.

5.2 Executive Deferred Compensation Plan.

(a) Establishment of Agilent Rabbi Trust. Effective no later than the

Payroll Date, Agilent shall establish the Agilent Executive Deferred Compensation Plan and the Agilent Rabbi Trust.

(b) Allocation and Assumption of Liabilities. HP shall determine the

amount of Liabilities under the HP Executive Deferred Compensation Plan as of the Payroll Date, attributable to Agilent Employees. As soon as administratively practicable thereafter, HP shall pay to Agilent or to the trustee of the Agilent Rabbi Trust, as Agilent specifies, an amount of HP's assets equal to such Liabilities. Coincident with the receipt of such transfer of assets, Agilent shall assume all responsibilities and obligations attributable to such Liabilities.

(c) Participation in Executive Deferred Compensation Plans. Effective

as of the Payroll Date, eligible Agilent Employees shall become eligible to commence participation in the Agilent Executive Deferred Compensation Plan. Agilent Employees who are currently participating in the HP Executive Deferred Compensation Plan shall continue their participation in that Plan (according to its terms) to the Payroll Date.

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5.3 Officers Early Retirement Plan. HP shall continue to administer the HP

Officers Early Retirement Plan for Agilent Employees who are in periodic pay status as of October 31, 1999. Agilent shall reimburse HP for any and all costs and expenses relating to such distributions and the related administration.

5.4 IRG. Agilent shall assume and be solely responsible for all

Liabilities for, or relating to, or arising from, the IRG of Agilent Employees and Agilent Transferred Employees under the HP IRG. Whichever of HP or Agilent pays such IRG benefit shall be entitled to reimbursement from the other based on the applicable portion of such IRG benefit attributable to that individual's employment with the other. HP and Agilent agree to cooperate with the other to calculate such IRG benefits.

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ARTICLE VI

HEALTH AND WELFARE PLANS

6.1 VEBA Asset Transfers.

(a) Calculation of Liabilities and Reserves. This Section 6.1 shall

govern the transfer of assets from the HP VEBA to the Agilent VEBA. As soon as reasonably practicable after the Distribution Date, HP shall engage actuaries and cause to be determined for the HP VEBA the total benefit Liabilities as of the Distribution Date for all participants in the following plans: (i) the HP VEBA Income Protection Plan, using the actuarial assumptions set forth in Schedule 6.1(a)(i); and (ii) the HP VEBA Survivor Protection Plan, using the actuarial assumptions set forth in Schedule 6.1(a)(ii). As soon as reasonably practicable after the Distribution Date, HP shall determine the total reserves for the HP VEBA Voluntary Severance Incentive Plan as of the Distribution Date, which shall be equal to the total of the maximum permissible reserves calculated separately for the HP Employees and the Agilent Transferred Employees as of the Distribution Date using the rules in Code Section 419A.

(b) Asset Allocations and Transfers.

(i) The Agilent VEBA's share of the HP VEBA assets that are allocated within the HP VEBA to each of the Plans described below shall be determined as follows: (A) for the portions of the HP Health Plans funded through the HP VEBA, assets equal to the percentage that the number of Agilent Employees (solely for this purpose, defined as any individual who is either actively employed by, or on any leave of absence from, the Agilent Group on the Distribution Date) participating in, respectively, the medical (excluding HMO) and the dental portions of the HP Health Plans funded through the HP VEBA bears to the total number of participants in, respectively, the medical (excluding HMO) and the dental portions of the HP Health Plans funded through the HP VEBA as of the Distribution Date; (B) for the HP VEBA Income Protection Plan, assets equal to the percentage that the benefit Liabilities for the Agilent Transferred Employees on long-term disability bears to the total benefit Liabilities of all of the participants on long-term disability in such Plan as of the Distribution Date determined under Subsection 6.1(a) above; (C) for the HP VEBA Survivor Protection Plan, assets equal to the percentage that the benefit Liabilities for the Agilent Transferred Employees in, respectively, the active employee and retiree life insurance portions of the HP VEBA Survivor Protection Plan bears to the total benefit Liabilities of all of the participants in, respectively, the active employee and retiree life insurance portions of such Plan as of the Distribution Date determined under Subsection 6.1(a) above; and (D) for the HP VEBA Voluntary Severance Incentive Plan, assets equal to the percentage that the reserves allocated to Agilent Transferred Employees bears to the total reserves as of the Distribution Date determined under Subsection 6.1(a) above.

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(ii) As soon as reasonably practicable after the Distribution Date (the "VEBA Transfer Date"), the proportions calculated in Subsection 6.1(b)(i) above of the assets allocated within the HP VEBA to each of the Plans described in Subsection 6.1(b)(i) above valued as of the VEBA Transfer Date shall be transferred to accounts within the Agilent VEBA maintained for the corresponding Agilent Plans.

6.2 Assumption of Health and Welfare Plan Liabilities.

(a) General. Except as specified otherwise in this Agreement, as of

the Distribution Date, all Liabilities for or relating to Agilent Transferred Employees under the HP Health and Welfare Plans shall cease to be Liabilities of the HP Health and Welfare Plans and shall be assumed by the corresponding Agilent Health and Welfare Plans.

(b) Pending Treatments. Notwithstanding Subsection 6.2(a) above, all

treatments which have been pre-certified for or are being provided to an Agilent Transferred Employee as of the Distribution Date shall be provided without interruption under the appropriate HP Health and Welfare Plan until such treatment is concluded or discontinued pursuant to applicable Plan rules and limitations, but Agilent shall continue to be responsible for all Liabilities relating to, arising out of, or resulting from such on-going treatments as of the Distribution Date.

(c) Pending Commitments. Agilent shall assume, effective as of the

Distribution Date, all Liabilities relating to, arising out of or resulting from special commitments made by HP before the Distribution Date to provide benefits to or with respect to Agilent Transferred Employees for care or services not covered by any HP Health and Welfare Plans, but only if such special commitments were made with prior written consent of the Agilent Vice President, Human Resources or his or her authorized delegate, to the extent such commitments are made after the Separation Date. Before the Distribution Date, HP shall transfer to Agilent copies of all documentation, and a complete written description, of the terms of all such special commitments to Agilent Transferred Employees.

6.3 Claims for Health and Welfare Plans.

(a) Administration of HP Claims. HP shall administer claims incurred

under the HP Health and Welfare Plans by Agilent Employees before the Distribution Date but only to the extent that Agilent has not, before the Distribution Date, established and assumed administrative responsibility for a comparable Plan. Any determination made or settlements entered into by HP with respect to such claims shall be final and binding. HP shall transfer to Agilent, effective as of the Distribution Date, responsibility for administering all claims incurred by Agilent Transferred Employees before the Distribution Date (including any claims that were administered by HP as of, on, or after the Distribution Date). Agilent shall administer such claims in a substantially similar manner, using substantially similar methods and procedures, as HP used in administering such claims. Agilent shall have sole and absolute discretionary authority to make any necessary

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determinations with respect to such claims, including entering into settlements with respect to such claims.

(b) Outsourcing of Claims by HP. HP shall have the right to engage a

third party administrator, vendor, or insurance company to administer ("Outsource") claims incurred under the HP Health and Welfare Plans, including claims incurred by Agilent Employees and Agilent Transferred Employees before the Distribution Date. HP may determine the manner and extent of such Outsourcing, including the selection of one or more third party administrators, vendors, or insurance companies and the ability to transfer the liability for such claims to one or more independent insurance companies. HP has Outsourced administration of many HP Health and Welfare Plans, as set forth in Section 6.5 and the Schedule thereto. To the extent not otherwise set forth in Section 6.5 and the Schedule thereto, HP shall promptly notify Agilent of its intent to further Outsource such claims, and the material terms and conditions of the Outsourcing, before the effective date thereof.

(c) Outsourcing of Claims by Agilent. HP shall use its commercially

reasonable best efforts for and on behalf of Agilent to procure Outsourcing arrangements with its third party administrators, vendors, or insurance companies with the Material Features of each of HP's current Outsourcing arrangements. Agilent agrees, as of the Distribution Date or such other date as Agilent and HP may mutually agree upon, to Outsource claims under the Agilent

Health and Welfare Plans pursuant to arrangements procured by HP.

6.4 Post-Distribution Transitional Arrangements.

(a) Continuance of Elections, Co-Payments and Maximum Benefits.

(i) As of the Distribution Date or such other date as HP and Agilent may mutually agree, Agilent shall cause the Agilent Health and Welfare Plans to recognize and maintain all coverage and contribution elections made by Agilent Employees and Agilent Transferred Employees under the HP Health and Welfare Plans and apply such elections under the Agilent Health and Welfare Plans for the remainder of the period or periods for which such elections are by their terms applicable. The transfer or other movement of employment between HP to Agilent at any time upon or before the Distribution Date shall neither constitute nor be treated as a "status change" or termination of employment under the HP Health and Welfare Plans or the Agilent Health and Welfare Plans.

(ii) On and after the Distribution Date, Agilent shall cause the Agilent Health Plans to recognize and give credit for (A) all amounts applied to deductibles, out-of-pocket maximums, co-payments and other applicable benefit coverage limits with respect to which such expenses have been incurred by Agilent Transferred Employees under the HP Health Plans for the remainder of the calendar year in which the Distribution Date occurs, and (B) all benefits paid to Agilent Transferred Employees under the HP Health Plans for purposes of determining when such persons have reached their lifetime maximum benefits under the Agilent Health Plans.

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(b) HCFA Administration. As of the Distribution Date, Agilent shall

assume all Liabilities relating to, arising out of or resulting from claims verified by HP or Agilent under the HCFA data match reports that relate to Agilent Transferred Employees.

6.5 Vendor Arrangements. HP shall use its commercially reasonable best

efforts for and on behalf of Agilent to procure, effective as of the Distribution Date or such other date as HP and Agilent mutually agree upon: (a) third party ASO Contracts with the Material Features of the ASO Contracts entered into by HP, as set forth in Schedule 6.5(a) (the "ASO Contracts"); (b) Group Insurance Policies, with the Material Features of the Group Insurance Policies entered into by HP, as set forth in Schedule 6.5(b) (the "Group Insurance Policies"); and (c) HMO Agreements with the Material Features of the HMO Agreements entered into by HP, as set forth in Schedule 6.5(c) (the "HMO Agreements"). In each case, Agilent shall, as of the Distribution Date or such other date as HP and Agilent mutually agree upon, establish, adopt and/or implement such contracts, agreements or arrangements.

6.6 Group Long-Term Care Plan Asset Transfer.

(a) Calculation of Liabilities. This Section shall govern the

transfer of assets from the trust fund for the HP L-T Care Plan to a trust fund for the Agilent L-T Care Plan that will be established by Agilent as of the Distribution Date or such other date as HP and Agilent may mutually agree. As soon as reasonably practicable after the Distribution Date, HP shall engage actuaries and cause to be determined for the HP L-T Care Plan the total benefit Liabilities for all participants in such Plan as of the Distribution Date using the assumptions set forth in Schedule 6.6(a).

(b) Asset Allocation and Transfer.

(i) The Agilent L-T Care Plan's share of the HP L-T Care Plan assets shall be equal to the percentage that the benefit Liabilities for the Agilent Transferred Employees bears to the total benefit Liabilities of all participants in the HP L-T Care Plan determined under Subsection 6.6(a) above.

(ii) As soon as reasonably practicable after the Distribution Date or such other date as HP and Agilent may mutually agree (the "HP L-T Care Plan Transfer Date"), the proportion calculated in Subsection 6.6(b)(i) above of the assets of the HP L-T Care Plan valued as of the HP L-T Care Plan Transfer Date shall be transferred to the Agilent L-T Care Plan.

6.7 Group Universal Life: Group Universal Life Insurance Program Cash

Value and Reserve Transfers.

(a) General. This Section shall govern the transfer of certain cash

values and of a portion of the premium stabilization reserve from the insurance contract maintained for the HP GUL

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to an insurance contract for the Agilent GUL that will be established by Agilent as of the Distribution Date or such other date as HP and Agilent may mutually agree.

(b) Calculation of Liabilities. As soon as reasonably practicable

after the Distribution Date, the HP GUL program administrator (currently Kirke Van Orsdel, a division of Seabury & Smith, Inc.) shall determine actuarially the total HP GUL benefit Liabilities for all participants in the HP GUL as of the Distribution Date. Such actuarial determination shall be made using actuarial and other assumptions proposed by the HP GUL program administrator that have been agreed to by HP and Agilent prior to the Distribution Date.

(c) Allocations and Transfers.

(i) The Agilent GUL cash values shall be equal to the total of the cash values allocated to the accounts of the Agilent Transferred Employees under the HP GUL as of the HP GUL Transfer Date as defined in Subsection 6.7(c)(iii) below.

(ii) The Agilent GUL's share of the HP GUL premium stabilization reserve shall be equal to the percentage that the benefit Liabilities for the Agilent Transferred Employees bears to the total benefit Liabilities of all of the participants in the HP GUL determined under Subsection 6.7(b) above.

(iii) As soon as reasonably practicable after the Distribution Date or such other date as HP and Agilent may mutually agree (the "HP GUL Transfer Date"), the cash values described in Subsection 6.7(c)(i) above, and the proportion calculated in Subsection 6.7(c)(ii) above of the amount of the HP GUL premium stabilization reserve valued as of the HP GUL Transfer Date, shall be transferred to the Agilent GUL.

6.8 IPP/State Voluntary Disability Plans. Effective on the Payroll Date,

Agilent shall adopt state voluntary disability plans for California, New York and New Jersey which are substantially identical in all Material Features to the HP state voluntary disability plan for each such respective state. Each such state voluntary disability plan shall be a component program under the HP Income Protection Plan.

6.9 Business Travel Accident Insurance. Through the Distribution Date,

Agilent shall remain a Participating Company in the HP business travel accident

insurance policy. HP shall be responsible for administering or causing to be administered the HP business travel accident insurance policy with respect to Agilent Employees. Agilent shall reimburse HP for any and all direct and indirect expenses and costs attributable to Agilent Employees. HP shall use its commercially reasonable best efforts for and on behalf of Agilent to procure a business travel accident insurance policy with the Material Features of the HP business travel accident policy, effective as of the Distribution Date or such other date as HP and Agilent mutually agree upon. Accordingly, effective as of the Distribution Date, Agilent shall be solely responsible for maintaining its own business travel accident insurance policy.

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6.10 Flexible Benefits Plan. Through December 31, 1999, Agilent and

designated members of the Agilent Group shall remain Participating Companies in the HP Flexible Benefits Plan. The existing elections for Agilent Employees shall remain in effect through December 31, 1999. HP shall be responsible for administering, or causing to be administered, the HP Flexible Benefits Plan for Agilent Employees through December 31, 1999. Agilent shall reimburse HP for any and all direct and indirect expenses and costs attributable to Agilent Employees. Effective on January 1, 2000, Agilent shall establish, or caused to be established, the Agilent Flexible Benefits Plan and shall be solely responsible for implementing and maintaining the Agilent Flexible Benefits Plan.

6.11 Redeployment/Alternate Offer Program. Through the Payroll Date, HP

shall be responsible for administering the Redeployment/Alternate Offer Program with respect to Agilent Employees. HP and Agilent shall mutually agree on which affected employees will be offered to participate in the Redeployment/Alternate Offer Program. Agilent shall be responsible for providing HP with all the necessary information regarding Agilent Employees and Agilent Terminated Employees to the extent such employees are eligible for the Redeployment/Alternate Offer Program. Agilent shall reimburse HP for any and all direct and indirect expenses and costs attributable to Agilent Employees. Effective as of the Payroll Date, Agilent shall assume all outstanding commitments related to the HP Redeployment/Alternate Offer Program and after such date Agilent shall be solely responsible for implementing and maintaining its own Redeployment/Alternate Offer Program.

6.12 COBRA. HP shall be responsible through the Distribution Date, for

compliance with the health care continuation coverage requirements of COBRA and the HP Health and Welfare Plans with respect to Agilent Employees and qualified beneficiaries (as such term is defined under COBRA). Agilent shall be responsible for providing HP with all necessary employee change notices and related information for covered dependents, spouses, qualified beneficiaries (as such term is defined under COBRA), and alternate recipients pursuant to QMCSO, in accordance with applicable HP COBRA policies and procedures. As soon as administratively practicable after the Distribution Date, HP shall provide Agilent, through hard copy, electronic format or such other mechanism as is appropriate under the circumstances, with a list of all qualified beneficiaries (as such term is defined under COBRA) that relate to the Agilent Group and the relevant information pertaining to their coverage elections and remaining COBRA time periods. Effective as of the Distribution Date, Agilent shall be solely responsible for compliance with the health care continuation coverage requirements of COBRA and the Agilent Health and Welfare Plans for Agilent Transferred Employees and their qualified beneficiaries (as such term is defined under COBRA).

6.13 Leave of Absence Programs and FMLA.

(a) Allocation of Responsibilities After Payroll Date. Effective as

of the Payroll Date: (i) Agilent shall adopt Leave of Absence Programs which are substantially identical in all Material Features to the HP Leave of Absence

Programs as in effect on the Payroll Date; (ii) Agilent shall honor all terms and conditions of leaves of absence which have been granted to any Agilent

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Employee under an HP Leave of Absence Program or FMLA before the Payroll Date by HP, including such leaves that are to commence after the Payroll Date; (iii) Agilent shall be solely responsible for administering leaves of absence and complying with FMLA with respect to Agilent Employees and Agilent Transferred Employees; and (iv) Agilent shall recognize all periods of service of Agilent Employees and Agilent Transferred Employees with the HP Group, as applicable, to the extent such service is recognized by the HP Group for the purpose of eligibility for leave entitlement under the HP Leave of Absence Programs and FMLA; provided, however, that no duplication of benefits shall, to the extent permitted by law, be required by the foregoing.

(b) Disclosure. As soon as administratively practicable after the

Payroll Date, HP shall provide to Agilent copies of all records pertaining to the HP Leave of Absence Programs and FMLA with respect to all Agilent Employees and Agilent Transferred Employees to the extent such records have not been previously provided.

6.14 Post-Employment Programs. As soon as administratively practicable

after the Distribution Date, HP shall provide Agilent, though hard copy, electronic format or such other mechanism as is appropriate under the circumstances, with a list detailing all Agilent Transferred Employees who are, to the best knowledge of HP, eligible to participate in the HP Post-Employment Programs as of the Distribution Date, and the type coverage and level of coverage for which they are eligible, as applicable. Effective as of the Distribution Date, Agilent shall be solely responsible for the Agilent Post-Employment Programs for Agilent Transferred Employees.

6.15 HP Workers' Compensation Program.

(a) Administration of Claims.

(i) Through the Payroll Date or such other date as HP and Agilent may mutually agree, HP shall continue to be responsible for the administration of all claims that (A) are, or have been, incurred under the HP WCP before the Payroll Date by Agilent Employees ("Agilent WCP Claims"), and (B) have been historically administered by HP or its third party administrator.

(ii) Effective as of the Payroll Date or such other date as HP and Agilent may mutually agree: (A) Agilent shall, to the extent Legally Permissible (as defined in Subsection 6.15(a)(iv) below), be responsible for the administration of all Agilent WCP Claims, and (B) HP shall be responsible for the administration of all Agilent WCP Claims not administered by Agilent pursuant to clause (A), regardless of whether it is under the self-insured or insured portion of the HP WCP. Any determination made, or settlement entered into, by or on behalf of either party or its insurance company with respect to Agilent WCP Claims for which it is administratively responsible shall be final and binding upon the other party. Agilent shall reimburse HP for any and all direct and indirect costs and expenses related thereto.

(iii) Each party shall fully cooperate with the other with respect to the administration and reporting of Agilent WCP Claims, the payment of Agilent WCP Claims

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determined to be payable, and the transfer of the administration of any Agilent

WCP Claims to the other party as determined under Subsection 6.15(a)(ii) above. Either party shall have the right to "Outsource" (i.e., transfer the administration of claims to a third party administrator or cause claims to be paid through insurance) any and all Agilent WCP Claims for which it is administratively responsible. HP has Outsourced administration of many Agilent WCP claims, as set forth in the relevant portion of Schedule 6.5(a). To the extent not otherwise set forth in Schedule 6.5(a), HP shall promptly notify Agilent of its intent to further Outsource such WCP Claims, and the material terms and conditions of the Outsourcing before the effective date thereof. HP shall use its commercially reasonable best efforts for and on behalf of Agilent to procure Outsourcing arrangements with its third party administrators, vendors, or insurance companies with the Material Features of each of HP's current Outsourcing arrangements. Agilent agrees, as of the Payroll Date, or such other date as Agilent and HP may mutually agree, to Outsource Agilent WCP Claims pursuant to arrangements procured by HP.

(iv) For purposes of this Subsection 6.15(a), "Legally Permissible" shall be determined on a state-by-state basis, and shall mean that administration of Agilent WCP Claims by Agilent both (A) is permissible under the applicable state's workers' compensation laws (taking into account all relevant facts, including that Agilent may have a self-insurance certificate in that state), and (B) would not have a material adverse effect on HP's self-insurance certificate within that state. If it is determined that, in a particular state, it is Legally Permissible for Agilent to administer Agilent WCP Claims, then Agilent shall be responsible for the administration of all Agilent WCP Claims incurred in that state, whether previously administered by or on behalf of HP. If it is determined that, in a particular state, it is not Legally Permissible for Agilent to administer Agilent WCP Claims, then HP shall be responsible for the administration of all Agilent WCP Claims incurred in that state, whether previously administered by or on behalf of HP.

(b) Self-Insurance Status.

(i) HP shall amend its certificates of self-insurance with respect to workers' compensation and any other applicable policies to include Agilent until the Distribution Date, and Agilent shall fully cooperate with HP in obtaining such amendments. HP shall use its commercially reasonable best efforts to obtain self-insurance status for workers' compensation for Agilent effective as of the Distribution Date in those jurisdictions in which Agilent conducts business, in which HP is self-insured, and where HP and Agilent mutually agree that such status is beneficial to Agilent. Agilent hereby authorizes HP to take all actions necessary and appropriate on its behalf in order to obtain such self-insurance status. All costs incurred by HP in amending such certificates, including without limitation filing fees, adjustments of security and excess loss policies and amendments of safety programs, shall be shared pro rata by HP and Agilent.

(ii) HP shall also arrange a contingent insured or other arrangement for payment of workers' compensation claims, into which Agilent shall enter if and to the extent that HP fails to obtain self-insured status for Agilent as provided in Subsection 6.15(b)(i) above, unless Agilent obtains another such arrangement that is effective as of the Distribution Date, in which event

Agilent shall reimburse HP for any costs and expenses incurred by HP in procuring such contingent arrangement.

(c) Insurance Policy.

(i) Effective as of the Payroll Date, in all states other than those states where Agilent is to be self-insured pursuant to Subsection 6.15(b) above, HP shall use its commercially reasonable best efforts to procure workers' compensation insurance policies on behalf of Agilent from the issuing insurance

companies (as set forth in the relevant portion of Schedule 6.5(b)) or different insurance companies which are substantially identical in all Material Features to the policies previously maintained by HP; provided that the retention under such Agilent policies shall be as determined by Agilent.

(ii) HP shall use its commercially reasonable best efforts to maintain the premium rates for all workers' compensation insurance policies for both HP and Agilent in effect for periods through the Distribution Date to be based on the aggregate number of employees covered under the workers' compensation insurance policies of both HP and Agilent. Any premiums due under the separate workers' compensation insurance issued to Agilent shall be payable by Agilent.

(d) Assumption of WCP Liabilities by Agilent. Effective as of the

Payroll Date, Agilent shall assume and be solely responsible for all Liabilities for or relating to Agilent WCP Claims. Such Liabilities shall be determined and allocated as established in Schedule 6.15(d).

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ARTICLE VII

EQUITY AND OTHER COMPENSATION -----

7.1 HP Variable Pay Plan. Employees of the Agilent Business (including,

for this purpose, any employees of HP who are designated as employees of the Agilent Business for purposes of the Separation) shall cease their participation in the HP Variable Pay Plan effective November 1, 1999. Effective as of the Payroll Date, Agilent shall establish a replacement variable pay plan for Agilent Employees and Agilent Transferred Employees for Agilent fiscal period(s) beginning on and after November 1, 1999 to be administered by the Compensation Committee of the Agilent Board of Directors in accordance with Code Section 162(m).

7.2 HP Options and Stock Appreciation Rights. -----

(a) Option Assumption by Agilent. At the Distribution Date, each

outstanding HP Option held by Agilent Transferred Employees, whether vested or unvested, other than Excluded Options (as defined in paragraph (b) below) shall be, in connection with the Distribution, assumed by Agilent. Each HP Option so assumed by Agilent shall continue to have, and be subject to, the same terms and conditions set forth in the Stock Plans and as provided in the respective option agreements governing such HP Option as of the Distribution Date, except that (i) such HP Option shall be exercisable for that number of whole shares of Agilent common stock equal to the quotient of the number of shares of HP common stock that were issuable upon exercise of such HP Option as of the Distribution Date divided by the Ratio, rounded down to the nearest whole number of shares of Agilent common stock, and (ii) the per share exercise price for the shares of Agilent common stock issuable upon exercise of such assumed HP Option shall be equal to the product determined by multiplying the exercise price per share of HP common stock at which such HP Option was exercisable as of the Distribution Date by the Ratio, rounded up to the nearest whole cent.

(b) Excluded Options. Before the Distribution Date, HP shall offer

to Agilent Employees who hold HP Options that were granted before February 12, 1999, the opportunity to amend such HP Options so as to (i) waive the accelerated vesting and option cancellation that would otherwise occur under the HP Stock Plans in connection with the Distribution, and (ii) allow for the assumption of such HP Options by Agilent in accordance with paragraph (a) above. To the extent such Option holders do not agree to such amendment of their HP Options, such HP Options, together with HP Options held by Agilent Transferred

Employees who retire from the HP Group on or before the Payroll Date ("Excluded Options"), shall not be assumed under paragraph (a) above but shall instead be governed by the applicable HP Stock Plans.

(c) Certain Non-U.S. Optionees. Except as may otherwise be agreed

upon by HP and Agilent and/or as set forth in Schedule 7.2(c), this Section 7.2 shall govern the treatment of HP Options held by non-U.S. Agilent Transferred Employees.

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(d) Stock Appreciation Rights. At the Distribution Date, each HP

stock appreciation right held by Agilent Transferred Employees, whether vested or unvested, shall be, in connection with the Distribution, assumed by Agilent. Each HP stock appreciation right so assumed by Agilent shall continue to have, and be subject to, the same terms and conditions set forth in the Plans and in the respective stock appreciation rights agreement governing such HP stock appreciation right as of the Distribution Date, except that (i) such HP stock appreciation right shall be measured with reference to that number of whole shares of Agilent common stock equal to the quotient of the number of shares of HP common stock relating to such stock appreciation right divided by the Ratio, rounded down to the nearest whole number of shares of Agilent common stock, and (ii) the per share grant price for the Agilent stock appreciation right shall be equal to the product as determined by multiplying the grant price per share of the HP stock appreciation right by the Ratio, rounded up to the nearest whole cent.

7.3 HP Restricted Stock. Except as otherwise provided herein and subject

to the terms of the applicable HP Stock Plans, on the Distribution Date, HP Restricted Stock (including any Agilent common stock issued with respect to such HP Restricted Stock in connection with the Distribution) held by Agilent Transferred Employees shall be forfeited in accordance with the terms of the applicable HP Stock Plans. Before the IPO, each Agilent Employee who holds HP Restricted Stock shall be given the opportunity to elect to receive (a) Agilent Options at the IPO, or (b) Agilent Restricted Stock at the Record Date, the Distribution Date, or such other date as HP and Agilent may determine. The value of an Agilent Employee's resulting Agilent Option or Agilent Restricted Stock award shall be substantially equivalent to the value of his or her forfeited HP Restricted Stock award determined (a) immediately before the IPO, in the case of Agilent Options, and (b) immediately before the Record Date, the Distribution Date, or such other date as HP and Agilent may determine, in the case of Agilent Restricted Stock, in either case such value to be reasonably determined by Agilent. The resulting Agilent Options or Agilent Restricted Stock, as applicable, shall vest under circumstances substantially identical to the vesting conditions applicable to the corresponding HP Restricted Stock, provided that, in the case of HP Restricted Stock that is subject to performance-based vesting, the resulting Agilent Options or Agilent Restricted Stock shall vest in a manner prescribed by Agilent.

7.4 Stock Purchase Plan. Through October 31, 1999 or such later date as

HP and Agilent may mutually agree, employees of the Agilent Business (including for this purpose any employee of HP who is designated as an employee of the Agilent Business for purposes of the Separation) shall continue to participate in the HP Stock Purchase Plan. Effective on or before the IPO or such other date as HP and Agilent may mutually agree, Agilent shall sponsor a Stock Purchase Plan for the benefit of Agilent Employees and Agilent Transferred Employees that is substantially similar in all Material Features to the corresponding HP Stock Purchase Plan. [Decisions not yet made regarding the treatment of transfer restrictions and/or employment vesting conditions applicable to shares of HP common stock held by Agilent Employees under the HP Stock Purchase Plan.] In the event an Agilent Employee who is participating in the Agilent Stock Purchase Plan transfers employment to the HP Group before the Distribution Date, or in the event an

HP Group Employee who is participating in the HP Stock Purchase Plan becomes an Agilent Employee before the Distribution Date, such individual's Stock Purchase Plan contributions and participation for the purchase period then in effect shall, directly or indirectly, transfer to the Stock Purchase Plan of whichever of HP or Agilent employs such individual on the last day of the applicable purchase period. HP and Agilent agree to cooperate with the other to coordinate any such transfer of Stock Purchase Plan participation.

7.5 Stock Service Award Program. Effective January 1, 2000 or such other

date as HP and Agilent may mutually agree, Agilent shall establish a stock service award program for Agilent Employees and Agilent Transferred Employees. The foregoing Agilent Plan shall be substantially identical in all Material Features to the comparable HP Plan as in effect immediately prior thereto.

7.6 Cash Profit Sharing Program. Through October 31, 1999, employees of

the Agilent Business (including, for this purpose, any employees of HP who are designated as employees of the Agilent Business for purposes of the Separation) shall continue to participate in the HP Cash Profit Sharing Program as may be in effect from time to time and HP shall retain all Liability relating thereto. Effective on and after November 1, 1999, Agilent shall provide a Cash Profit Sharing Program for the benefit of Agilent Employees and Agilent Transferred Employees which has the Material Features of the HP Cash Profit-Sharing Program. An Agilent Employee who transfers employment to the HP Group after the Payroll Date but before the Distribution Date, or an HP Group employee who becomes an Agilent Employee after the Payroll Date but before the Distribution Date, shall receive a profit sharing benefit as calculated and paid under the Cash Profit Sharing Program of whichever of HP or Agilent employs such individual on the last day of the applicable fiscal half, based on the individual's eligible compensation for the entire profit sharing period. Whichever of HP or Agilent pays such benefit shall be entitled to reimbursement from the other based on the portion of such benefit that relates to a transferred employee's pre-transfer service. HP and Agilent agree to cooperate with the other to calculate such profit sharing benefits and in connection with cost reimbursement policies and procedures.

ARTICLE VIII

FRINGE AND OTHER BENEFITS

8.1 Employee Assistance Program. HP shall use its commercially reasonable

best efforts for and on behalf of Agilent to procure, effective as of the Distribution Date or such other date as HP and Agilent may mutually agree, contracts and/or arrangements with HP's vendors that contain the Material Features of HP's contracts and/or arrangements providing for an employee assistance program. Agilent shall enter into such contracts and/or arrangements as procured by HP. Agilent shall cease to be a Participating Company in the HP employee assistance program coincident with Agilent's establishment of the Agilent employee assistance program. Agilent shall reimburse HP for any and all direct and indirect costs and expense related to its participation in the HP employee assistance program and HP's procurement of any and all contracts and/or arrangements on behalf of Agilent.

8.2 Educational Assistance Program. Effective as of the Payroll Date or

such other date as Agilent and HP may mutually agree, Agilent shall provide an Agilent educational assistance program to Agilent Employees which has the Material Features of the HP educational assistance program. Agilent shall cease

to be a Participating Company in the HP educational assistance program coincident with Agilent's establishment of the Agilent educational assistance program. At such time, any and all outstanding approved reimbursements under the HP educational assistance program for Agilent Employees shall be made by Agilent. Furthermore, Agilent shall reimburse HP for any and all direct and indirect costs and expenses related to its participation in the HP educational assistance program.

8.3 Adoption Assistance Program. Effective as of the Payroll Date,

Agilent shall provide an Agilent adoption assistance program to Agilent Employees which has the Material Features of the HP adoption assistance program. As of the Payroll Date, the HP adoption assistance program shall cease to provide reimbursement to any Agilent Employees and any and all outstanding approved reimbursements shall be made by Agilent.

8.4 Cafeteria and Related Subsidies. HP shall continue to make its

cafeterias, vending machines, catering services, and other food or beverage provision facilities or systems (collectively, "Food Subsidy Programs"), available to Agilent Employees on substantially similar terms and conditions as are offered to employees of the HP Group until the Distribution Date. HP and Agilent shall use their commercially reasonable best efforts to mutually agree on the appropriate methods and/or processes to ensure continued tax-favored status of HP's Food Subsidy Programs under the Code. Agilent shall reimburse HP for any and all direct and indirect costs and expenses related to allowing Agilent access to HP's Food Subsidy Program.

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8.5 Credit Union. HP shall use its commercially reasonable best efforts

to make the HP Employees' Federal Credit Union available to Agilent Employees on substantially similar terms and conditions as are offered to employees of the HP Group, through such date as Agilent and HP mutually agree. Agilent shall reimburse HP for any and all direct and indirect costs and expenses related thereto.

8.6 Employee Product Discounts. HP shall make qualified employee

discounts available to Agilent Employees on substantially similar terms and conditions as such discounts are made available to employees of the HP Group through the Distribution Date. Agilent shall reimburse HP for any and all direct and indirect cost and expenses relating thereto.

8.7 Employee Scholarship Program. Through April 30, 2000, HP shall

continue to maintain and administer the HP employee scholarship program on substantially the same terms and conditions as are currently in effect. Through the Distribution Date, Agilent shall continue to withhold payroll deductions for the HP employee scholarship program from Agilent Employees on the same terms and conditions as are currently in effect. The annual selection made in April or May, 2000 of eligible recipients for the HP employee scholarship program shall be made from a pool of both Agilent and HP employees and shall be funded by the HP employee scholarship program. Effective on May 1, 2000, Agilent Transferred Employees shall no longer be eligible to participate in the HP employee scholarship program. Effective on May 1, 2000, Agilent shall provide an Agilent employee scholarship program to Agilent Transferred Employees which has the Material Features of the HP employee scholarship program and to which Agilent Employees and Agilent Transferred Employees payroll deductions shall be contributed.

8.8 Recreational Properties. HP shall transfer title to certain of its

recreational facilities pursuant to Exhibit H to the Separation Agreement. HP and Agilent mutually agree to establish policies to permit the employees of the other party access to the recreational properties and facilities and to allocate

between them the costs and expenses associated therewith.

8.9 HP-Owned and Operated Aircraft. HP and Agilent shall use their

commercially reasonable best efforts to determine the terms and conditions pursuant to which Agilent shall be entitled to use HP-owned and operated aircraft through the Distribution Date or such other date as HP and Agilent may mutually agree. Agilent shall reimburse HP for any and all direct and indirect costs and expenses associated with the use by Agilent of HP-owned and operated aircraft. Provided, however, that such terms, conditions and reimbursements shall be consistent with all of the following: (a) Subpart F of Part 91 of the Federal Aviation Regulations, as amended from time to time; and (b) the representations made in, or arising from, HP's request for a private letter ruling filed with the IRS under cover letter dated March 31, 1999.

8.10 HP-Owned Cars. HP and Agilent shall use their commercially

reasonable best efforts to determine the terms and conditions pursuant to which Agilent shall be entitled to use HP-owned cars through the Distribution Date or such other date as HP and Agilent may mutually agree.

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8.11 Other Benefits. To the extent that HP maintains, sponsors or

provides other fringe benefits including, without limitation the benefits specified in Schedule 8.11 to its employees, then HP shall, to the extent permitted by law, continue to make such benefits available to Agilent Employees on substantially similar terms and conditions as are offered to the employees of the HP Group through the Distribution Date or such other date upon which Agilent and HP mutually agree. Agilent shall reimburse HP for any and all direct and indirect costs and expenses arising out of or relating to making any such fringe benefits available to its employees. Agilent and HP agree to make commercially reasonable best efforts to mutually agree on whether, when, and on what terms any member of the Agilent Group shall maintain, sponsor or offer fringe benefits.

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ARTICLE IX

ADMINISTRATIVE PROVISIONS

9.1 Additional Service Level Agreements. On or prior to the Separation

Date, HP and Agilent will enter into interim service level agreements covering the provisions of various interim services, including financial, accounting, legal, and other services by HP to Agilent or, in certain circumstances, vice versa. Such services shall, unless agreed to otherwise by HP and Agilent, be provided in a manner consistent with Section 5.3 of the Separation Agreement. Such service level agreements shall apply to such Subsidiaries and/or Affiliates of HP and/or Agilent, as HP and Agilent shall mutually agree.

9.2 Payment of Liabilities, Plan Expenses and Related Matters.

(a) Shared Costs. Agilent shall pay its share, as determined by HP in

good faith, of any contributions made to any trust maintained in connection with an HP Plan while Agilent is a Participating Company in that HP Plan.

(b) Contributions to Trusts. With respect to HP Plans to which

Agilent Employees and Agilent Transferred Employees make contributions, HP shall use reasonable procedures to determine Agilent Liabilities associated with such Plans, taking into account such contributions, settlements, refunds and similar

payments.

(c) Administrative Expenses Not Chargeable to a Trust. To the extent

not charged pursuant to Section 9.1 or another Ancillary Agreement (including, without limitation, an interim service level agreement as contemplated by Section 9.1 herein and Section 5.3 of the Separation Agreement), and to the extent not otherwise agreed to by HP and Agilent, and to the extent not chargeable to a trust established in connection with an HP Plan, Agilent shall be responsible, through either direct payment or reimbursement to HP, for its allocable share of expenses incurred by HP in the administration of (i) the HP Plans while Agilent participates in such Plans, and (ii) the Agilent Plans, to the extent HP administers such Plans. For this purpose, Agilent's allocable share of such expenses shall be that portion of the total of such expenses as the number of Agilent Employees and Agilent Transferred Employees who are participants in the applicable Plan bears to the total number of participants in such Plan.

9.3 Sharing of Participant Information. In addition to the

responsibilities and obligations of HP and Agilent specified in Exhibit J to the Separation Agreement, HP and Agilent shall share, or cause to be shared, all participant information that is necessary or appropriate for the efficient and accurate administration of each of the HP Plans and the Agilent Plans during the respective periods applicable to such Plans as Agilent and HP may mutually agree. HP and Agilent and their respective authorized agents shall, subject to applicable laws of confidentiality and data protection, be given reasonable and timely access to, and may make copies of, all information relating to the subjects of

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this Agreement in the custody of the other party or its agents, to the extent necessary or appropriate for such administration.

9.4 Reporting and Disclosure Communications to Participants. While

Agilent is a Participating Company in the HP Plans, Agilent shall take, or cause to be taken, all actions necessary or appropriate to facilitate the distribution of all HP Plan-related communications and materials to employees, participants and beneficiaries, including (without limitation) summary plan descriptions and related summaries of material modification(s), summary annual reports, investment information, prospectuses, notices and enrollment material for the HP Plans and Agilent Plans. Agilent shall reimburse HP for the costs and expenses relating to the copies of all such documents provided to Agilent, except to the extent such costs are charged pursuant to Section 9.1 (or are otherwise addressed in this Agreement) or pursuant to an Ancillary Agreement. Agilent shall assist, and Agilent shall cause each other applicable member of the Agilent Group to assist, HP in complying with all reporting and disclosure requirements of ERISA, including the preparation of Form Series 5500 annual reports for the HP Plans, where applicable.

9.5 Audits Regarding Vendor Contracts. From the period beginning as of

the Distribution Date and ending on such date as HP and Agilent may mutually agree, HP and Agilent and their duly authorized representatives shall have the right to conduct joint audits with respect to any vendor contracts that relate to both the HP Health and Welfare Plans and the Agilent Health and Welfare Plans. The scope of such audits shall encompass the review of all correspondence, account records, claim forms, canceled drafts (unless retained by the bank), provider bills, medical records submitted with claims, billing corrections, vendor's internal corrections of previous errors and any other documents or instruments relating to the services performed by the vendor under the applicable vendor contracts. HP and Agilent shall agree on the performance standards, audit methodology, auditing policy and quality measures, reporting requirements, and the manner in which costs incurred in connection with such audits will be shared.

9.6 Employee Identification Numbers. Until the Distribution Date, HP and

Agilent shall not change any employee identification numbers assigned by HP. HP and Agilent mutually agree to establish a policy pursuant to which employee identification numbers assigned to either employees of HP or Agilent shall not be duplicated between HP and Agilent.

9.7 Beneficiary Designations. Subject to Section 9.10, all beneficiary

designations made by Agilent Employees and Agilent Transferred Employees for the HP Plans shall be transferred to and be in full force and effect under the corresponding Agilent Plans until such beneficiary designations are replaced or revoked by the Agilent Employees and Agilent Transferred Employee who made the beneficiary designation.

9.8 Requests for IRS and DOL Opinions. HP and Agilent shall make such

applications to regulatory agencies, including the IRS and DOL, as may be necessary or appropriate. Agilent and HP shall cooperate fully with one another on any issue relating to the transactions contemplated by

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this Agreement for which HP and/or Agilent elects to seek a determination letter or private letter ruling from the IRS or an advisory opinion from the DOL.

9.9 Fiduciary Matters. HP and Agilent each acknowledge that actions

contemplated to be taken pursuant to this Agreement may be subject to fiduciary duties or standards of conduct under ERISA or other applicable law, and no party shall be deemed to be in violation of this Agreement if such party fails to comply with any provisions hereof based upon such party's good faith determination that to do so would violate such a fiduciary duty or standard.

9.10 Consent of Third Parties. If any provision of this Agreement is

dependent on the consent of any third party (such as a vendor) and such consent is withheld, HP and Agilent shall use their commercially reasonable best efforts to implement the applicable provisions of this Agreement. If any provision of this Agreement cannot be implemented due to the failure of such third party to consent, HP and Agilent shall negotiate in good faith to implement the provision in a mutually satisfactory manner.

9.11 World Wide Web. Through the Distribution Date or such other date as

Agilent and HP may mutually agree, HP shall make its intranet site available to Agilent Employees on substantially the same terms as such intranet site is made available to HP Employees. Agilent shall reimburse HP for any and all costs and expenses related thereto. HP and Agilent shall use their commercially reasonable best efforts to mutually agree on the appropriate methods for Agilent to establish its own intranet site.

9.12 Tax Cooperation. In connection with the interpretation and

administration of this Agreement, HP and Agilent shall take into account the agreements and policies established pursuant to the Separation Agreement and the parties' intent to qualify the Distribution as a tax-free reorganization under Code Sections 368(a)(1)(D) and 355.

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ARTICLE X

EMPLOYMENT-RELATED MATTERS

10.1 Terms of Agilent Employment. All basic terms and conditions of

employment for Agilent Employees and Agilent Transferred Employees including, without limitation, their pay and benefits in the aggregate, shall remain substantially the same as the terms and conditions that were in place when the Agilent Employee or Agilent Transferred Employee was employed by the HP Group, as applicable. Notwithstanding the foregoing, Agilent Employees and Agilent Transferred Employees shall be required to execute a new agreement regarding confidential information and proprietary developments in a form approved by Agilent. In addition, nothing in the Separation Agreement, this Agreement, or any Ancillary Agreement should be construed to change the at-will status of any of the employees of the HP Group or the Agilent Group.

10.2 HR Data Support Systems. HP shall provide human resources data

support for Agilent Employees and Agilent Transferred Employees for a period mutually agreed upon between HP and Agilent. HP and Agilent each reserves the right to discontinue Agilent's access to any HP human resources data support systems with reasonable notice. Agilent agrees to fully reimburse HP for any and all associated costs and expenses relating to its use of the HP human resources data support systems.

10.3 Non-Solicitation of Employees. Subject to Section 5.12 of the

Separation Agreement, HP and Agilent each agree not to directly solicit or recruit the other party's employees for a period of two (2) years following the Distribution Date, if such solicitation or recruitment would be disruptive or damaging or would interfere with the operation or business of the other party. Notwithstanding the foregoing, this prohibition on solicitation does not apply to actions taken by a party either: (a) as a result of an employee's affirmative response to a general recruitment effort carried out through a public solicitation or general solicitation, or (b) as a result of an employee's initiative.

10.4 Employment of Employees with U.S. Work Visas. Agilent Employees

who, on the Payroll Date, are employed in the U.S. pursuant to a work or training visa which authorizes employment only by the HP Group shall remain employed by the HP Group until the visa is amended or a new visa is granted to authorize employment by the Agilent Group and, at that time, shall become an employee of the Agilent Group with substantially similar rights as all other Agilent Employees. During the period from the Payroll Date until the amended or new visa is issued, such employee shall continue to participate in HP Plans and Agilent shall, as and when invoiced by HP, promptly reimburse HP for its direct and indirect costs and expenses relating to compensation and benefits.

10.5 Confidentiality and Proprietary Information. No provision of the

Separation Agreement or any Ancillary Agreement shall be deemed to release any individual for any violation of the HP non-competition guideline or any agreement or policy pertaining to confidential or

proprietary information of any member of the HP Group, or otherwise relieve any individual of his or her obligations under such non-competition guideline, agreement, or policy.

10.6 FTO. Effective as of the Payroll Date, Agilent shall establish

the Agilent FTO policy which is substantially identical in all Material Features to the HP FTO policy. Effective as soon as administratively practicable after the Payroll Date, HP shall transfer to Agilent all data and information relating to the HP FTO policy. Effective as soon as administratively practicable following the Payroll Date (or such other date as HP and Agilent may mutually

agree), Agilent shall assume all Liabilities attributable to Agilent Employees under the HP FTO policy. In the event that an HP Employee or Agilent Employee transfers his or her employment to the other party before the Distribution Date, such transfer of employment shall not result in a payout or constitute a termination event for purposes of the FTO policy, and no duplication of benefits shall occur as a result of any such transfer of employment between HP and Agilent. Furthermore, the Liability attributable to any Agilent Employee or HP Employee who transfers employment between HP and Agilent prior to the Distribution Date shall be assumed by the employer subsequent to the transfer.

10.7 Accrued Payroll, Bonuses, Profit Sharing and Commissions. HP

shall retain all Liabilities relating to, arising out of, or attributable to payroll, bonuses, profit sharing and commissions accrued by employees of the Agilent Business through October 31, 1999. HP and Agilent shall agree on the manner and method of payment for all payroll, bonuses, profit sharing and commissions agreed to on behalf of employees who have been employed in the Agilent Business on or before October 31, 1999. Effective on and after the Payroll Date, Agilent shall establish its own payroll system for Agilent Employees. Effective on and after November 1, 1999, Agilent shall establish its own commission policy for Agilent Employees.

10.8 Payroll and Withholding.

(a) Income Reporting, Withholding. HP and Agilent will use their

commercially reasonable best efforts to cause the HP human resources management system ("HRMS") to be split into two separate systems on the Payroll Date. Agilent shall perform the income reporting and withholding function under its own employer identification number for Agilent Employees and other service providers, commencing with service periods beginning on or after the Payroll Date. HP shall perform the income reporting and withholding function for HP Employees and other service providers.

(b) Delivery of, and Access to, Documents and Other Information.

Concurrently with the Payroll Date, HP shall cause to be delivered to Agilent, the employee information set forth on all Forms W-4 executed by HP Employees designated as Agilent Employees as of the Payroll Date. For the period beginning on the Payroll Date and ending on the Distribution Date (and for such additional period as HP and Agilent may mutually agree), HP shall make reasonably available to Agilent all forms, documents or information, no matter in what format stored, relating to compensation or payments made to any employee or service provider of Agilent. Such information may include, but is not limited to, information concerning employee payroll deductions, payroll

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adjustments, records of time worked, tax records (e.g., Forms W-2, W-4, 940 and 941), and information concerning garnishment of wages or other payments. Agilent agrees to fully reimburse HP for the cost associated with such availability and access.

(c) Consistency of Tax Positions; Duplication. HP and Agilent

shall individually and collectively make commercially reasonable best efforts to avoid unnecessarily duplicated federal, state or local payroll taxes, insurance or workers' compensation contributions, or unemployment contributions arising on or after the Payroll Date. HP and Agilent shall take consistent reporting and withholding positions with respect to any such taxes or contributions.

10.9 Personnel and Pay Records. For the period beginning on the

Payroll Date and ending on the Distribution Date (and for such additional period as HP and Agilent may mutually agree), HP shall make reasonably available to Agilent, subject to applicable laws on confidentiality and data protection, all

current and historic forms, documents or information, no matter in what format stored, relating to pre-Payroll Date personnel, medical records, and payroll information. Such forms, documents or information may include, but is not limited to: (a) information regarding an Agilent Employee's ranking or promotions; (b) the existence and nature of garnishment orders or other judicial or administrative actions or orders affecting an employee's or service provider's compensation; and (c) performance evaluations. Agilent shall fully reimburse HP for the cost associated with such availability and access.

10.10 Unemployment Insurance Program.

(a) Coverage Through Distribution Date. Unless otherwise

directed by Agilent, HP shall use its commercially reasonable best efforts to cause Agilent to be covered under the HP Unemployment Insurance Program through the Distribution Date. Agilent shall reimburse HP for its allocable share of fees paid and related costs and expenses by HP to its unemployment insurance vendor(s) for services rendered during such period. Agilent shall cooperate with the unemployment insurance vendor(s) by providing information in its possession that is necessary for administration of the HP Unemployment Insurance Program.

(b) Coverage Post-Distribution Date. Before the Distribution

Date, HP shall use its commercially reasonable best efforts for and on behalf of Agilent to procure an agreement with its unemployment insurance vendor(s) with the Material Features of the HP unemployment insurance agreement, including, without limitation, administration of all unemployment compensation claims of Agilent Transferred Employees and Agilent Employees, regardless of whether such claims were filed before, on, or after the Distribution Date.

(c) Tax Experience Rating. Unless otherwise directed by Agilent,

HP shall take commercially reasonable best efforts to assist Agilent as well as all members of the Agilent Group in retaining the HP experience rating on or after the Payroll Date.

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10.11 Non-Termination of Employment; No Third-Party Beneficiaries. No

provision of this Agreement, the Separation Agreement, or any Ancillary Agreement shall be construed to create any right, or accelerate entitlement, to any compensation or benefit whatsoever on the part of any Agilent Employee, Agilent Transferred Employee or other future, present or former employee of HP or Agilent under any HP Plan or Agilent Plan or otherwise. Without limiting the generality of the foregoing: (a) neither the Distribution or Separation, nor the termination of the Participating Company status of Agilent or any member of the Agilent Group shall cause any employee to be deemed to have incurred a termination of employment; and (b) no transfer of employment between HP and Agilent before the Distribution Date shall be deemed a termination of employment for any purpose hereunder.

10.12 Employment Litigation.

(a) Claims to be Transferred to Agilent. On the Separation

Date, the legal responsibility for claims identified in Schedule 10.12(a) shall be transferred in their entirety from HP to Agilent. Thereafter, Agilent shall assume the defense of these claims. Agilent hereby indemnifies, defends and holds harmless HP against these claims. Agilent shall reimburse HP for any reasonable attorneys' fees and other expenses reasonably incurred by HP subsequent to the Separation Date in connection with investigating and/or defending against any such claim, including, without limitation, reimbursement

for any services provided by members of the HP legal staff.

(b) Claims to be Jointly Defended by HP and Agilent. HP and

Agilent shall jointly defend the claims identified in Schedule 10.12(b); provided, however, that (i) Agilent shall indemnify and hold harmless HP against any judgments entered against HP on the claims identified in Schedule 10.12(b) or settlements of the claims identified in Schedule 10.12(b), provided, however, that HP shall not compromise or settle any such claim regarding Agilent Employees without the prior consent of Agilent, which such consent shall not be unreasonably withheld or delayed, and provided further, however, that such compromise or settlement shall release Agilent in full from any further liability with respect to such claim; and (ii) Agilent and HP shall share pro rata the attorneys' fees and all other expenses reasonably incurred subsequent to the Separation Date in connection with defending against the unemployment claims identified in Schedule 10.12(b) based on the number of employees of each organization that are claimants in the litigation.

(c) Unscheduled Claims. Agilent shall have the sole

responsibility for all employment-related claims regarding Agilent Employees and Agilent Transferred Employees that exist, or come into existence, on or after the Separation Date arising out of or relating to their employment in the Agilent Business or the Agilent Group.

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ARTICLE XI

GENERAL PROVISIONS

11.1 Effect if Payroll, Separation, IPO and/or Distribution Does Not

Subject to Section 11.8, if the Separation, IPO and/or Distribution does

not occur, then all actions and events that are, under this Agreement, to be taken or occur effective as of the Payroll Date, Separation Date, IPO, and/or Distribution Date, or otherwise in connection with the Separation, IPO and/or Distribution, shall not be taken or occur except to the extent specifically agreed by Agilent and HP.

11.2 Relationship of Parties. Nothing in this Agreement shall be

deemed or construed by the parties or any third party as creating the relationship of principal and agent, partnership or joint venture between the parties, the understanding and agreement being that no provision contained herein, and no act of the parties, shall be deemed to create any relationship between the parties other than the relationship set forth herein.

11.3 Affiliates. Each of HP and Agilent shall cause to be performed,

and hereby guarantee the performance of, any and all actions of the HP Group or the Agilent Group, respectively.

11.4 Incorporation of Separation Agreement Provisions. The following

provisions of the Separation Agreement are hereby incorporated herein by reference, and unless otherwise expressly specified herein, such provisions shall apply as if fully set forth herein (references in this Section to an "Article" or "Section" shall mean Articles or Sections of the Separation Agreement, and, except as expressly set forth below, references in the material incorporated herein by reference shall be references to the Separation Agreement): Section 5.4 (relating to Agreement for Exchange of Information); Section 5.9 (relating to Dispute Resolution); Section 5.11 (relating to No Representation and Warranty); Article V (relating to Covenants and Other Matters); and Article VI (relating to Miscellaneous) other than Section 6.2

(relating to Governing Law).

11.5 Governing Law. To the extent not preempted by applicable federal

law, this Agreement shall be governed by, construed and interpreted in
accordance with the laws of the State of Delaware, irrespective of the choice of
law principles of the State of Delaware, as to all matters, including matters of
validity, construction, effect, performance and remedies.

11.6 Severability. If any term or other provision of this Agreement

is determined to be invalid, illegal or incapable of being enforced by any rule
of law or public policy, all other conditions and provisions of this Agreement
shall nevertheless remain in full force and effect so long as the economic or
legal substance of the transactions contemplated hereby is not affected in any
manner materially adverse to either party. Upon such determination that any term
or other provision is invalid, illegal or incapable of being enforced, the
parties hereto shall negotiate in good faith to modify this Agreement so as to
effect the original intent of the parties as closely as possible and in

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an acceptable manner to the end that transactions contemplated hereby are
fulfilled to the fullest possible extent.

11.7 Amendment. The Board of Directors of Agilent and HP may mutually

agree to amend the provisions of this Agreement at any time or times, either
prospectively or retroactively, to such extent and in such manner as the Boards
mutually deem advisable. Each Board may delegate its amendment power, in whole
or in part, to one or more Persons or committees as it deems advisable.
Accordingly, each Board hereby gives its Vice President, Human Resources the
full power and authority to mutually adopt an amendment to this Agreement
(subject to each of their authority to amend Plans).

11.8 Termination. This Agreement may be terminated at any time prior

to the IPO Closing Date by and in the sole discretion of HP without the approval
of Agilent. This Agreement may be terminated at any time after the IPO Closing
Date and before the Distribution Date by mutual consent of HP and Agilent. In
the event of termination pursuant to this Section, no party shall have any
liability of any kind to the other party.

11.9 Conflict. In the event of any conflict between the provisions of

this Agreement and the Separation Agreement, any Ancillary Agreement, or Plan,
the provisions of this Agreement shall control. In the event of any conflict
between the provisions of this Agreement and any Local Agreement, the provisions
of the Local Agreement shall control.

11.10 Counterparts. This Agreement may be executed in two or more

counterparts each of which shall be deemed to be an original, but all of which
together shall constitute but one and the same Agreement.

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IN WITNESS WHEREOF, each of the parties have caused this Agreement to be
executed on its behalf by its officers thereunto duly authorized on the day and
year first above written.

HEWLETT-PACKARD COMPANY

By: _____

Name: _____

Title: President and Chief Executive Officer
AGILENT TECHNOLOGIES, INC.

By: _____

Name: _____

Title: President and Chief Executive Officer

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SCHEDULE 1.40

HEALTH AND WELFARE PLANS

Business Travel Accident Insurance
Cafeteria Plan
COBRA Program
Community Dental Network ("CDN")
Continued Group Medical Program
Dental Plan II
Dependent Care Reimbursement Plan
Group Universal Life Plan
Health Care Reimbursement Plan
HMOs (as set forth more fully in Schedule 6.5(c))
Income Protection Plan (STD & LTD)
- California Voluntary Plan
- New Jersey Voluntary Plan
- New York Voluntary Plan
Leave of Absence Programs
- FMLA Leave
- Medical Leave
- Military Leave
- Personal Leave
Long Term Care Plan
Medical Plan Option A
Medical Plan Option B
Redeployment/Alternate Offer Program
Regular Dental Plan
SeniorMed Program
Supplemental Income Protection Plan
Survivor Protection Plan
- Accidental Death & Dismemberment ("AD&D")
- HP Life Insurance
- Retiree Life
Voluntary Severance Incentive Plan
Workers' Compensation Program

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SCHEDULE 6.1(a) (i)

ACTUARIAL ASSUMPTIONS FOR HP VEBA

INCOME PROTECTION PLAN LIABILITIES

Actuarial Assumptions:

1. Interest Rate: An interest rate of seven percent (7%) per annum is used for discounting.

2. Termination of Disability Through Death or Recovery: The 1987 Commissioner's Group Disability Tables are used (Transactions, Society of Actuaries, Vol. XXXIX, 1987).
3. Short-Term Disabilities: Statistics compiled by HP are assumed to accurately reflect the Plan's short-term disability experience.
4. Unknown Payment Amounts: It is assumed that the average monthly payment for long-term disability claims with unknown claims will increase linearly over time.
5. Benefit Offsets: All short-term disabilities that are assumed to progress to long-term disability status and all long-term claims with unknown claim amounts are reduced by Social Security implicitly through the linear regress used to determine unknown payment amounts.
6. Short-Term Disabilities Expected to Progress to Long-Term Disability Status: A number of disabilities equal to the number of known disabilities in the twelve (12)-month period ending twelve (12) months prior to the Distribution Date are assumed to progress to long-term status.
7. Administrative Expenses: Assumed at approximately three and one-half percent (3.5%) of benefit costs.

Methods:

Long-term disability reserves are determined from open long-term disability claims and those short-term disability claims that are assumed to progress to long-term disability status. The actual claim amount is valued, if known. An assigned amount, determined using the assumptions described above, is valued for unknown claim amounts. The full present value of future claim payments is determined based upon the interest rate and termination of disability assumptions.

Short-term disability reserves for known short-term disability claims are valued based upon (1) expected future duration of the disability, (2) the average weekly payment, and (3) the number of such known, open claims.

Short-term disability reserves for unknown short-term disability claims are valued based upon (1) the average duration of the short-term disability claims paid, (2) the average weekly benefit, (3) the

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number of claims received in the measurement period, estimated at thirty-eight percent (38%) of open claims, and (4) the number of working days necessary to process a new claim.

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SCHEDULE 6.1(a) (ii)

ACTUARIAL ASSUMPTIONS FOR HP VEBA

SURVIVOR PROTECTION PLAN LIABILITIES

Actuarial Methods and Assumptions

1. Interest Rate: An interest rate of seven percent (7%) per annum is used for discounting.
2. Mortality of Disabled Employees: Table V-A, of the Pension Benefit Guaranty Corporation, for Disabled Male Participants Receiving Social Security Disability Benefits.

3. Mortality of Nondisabled Employees: 1983 Group Annuity Mortality Table Graduated, Unloaded Rates.
4. Preretirement Turnover: Rates used in the HP RP valuation. Rates are based upon a combination of age and service. Employees eligible for retirement benefits are assumed to retire in accordance with the retirement probabilities.
5. Retirement: Rates used in the HP RP valuation. Early retirement starts at age fifty five (55) with one hundred percent (100%) probability of retirement assumed at age seventy (70). Employees not eligible for retirement benefits are assumed to turn over in accordance with the preretirement turnover probabilities.

Methods

Known claims reserves for continued protection for disabled employees are determined from open disabled life claims. Unknown claims reserves for continued protection for disabled employees are determined from those claims that were opened in 1998 and the first half of 1999. Those claims have been assumed to be equal in number and in average benefit to claims that were open but unknown on the Distribution Date.

The past service liability for retiree death benefit protection is valued using the Projected Unit Credit method. Under the Projected Unit Credit method, the present value of future benefits is equal to the discounted value of the retiree death benefit. That value is prorated over the working lifetime of the employee. The portion of the proration that is attributable to past service is called the Accumulated Benefit Obligation. All of the present value of future benefits is included in the Accumulated Benefit Obligation for retired employees. The present value of vested benefits is equal to the present value of future benefits for those employees who have satisfied the Plan's age and service retirement criteria, zero (0) for other employees.

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SCHEDULE 6.5(a)

THIRD PARTY ASO CONTRACTS

Plan	Vendor	Services
Medical Plan Option A Medical Plan Option B Regular Dental Plan Dental Plan II	HealthCare Compare Administrative Services, Inc. "	Claims Administration
Continued Group Medical Program (non-HMO) SeniorMed Program (non-HMO)	Automatic Data Processing, Inc. dba: -ADP -Johnson & Higgins Kirke-Van Orsdel, Inc. ("J&H/KVI") -Health Benefits of America	Open Enrollment Administration
Continued Group Medical Program Senior Med Program Leave of Absence Program (Medical Benefits) COBRA Program	Automatic Data Processing, Inc. dba: -ADP -Johnson & Higgins/Kirke- Van Orsdel, Inc. ("J&H/KVI") -Health Benefits of America	Premium Collection and Open Enrollment Administration
Medical Plan Option A Medical Plan Option B Regular Dental Plan Dental Plan II HMOs	Geo Access, Inc.	Provides and maintains online database of service providers available under all indicated plans.
Income Protection Plan (STD & LTD) -California Voluntary Plan -New York Voluntary Plan -New Jersey Voluntary Plan	Voluntary Plan Administrators, Inc. ("VPA")	Claims Administration
Group Universal Life Plan	Kirke Van Orsdel, a division of Seabury & Smith, Inc. (KVI)	Premium Collection and Claims Administration

Long Term Care Plan	U.S. Care, Inc.	Eligibility Determination and Claims Administration
Health Care Reimbursement Plan Dependent Care Reimbursement Plan	United HealthCare Insurance Company	Claims Administration
Workers' Compensation Program	Sedgwick CMS, Inc. (Non-CA) Presidium Inc. (CA)	Claims Administration

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SCHEDULE 6.5 (b)

GROUP INSURANCE POLICIES

Plan	Insurer
HP Life Insurance Retiree Life	Connecticut General Life Insurance Company (CIGNA)
Group Universal Life Plan	Connecticut General Life Insurance Company (CIGNA)
Business Travel Accident Insurance	UNUM Life Insurance Company of America (UNUM)
Workers' Compensation Program	Old Republic Insurance Company General Reinsurance Company The Travelers Insurance Companies

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SCHEDULE 6.5 (c)

THIRD PARTY HMO CONTRACTS

Aetna U.S. Healthcare
AmeriHealth HMO, Inc.
Av-Med Health Plan
Blue Choice Healthcare Plan
Capital District Physicians Health Plan
Care Choices/Mercy Health Plans
ChoiceCare Health Plans, Inc.
CIGNA HealthCare of Colorado
CIGNA Healthcare/COMED
ConnectiCare, Inc.
FreeState Health Plan, Inc.
Group Health Cooperative of Puget Sound
Group Health Northwest
Harvard Pilgrim Health Care
Health Alliance Plan of Michigan
HealthAmerica PA, Inc.
Health Net
Health Plan of the Redwoods
HealthPlus
Healthsource New Hampshire
HMO Blue New England
HMO Blue of Idaho
HMO Illinois
Humana (Louisville)
Humana Health Plans of Puerto Rico
Humana/Wisconsin Health Organization
Independent Health
Intergroup of Arizona
Intergroup of Utah, Inc.
Kaiser Permanente-California

Kaiser Permanente-Colorado
 Kaiser Permanente-Georgia
 Kaiser Permanente-Hawaii
 Kaiser Permanente-Mid-Atlantic States
 Kaiser Permanente-North Carolina
 Kaiser Permanente-NW Region
 Lifeguard, Inc.
 Matthew Thornton Health Plan, Inc.
 Medica Choice
 Medica Primary
 Optimum Choice, Inc.
 Oxford Health Plans
 PacifiCare of California
 PacifiCare of Colorado
 PacifiCare of Oregon
 PacifiCare of Texas
 Preferred Care
 Prepaid Health Plan (PHP)
 Principal Health Care of Kansas City
 Prudential HealthCare
 Prudential HealthCare HMO
 Prudential HealthCare of Indiana
 QualChoice
 QualMed
 Regence HMO Oregon
 Rush Prudential Health Plans
 Texas Health Choice
 Tufts Health Plan
 United Health Care of Alabama
 United HealthCare of Georgia
 United HealthCare of the Midlands
 United HealthCare of the Midwest, Inc.
 United HealthCare of Ohio-Columbus
 United HealthCare of Ohio-Dayton

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SCHEDULE 6.6(a)

ASSUMPTIONS FOR HP LONG-TERM CARE

PLAN LIABILITIES

1. Administrative Expenses - Seven Dollars and Forty Three Cents (\$7.43) per member per month. Administrative expenses are assumed to increase for inflation at three percent (3%) per year.
2. Voluntary Termination - three percent (3%) per year
3. Mortality - 1983 Group Annuity Mortality Table
4. Morbidity

Incidence and continuance rates are based on the 1985 Nursing Home Study adjusted based on insurer experience, other studies and the effect of additional benefits. Sample rates of incidence (probability of disability) and severity (present value of incurred claims) are as follows:

Age ---	Rate of Disability -----	Present Value of Incurred Claim -----			
		\$80 ---	\$	120	\$ 160 -----
35	.000579	25,404	45,755		65,002
45	.001569	24,645	45,190		66,813

55	.002109	24,595	45,972	71,094
65	.006623	25,562	47,959	72,627
75	.029038	26,576	49,589	71,825
85	.109395	26,384	47,861	66,779
95	.189596	24,854	44,236	60,157

5. Discount Rate - six percent (6%)

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SCHEDULE 6.15(d)

WCP CLAIMS

ACCRUED LIABILITIES ALLOCATION

HP Risk Management provides direction to liability programs within HP that generate claims. These claims usually extend beyond a year. Federal regulations require HP to estimate the ultimate cost of those claims and to accrue that future cost on the books at a consolidated level.

Basis of Calculation: Actuarial analysis using the past ten (10) years of HP claims history, supplemented by insurance industry data. Accrued amounts represent projected ultimate claims cost, with an approximate eighty percent (80%) confidence level. The worker's compensation accrual amount has been discounted to NPV at sixty-five percent (65%) in accordance with tax and accounting rules.

Self-Insured Liabilities to be Allocated:

Liability	Estimated as of October 31, 1999	Proposed HP	Proposed Agilent
Workers' Compensation Liability	\$50M	\$28M	\$22M

Historical Basis of Allocation Distribution:

1. Worker's Compensation: Distributed to entity on a performance based model.
 - a. Seventy-five percent (75%) on a three (3) year claims frequency severity
 - b. Twenty-five percent (25%) exposure headcount and payroll
2. Proposed Basis of Allocation to HP and Agilent:

Use of existing model with the inclusion of proportionate share of corporate and AGO costs

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SCHEDULE 7.2(c)

OPTIONS HELD BY CERTAIN NON-U.S.

AGILENT TRANSFERRED EMPLOYEES

United Kingdom

Notwithstanding anything in Section 7.2 to the contrary, unless otherwise

mutually agreed by HP and Agilent, United Kingdom ("UK") Agilent Employees holding UK approved HP Options shall not be eligible for assumption by Agilent; such HP Options shall remain exercisable in accordance with the terms of the applicable HP Stock Plan; provided, however, that the exercise price and the number of shares of HP common stock relating to such HP Options shall not be adjusted by HP in connection with the Distribution. UK Agilent Transferred Employees who (i) are actively employed by, or on leave of absence from, the Agilent Group as of the Distribution Date, and (ii) hold such HP Options shall receive additional Agilent Stock Options at the Distribution Date for a number of shares of Agilent common stock and with exercise prices that are reasonably determined by Agilent to provide a value which, when added to the value of such HP Options immediately after the Distribution Date, provides value that is substantially equivalent to the value of such HP Options immediately prior to the Distribution Date.

France

Notwithstanding anything in Section 7.2 to the contrary, unless otherwise mutually agreed by HP and Agilent, the exercise price and the number of shares of HP common stock relating to Excluded Options held by French Agilent Transferred Employees shall not be adjusted by HP in connection with the Distribution. French Agilent Transferred Employees who are actively employed by, or on leave of absence from, the Agilent Group as of the Distribution Date and who hold such Excluded Options shall receive additional Agilent Stock Options at the Distribution Date for a number of shares of Agilent common stock and with the exercise prices that are reasonably determined by Agilent to provide a value which, when added to the value of such Excluded Options immediately after the Distribution Date, provides value that is substantially equivalent to the value of such Excluded Options immediately prior to the Distribution Date.

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SCHEDULE 8.11

FRINGE BENEFITS

Executive Physical Program
Executive Financial Services
Commuter Assistance Program
On-Site workout facilities
LifeWorks

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SCHEDULE 10.12(a)

EMPLOYMENT LITIGATION

TRANSFERRED CLAIMS

Borbely, Daniel v. HP (98-0284), Employment Discrimination
Brown, Frances v. HP (92-0062), Employment
Carter, Kimberly v. HP (99-0001), Employment
Cirelli, Linda v HP (99-0056), Employment Discrimination
Garrett, Terry v. HP (95-0028), Employment Discrimination

Maier, Craig v. HP (97-0097), Employment Discrimination

Reed, Robert v. HP (98-0296), Employment

Serino, Kimberly v HP (98-0280), Employment Discrimination

Truong v. HP (98-0023), Employment

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SCHEDULE 10.12(b)

EMPLOYMENT LITIGATION

JOINTLY DEFEND CLAIMS

[None]

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TAX SHARING AGREEMENT

BY AND AMONG

HEWLETT-PACKARD COMPANY

AND ITS AFFILIATES

AND

AGILENT TECHNOLOGIES, INC.

AND ITS AFFILIATES

Dated _____, 1999

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TAX SHARING AGREEMENT

THIS TAX SHARING AGREEMENT (this "Agreement"), dated as of _____, 1999, by and among Hewlett-Packard Company ("Hewlett-Packard"), a Delaware corporation and each Hewlett-Packard Affiliate (as defined below), and Agilent Technologies, Inc. ("Agilent"), a Delaware corporation and currently a direct, wholly owned subsidiary of Hewlett-Packard, and each Agilent Affiliate (as defined below) is entered into in connection with the Spinoff (as defined below).

RECITALS

WHEREAS, as set forth in the Master Separation and Distribution Agreement dated as of August 12, 1999 (the "Master Agreement"), and subject to the terms and conditions thereof, Hewlett-Packard wishes to transfer and assign to Agilent substantially all of the assets and liabilities currently associated with the Agilent Business (as defined below) and the stock, investments and similar interests currently held by Hewlett-Packard in subsidiaries and other entities that conduct such business (the "Separation");

WHEREAS, following the Separation, Hewlett-Packard and Agilent currently contemplate that Agilent will make an initial public offering (the "IPO") of Agilent Common Stock that will reduce Hewlett-Packard's ownership of Agilent on a fully-diluted basis to not less than 80.1 percent;

WHEREAS, Agilent intends to distribute all of the proceeds of the IPO to Hewlett-Packard and Hewlett-Packard intends to segregate such funds for distribution to its creditors or shareholders (the "Cash Distribution");

WHEREAS, Hewlett-Packard intends to distribute all of its shares of Agilent Common Stock, on a pro rata basis, to the holders of the common stock of Hewlett-Packard, subject to the terms and conditions of the Master Agreement (the "Public Distribution");

WHEREAS, prior to consummating the Separation and the Public Distribution, various Hewlett-Packard Affiliates and the Agilent Affiliates will have undertaken certain restructuring transactions designed to separate the Agilent Business from the Hewlett-Packard Business in jurisdictions outside of

the United States, as defined in Section 7701(a)(9) of the Code, (the "Foreign Restructuring"), and Hewlett-Packard World Trade, Inc., a wholly owned Delaware subsidiary of Hewlett-Packard, will contribute all of its property relating to the Agilent Business into Agilent World Trade, Inc., a newly formed Delaware corporation, and will distribute all of the stock of Agilent World Trade, Inc. to Hewlett-Packard (the "Internal Distribution");

WHEREAS, the Separation, the Public Distribution, the Internal Distribution and certain of the transactions involved in the Foreign Restructuring are intended to qualify as tax free reorganizations and distributions under Sections 368(a)(1)(D) and 355 of the Code; and

WHEREAS, in contemplation of the Public Distribution pursuant to which Agilent and its domestic subsidiaries will cease to be members of the Hewlett-Packard Group (as defined below), the parties hereto have determined to enter into this Agreement, setting forth their agreement with respect to certain tax matters.

AGREEMENT

NOW THEREFORE, in consideration of the mutual covenants and promises contained herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties agree as follows:

Section 1. Definitions

1.1 In General. As used in this Agreement, the following capitalized

terms shall have the following meanings:

"Additional Restructuring Tax" has the meaning set forth in Section 5.1(b) of this Agreement.

"After Tax Amount" means any additional amount necessary to reflect the hypothetical Tax consequences of the receipt or accrual of any payment required to be made under this Agreement (including payment of an additional amount or amounts hereunder and the effect of the deductions available for interest paid or accrued and for Taxes such as state and local income Taxes), determined by using the highest marginal corporate Tax rate (or rates, in the case of an item that affects more than one Tax) for the relevant taxable period (or portion thereof).

"Agilent Affiliate" means any corporation or other entity directly or indirectly controlled by Agilent.

"Agilent Business" has the meaning set forth in the Master Agreement.

"Agilent Group" means the affiliated group of corporations as defined in Section 1504(a) of the Code, or similar group of entities as defined under corresponding provisions of the laws of other jurisdictions, of which Agilent would be the common parent corporation if it were not a subsidiary of Hewlett-Packard, and any corporation or other entity which may be, may have been or may become a member of such group from time to time.

"Agilent Group Combined Tax Liability" means, with respect to any taxable period, the Agilent Group's liability for Non-Federal Combined Taxes as determined under Section 3.3 of this Agreement.

"Agilent Group Federal Income Tax Liability" means, with respect to any taxable period, the Agilent Group's liability for Federal Income Taxes as determined under Section 3.2 of this Agreement.

"Agilent Historic Affiliate" means any Agilent Affiliate that was a Hewlett-Packard Affiliate on or before [March 2, 1999], including the companies listed in Appendix G of this Agreement; provided, however, that any such

affiliate which was acquired by the Hewlett-Packard Group shall only be treated as an Agilent Historic Affiliate with respect to periods before such acquisition.

"Agilent VP" means the vice president of Agilent with authority over Tax matters.

"Applicable Spinoff" means each of the transactions identified in Appendix E of this Agreement, each of which is intended to qualify as a non-recognition transaction under Sections 355 and/or 368(a) of the Code.

"Audit" includes any audit, assessment of Taxes, other examination by any Tax Authority, proceeding, or appeal of such a proceeding relating to Taxes, whether administrative or judicial, including proceedings relating to competent authority determinations.

"Benefitting Party" has the meaning set forth in Section 8.3 of this Agreement.

"Carryback Period" has the meaning set forth in Section 5.5 of this Agreement.

"Code" means the Internal Revenue Code of 1986, as amended.

"Combined Group" means a group of corporations or other entities that files a Combined Return.

"Combined Return" means any Tax Return with respect to Non-Federal Taxes filed on a consolidated, combined (including nexus combination, worldwide combination, domestic combination, line of business combination or any other form of combination) or unitary basis wherein Agilent or one or more Agilent Affiliates join in the filing of such Tax Return (for any taxable period or portion thereof) with Hewlett-Packard or one or more Hewlett-Packard Affiliates.

"Consolidated Group" means an affiliated group of corporations within the meaning of Section 1504(a) of the Code that files a Consolidated Return.

"Consolidated Return" means any Tax Return with respect to Federal Income Taxes filed on a consolidated basis wherein Agilent or one or more Agilent Affiliates join in the filing of such Tax Return (for any taxable period or portion thereof) with Hewlett-Packard or one or more Hewlett-Packard Affiliates.

"Consolidated Return Year" means any taxable year for which a Consolidated Return is filed.

"Contemplated Domestic Restructuring Taxes" means the Domestic Restructuring Taxes set forth in Appendix C of this Agreement.

"Contemplated Foreign Restructuring Taxes" means the Foreign Restructuring Taxes set forth in Appendix D of this Agreement.

"Deducting Party" has the meaning set forth in Section 8.3 of this Agreement.

"Determination" has the meaning set forth in Section 10.5(a) of this Agreement.

"Disputed Item" has the meaning set forth in Section 10.1(a) of this Agreement.

"Disputing Party" has the meaning set forth in Section 10.1(a) of this Agreement.

"Distribution Date" has the meaning set forth in the Master Agreement.

"Domestic Restructuring" means the transactions undertaken by Hewlett-Packard and Agilent (and their respective affiliates) designed to separate the Agilent Business from the Hewlett-Packard Business in the United States, as defined in Section 7701(a)(9) of the Code, including the Internal Distribution, the Separation, the Cash Payment and the Public Distribution.

"Domestic Restructuring Tax" means any Tax imposed by the United States, or any political subdivision thereof, upon Hewlett-Packard (or any Hewlett-Packard Affiliate) or Agilent (or any Agilent Affiliate) directly in connection with the Domestic Restructuring, together with reasonable professional fees incurred in connection therewith.

"Estimated Tax Installment Date" means the estimated Tax installment due dates prescribed in Section 6655(c) of the Code (presently February 15, April 15, July 15 and October 15), and any other date on which an installment of estimated Taxes is required to be made.

"Federal Income Tax" means any Tax imposed under Subtitle A of the Code (including the Taxes imposed by Sections 11, 55, 59A, and 1201(a) of the Code), and any interest, additions to Tax or penalties applicable or related thereto, and any other income-based United States federal Tax which is hereinafter imposed upon corporations.

"Federal Income Tax Benefit" means, with respect to any Carryback Period, the amount determined under Section 5.5(a) of this Agreement.

"Federal Tax" means any Tax imposed or required to be withheld by any Tax Authority of the United States.

"Filing Party" has the meaning set forth in Section 2.3(c) of this Agreement.

"Final Determination" means any of (1) the final resolution of any Tax (or other matter) for a taxable period, including related interest or penalties, that, under applicable law, is not subject to further appeal, review or modification through proceedings or otherwise, including (A) by the expiration of a statute of limitations or a period for the filing of claims for refunds, amending Tax Returns, appealing from adverse determinations, or recovering any refund (including by offset), (B) by a

decision, judgment, decree, or other order by a court of competent jurisdiction, which has become final and unappealable, (C) by a closing agreement or an accepted offer in compromise under Section 7121 or 7122 of the Code, or comparable agreements under laws of other jurisdictions, (D) by execution of an Internal Revenue Service Form 870 or 870AD, or by a comparable form under the laws of other jurisdictions (excluding, however, with respect to a particular Tax Item for a particular taxable period any such form that reserves (whether by its terms or by operation of law) the right of the taxpayer to file a claim for refund and/or the right of the Tax Authority to assert a further deficiency with respect to such Tax Item for such period), or (E) by any allowance of a refund or credit, but only after the expiration of all periods during which such refund or credit may be recovered (including by way of offset), or (2) the payment of Tax by any member of the Consolidated Group or Combined Group with respect to any Tax Item disallowed or adjusted by a Tax Authority provided that the party liable for payment of such tax determines that no action should be taken to recoup such payment.

"Final Notice of Disagreement" has the meaning set forth in Section 10.3(a) of this Agreement.

"Foreign Restructuring Tax" means any Tax imposed by any Tax Authority upon Hewlett-Packard (or any Hewlett-Packard Affiliate) or Agilent (or any Agilent Affiliate) directly in connection with the Foreign Restructuring, together with reasonable professional fees incurred in connection therewith.

"Hewlett-Packard Affiliate" means any corporation or other entity

directly or indirectly controlled by Hewlett-Packard, but excluding Agilent or any Agilent Affiliate.

"Hewlett-Packard Business" means any business of Hewlett-Packard other than the Agilent Business.

"Hewlett-Packard Group" means the affiliated group of corporations as defined in Section 1504(a) of the Code, or similar group of entities as defined under corresponding provisions of the laws of other jurisdictions, of which Hewlett-Packard is the common parent corporation, and any corporation or other entity which may be, may have been or may become a member of such group from time to time, but excluding any member of the Agilent Group.

"Hewlett-Packard VP" means the vice president of Hewlett-Packard with authority over Tax matters.

"Income Taxes" means (1) any Tax based upon, measured by, or calculated with respect to (A) net income or profits (including any capital gains Tax, minimum Tax and any Tax on items of Tax preference, but not including sales, use,

real or personal property, gross or net receipts, transfer or similar Taxes) or (B) multiple bases if one or more of the bases upon which such Tax may be based, measured by, or calculated with respect to, is described in clause (A) above, or (2) any U.S. state or local franchise Tax.

"Indemnifying Party" has the meaning set forth in Section 6.1(d) of this Agreement.

"Indemnitee" has the meaning set forth in Section 6.1(d) of this Agreement.

"Initial Notice of Disagreement" has the meaning set forth in Section 10.1(b) of this Agreement.

"Initial Private Letter Ruling" means the first private letter ruling issued by the Service to Hewlett-Packard in connection with the Spinoff.

"Interest Accrual Period" has the meaning set forth in Section 6.4 of this Agreement.

"Interim Period" means any taxable period that begins on or after the Separation Date but before the Distribution Date.

"Japan Restructuring Tax" has the meaning set forth in Section 5.9(a) of this Agreement.

"Non-Disputing Party" has the meaning set forth in Section 10.1(b) of this Agreement.

"Non-Federal Combined Tax" means any Non-Federal Tax with respect to which a Combined Return is filed or is required to be filed.

"Non-Federal Separate Tax" means any Non-Federal Tax other than a Non-Federal Combined Tax.

"Non-Filing Party" has the meaning set forth in Section 2.4(a) of this Agreement.

"Payment Period" has the meaning set forth in Section 6.4 of this Agreement.

"Post-Distribution Period" means a taxable period beginning on or after the Distribution Date.

"Pre-Separation Period" means a taxable period beginning before the Separation Date.

"Pre-Spinoff Period" means any Pre-Separation Period and/or Interim Period.

"Privilege" means any privilege that may be asserted under applicable law including, any privilege arising under or relating to the attorney-client relationship (including the attorney-client and work product privileges), the accountant-client privilege, and any privilege relating to internal evaluation processes.

"Pro Forma Agilent Group Combined Return" means a pro forma Non-Federal Combined Tax Return or other schedule prepared pursuant to Section 3.3 of this Agreement.

"Pro Forma Agilent Group Consolidated Return" means a pro forma consolidated Federal Income Tax Return or other schedule prepared pursuant to Section 3.2 of this Agreement.

"Redetermination Amount" means, with respect to any Tax for any taxable period, the amount determined under Section 4.7 of this Agreement.

"Restriction Period" means the period beginning on the date hereof and ending thirty (30) months after the Distribution Date.

"Restructuring Tax" means a Domestic Restructuring Tax or a Foreign Restructuring Tax, in each case including both Contemplated and Additional Restructuring Taxes.

"Ruling Documents" means (1) the request for a ruling under Section 355 and various other Sections of the Code, filed with the Service in connection with the Spinoff, together with any supplemental filings or ruling requests or other materials subsequently submitted on behalf of Hewlett-Packard, its subsidiaries and shareholders to the Service, the appendices and exhibits thereto, and any rulings issued by the Service to Hewlett-Packard (or any Hewlett-Packard Affiliate) in connection with the Spinoff or (2) any similar filings submitted to, or rulings issued by, any other Tax Authority in connection with the Spinoff.

"Separate Return" means any Tax Return with respect to Non-Federal Separate Taxes filed by Hewlett-Packard, Agilent, or any of their respective affiliates.

"Separation Date" has the meaning set forth in the Master Agreement.

"Service" means the Internal Revenue Service.

"Spinoff" means the separation of the Agilent Business from the Hewlett-Packard Business, and the Public Distribution.

"Supplemental Ruling" means (1) any ruling issued by the Service in connection with the Spinoff other than the Initial Private Letter Ruling or (2) any similar ruling issued by any other Tax Authority addressing the application of a provision of the laws of another jurisdiction to the Spinoff.

"Supplemental Ruling Documents" has the meaning set forth in Section 5.4(b)(i) of this Agreement.

"Tax" includes any charges, fees, levies, imposts, duties, or other assessments of a similar nature, including income, alternative or add-on minimum, gross receipts, profits, lease, service, service use, wage, wage withholding, employment, workers compensation, business occupation, occupation, premiums, environmental, estimated, excise, employment, sales, use, transfer, license, payroll, franchise, severance, stamp, occupation, windfall profits, withholding, social security, unemployment, disability, ad valorem, estimated, highway use, commercial rent, capital stock, paid up capital, recording,

registration, property, real property gains, value added, business license, custom duties, or other tax or governmental fee of any kind whatsoever, imposed or required to be withheld by any Tax Authority including any interest, additions to tax, or penalties applicable or related thereto.

"Tax Arbiter" means a nationally recognized tax attorney or tax accountant that is a member of a nationally recognized law firm or accounting firm which firm is independent of both parties.

"Tax Asset" means any Tax Item that has accrued for Tax purposes, but has not been used during a taxable period, and that could reduce a Tax in another

taxable period, including a net operating loss, net capital loss, investment tax credit, foreign tax credit, charitable deduction or credit related to alternative minimum tax.

"Tax Authority" means any governmental authority or any subdivision, agency, commission or authority thereof or any quasi-governmental or private body having jurisdiction over the assessment, determination, collection or imposition of any Tax (including the Service).

"Tax Benefit" means a reduction in the Tax liability of a taxpayer (or of the affiliated group of which it is a member) for any taxable period. Except as otherwise provided in this Agreement, a Tax Benefit shall be deemed to have been realized or received from a Tax Item in a taxable period only if and to the extent that the Tax liability of the taxpayer (or of the affiliated group of which it is a member) for such period, after taking into account the effect of the Tax Item on the Tax liability of such taxpayer in all prior periods, is less than it would have been if such Tax liability were determined without regard to such tax item.

"Tax Detriment" means an increase in the Tax liability of a taxpayer (or of the affiliated group of which it is a member) for any taxable period. Except as otherwise provided in this Agreement, a Tax Detriment shall be deemed to have been realized or received from a Tax Item in a taxable period only if and to the extent that the Tax liability of the taxpayer (or of the affiliated group of which it is a member) for such period, after taking into account the effect of the Tax Item on the Tax liability of such taxpayer in all prior periods, is more than it would have been if such Tax liability were determined without regard to such tax item.

"Tax Item" means any item of income, gain, loss, deduction or credit, or other attribute that may have the effect of increasing or decreasing any Tax.

"Tax Law" means any federal, state, local or foreign law with respect to Taxes, including the Code and Treasury Regulations.

"Tax Return" means any return, report, certificate, form or similar statement or document (including, any related or supporting information or schedule attached thereto and any information return, amended tax return, claim for refund or declaration of estimated tax) required to be supplied to, or filed with, a Tax Authority in connection with the determination, assessment or collection of any Tax or the administration of any laws, regulations or administrative requirements relating to any Tax.

"Treasury Regulations" means the final, temporary and proposed income tax regulations promulgated under the Code, as such regulations may be amended from time to time (including corresponding provisions of succeeding regulations).

1.2 Construction Principles. As used in this Agreement, words in any -----

gender shall be deemed to include all other genders, the singular shall be deemed to include the plural and vice versa, and the captions and section

headings are inserted for convenience of reference only and are not intended to have any significance for the interpretation of, or construction of, the provisions of this Agreement.

Section 2. Preparation and Filing of Tax Returns

2.1 In General.

(a) Hewlett-Packard shall have the responsibility for the preparation and filing of (1) all Tax Returns with respect to Hewlett-Packard, any Hewlett-Packard Affiliate, Agilent and/or any Agilent Affiliate (other than returns required to be filed after October 31, 1999 of an Agilent Historic Affiliate) for any Pre-Separation Period and (2) all Consolidated Returns and all Combined Returns for any Interim Period.

(b) Except as provided in Section 2.1(a) of this Agreement, Agilent shall have the responsibility for the preparation and filing of all Tax Returns for (1) Agilent and any Agilent Affiliate which are required to be filed for any Interim Period and any Post-Distribution Period and (2) any Agilent Historic Affiliate which are required to be filed after October 31, 1999 for any Pre-Separation Period.

2.2 Provision of Tax Return Information.

(a) Agilent shall provide Hewlett-Packard all documents and information, and make available employees and officers of Agilent as Hewlett-Packard reasonably requests, on a mutually convenient basis during normal business hours, to aid Hewlett-Packard in preparing any Tax Return described in Section 2.1(a) of this Agreement to the extent that such Tax Return relates to the business, assets or activities that are transferred to Agilent (or any Agilent Affiliate), any Pro Forma Agilent Group Consolidated Returns described in Section 4.6(a) of this Agreement, and any Pro Forma Agilent Group Combined Returns described in Section 4.6(b) of this Agreement, or to contest any Audit of any such Tax Return. Without limiting the foregoing, in this regard, Agilent agrees to provide (1) the

information set forth in Appendix A to this Agreement, on or before the dates set forth therein, with respect to Consolidated Returns, and (2) the information set forth in Appendix B to this Agreement, on or before the dates set forth therein, with respect to Combined Returns.

(b) In the case of any Tax Return for a Pre-Spinoff Period described in Section 2.1(a) of this Agreement, Hewlett-Packard shall provide employees of Agilent responsible for preparing its Tax Returns with access to each such Tax Return, and will provide Agilent with a copy of that portion of each such Tax Return to the extent it relates to Agilent or any Agilent Affiliate, together with all related Tax accounting work papers, not later than five (5) days after the receipt of a written request therefor. In addition, Hewlett-Packard will provide employees of Agilent responsible for preparing its Tax Returns with access to any private letter rulings, together with any requests therefor and related documents, issued to Hewlett-Packard prior to the Distribution Date, and will provide Agilent with a copy of such rulings or documents to the extent that the issues discussed therein are relevant to Agilent or an Agilent Affiliate, not later than five (5) days after the receipt of a written request therefor.

(c) After the date of this Agreement, Hewlett-Packard shall afford Agilent access to employees and officers of Hewlett-Packard as Agilent reasonably requests, on a mutually convenient basis during normal business hours to aid Agilent in preparing any Tax Return described in Section 2.1(b) of this Agreement or to contest any Audit of any such Tax Return.

(d) Notwithstanding any other provision of this Agreement, no member of the Hewlett-Packard Group shall be required to provide Agilent or any Agilent Affiliate access to or copies of (1) any information that relates to Hewlett-Packard or any Hewlett-Packard Affiliate and not to the business or assets of

Agilent or any Agilent Affiliate, (2) any information as to which any member of the Hewlett-Packard Group is entitled to assert the protection of any Privilege, or (3) any information as to which any member of the Hewlett-Packard Group is subject to an obligation with a third-party to maintain the confidentiality of such information. Hewlett-Packard shall use reasonable efforts to separate any such information from any other information to which Agilent is entitled to under this Agreement. To the extent that Hewlett-Packard redacts or otherwise withholds any information pursuant to this Section 2.2(d), Hewlett-Packard shall provide Agilent with an index of such information.

(e) To the extent that Agilent acquires Tax Return software from Hewlett-Packard, any information that relates solely to Hewlett-Packard (and not to the business or assets of Agilent) that is included in such software shall be deleted from such software as soon as practicable (unless such

removal would adversely affect the Agilent information included in such software) and Agilent shall inform Hewlett-Packard of the deletions that are made.

2.3 Manner of Filing Tax Returns.

(a) All Tax Returns filed after the date of this Agreement by Hewlett-Packard, any Hewlett-Packard Affiliate, Agilent and/or any Agilent Affiliate shall be (1) prepared in a manner that is consistent with (A) the Ruling Documents and (B) Sections 5.6 and 5.8 of this Agreement, and (2) filed on a timely basis (including extensions) by the party responsible for such filing under Section 2.1 of this Agreement.

(b) Hewlett-Packard and Agilent, for itself and the Agilent Affiliates, agree to file all Tax Returns for any Pre-Spinoff Period, and to take all other actions in a manner consistent with the position that Agilent and the Agilent Affiliates are part of any Consolidated Group and any Combined Group for all days through and including the Distribution Date.

(c) Except as otherwise provided in this Section 2.3 or Sections 2.4 and 7.6 of this Agreement, the party that is required to file a return under Section 2.1 of this Agreement (the "Filing Party") shall have the exclusive right to determine (1) the manner in which such Tax Return shall be prepared and filed, including the elections, methods of accounting, positions, conventions and principles of taxation to be used and the manner in which any Tax Item shall be reported, (2) whether any extensions may be requested, (3) the elections that will be made in such Tax Return, (4) whether any amended Tax Returns shall be filed, (5) whether any claims for refund shall be made, (6) whether any refunds shall be paid by way of refund or credited against any liability for the related Tax, and (7) whether to retain outside specialists to prepare such Tax Return, whom to retain for such purpose and the scope of any such retainer.

(d) In the event that a Tax Item affects a Tax Return described in Section 2.1(a) of this Agreement and also affects a Tax Return described in Section 2.1(b) of this Agreement that is filed after the date of this Agreement, Agilent or the Agilent Affiliate preparing, or causing the preparation of, such Tax Return under Section 2.1(b) of this Agreement shall conform the treatment of such Tax Item in such Tax Return described in Section 2.1(b) of this Agreement to the treatment of such Tax Item in the applicable Tax Return described in Section 2.1(a) of this Agreement.

(e) Any Tax Return described in (1) Section 2.1(a) of this Agreement (but only with respect to Tax Items of Agilent or an Agilent Affiliate) or (2) Section 2.1(b) of this Agreement, in either case which Tax Return is filed after the date of this Agreement, shall be prepared on a basis consistent with the elections, methods of accounting, positions, conventions and principles of taxation and the manner in which any Tax Item or other information is reported as reflected on the most recently filed prior Tax Returns involving similar matters. The preceding sentence shall not apply (1) to the extent otherwise required by Section 2.3(a)(1) of this Agreement, (2) if Agilent

obtains Hewlett-Packard's prior written consent (which consent shall not be unreasonably withheld), or (3) if there is a change in controlling law.

(f) Any Tax Return filed by Hewlett-Packard or Agilent with respect to any Pre-Spinoff Period will be filed in conformance with Hewlett-Packard's existing intercompany pricing guidelines and rulings, except to the extent that Agilent enters into an advanced pricing agreement with the Service that provides for different intercompany pricing guidelines and any such agreement does not result in any Tax Detriment to Hewlett-Packard with respect to the Interim Period.

2.4 Review of Tax Returns.

(a) The Filing Party shall provide the other party (the "Non-Filing Party") a draft copy of any Tax Return that the Filing Party has prepared, together with all related Tax and accounting work papers, not later than _____ (__) days before the due date, including extensions, for filing such Tax Return with the applicable Tax Authority; provided, however, that Hewlett - Packard may redact portions of any such Tax Return or related work papers to the extent that the information set forth therein does not reasonably relate to Agilent or any Agilent Affiliate. To the extent that Hewlett-Packard makes any such redactions, Hewlett-Packard will provide an index of such redactions to Agilent.

(b) The Filing Party shall accept any request by the Non-Filing Party, that is made not later than one hundred five (105) days before the due date, including extensions, for filing the applicable Tax Return, to incorporate any election, method of accounting or other position, convention or principle of taxation on such Tax Return to the extent that it relates to a Tax Item with respect to the Non-Filing Party or any affiliate thereof, or the activities or business of either,

provided that, if reasonably requested by the Filing Party, and if the amount of Taxes to which such request relates for which the Non-Filing Party could be liable under this Agreement does not exceed one million dollars (\$1,000,000.00), the Non-Filing Party produces a written opinion of nationally recognized tax counsel that there is substantial authority (within the meaning of Section 6662 of the Code) in support of such election, method of accounting or other position, convention or principle of taxation.

(c) Hewlett-Packard shall make its employees reasonably available, to the extent consistent with Hewlett-Packard's process for preparing a Consolidated Return or a Combined Return, at mutually convenient times during normal business hours to discuss information pertinent to Agilent or any Agilent Affiliate contained in such Consolidated Return or Combined Return prior to the date on which Hewlett-Packard intends to file such Consolidated Return or Combined Return.

2.5 Agent. Agilent hereby irrevocably designates, and agrees to

cause each Agilent Affiliate to so designate, Hewlett-Packard as its sole and exclusive agent and attorney-in-fact to take such action (including execution of documents) as Hewlett-Packard, in its sole discretion, may deem appropriate in any and all matters (including Audits) relating to any Tax Return described in Section 2.1(a) of this Agreement; provided, however, that Hewlett-Packard shall

not exercise its rights as agent and attorney-in-fact in any manner that is inconsistent with the rights granted to Agilent under this Agreement, and nothing in this Section 2.5 shall limit the rights granted to Agilent under this Agreement.

Section 3. Tax Sharing

3.1 In General.

(a) Except as otherwise provided in this Agreement, Hewlett-Packard shall be responsible for, and shall indemnify and hold harmless Agilent against, all Taxes that relate to Hewlett-Packard, any Hewlett-Packard Affiliate, Agilent or any Agilent Affiliate for all Pre-Separation Periods other than (1) Restructuring Taxes or (2) Taxes of an Agilent Historic Affiliate for periods before its acquisition by the Hewlett-Packard Group.

(b) For each Interim Period, Agilent shall be liable for an amount equal to the sum of the Agilent Group Federal Income Tax Liability and the

Agilent Group Combined Tax Liability for such taxable period.

3.2 Agilent Group Federal Income Tax Liability. No later than

_____ (__) days after the filing of the Consolidated Return for the Interim Period, Hewlett-Packard and Agilent shall prepare a Pro Forma Agilent Group Consolidated Return. The Agilent Group Federal Income Tax Liability shall be the Agilent Group's liability for Federal Income Taxes for such taxable period, as determined on such Pro Forma Agilent Group Consolidated Return prepared:

(a) on the basis of the Consolidated Return for such period, determined by including only Tax Items of members of the Agilent Group which are included in the Consolidated Return and by allocating Tax Assets to the Agilent Group to the extent that the Tax Asset was created by a member of the Agilent Group and such Tax Asset was actually utilized on the relevant Consolidated Return; and

(b) applying the highest marginal corporate Tax rate in effect for such taxable period (or any portion thereof).

3.3 Agilent Group Combined Tax Liability. With respect to any

Interim Period, the Agilent Group Combined Tax Liability shall be the sum for such taxable period of the Agilent Group's liability for each Non-Federal Combined Tax, as determined on a Pro Forma Agilent Group Combined Return prepared in a manner consistent with the principles and procedures set forth in Section 3.2 of this Agreement.

3.4 Cooperation. Hewlett-Packard shall make its employees available

to Agilent, at mutually convenient times during normal business hours, as Agilent reasonably requests, to explain each Pro Forma Agilent Group Consolidated Return prepared after the date of this Agreement pursuant to Section 3.2 of this Agreement and each Pro Forma Agilent Group Combined Return prepared after the date of this Agreement pursuant to Section 3.3 of this Agreement. Hewlett-Packard shall accept all reasonable suggestions made by Agilent to incorporate any election, method of accounting or other position, convention or principle of taxation on such Pro Forma Agilent Group Consolidated Returns and Pro Forma Agilent Group Combined Returns, provided that, if

requested by Hewlett-Packard, Agilent produces a written opinion of nationally recognized tax counsel that there is substantial authority (within the meaning of Section 6662 of the Code) in support of such election, method of accounting or other position, convention or principle of taxation.

Section 4. Payment of Taxes and Tax Sharing Amounts

4.1 Federal Income Taxes. Hewlett-Packard shall pay (or cause to be

paid) to the Service all Federal Income Taxes, if any, of any Consolidated Group due and payable for all Pre-Spinoff Periods.

4.2 Non-Federal Combined Taxes. Hewlett-Packard shall pay (or cause

to be paid) to the appropriate Tax Authorities all Non-Federal Combined Taxes, if any, of any Combined Group due and payable for all Pre-Spinoff Periods.

4.3 Non-Federal Separate Taxes. Agilent shall pay (or cause to be

paid) to the appropriate Tax Authorities all Non-Federal Separate Taxes, if any, that relate to the Agilent Group and any Agilent Affiliate, and Hewlett-Packard shall pay (or cause to be paid) to the appropriate Tax Authorities all Non-Federal Separate Taxes, if any, that relate to the Hewlett-Packard Group or any Hewlett-Packard Affiliate.

4.4 Other Federal Taxes. The parties shall each pay (or cause to be

paid) to the appropriate Tax Authorities all of their respective Federal Taxes (excluding Federal Income Taxes for Pre-Spinoff Periods, which are governed by Section 4.1 of this Agreement), if any.

4.5 Tax Sharing Installment Payments.

(a) Federal Income Taxes. Not later than _____ (__) business

days prior to each Estimated Tax Installment Date with respect to Federal Income Taxes for any Interim Period, Hewlett-Packard shall notify Agilent of its determination, under the principles of Section 6655 of the Code, of the estimated amount of the related installment of the Agilent Group Federal Income Tax Liability. Agilent shall pay to Hewlett-Packard not later than such Estimated Tax Installment Date the amount thus determined.

(b) Non-Federal Combined Taxes. Not later than _____ (__)

business days prior to each Estimated Tax Installment Date with respect to Non-Federal Combined Taxes for any Interim Period, Hewlett-Packard shall notify Agilent of its determination of the estimated amount of the related installment of the Agilent Group Combined Tax Liability. Agilent shall pay to Hewlett-Packard not later than such Estimated Tax Installment Date the amount thus determined.

4.6 Tax Sharing True-up Payments.

(a) Federal Income Taxes. Not later than _____ (__) business

days after a Consolidated Return is filed with respect to any Interim Period, Hewlett-Packard shall deliver to Agilent a Pro Forma Agilent Group Consolidated Return reflecting the Agilent Group Federal Income Tax Liability. Not later than _____ (__) business days after the date of delivery, Agilent shall pay to Hewlett-Packard, or Hewlett-Packard shall pay to Agilent, as appropriate, an amount equal to the difference, if any, between the Agilent Group Federal Income Tax Liability for such period and the aggregate amount paid by Agilent with respect to such period under Section 4.5(a) of this Agreement.

(b) Non-Federal Combined Taxes. Not later than _____ (__) days

after a Combined Return is filed with respect to any Interim Period, Hewlett-Packard shall deliver to Agilent a schedule based upon the Pro Forma Agilent Group Combined Returns for such period reflecting the Agilent Group Combined Tax Liability for such period. Not later than _____ (__) business days after the date of delivery, Agilent shall pay to Hewlett-Packard, or Hewlett-Packard shall pay to Agilent, as appropriate, an amount equal to the difference, if any, between the Agilent Group Combined Tax Liability for such period and the amount paid by Agilent with respect to such period under Section 4.5(b) of this Agreement.

4.7 Redetermination Amounts.

(a) For any Interim Period, in the event of a redetermination of any Tax Item of any member of a Consolidated Group or Combined Group (other than Tax Items relating to Additional Restructuring Taxes, which are the subject to Section 5 of this Agreement), as a result of a refund of Taxes paid, a Final Determination or any settlement or compromise with any Tax Authority, Hewlett-Packard and Agilent shall prepare jointly, in accordance with the principles and procedures set forth in Section 3 of this Agreement, revised Pro Forma Agilent Consolidated Returns and/or revised Pro Forma Agilent Combined Returns, as appropriate, to reflect the redetermination of such Tax Item as a result of such refund, Final Determination, settlement or compromise. Agilent shall pay to Hewlett-Packard, or Hewlett-Packard shall pay to Agilent, as appropriate, an amount equal to the difference, if any, between the Tax liability reflected on such revised pro forma tax returns and the Tax liability for such period as originally computed pursuant to Section 3 of this Agreement.

(b) To the extent that Agilent is compensated for the use of a Tax Asset on a Consolidated Return or Combined Return, and such use

permanently prevents Hewlett-Packard from using a Tax Asset in a subsequent period, then Agilent shall reimburse Hewlett-Packard for such amount.

(c) To the extent that Hewlett-Packard receives a refund with respect to Taxes paid on a Separate Return of an Agilent Historic Affiliate for any Pre-Separation Period, Hewlett-Packard shall pay the amount of such refund to Agilent.

Section 5. Restructuring Taxes and Deconsolidation

5.1 Liability for Restructuring Taxes.

(a) In General. Except as otherwise provided in this

Agreement, all Contemplated Domestic Restructuring Taxes and all Contemplated Foreign Restructuring Taxes shall be the obligation of the entity that is liable for such Taxes under the Tax Law.

(b) Increases in Restructuring Taxes. In the event that

Hewlett-Packard, any Hewlett-Packard Affiliate, Agilent, or any Agilent Affiliate incurs any Domestic Restructuring Taxes or Foreign Restructuring Taxes other than Contemplated Domestic Restructuring Taxes or Contemplated Foreign Restructuring Taxes, the amount of such additional Taxes (the "Additional Restructuring Taxes") shall be allocated between Hewlett-Packard and Agilent as follows:

(i) Liability for Breach of Representation. To the

extent that any Additional Restructuring Taxes are primarily attributable to a breach of representation made by Agilent pursuant to Section 5.2 of this Agreement, then one hundred percent (100%) of the amount of such Additional Restructuring Taxes shall be allocated to Agilent. To the extent that any Additional Restructuring Taxes are primarily attributable to a breach of representation made by Hewlett-Packard pursuant to Section 5.3 of this Agreement, then one hundred percent (100%) of the amount of such Additional Restructuring Taxes shall be allocated to Hewlett-Packard.

(ii) Other Liability. Except as provided in Section

5.1(b) (i), any Additional Restructuring Taxes shall be allocated eighty-two percent (82%) to Hewlett-Packard and eighteen percent (18%) to Agilent.

5.2 Agilent Representations and Covenants. Agilent, for itself

and the Agilent Affiliates, hereby represents, warrants and covenants that:

(a) Agilent has reviewed the information and representations

made in the Ruling Documents (and any Supplemental Ruling

Documents) and, to its knowledge, all of such information or representations that relate to Agilent or any Agilent Affiliate, or the business or operations of either, including the representations set forth in Appendix F to this Agreement, are true, correct and complete.

(b) Agilent will not, and will cause each Agilent Affiliate not to, take any action, or fail or omit to take any action, that would cause any of the information or representations made in the Ruling Documents or Supplemental Ruling Documents that relate to Agilent or any Agilent Affiliate, or the business or operations of either, including the representations set forth in Appendix F to this Agreement, to be untrue, regardless of whether such information or representations were included in the Initial Private Letter Ruling (or any Supplemental Ruling).

(c) Neither Agilent nor any Agilent Affiliate will, directly or indirectly, during the Restriction Period:

(i) enter into, or otherwise be a party to, any transaction or arrangement (including, without limitation, stock issuances, stock acquisitions, and transactions involving the stock or substantially all of the assets of Agilent or any Agilent Affiliate) pursuant to which one or more persons acquire stock of Agilent or any Agilent Affiliate representing a "50-percent or greater interest" within the meaning of Section 355(d)(4) of the Code that would cause Section 355(e) of the Code to apply to any Applicable Spinoff; or

(ii) take or fail to take any other action (including, without limitation, any cessation, transfer to affiliates or disposition of its active trade or business, and certain reacquisitions of its stock and payments of extraordinary dividends to its shareholders) that would cause any Applicable Spinoff to fail to qualify for nonrecognition of gain or loss under Section 355 of the Code.

(d) During the Restriction Period:

(i) neither Agilent nor any Agilent Affiliate will, directly or indirectly, in a single transaction or in a series of transactions specified below, which, when aggregated with all other such specified transactions undertaken during the Restriction Period, would involve the acquisition (determined under the principles of Section 355 of the Code) by one or more persons of more than thirty-five percent (35%) of the stock of Agilent or any Agilent Affiliate (including stock issued by Agilent in the IPO):

(1) issue stock or other equity interests of Agilent or any Agilent Affiliate (including, without limitation, options, rights, warrants or securities exercisable for, or convertible into stock of Agilent or any Agilent Affiliate, or any similar arrangement); or

(2) redeem, purchase or otherwise reacquire any of its capital stock (other than through stock purchases meeting the requirements of section 4.05(1)(b) of Rev. Proc. 96-30, 1996-1 C.B. 696);

(ii) Agilent will not liquidate or merge with or into any other entity; and

(iii) no Agilent Affiliate will liquidate or merge with or into any other entity [(other than in an intragroup liquidation or merger that would not affect the qualification of an Applicable Spinoff as a reorganization under Sections 368(a) and/or 355 of the Code)];

unless (1) Hewlett-Packard consents in writing, which consent shall not be unreasonably withheld, or (2) Hewlett-Packard obtains, at Agilent's request, a Supplemental Ruling from the applicable Tax Authority that such transaction or series of transactions will not adversely affect the Tax treatment of any

Applicable Spinoff. If the Service issues guidance or Treasury Regulations are issued under Section 355(e) of the Code, the parties hereby agree to meet to review the conditions and requirements set forth in this Section 5.2(d) and to consider making appropriate revisions thereto. Not later than five (5) days prior to consummating any of the transactions described in the preceding sentence, Agilent shall provide notice of such transaction to the Agilent VP and (except as otherwise prohibited by any confidentiality agreement with a third-party) to the Hewlett-Packard VP. Nothing in this Section 5.2(d) shall limit the liability of either party to this Agreement for any Restructuring Taxes that are the responsibility of such party under this Agreement.

(e) [Need to insert representations with respect to the foreign law aspects of the Foreign Restructuring.]

(f) [Need to insert representations with respect to the state/local law aspects of the Domestic Restructuring.]

(g) Agilent recognizes that any failure by it or any Agilent Affiliate to comply with their obligations under this Section 5.2 may result in Additional Restructuring Taxes which could cause irreparable harm to Hewlett-Packard, the Hewlett-Packard Affiliates and their stockholders, and that such persons may be inadequately compensated by monetary damages for such failure. Accordingly, if (1) Agilent or any Agilent Affiliate shall fail to comply with any obligation under this Section 5.2 which would be reasonably foreseeable to result in any Additional Restructuring Taxes, and (2) Agilent shall fail to provide Hewlett-Packard with a written opinion of nationally recognized tax counsel that such failure to comply with such obligation will not result in any increase in Taxes of Hewlett-Packard or any Hewlett-Packard Affiliate, and such opinion is provided to Hewlett-Packard for its review and approval, which approval will not be unreasonably withheld, then Hewlett-Packard and each Hewlett-Packard Affiliate shall be entitled to injunctive relief in addition to all other remedies.

5.3 Hewlett-Packard Representations. Hewlett-Packard, for itself and -----
the Hewlett-Packard Affiliates, hereby represents, warrants and covenants that:

(a) Hewlett-Packard will not, and will cause each Hewlett-Packard Affiliate not to, take any action, or fail or omit to take any action, that would cause any of the information or representations made in the Ruling Documents or Supplemental Ruling Documents to be untrue, regardless of whether such information or representations were included in the Initial Private Letter Ruling (or any Supplemental Ruling).

(b) Neither Hewlett-Packard nor any Hewlett-Packard Affiliate will, directly or indirectly, during the Restriction Period:

(i) enter into, or otherwise be a party to, any transaction or arrangement (including, without limitation, stock issuances, stock acquisitions, and transactions involving the stock or substantially all of the assets of Hewlett-Packard or any Hewlett-Packard Affiliate) pursuant to which one or more persons acquire stock of Hewlett-Packard or any Hewlett-Packard Affiliate representing a "50-percent or greater interest" within the meaning of Section 355(d)(4) of the Code that would cause Section 355(e) of the Code to apply to any Applicable Spinoff; or

(ii) take or fail to take any other action (including, without limitation, any cessation, transfer to affiliates or disposition of its active trade or business, and certain reacquisitions of its stock and payments of extraordinary dividends to its shareholders) that would cause any Applicable Spinoff to fail to qualify for nonrecognition of gain or loss under Section 355 of the Code.

(c) [Need to insert representations with respect to the foreign law aspects of the Foreign Restructuring.]

(d) [Need to insert representations with respect to the state/local law aspects of the Domestic Restructuring.]

(e) Hewlett-Packard recognizes that any failure by it or any Hewlett-Packard Affiliate to comply with their obligations under this Section 5.3 may result in Additional Restructuring Taxes which could cause irreparable harm to Agilent, the Agilent Affiliates and their stockholders, and that such persons may be inadequately compensated by monetary damages for such failure. Accordingly, if (1) Hewlett-Packard or any Hewlett-Packard Affiliate shall fail to comply with any obligation under this Section 5.3 which would be reasonably foreseeable to result in any Additional Restructuring Taxes, and (2) Hewlett-Packard shall fail to provide Agilent with a written opinion of nationally recognized tax counsel that such failure to comply with such obligation will not result in any increase in Taxes of Agilent any Agilent Affiliate, and such opinion is provided to Agilent for its review and approval, which approval will not be unreasonably withheld, then Agilent and each Agilent Affiliate shall be entitled to injunctive relief in addition to all other remedies.

5.4 Private Letter Rulings.

(a) Information. Hewlett-Packard has provided Agilent with a copy

of the Initial Private Letter Ruling and copies of the Ruling Documents submitted on or prior to the date hereof, and shall provide Agilent with copies of any additional Ruling Documents prepared after the date hereof prior to the submission of such Ruling Documents to a Tax Authority.

(b) Supplemental Rulings.

(i) In General. Hewlett-Packard agrees that at the

reasonable request of Agilent, Hewlett-Packard shall cooperate with Agilent and use its reasonable best efforts to seek to obtain, as expeditiously as

possible, a Supplemental Ruling or other guidance from the Service or any other Tax Authority for the purpose of confirming (1) the continuing validity of (A) the Initial Private Letter Ruling, (B) any similar ruling issued by any Tax Authority addressing the application of a provision of the laws of another jurisdiction to the Internal Distribution or the Public Distribution and/or (C) any Supplemental Rulings issued previously, and (2) compliance on the part of Agilent or an Agilent Affiliate with its obligations under Section 5.2 of this Agreement. However, Hewlett-Packard shall not be obligated to seek a Supplemental Ruling if it reasonably believes that seeking such Supplemental Ruling would adversely affect Hewlett-Packard or any Hewlett-Packard Affiliate. Further, in no event shall Hewlett-Packard be required to file any Supplemental Ruling unless Agilent represents that (1) it has read the request for the Supplemental Ruling and any materials, appendices and exhibits submitted or filed therewith (the "Supplemental Ruling Documents") and (2) all information and representations, if any, relating to Agilent and any Agilent Affiliate contained in the Supplemental Ruling Documents are true, correct and complete in all material respects. Agilent shall reimburse Hewlett-Packard for all costs and expenses incurred by Hewlett-Packard in obtaining a Supplemental Ruling requested by Agilent. Agilent hereby agrees that only Hewlett-Packard shall apply for a Supplemental Ruling. Agilent further agrees that it shall not seek any guidance (whether written or oral) from the Service or any other Tax Authority concerning the Spinoff except as set forth in this Section 5.4(b).

(ii) Participation Rights. If Hewlett-Packard determines to

obtain a Supplemental Ruling or other guidance after the date of this Agreement: (1) Hewlett-Packard shall keep Agilent informed in a timely manner of all material actions taken or proposed to be taken by Hewlett-Packard in connection therewith; (2) Hewlett-Packard shall (A) reasonably in advance of the submission of any such Supplemental Ruling Documents, provide Agilent with a draft copy

thereof, (B) reasonably consider Agilent's comments on such draft copy, and (C) provide Agilent with a final copy; and (3) to the extent that such Supplemental Ruling relates to Agilent or any Agilent Affiliate, Hewlett-Packard shall (A) incorporate Agilent's comments on all submissions of Supplemental Ruling Documents, and (B) provide Agilent with notice reasonably in advance of, and Agilent shall have the right to attend, any meetings with the Tax Authority (subject to the approval of the Tax Authority) that relate to such Supplemental Ruling.

5.5 Carrybacks.

(a) In General. Hewlett-Packard agrees to pay to Agilent the

Federal Income Tax Benefit from the use in any Pre-Spinoff Period (the "Carryback Period") of a carryback of any Tax Asset of the Agilent Group from a Post-Distribution Period; provided, however, that if such carryback permanently

prevents Hewlett-Packard from using a Tax Asset, Agilent shall reimburse Hewlett-Packard for such payment. The Federal Income Tax Benefit of a carryback of a Tax Asset shall be considered equal to the greater of (1) the increase in the amount Hewlett-Packard would have paid Agilent or (2) the decrease in the amount Agilent would have paid Hewlett-Packard had the amount of such Tax Asset applied to the Carryback Period arisen in such Carryback Period and the provisions of Section 3 of this Agreement applied to such period. If subsequent to the payment by Hewlett-Packard to Agilent of the Federal Income Tax Benefit of a carryback of a Tax Asset of the Agilent Group, there shall be a Final Determination which results (1) in a disallowance or a reduction of the Tax Asset so carried back or (2) a reduction in the amount of such Federal Income Tax Benefit, Agilent shall repay to Hewlett-Packard any amount which would not have been payable to Agilent pursuant to this Section 5.5 had the amount of the benefit been determined in light of these events. Agilent shall indemnify Hewlett-Packard and hold it harmless from and against any interest, addition to Tax or penalty payable by any member of the Hewlett-Packard Group as a result of any such event. Nothing in this Section 5.5 shall require Hewlett-Packard to file an amended Tax Return or claim for refund of Federal Income Taxes; provided, however, that Hewlett-Packard shall use its reasonable best efforts to

use any carryback of a Tax Asset of the Agilent Group that is carried back under this Section 5.5. Nothing in this Agreement is intended to limit the ability of Agilent and the Agilent Affiliates to implement Tax planning strategies designed to reduce or eliminate any carryback of any Tax Assets of the Agilent Group from any Post-Distribution Period to any Interim Period.

(b) Net Operating Losses. Notwithstanding any other

provision of this Agreement, unless Hewlett-Packard otherwise expressly agrees in writing, Agilent hereby expressly agrees to elect (under Section 172(b)(3) of the Code and, to the extent feasible, any similar provision of any state, local or foreign Tax Law) to relinquish any right to carryback net operating losses (in which event no payment shall be due from Hewlett-Packard to Agilent in respect of such net operating losses).

5.6 Allocation of Tax Items. All Tax computations for (1) any

Interim Periods ending on the Distribution Date and (2) the immediately following taxable period of Agilent or any Agilent Affiliate, shall be made pursuant to the principles of Section 1.1502-76(b) of the Treasury Regulations or of a corresponding provision under the laws of other jurisdictions, as determined by Hewlett-Packard, taking into account all reasonable suggestions made by Agilent with respect thereto. [Discuss whether to elect to ratably allocate under 1.1502-76(b)(2)(ii).]

5.7 Continuing Covenants. Hewlett-Packard and Agilent agree (1)

not to take, or to cause their respective affiliates to take, any action reasonably expected to result in an increased Tax liability to the other, a reduction in a Tax Asset of the other or an increased liability to the other under this Agreement and (2) to take (or cause their respective affiliates to take) any action reasonably requested by the other that would reasonably be expected to result in a Tax Benefit or avoid a Tax Detriment to the other, provided that such action does not result in any additional cost not fully compensated for by the requesting party. The parties hereby acknowledge that the preceding sentence is not intended to limit, and therefore shall not apply to, the rights of the parties with respect to matters otherwise covered by this Agreement.

5.8 Allocation of Tax Assets.

(a) In General. Hewlett-Packard and Agilent shall cooperate

in determining the allocation of any Tax Assets among Hewlett-Packard, each Hewlett-Packard Affiliate, Agilent and each Agilent Affiliate that is occasioned by the Spinoff. The parties hereby agree that in the absence of controlling legal authority, Tax Assets shall be allocated to the legal entity that incurred the cost or burden associated with the creation of such Tax Asset.

(b) Earnings and Profits. Before the first anniversary of

the Public Distribution, Hewlett-Packard will advise Agilent in writing of the decrease in Hewlett-Packard earnings and profits attributable to the Public Distribution under Section 312(h) of the Code, as well as the amounts of any allocations required under Temp. Treas. Reg. (S) 7.367(b)-10T or Treas. Reg. (S) 1.1248-2 or -3, as a result of the Spinoff; provided however, that

Hewlett-Packard shall provide Agilent with estimates of such amounts (determined in accordance with past practice) prior to such anniversary as reasonably requested by Agilent.

5.9 Japan Restructuring Taxes.

(a) In General. Agilent shall be liable for the Contemplated

Restructuring Tax set forth on Appendix D to this Agreement and any Additional Restructuring Tax with respect to the sale of the Hewlett-Packard Business by Hewlett-Packard Japan to [Hewlett-Packard KK] ("Japan Restructuring Tax"). Hewlett-Packard or a Hewlett-Packard Affiliate shall provide Agilent or an Agilent Affiliate with funding as of November 1, 1999 in an amount equal to the sum of:

(i) one hundred percent (100%) of the amount of any Contemplated Japan Restructuring Tax to the extent that the parties

reasonably expect any foreign tax credits attributable thereto to be allocated to [Hewlett-Packard KK] for Federal Income Tax purposes; plus

(ii) sixty percent (60%) of the amount of the remaining Contemplated Japan Restructuring Tax.

In addition, Hewlett-Packard or a Hewlett-Packard Affiliate shall further pay Agilent (or an Agilent Affiliate designated by Agilent) eighty-two percent (82%) of any Additional Japan Restructuring Tax that is imposed with respect to such sale.

(b) Use of Foreign Tax Credits by Hewlett-Packard. To the extent

that Hewlett-Packard or a Hewlett-Packard Affiliate receives a Tax Benefit attributable to an increase in foreign tax credits (other than credits taken into account under paragraph (a) (i) of this Section 5.9) by reason of the Japan Restructuring Tax (such Tax Benefit determined by measuring the incremental

impact on Hewlett-Packard's liability solely as a result of the Japan Restructuring Tax), Hewlett-Packard shall pay Agilent forty percent (40%) of its Tax Benefit, to the extent that such credits relate to the Contemplated Japan Restructuring Tax, and eighteen percent (18%) of its Tax Benefit, to the extent that such credits relate to an Additional Japan Restructuring Tax. The preceding sentence shall apply to a Tax Benefit with respect to Hewlett-Packard's liability on the Consolidated Return for the fiscal year ending October 31, 2000 only to the extent that such Tax Benefit is not attributable to foreign tax credits treated as used on the Pro Forma Agilent Consolidated Return for such period.

(c) Use of Foreign Tax Credits by Agilent. To the extent that

Agilent receives a Tax Benefit attributable to an increase in foreign tax credits by reason of the Japan Restructuring Tax (such Tax Benefit determined by measuring the incremental impact on Agilent's liability solely as a result of the credit for Japan Restructuring Tax), Agilent shall pay Hewlett-Packard sixty percent (60%) of its Tax Benefit, to the extent that such credits relate to the Contemplated Japan Restructuring Tax, and eighty-two percent (82%) of its Tax Benefit, to the extent that such credits relate to an Additional Japan Restructuring Tax. For purposes of the preceding sentence Agilent shall be treated as receiving a Tax Benefit for the Interim Period only to the extent any credits are treated as used on the Pro Forma Agilent Consolidated Return for such period.

(d) Subsequent Adjustments. If taking into account subsequent

events (including, for example, carrybacks of other foreign tax credits

and Final Determinations that affect foreign tax credit computations) one of the parties determines that it did not receive any portion of the Tax Benefit for which it previously had made a payment to the other party pursuant to paragraph (b) or (c) of this Section 5.9, Agilent shall pay Hewlett-Packard, or Hewlett-Packard shall pay Agilent, as appropriate, an amount such that the net payment (if any) equals the portion of the net Tax Benefit (taking into account such subsequent events) specified in paragraph (b) or (c) of this Section 5.9.

5.1 Japan Operating Taxes.

(a) Fiscal Year 1999 and Prior Periods. If Agilent or any

Agilent Affiliate receives any Tax Benefit attributable to Japanese income Taxes accrued by Hewlett-Packard Japan with respect to its fiscal year 1999 or any prior period, Agilent shall pay the amount of such Tax Benefit to Hewlett-Packard; for this purpose Agilent's Tax Benefit shall be determined by measuring the incremental impact on Agilent's liability prior to taking into account the impact of any Japan Restructuring Tax, but after the impact of all other Tax Items to Agilent.

(b) Fiscal Year 2000. If Hewlett-Packard or any Hewlett-Packard

Affiliate receives any Tax Benefit attributable to Japanese income Taxes accrued by Hewlett-Packard Japan with respect to its fiscal year 2000 (and such Tax Benefit is not otherwise reimbursed under Section 5 of this Agreement), Hewlett-Packard shall pay the amount of such Tax Benefit to Agilent; for this purpose Hewlett-Packard's Tax Benefit shall be determined by measuring the incremental impact on Hewlett-Packard's liability prior to taking into account the impact, of any Japan Restructuring Tax, but after the impact of all other Tax Items to Hewlett-Packard.

(c) Subsequent Adjustments. If taking into account subsequent

events (including, for example, carrybacks of other foreign tax credits and Final Determinations that affect foreign tax credit computations) one of the parties determines that it did not receive any portion of the Tax Benefit for which it previously had made a payment to the other party pursuant to paragraph

(a) or (b) of this Section 5.10, Agilent shall pay Hewlett-Packard, or Hewlett-Packard shall pay Agilent, as appropriate, an amount such that the net payment (if any) equals the portion of the net Tax Benefit (taking into account such subsequent events) specified in paragraph (a) or (b) of this Section 5.10.

Section 6. Additional Obligations

6.1 Indemnification.

(a) In General. Hewlett-Packard and each Hewlett-Packard

Affiliate shall jointly and severally indemnify Agilent, each Agilent Affiliate and their respective directors, officers and employees, and hold them harmless from and against any and all Taxes for which Hewlett-Packard or any Hewlett-Packard Affiliate is liable under this Agreement and any loss, cost, damage or expense, including reasonable attorneys' fees and costs, that is attributable to, or results from the failure of Hewlett-Packard, any Hewlett-Packard Affiliate or any director, officer or employee to make any payment required to be made under this Agreement. Agilent and each Agilent Affiliate shall jointly and severally indemnify Hewlett-Packard, each Hewlett-Packard Affiliate and their respective directors, officers and employees, and hold them harmless from and against any and all Taxes for which Agilent or any Agilent Affiliate is liable under this Agreement and any loss, cost, damage or expense, including reasonable attorneys' fees and costs, that is attributable to, or results from, the failure of Agilent, any Agilent Affiliate or any director, officer or employee to make any payment required to be made under this Agreement.

(b) Inaccurate or Incomplete Information. Hewlett-Packard and

each Hewlett-Packard Affiliate shall jointly and severally indemnify Agilent, each Agilent Affiliate and their respective directors, officers and employees, and hold them harmless from and against any cost, fine, penalty, or other expense of any kind attributable to the negligence of Hewlett-Packard or any Hewlett-Packard Affiliate in supplying Agilent or any Agilent Affiliate with inaccurate or incomplete information, in connection with the preparation of any Tax Return. Agilent and each Agilent Affiliate shall jointly and severally indemnify Hewlett-Packard, each Hewlett-Packard Affiliate and their respective directors, officers and employees, and hold them harmless from and against any cost, fine, penalty, or other expenses of any kind attributable to the negligence of Agilent or any Agilent Affiliate in supplying Hewlett-Packard or any Hewlett-Packard Affiliate with inaccurate or incomplete information, in connection with the preparation of any Tax Return.

(c) No Indemnification for Tax Attributes. Nothing in this

Agreement shall be construed as a guarantee of the existence or amount of any loss, credit, carryforward, basis or other Tax attribute, whether past, present or future, of Hewlett-Packard, any Hewlett-Packard Affiliate, Agilent or any Agilent Affiliate.

(d) Payments. Except as otherwise provided under this Agreement,

to the extent that one party (the "Indemnifying Party") has an indemnification obligation to the other party (the "Indemnatee") pursuant to this

Agreement, the Indemnatee shall provide the Indemnifying Party with its calculation of the amount of such indemnification payment. Such calculation shall provide sufficient detail to permit the Indemnifying Party to reasonably understand the calculations. All indemnification payments shall be made to the Indemnatee or to the appropriate Tax Authority as specified by the Indemnatee within the prescribed for payment in this agreement, or if no period is prescribed, within thirty (30) days after delivery by the Indemnatee to the Indemnifying Party of written notice of a payment by or the incurrence of such an amount based on a Final Determination, together with a computation of the amounts due.

(e) Electronic Payments. Any payment required under this

Agreement in an amount in excess of one million dollars (\$1,000,000.00) shall be made by electronic funds transfer of immediately available funds.

6.2 Treatment of Payments. Unless otherwise required by any Final

Determination, the parties agree to treat any payments (other than payments of interest pursuant to Sections 5.5 or 6.4 of this Agreement and payments of After Tax Amounts pursuant to Section 6.3 of this Agreement) pursuant to this Agreement as relating back to the last taxable period beginning on or before the Distribution Date and, accordingly, as not includible in income.

6.3 After Tax Amounts. If pursuant to a Final Determination it is

determined that the receipt or accrual of any payment made under this Agreement (other than payments of interest pursuant to Sections 5.5 or 6.4 of this Agreement) is subject to any Tax, the party making such payment shall be liable for (a) the After Tax Amount with respect to such payment and (b) interest at the rate described in Section 6.4 of this Agreement on the amount of such Tax from the date such Tax accrues through the date of payment of such After Tax Amount. A party making a demand for a payment pursuant to this Agreement and for a payment of an After Tax Amount with respect to such payment shall separately specify and compute such After Tax Amount. However, a party may choose not to specify an After Tax Amount in a demand for payment pursuant to this Agreement without thereby being deemed to have waived its right subsequently to demand an After Tax Amount with respect to such payment.

6.4 Interest. Payments pursuant to this Agreement that are not made

within the period prescribed in this Agreement (the "Payment Period") shall bear interest for the period from and including the date immediately following the last date of the Payment Period through and including the date of payment (the

"Interest Accrual Period") at a per annum rate equal to the prime rate as published in The Wall Street Journal on the date of determination, plus two percent (2%). Such interest will be payable at the same time as the payment to which it relates and shall be calculated on the basis of a year of 365 days and the actual number of days for which due.

6.5 Tax Records. The parties hereby agree to retain and provide

on demand books, records, documentation and other information relating to any Tax Return until [the later of (1) the expiration of the applicable statute of limitations (giving effect to any extension, waiver or mitigation thereof) and (2) in the event any claim is made under this Agreement for which such information is relevant, until a Final Determination with respect to such claim] [need to compare to general records retention agreement].

Section 7. Audits

7.1 In General.

(a) Except as otherwise provided in this Agreement, the Filing Party shall have the right to control, contest, and represent the interests of Hewlett-Packard, any Hewlett-Packard Affiliate, Agilent or any Agilent Affiliate in any Audit relating to any Tax Return that the Filing Party is responsible for filing under Section 2.1 of this Agreement and to resolve, settle or agree to any deficiency, claim or adjustment proposed, asserted or assessed in connection with or as a result of any such Audit. The Filing Party's rights shall extend to any matter pertaining to the management and control of an Audit, including execution of waivers, choice of forum, scheduling of conferences and the resolution of any Tax Item.

(b) Notwithstanding Section 7.1(a), for so long as Hewlett-

Packard owns fifty percent (50%) or more of the outstanding stock (by vote or value) of Agilent, the entering into of any resolution, settlement or agreement or any decision in connection with (including the entering into of) any judicial or administrative proceeding relating to Taxes by Agilent or any Agilent Affiliate shall be subject to Hewlett-Packard's review and approval, which approval shall not be unreasonably withheld.

7.2 Notice. If after the date of this Agreement, Hewlett-Packard

(or any Hewlett-Packard Affiliate) or Agilent (or any Agilent Affiliate) receives written notice of, or relating to, an Audit from a Tax Authority that asserts, proposes or recommends a deficiency, claim or adjustment that, if sustained, could result in Taxes for which the other party is responsible under this Agreement, then the party receiving such notice shall provide a copy of such notice to such other party within ten (10) days of receipt thereof.

7.3 Participation Rights.

(a) If a Tax Authority asserts, proposes or recommends a deficiency, claim or adjustment that, if sustained, would result in Taxes for which the Non-Filing is responsible under this Agreement, then the Filing Party shall keep the Non-Filing Party informed in a timely manner of all material actions taken or proposed to be taken by the Filing Party in connection with such deficiency, claim or adjustment.

(b) In the case of an Audit with respect to a Tax Item for which the Non-Filing Party would be primarily responsible under this Agreement, the Filing Party shall:

(i) in the case of any material correspondence or filing submitted to the Tax Authority or any judicial authority that relates to the merits of such deficiency, claim or adjustment (1) reasonably in advance of such submission, but subject to applicable time constraints imposed by such Tax Authority or judicial authority, provide the Non-Filing Party with a draft copy of the portion of such correspondence or filing that relates to such deficiency, claim or adjustment, (2) incorporate, subject to applicable time constraints imposed by such Tax Authority or judicial authority, the Non-Filing Party's comments and changes on such draft copy of such correspondence or filing, and (3) provide the Non-Filing Party with a final copy of the portion of such correspondence or filing that relates to such deficiency, claim or adjustment; and

(ii) provide the Non-Filing Party with notice reasonably in advance of, and the Non-Filing Party shall have the right to attend, any meetings with the Tax Authority (including meetings with examiners) or hearings or proceedings before any judicial authority to the extent they relate to such deficiency, claim or adjustment.

(c) If the Filing Party is reasonably satisfied that it will not adversely affect the exercise of any of the Filing Party's rights described in Section 7.1(a) of this Agreement with respect to other items, the Filing Party shall accept any suggestions made by the Non-Filing Party with respect to the resolution or settlement of, or agreement to, any deficiency, claim or adjustment proposed, asserted or assessed in connection with or as a result of any Audit with respect to a Tax Item for which the Non-Filing Party would be primarily responsible under this Agreement.

(d) At the Filing Party's reasonable request (or upon the Filing Party's consent to a request by the Non-Filing Party, which consent shall not be unreasonably withheld), the Non-Filing Party shall assume responsibility for (1) presenting the merits with respect to (A) any deficiency, claim or adjustment that, if sustained, would result in Taxes for which the Non-Filing Party is responsible under this Agreement, or (B) subject to Section 7.6 of this Agreement, any affirmative claim relating to a Tax Item of the Non-Filing Party, or (2) resolving, settling or agreeing to any such deficiency, claim or

adjustment. Any such request (or consent) by the Filing Party shall be subject to the Non-Filing Party's continued compliance with the conditions of Section 7.4 of this Agreement and to such other conditions as the Filing Party reasonably determines to be appropriate to preserve the Filing Party's rights described in Section 7.1(a) of this Agreement.

7.4 Limitations.

(a) In General. The Filing Party shall have no obligation to contest,

or to continue to contest, any deficiency, claim or adjustment and the Non-Filing Party shall have no rights to participate under Section 7.3 of this Agreement unless:

(i) if the amount in controversy with respect to any Tax Item for which the Non-Filing Party could be liable does not exceed one million dollars (\$1,000,000.00), or if the amount in controversy relates to a Restructuring Tax for which the Filing Party could be primarily responsible under this Agreement, within thirty (30) days of a reasonable request by the Filing Party, the Non-Filing Party shall deliver to the Filing Party a written opinion of nationally recognized tax counsel to the effect that the Non-Filing Party's position with respect to such deficiency, claim or adjustment is supported by substantial authority (within the meaning of Section 6662 of the Code);

(ii) the Non-Filing Party shall have agreed to be bound by a Final Determination of such deficiency, claim or adjustment;

(iii) the Non-Filing Party shall have agreed to pay, and shall be currently paying, all reasonable out of pocket costs and expenses incurred by the Filing Party to contest such deficiency, claim or assessment including reasonable outside attorney's, accountants' and investigatory fees and disbursements;

(iv) the Non-Filing Party shall have advanced to the Filing Party, on an interest-free basis (and with no additional net after-tax cost to the Filing Party), the amount of Tax in controversy (but not in excess of either (A) the amount of Tax for which the Non-Filing Party could be liable under

this Agreement or (B) the amounts actually expended by the Filing Party) to the extent necessary for the contest to proceed in the forum selected by the Filing Party, in its sole discretion;

(v) the Non-Filing Party shall have provided to the Filing Party all documents and information, and shall have made available employees and officers of the Non-Filing Party, as may be necessary, useful or reasonably required by the Filing Party in contesting such deficiency, claim or adjustment; and

(vi) the contest of such deficiency, claim or adjustment shall involve no material danger of the sale, forfeiture or loss of, or the creation of any lien on, any asset of the Filing Party (except if the Non-Filing Party shall have adequately bonded such lien or otherwise made provision to protect the interests of the Filing Party in a manner reasonably satisfactory to the Filing Party).

(b) Settlement. The Filing Party may resolve, settle or agree to any

deficiency, claim or adjustment proposed, asserted or assessed in connection with any Audit of any Tax Return that it is responsible for filing under Section 2.1 of this Agreement without the Non-Filing Party's consent only if:

(i) such resolution, settlement or agreement relates to (A) a Tax Item that does not exceed one million dollars (\$1,000,000.00) for which the Non-Filing Party could be liable, or (B) a Restructuring Tax for which

the Filing Party could be primarily responsible under this Agreement;

(ii) the Non-Filing Party has been afforded a reasonable opportunity to have the merits of such deficiency, claim or adjustment presented to the relevant Tax Authority; and

(ii) the Filing Party is not otherwise continuing to pursue a contest with respect to another deficiency, claim or adjustment for such taxable period at the same administrative level and the Non-Filing Party fails to deliver to the Filing Party, within thirty (30) days of a reasonable request by the Filing Party, a written opinion of nationally recognized tax counsel, to the effect that the Non-Filing Party's position with respect to such deficiency, claim or adjustment should be reversed or substantially modified upon appeal in a manner favorable to the Non-Filing Party.

(c) Litigation. The Filing Party shall only have an obligation to

appeal in a judicial forum a determination of any Tax Authority that, if sustained, would result in:

(i) a liability of the Non-Filing Party under this Agreement with respect to (A) a Tax Item that does not exceed one million dollars (\$1,000,000.00), or (B) a Restructuring Tax for which the Filing Party could be primarily responsible under this Agreement, if within sixty (60) days of a request by the Filing Party, the Non-Filing Party shall deliver to the Filing Party a written opinion of nationally recognized tax counsel to the effect that such determination should be reversed or substantially modified upon appeal in a manner favorable to the Non-Filing Party; or

(ii) a liability of the Non-Filing Party under this Agreement that is not described in Section 7.4(c)(i), if within sixty (60) days of a request by the Filing Party, the Non-Filing Party shall deliver to the Filing Party a written opinion of nationally recognized tax counsel to the effect that it is more likely than not that such determination would be reversed or substantially modified upon appeal in a manner favorable to the Non-Filing Party.

For purposes of this Section 7.4(c), a "determination" of any Tax Authority does not include any settlement described in Section 7.4(b) of this Agreement.

(d) Waiver. Notwithstanding any other provision of this Section 7.4,

the Filing Party may resolve, settle, or agree to any deficiency, claim or adjustment for any taxable period that, if sustained, would result in (1) a Redetermination Amount resulting from a redetermination of a Tax Item of the Non-Filing Party or (2) any Restructuring Taxes for which the Non-Filing Party could be responsible under this Agreement if the Filing Party notifies the Non-Filing Party in writing that it waives the payment by the Non-Filing Party for such taxable period of any amount that would not be payable by the Non-Filing Party under this Agreement but for such deficiency, claim or adjustment (but not including amounts described in Section 7.4(a)(iii) of this Agreement that relate to the conduct to date of the contest). In such event, the Filing Party shall promptly reimburse the Non-Filing Party for all amounts previously advanced by the Non-Filing Party to the Filing Party in connection with such deficiency, claim or adjustment under Section 7.4(a)(iv) of this Agreement. In addition, the Filing Party shall reimburse the Non-Filing Party for any Tax Detriment that directly results from the settlement of such deficiency, claim or adjustment. No waiver by the Filing Party under this Section 7.4(d) with respect to any deficiency, claim or adjustment relating to any single Tax Item, position, issue or transaction or relating to any single Tax for any one taxable period shall operate as a waiver with respect to any other deficiency, claim or adjustment.

7.5 Failure to Notify, Etc. The failure of the Filing Party promptly

to notify the Non-Filing Party of any matter relating to a particular Tax for a taxable period or to take any action specified in Section 7.3 of this Agreement

shall not relieve the Non-Filing Party of any liability and/or obligation which it may have to the Filing Party under this Agreement with respect to such Tax for such taxable period except to the extent that the Non-Filing Party's rights hereunder are materially prejudiced by such failure and in no event shall such failure relieve the Non-Filing Party of any other liability and/or obligation which it may have to the Filing Party.

7.6 Affirmative Claims.

(a) In General. Subject to the principles of Sections 7.3 and 7.4 of this Agreement, Hewlett-Packard shall assert any affirmative claim (including, without limitation, by filing an amended return or claim for refund) relating to a Tax Item of a member of the Agilent Group to the relevant Tax Authority provided that (1) Agilent agrees in advance to provide full compensation to Hewlett-Packard for any cost or detriment to Hewlett-Packard or a Hewlett-Packard Affiliate that would result from successfully asserting such claim, and (2) Agilent reasonably requests that such claim be asserted within the applicable time period set forth in Section 7.6(b) or 7.6(c) of this Agreement. Hewlett-Packard may, in its sole discretion, assert any affirmative claim that does not satisfy the foregoing conditions or that is not described in Section 7.6(b) or 7.6(c) of this Agreement.

(b) Consolidated Return Years. Agilent shall request that Hewlett-Packard assert any affirmative claims relating to a Tax Item of a member of the Agilent Group for a Consolidated Return Year no later than the date that is one hundred eighty (180) days after the date on which Hewlett-Packard delivers written notice to Agilent that an examination of the Consolidated Return for the applicable Consolidated Return Year is to begin.

(c) Combined Returns. Agilent shall request that Hewlett-Packard assert any affirmative claims relating to a Tax Item of a member of the Agilent Group for a Pre-Spinoff Period for which a Combined Return has been filed no later than the date that is one hundred eighty (180) days (but subject to applicable time constraints imposed by the Tax Authority) after the date on which Hewlett-Packard delivers written notice to Agilent that an examination of the Combined Return for the applicable Pre-Spinoff Period has begun or is to begin.

7.7 Remedies. The parties hereby agrees that the sole and exclusive remedy for a breach by the Filing Party of the Filing Party's obligations to the Non-Filing Party with respect to a deficiency, claim or adjustment relating to the redetermination of a Tax Item of the Non-Filing Party for a taxable period shall be a reduction in the amount that would otherwise be payable by the Non-Filing Party for such taxable period or an increase in amount that would otherwise be payable by the Filing Party for such taxable period, in either case because of the breach. The parties further agree that no claim against the Filing Party and no defense to the Non-Filing Party's liabilities to the Filing Party under this Agreement shall arise from the resolution by the Filing Party of any deficiency, claim or adjustment relating to the redetermination of any Tax Item of the Filing Party.

Section 8. Taxability and Reporting of Stock Options

8.1 In General. To the extent permitted by the Tax Law, Hewlett-Packard shall claim all Tax deductions arising by reason of exercises of options to purchase shares of Hewlett-Packard stock, and Agilent shall claim all Tax deductions arising by reason of exercises of options to purchase shares of Agilent stock. In addition, to the extent permitted by the Tax Law, Hewlett-Packard shall take all Tax deductions arising by reason of the lapse of any restrictions with respect to shares of Hewlett-Packard stock, Agilent stock or other property subject to a substantial risk of forfeiture (within the meaning

of Section 83) held by an employee of Hewlett-Packard, and Agilent shall take all Tax deductions arising by reason of the lapse of any restrictions with respect to shares of Agilent stock, Hewlett-Packard stock or other property subject to a substantial risk of forfeiture (within the meaning of Section 83) held by an employee of Agilent. The parties hereto agree to report all Tax deductions with respect to stock options and other equity issued to their employees consistently with this Section 8.1.

8.2 Notices, Withholding, Reporting. Hewlett-Packard shall promptly

notify Agilent of any post-Distribution Date event giving rise to income to any Agilent Group employees or former employees in connection with exercises of options to purchase shares of Hewlett-Packard stock, or the lapse of any restrictions with respect to shares of Hewlett-Packard stock or other property subject to a substantial risk of forfeiture (within the meaning of Section 83). If required by the Tax Law, Agilent shall withhold applicable Taxes and satisfy applicable Tax reporting obligations in connection therewith.

8.3 Adjustments. If, pursuant to a Final Determination, all or any

part of a Tax deduction taken pursuant to Section 8.1 of this Agreement is disallowed to the party entitled to such deduction under Section 8.1 of this Agreement (the "Deducting Party"), then, to the extent permitted by the Tax Law, the other party (the "Benefitting Party") shall take such deduction. To the extent that the Benefitting Party obtains a Tax Benefit as a result of a deduction described in this Section 8.3, the Benefitting Party shall make a payment to the Deducting Party in an amount equal to such Tax Benefit.

Section 9. Other Tax Matters

9.1 Other Adjustments. Except as otherwise provided under this

Agreement, if, pursuant to a Final Determination, a party to this Agreement suffers an unanticipated Tax Detriment and, as a result, the other party to this Agreement obtains a corresponding unanticipated Tax Benefit, and such Tax Detriment is not otherwise compensated under this Agreement, then the party obtaining such Tax Benefit shall make a payment to the other party in an amount equal to such Tax Benefit.

9.2 Research Tax Credit. Within 180 days after the Distribution

Date, Hewlett-Packard will furnish the Agilent Group, pursuant to Section 41 of the Code, a draft of the base period information the Agilent Group will need to properly compute its research tax credits for Post-Distribution Periods, and within thirty (30) days of receipt of such draft, Agilent shall provide Hewlett-Packard with any comments thereon. Hewlett-Packard shall reasonably consider all reasonable suggestions on such draft, and shall provide the final base period information to Agilent no later than 240 days after the Distribution Date.

9.3 Gain Recognition Agreements.

(a) In General. Agilent shall give Hewlett-Packard at least

sixty (60) days prior written notice in the event that any time prior to the date which is five (5) years after the Distribution Date, Agilent (or any Agilent Affiliate) directly or indirectly disposes of all or any portion of the ownership interest in, or all or substantially all of the assets of, any entity identified in Appendix H of this Agreement. Such notice shall describe any such disposition in sufficient detail to enable Hewlett-Packard (1) to comply with the requirements of Section 367 of the Code, applicable Treasury Regulations thereunder and any Gain Recognition Agreement entered into with the Service, and (2) if applicable, to enter into a revised Gain Recognition Agreement with the Service under Section 367 of the Code and the applicable Treasury Regulations thereunder.

(b) Gain Recognition Agreement Taxes. If a Tax Authority

determines that any member of the Hewlett-Packard Group has failed to

comply with the terms of any Gain Recognition Agreement executed by a member of the Hewlett-Packard Group during a Pre-Separation Period, and such non-compliance is attributable to any action or omission by a member of the Agilent Group after the Distribution Date, the Agilent Group shall indemnify and hold harmless the Hewlett-Packard Group for any Tax Detriment arising therefrom.

Section 10. Dispute Resolution

10.1 Initial Notice of Disagreement.

(a) In the event of any disagreement regarding the application or interpretation of the Tax Law under this Agreement, the party (the "Disputing Party") disputing such application or interpretation shall have thirty (30) days from the delivery of a schedule or other notice in which such application or interpretation is made to register its disagreement with all or a portion of such interpretation (each such disagreement a "Disputed Item"). Any other disagreements under this Agreement shall be resolved under the dispute resolution procedures set forth in the Master Agreement.

(b) The Disputing Party shall register its disagreement by delivering to the other party (the "Non-Disputing Party") within such thirty (30) day period a written notice (an "Initial Notice of Disagreement") that (1) specifically enumerates each Disputed Item, (2) describes the grounds for the Disputing Party's disagreement with each Disputed Item, and (3) states the amount in dispute (or a good faith estimate thereof) with respect to each Disputed Item.

(c) The failure of the Disputing Party within the thirty (30) day period described in Section 10.1(b) to deliver an Initial Notice of Disagreement, that satisfies the requirements of Section 10.1(b), with respect to all or a portion of any application or interpretation described in Section 10.1(a) shall be deemed to constitute (1) an acceptance and acknowledgment by such party of its liability for the required payment or portion thereof and (2) a waiver by such party of its right to a Determination by a Tax Arbiter pursuant to Section 10.5 of this Agreement with respect to such payment or portion thereof.

10.2 Negotiation. The Disputing Party and the Non-Disputing Party

shall in good faith attempt to resolve their disagreements over each Disputed Item enumerated in the Initial Notice of Disagreement as follows:

(a) Within thirty (30) days following delivery of an Initial Notice of Disagreement, the Hewlett-Packard VP and the Agilent VP shall meet and make a good faith attempt to resolve such dispute and shall continue to negotiate in good faith in an effort to resolve the dispute without the necessity of any formal proceedings.

(b) If the Hewlett-Packard VP and Agilent VP are unable to agree within thirty (30) days of their first meeting, then the chief financial officers of Hewlett-Packard and Agilent shall meet within thirty (30) days after the end of the first thirty (30) day negotiating period in an attempt to resolve the dispute.

(c) During the course of negotiations under this Section 10.2, all reasonable requests made by one party to the other for information, including requests for copies of relevant documents, will be honored. The specific format for such negotiations will be left to the discretion of the negotiating teams and may include the preparation of agreed upon statements of fact or written statements of position furnished to the other party.

10.3 Final Notice of Disagreement.

(a) If the parties are unable to resolve any dispute pursuant to the negotiation procedures described in Section 10.2, the Disputing Party shall have ten (10) days after the end of the second thirty (30) day period described in Section 10.2(b) to register its continued disagreement with any Disputed Item and to elect to seek a Determination by a Tax Arbiter with respect to such Disputed Item pursuant to Section 10.5 of this Agreement. The Disputing Party shall do so by delivering to the Non-Disputing Party within such ten (10) day period a written notice (a "Final Notice of Disagreement") that (1) specifically enumerates each Disputed Item with respect to which it elects to seek a Determination by a Tax Arbiter, (2) describes the grounds for the Disputing Party's continued disagreement with each such Disputed Item, and (3) states the amount in dispute (or a good faith estimate thereof) with respect to each such Disputed Item.

(b) The failure of the Disputing Party within the ten (10) day period described in Section 10.3(a) to deliver a Final Notice of Disagreement, that satisfies the requirements of Section 10.3(a), with respect to all or a portion of the payment described in Section 10.1(a) shall be deemed to constitute (1) an acceptance and acknowledgment by such party of its liability for such payment or portion thereof and (2) a waiver by such party of its right to a Determination by a

Tax Arbiter pursuant to Section 10.5 of this Agreement with respect to such Disputed Item.

(c) Any dispute, controversy, or claim relating to or arising out of a Disputed Item contained in a Notice of Final Disagreement shall be finally settled by arbitration before a Tax Arbiter pursuant to the provisions of this Section 10.

10.4 Selection of Tax Arbiter. If the Disputing Party delivers a

Final Notice of Disagreement to the Non-Disputing Party, the parties shall, within ten (10) days after such delivery, jointly select an Tax Arbiter to make a Determination with respect to each Disputed Item enumerated in the Final Notice of Disagreement. If the parties cannot jointly agree on an Tax Arbiter to make such Determination within such ten (10) day period, then each party shall select a Tax Arbiter, and such Tax Arbiters shall select a third Tax Arbiter, who shall make a Determination in accordance with Section 10.5.

10.5 Determination by Tax Arbiter.

(a) The Tax Arbiter shall determine the appropriate outcome based upon this Agreement (the "Determination") with respect to each Disputed Item. The Tax Arbiter shall have ninety (90) days from the date that he or she is selected pursuant to Section 10.4 of this Agreement in which to make such Determinations, unless the Disputing Party and the Non-Disputing Party mutually agree upon an extension of such period or the Tax Arbiter, in its discretion, determines that an extension of such period is warranted by exceptional circumstances. The Disputing Party and the Non-Disputing Party shall provide the Tax Arbiter with such information or documentation as the Tax Arbiter deems in its discretion to be necessary for it to make the Determinations requested of it. Any Determination by the Tax Arbiter (as well as any allocation of costs and expenses pursuant to Section 10.5(b) of this Agreement) shall be in writing, shall be delivered to the Disputing Party and the Non-Disputing Party, and shall be final and binding upon them and enforced as an arbitration award under the United States Arbitration Act, 9 U.S.C. (S)(S) 1-16. The parties explicitly waive any right to seek any judicial review of the substance of the Determination of the Tax Arbiter. The Tax Arbiter shall be entitled to use, at the sole cost and expense of the Disputing Party and the Non-Disputing Party, whatever resources it deems necessary, including accounting and technical services. Any proceedings relating to the Determination shall take place in

[Palo Alto, California].

(b) The Disputing Party and the Non-Disputing Party shall be jointly and severally liable to the Tax Arbiter for all costs and expenses associated with retaining the Tax Arbiter. As between themselves, except as otherwise

provided in this Section 10.5(b), the Disputing Party and the Non-Disputing Party shall share equally the costs and expenses associated with retaining an Tax Arbiter. Where a Determination with respect to a Disputed Item is not less than eighty percent (80%) of the amount claimed to be due from the Disputing Party, the Tax Arbiter may, in its discretion, allocate to the Disputing Party more than fifty percent (50%) of the costs and expenses associated with such Determination. Where a Determination with respect to a Disputed Item is less than fifty percent (50%) of the amount claimed to be due from the Disputing Party, the Tax Arbiter may, in its discretion, allocate to the Non-Disputing Party more than fifty percent (50%) of the costs and expenses associated with such Determination.

Section 11. Miscellaneous

11.1 Effectiveness. This Agreement shall become effective upon

execution by both parties hereto.

11.2 Notices. Any notice, request, instruction or other document

to be given or delivered under this Agreement by any party to another party shall be in writing and shall be deemed to have been duly given or delivered when (1) delivered in person, (2) deposited in the United States mail, postage prepaid and sent certified mail, return receipt requested or (3) delivered to Federal Express or similar service for overnight delivery to the address of the party set forth below:

If to Hewlett-Packard or any Hewlett-Packard Affiliate, to the Hewlett-Packard VP, with a copy to the General Counsel of Hewlett-Packard, at:

Hewlett-Packard Company
3000 Hanover Street
Palo Alto, California 94304

If to Agilent or any Agilent Affiliate, to the Agilent VP, with a copy to the General Counsel of Agilent:

Agilent Technologies Inc.
395 Page Mill Road
Palo Alto, California 94304

Any party may, by written notice to the other parties, change the address or the party to which any notice, request, instruction or other document is to be delivered.

11.3 Changes in Law.

(a) Any reference to a provision of the Code or a law of another jurisdiction shall include a reference to any applicable successor provision or law.

(b) If, due to any change in applicable law or regulations or their interpretation by any court of law or other governing body having jurisdiction subsequent to the date of this Agreement, performance of any provision of this Agreement or any transaction contemplated thereby shall become impracticable or impossible, the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such provision.

11.4 Confidentiality. Each party shall hold and cause its directors,

officers, employees, advisors and consultants to hold in strict confidence, unless compelled to disclose by judicial or administrative process or, in the opinion of its counsel, by other requirements of law, all information (other than any such information relating solely to the business or affairs of such party) concerning the other parties hereto furnished it by such other party or its representatives pursuant to this Agreement (except to the extent that such information can be shown to have been (1) in the public domain through no fault of such party or (2) later lawfully acquired from other sources not under a duty of confidentiality by the party to which it was furnished), and each party shall not release or disclose such information to any other person, except its directors, officers, employees, auditors, attorneys, financial advisors, bankers and other consultants who shall be advised of and agree to be bound by the provisions of this Section 11.5. Each party shall be deemed to have satisfied its obligation to hold confidential information concerning or supplied by the other party if it exercises the same care as it takes to preserve confidentiality for its own similar information.

11.5 Successors. This Agreement shall be binding on and inure to the

benefit and detriment of any successor, by merger, acquisition of assets or otherwise, to any of the parties hereto, to the same extent as if such successor had been an original party.

11.6 Affiliates. Each of the parties hereto shall cause to be

performed, and hereby guarantees the performance of, all actions, agreements and obligations set forth herein to be performed by any of such party's affiliates; provided, however, that (1) if it is contemplated that an Agilent Affiliate may

cease to be an Agilent Affiliate as a result of a transfer of its stock or other ownership interests to a third party in exchange for consideration in an amount approximately

equal to the fair market value of the stock or other ownership interests transferred and such consideration is not distributed outside of the Agilent Group to the shareholders of Agilent then Agilent shall request in writing no later than thirty (30) days prior to such cessation that Hewlett-Packard execute a release of such Agilent Affiliate from its obligations under this Agreement effective as of such transfer provided that Agilent shall have confirmed in writing its obligations and the obligations of its remaining Agilent Affiliates with respect to their own obligations and those of the departing Agilent Affiliate and that such departing Agilent Affiliate shall have executed a release of any rights it may have against Hewlett-Packard or any Hewlett-Packard Affiliate by reason of this Agreement, and (2) if it is contemplated that a Hewlett-Packard Affiliate may cease to be a Hewlett-Packard Affiliate as a result of a transfer of its stock or other ownership interests to a third party in exchange for consideration in an amount approximately equal to the fair market value of the stock or other ownership interests transferred and such consideration is not distributed outside of the Hewlett-Packard Group to the shareholders of Hewlett-Packard then Hewlett-Packard shall request in writing no later than thirty (30) days prior to such cessation that Agilent execute a release of such Hewlett-Packard Affiliate from its obligations under this Agreement effective as of such transfer provided that Hewlett-Packard shall have confirmed in writing its obligations and the obligations of its remaining Hewlett-Packard Affiliates with respect to their own obligations and the obligations of the departing Hewlett-Packard Affiliate and that such departing Hewlett-Packard Affiliate shall have executed a release of any rights it may have against Agilent or any Agilent Affiliate by reason of this Agreement.

11.7 Authorization, Etc. Each of the parties hereto hereby represents

and warrants that it has the power and authority to execute, deliver and perform this Agreement, that this Agreement has been duly authorized by all necessary corporate action on the part of such party, that this Agreement constitutes a legal, valid and binding obligation of each such party and that the execution,

delivery and performance of this Agreement by such party does not contravene or conflict with any provision of law or of its charter or bylaws or any agreement, instrument or order binding on such party.

11.8 Entire Agreement. This Agreement contains the entire agreement

among the parties hereto with respect to the subject matter hereof and supersedes any prior Tax sharing agreements between Hewlett-Packard (or any of its Affiliates) and Agilent (or any of its Affiliates) and such prior tax sharing agreements shall have no further force and effect.

11.9 Applicable Law; Jurisdiction. This Agreement shall be governed

by and construed and enforced in accordance with the laws of the State of Delaware without giving effect to laws and principles relating to conflicts of law. Each party to this Agreement irrevocably and unconditionally consent to submit to the exclusive jurisdiction of the Chancery Court in and for New Castle County, Delaware and of the courts of the United States of America located in the State of Delaware for any actions, suits or proceedings arising out of or relating to this agreement and the transactions contemplated hereby (and agree not to commence any action, suit or proceeding relating thereto except in such courts), and further agree that service of any process, summons, notice or document by U.S. registered mail at the address set forth in Section 11.2 of this Agreement shall be effective service of process for any action, suit or proceeding brought against you in any such court. You hereby irrevocably and unconditionally waive any objection to the laying of venue of any action, suit or proceeding arising out of this agreement or the transactions contemplated hereby, in the Chancery Court in and for New Castle County, Delaware and of the courts of the United States of America located in the State of Delaware, and hereby further irrevocably and unconditionally waive and agree not to plead or claim in any such court that any such action, suit or proceeding brought in any such court has been brought in an inconvenient forum.

11.10 Counterparts. This Agreement may be executed in any number of

counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same Agreement.

11.11 Severability. If any term, provision, covenant, or restriction

of this Agreement is held by a court of competent jurisdiction (or an arbitrator or arbitration panel) to be invalid, void, or unenforceable, the remainder of the terms, provisions, covenants, and restrictions set forth herein shall remain in full force and effect, and shall in no way be affected, impaired, or invalidated. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants, and restrictions without including any of such which may be hereafter declared invalid, void, or unenforceable. In the event that any such term, provision, covenant or restriction is held to be invalid, void or unenforceable, the parties hereto shall use their best efforts to find and employ an alternate means to achieve the same or substantially the same result as that contemplated by such terms, provisions, covenant, or restriction.

11.12 No Third Party Beneficiaries. This Agreement is solely for the

benefit of Hewlett-Packard, the Hewlett-Packard Affiliates, Agilent and the Agilent Affiliates. This Agreement should not be deemed to confer upon third parties any remedy, claim, liability, reimbursement, cause of action or other rights in excess of those existing without this Agreement.

11.13 Waivers, Etc. No failure or delay on the part of the parties in

exercising any power or right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such right or power, or any abandonment or discontinuance of steps to enforce such right or power, preclude any other or further exercise thereof or the exercise of any other right or

power. No modification or waiver of any provision of this Agreement nor consent to any departure by the parties therefrom shall in any event be effective unless the same shall be in writing, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given.

11.13 Setoff. All payments to be made by any party under this

Agreement may be netted against payments due to such party under this Agreement, but otherwise shall be made without setoff, counterclaim or withholding, all of which are hereby expressly waived.

IN WITNESS WHEREOF, each of the parties hereto has caused this Agreement to be executed by a duly authorized officer as of the date first above written.

HEWLETT-PACKARD COMPANY
on behalf of itself and its Affiliates

By _____
Name:
Title:

AGILENT TECHNOLOGIES INC.
on behalf of itself and its Affiliates

By _____
Name:
Title:

APPENDIX A

Information to be Provided to Hewlett-Packard by Agilent
With respect to Consolidated Returns

APPENDIX B

Information to be Provided to Hewlett-Packard by Agilent
With respect to Combined Returns

APPENDIX C

Contemplated Domestic Restructuring Taxes

APPENDIX D

Contemplated Foreign Restructuring Taxes

APPENDIX E

Applicable Spinoffs

APPENDIX F

Certain Agilent Representations

APPENDIX G

Certain Agilent Representations

APPENDIX H

Gain Recognition Agreements

MASTER IT SERVICE LEVEL AGREEMENT

This IT Service Level Agreement (the "Agreement") is effective as of _____, 1999 (the "Effective Date"), between HEWLETT-PACKARD COMPANY, a Delaware corporation ("HP"), having an office at 3000 Hanover Street, Palo Alto, California 94304 and Agilent Technologies, Inc., a Delaware corporation ("Agilent"), having an office at 3000 Hanover Street, Palo Alto, California 94304.

1. Definitions. For the purpose of this Agreement, the following capitalized

terms shall have the following meanings:

1.1 "Ancillary Agreements" shall have the meaning set forth in Separation

and Distribution Agreement.

1.2 "Additional Services" shall have the meaning set forth in Section 3.2.

1.3 "Cover Sheet" shall have the meaning set forth in Section 2.

1.4 "Distribution Date" shall have the meaning set forth in the Separation

and Distribution Agreement.

1.5 "Impracticable" shall have the meaning set forth in Section 7.2.

1.6 "Providing Company" shall mean, with respect to any particular

Service, the party or its Subsidiaries identified on the applicable Cover Sheet as the party to provide such Service.

1.7 "Receiving Company" shall mean, with respect to any particular

Service, the party or its Subsidiaries identified on the applicable Cover Sheet as the party to receive such Service.

1.8 "Separation and Distribution Agreement" shall mean that certain Master

Separation and Distribution Agreement between HP and Agilent.

1.9 "Separation Date" shall have the meaning set forth in the Separation

and Distribution Agreement.

1.10 "Service(s)" shall have the meaning set forth in Section 3.1.

1.11 "Subsidiary" shall have the meaning set forth in the Separation and

Distribution Agreement.

1.12 "System" shall mean the software, hardware, data store or maintenance

and support components or portions of such components of a set of information technology assets identified in the corresponding Exhibit A attached hereto.

2. Cover Sheets. This Agreement will govern individual IT services. Each

Service shall be covered by a copy of this Agreement with a cover sheet in the form attached hereto (each cover sheet, a "Cover Sheet"). The Agreement for each Service shall also include the following Exhibits, as appropriate for that Service:

- Exhibit A: Statement of Services
- Exhibit B: Compensation
- Exhibit C: Software License Terms (if applicable)
- Exhibit D: Confidential Disclosure Agreement
- Exhibit E: Escalation Teams

For each Service, the parties shall set forth, among other things, the identities of the Providing Company and the Receiving Company, the time period during which the Service will be provided, a summary of the Service to be provided and approval by each party on a Cover Sheet; a description of the Service on the corresponding Exhibit A; and the estimated charge, if any, for

the Service and any other terms applicable thereto on the corresponding Exhibit

B. Obligations regarding each Agreement shall be effective upon execution of
-
the Cover Sheet. Each Agreement, all the Exhibits and its Cover Sheet shall be defined as the "Agreement" and incorporated herein wherever reference to it is made.

3. Services.

3.1 Services Generally. Except as otherwise provided herein, for the term

determined pursuant to Section 4 hereof, Providing Company shall provide or cause to be provided to Receiving Company the services described in the Exhibit

A's attached hereto. The service described on a single Exhibit A shall be

referred herein as a "Service". Collectively, the services described on all the
Exhibit A's (including Additional Services) shall be referred herein as

"Services".

3.2 Additional Services. From time to time after the Effective Date, the

parties may identify additional services that one party will provide to the other party in accordance with the terms of this Agreement (the "Additional Services"). Accordingly, the parties shall execute additional Cover Sheets and complete additional Sets of Exhibits for such Additional Services pursuant to Section 2. Except as set forth in Section 3.3, the parties may agree in writing on Additional Services during the term of this Agreement.

3.3 Obligations as to Additional Services. Except as set forth in the next

sentence, the Providing Company shall be obligated to perform, at a reasonable charge, any Additional Service that: (A) was provided by the Providing Company immediately prior to the Separation Date and that Receiving Company reasonably believes was inadvertently or unintentionally omitted from the list of Services or (B) is essential to effectuate an orderly transition under the Separation and Distribution Agreement unless such performance would significantly disrupt Providing Company's operations or materially increase the scope of its responsibility under this Agreement. If Providing Company reasonably believes the performance of Additional Services required under subparagraphs (A) or (B) would significantly disrupt its operations or materially increase the scope of its responsibility under this Agreement, the Providing Company and Receiving Company shall negotiate in good faith to establish terms under which Providing Company can provide such Additional Services, but the Providing Company shall

not be obligated to provide such Additional Services if, following good faith negotiation, it is unable to reach agreement on such terms.

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4. Term. The term of this Agreement shall commence on the Effective Date and

shall remain in effect until November 1, 2001 (the "Expiration Date"), unless earlier terminated under Section 8. This Agreement may be extended by the parties in writing either in whole or with respect to one or more of the Services, provided, however, that such extension shall only apply to the Services for which the Agreement was extended. The parties shall be deemed to have extended this Agreement with respect to a specific Service if the Cover Sheet for such Service specifies a completion date beyond the aforementioned Expiration Date. The parties may agree on an earlier expiration date respecting a specific Service by specifying such date on the Cover Sheet for that Service. Services shall be provided up to and including the date set forth in the applicable Cover Sheet, subject to earlier termination as provided herein.

5. Compensation.

5.1 Charges for Services. Receiving Company shall pay Providing Company

the charges, if any, set forth on the Exhibit B's for each of the Services listed therein as adjusted, from time to time, in accordance with the process and procedures established under Section 5.4 hereof. Such fees shall include the direct and indirect costs of providing the Services plus five percent (5%). However, if the term of this Agreement is extended beyond the Expiration Date as provided in Section 4, Agilent will reimburse HP such costs plus 10% for the Services. Wherever practical, fees shall be based on actual incurred costs, not budgeted or estimated costs. The parties also intend for charges to be easy to administer and justify and, therefore, they hereby acknowledge it may be counterproductive to try to recover every cost, charge or expense particularly those that are insignificant or de minimis. The parties shall use good faith efforts to discuss any situation in which the actual charge for a Service is reasonably expected to exceed the estimated charge, if any, set forth on an Exhibit B for a particular Service, provided, however, that the incurrence of charges in excess of any such estimate shall not justify stopping the provision of, or payment for, Services under this Agreement.

5.2 Payment Terms. Providing Company shall bill Receiving Company monthly

for all charges pursuant to this Agreement. Such bills shall be accompanied by reasonable documentation or other reasonable explanation supporting such charges. Receiving Company shall pay Providing Company for all Services provided hereunder within thirty (30) days after receipt of an invoice therefor. Late payments shall bear interest at the Prime Rate plus two percent (2%) per annum.

5.3 Performance Under Ancillary Agreements. Notwithstanding anything to

the contrary contained herein, Receiving Company shall not be charged under this Agreement for any obligations that are specifically required to be performed under the Separation and Distribution Agreement or any other Ancillary Agreement and any such other obligations shall be performed and charged for (if applicable) in accordance with the terms of the Separation and Distribution Agreement or such other Ancillary Agreement.

5.4 Error Correction; True-Ups; Accounting. Before the Separation Date,

the parties shall agree on a process and procedure for conducting internal audits and making adjustments to charges as a result of the movement of employees and functions between parties, the discovery of errors or omissions in charges, as well as a true-up of amounts owed. The parties shall set forth

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the agreed upon process and procedure in Schedule I hereto. In no event shall

such processes and procedures extend beyond one (1) year after completion of a Service.

5.5 Pricing Adjustments. In the event of a tax audit adjustment relating

to the pricing of any or all Services provided pursuant to this Agreement in which it is determined by a taxing authority that any of the charges, individually or in combination, did not result in an arm's-length payment, as determined under internationally accepted arm's-length standards, then the parties, including a Providing Company subcontractor providing or receiving Services hereunder, may agree to make corresponding adjustments to the charges in question for such period to the extent necessary to achieve arm's-length pricing. Any adjustment made pursuant to this Section 5.5 shall be reflected in the parties' legal books and records, and the resulting overpayment or underpayment shall create an obligation to be paid in the manner specified in Section 5.2.

6. General Obligations; Standard of Care.

6.1 Performance Metrics: Providing Company. Subject to Section 7.3, the

Providing Company shall maintain sufficient resources to perform its obligations hereunder. Specific performance metrics for the Providing Company for a specific Service may be set forth in the corresponding Exhibit A. Where none is

set forth, the Providing Company shall use reasonable efforts to provide Services in accordance with the policies, procedures and practices in effect before the date hereof and shall exercise the same care and skill as it exercises in performing similar services for itself. In addition, where none is set forth for Services in which a System is replicated or transferred, the Providing Company will use reasonable efforts to replicate and/or transfer each System so that it has substantially the same functionality for Receiving Company as it did immediately before the date hereof taking into account changes reasonably expected and customary in a new operating environment.

6.2 Disclaimer of Warranties. PROVIDING COMPANY MAKES NO WARRANTIES,

EXPRESS, IMPLIED OR STATUTORY, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, WITH RESPECT TO THE SERVICES, SOFTWARE OR OTHER DELIVERABLES PROVIDED BY IT HEREUNDER.

6.3 Performance Metrics: Receiving Company. Specific performance metrics

for the Receiving Company for a specific Service may be set forth in the corresponding Exhibit A. Where none is set forth, the Receiving Company shall

use reasonable efforts, in connection with receiving Services, to follow the policies, procedures and practices in effect before the date hereof including providing information and documentation sufficient for Providing Company to perform the Services as they were performed before the date hereof and making available, as reasonably requested by the Providing Company, sufficient resources and timely decisions, approvals and acceptances in order that Providing Company may accomplish its obligations hereunder in a timely manner.

6.4 Transitional Nature of Services; Changes. The parties acknowledge the

transitional nature of the Services and that Providing Company may make changes from time to time in the manner of performing the Services if Providing Company is making similar changes in performing similar services for itself and if Providing Company furnishes to Receiving Company reasonable notice regarding such changes. Notwithstanding the foregoing, for a period of six (6) months from the Effective Date, Providing Company will not make any material change to Systems affecting Receiving Company without first providing thirty (30) days prior written notice

and obtaining Receiving Company's prior written consent, which consent shall not be unreasonably withheld or delayed.

6.5 Responsibility for Errors; Delays. Providing Company's sole

responsibility to Receiving Company:

- (a) for errors or omissions in Services, shall be to furnish correct information, payment and/or adjustment in the Services, at no additional cost or expense to Receiving Company; provided, Receiving Company must promptly advise Providing Company of any such error or omission of which it becomes aware after having used reasonable efforts to detect any such errors or omissions in accordance with the standard of care set forth in Section 6.1;
- (b) for failure to deliver any Service because of Impracticability, shall be to use reasonable efforts, subject to Section 7.3, to make the Services available and/or to resume performing the Services as promptly as reasonably practicable;
- (c) for an error, bug, fault or deficiency in a replicated or transferred System (a "System Error") that did not exist in the System immediately before the Separation Date, shall be to use reasonable efforts, subject to Section 7.3 and taking into account the importance of the affected System to the Receiving Company's business operations, to cooperate with Receiving Company to correct such System Error at no additional cost or expense to Receiving Company (such correction may take the form of new or revised software or an appropriate work-around); provided, Receiving Company must advise Providing Company of any such System Error within sixty (60) days after completion of the activities set forth in (A) the Exhibit A for the System containing a

System Error or (B) the Exhibit A for any feeder System

that caused the System Error, whichever is later; and
- (d) for failure to complete any of the Services related to replication or transfer of System(s) because of Impracticability, shall be to use reasonable efforts, subject to Section 7.3, to make the Systems available to Receiving Company from a Providing Company facility until Providing Company can resume replication or transfer activities or until the parties devise an appropriate alternative approach pursuant to Section 6.6.

6.6 Good Faith Cooperation; Consents. The parties will use good faith

efforts to cooperate with each other in all matters relating to the provision and receipt of Services. Such cooperation shall include exchanging information, providing electronic access to Systems used in connection with Services, performing true-ups and adjustments and obtaining all third party consents, licenses, sublicenses or approvals necessary to permit each party to perform its obligations hereunder (including by way of example, not by way of limitation, rights to use third party software needed for the performance of Services). The costs of obtaining such third party consents, licenses, sublicenses or approvals shall be borne by the Receiving Company. The parties will maintain documentation supporting the information contained in the Exhibits and cooperate with each other in making such information available as needed in the event of a tax audit, whether in the United States or any other country.

6.7 Alternatives. If Providing Company reasonably believes it is unable to

provide any Service because of a failure to obtain necessary consents, licenses, sublicenses or approvals

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pursuant to Section 6.6 or because of Impracticability, the parties shall cooperate to determine the best alternative approach. Until such alternative approach is found or the problem otherwise resolved to the satisfaction of the parties, the Providing Company shall use reasonable efforts, subject to Section 7.2 and Section 7.3, to continue providing the Service or, in the case of Systems, to support the function to which the System relates or permit Receiving Company to have access to the System so Receiving Company can support the function itself. To the extent an agreed upon alternative approach requires payment above and beyond that which is included in the Providing Company's charge for the Service in question, the parties shall share equally in making any such payment unless they otherwise agree in writing.

7. Certain Limitations.

7.1 Service Boundaries. Except as provided in an Exhibit A for a specific

Service: (i) Providing Company shall be required to provide the Services only to the extent and only at the locations such Services are being provided by Providing Company for the Receiving Company immediately prior to the Effective Date; and (ii) the Services will be available only for purposes of conducting the business of the Receiving Company substantially in the manner it was conducted prior to the Effective Date.

7.2 Impracticability. Providing Company shall not be required to provide

any Service to the extent the performance of such Service becomes "Impracticable" as a result of a cause or causes outside the reasonable control of Providing Company including unfeasible technological requirements, or to the extent the performance of such Services would require Providing Company to violate any applicable laws, rules or regulations or would result in the breach of any software license or other applicable contract.

7.3 Additional Resources. Except as provided in an Exhibit A for a

specific Service, in providing the Services, Providing Company shall not be obligated to: (i) hire any additional employees; (ii) maintain the employment of any specific employee; (iii) purchase, lease or license any additional equipment or software; or (iv) pay any costs related to the transfer or conversion of Receiving Company's data to Receiving Company or any alternate supplier of Services.

8. Termination.

8.1 Termination. The Receiving Company may terminate this Agreement, either

with respect to all or with respect to any one or more of the Services provided to such Receiving Company hereunder, for any reason or for no reason, at any time upon six (6) months prior written notice to the Providing Company. In addition, subject to the provisions of Section 16 below, either party may terminate this Agreement with respect to a specific Service if the other party materially breaches a material provision with regard to that particular Service and does not cure such breach (or does not take reasonable steps required under the circumstances to cure such breach going forward) within sixty (60) business days after being given notice of the breach; provided, however, that the non-terminating party may request that the parties engage in a dispute resolution negotiation as specified in Section 16 below prior to termination for breach.

8.2 Survival. Those Sections of this Agreement that, by their nature, are

intended to survive termination will survive in accordance with their terms.
Notwithstanding the foregoing, in the event of any termination with respect to
one or more, but less than all Services, this Agreement shall continue in full
force and effect with respect to any Services not terminated hereby.

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8.3 User Ids, Passwords. The parties shall use good faith efforts at the

termination or expiration of this Agreement or any specific Service hereto, to
ensure that all applicable user IDs and passwords are canceled and, subject to
Section 7.3, that any applicable data pertaining solely to the other parties are
deleted or removed from Systems.

9. Relationship Between the Parties. The relationship between the parties

established under this Agreement is that of independent contractors and neither
party is an employee, agent, partner, or joint venturer of or with the other.
Providing Company will be solely responsible for any employment-related taxes,
insurance premiums or other employment benefits respecting its personnel's
performance of Services under this Agreement. Receiving Company agrees to grant
Providing Company personnel access to sites, systems and information (subject to
the provisions of confidentiality stated below) as necessary for Providing
Company to perform its obligations hereunder. Providing Company personnel agree
to obey any and all security regulations and other published policies of
Receiving Company.

10. Subcontractors. Providing Company may engage a "Subcontractor" to perform

all or any portion of Providing Company's duties under this Agreement, provided
that any such Subcontractor agrees in writing to be bound by confidentiality
obligations at least as protective as the terms of Section 13 regarding
confidentiality below, and provided further that Providing Company remains
responsible for the performance of such Subcontractor. As used in this
Agreement, "Subcontractor" will mean any individual, partnership, corporation,
firm, association, unincorporated organization, joint venture, trust or other
entity engaged to perform hereunder.

11. Intellectual Property.

11.1 Unless otherwise agreed by the parties under the Ancillary Agreements
or any separate license or technology agreement, if Providing Company supplies
Receiving Company with a deliverable that in whole or in part consists of
software, firmware, or other computer code (referred to as a "Software
Deliverable"), such Software Deliverables will be supplied in object code form
only and will be subject to the Providing Company software license terms
attached hereto as Exhibit C. In the event that such Software Deliverables are

licensed to Providing Company by third parties, Receiving Company agrees to be
bound by any different or additional conditions that are required by such third
parties and are communicated in writing by Providing Company to Receiving
Company.

11.2 This Agreement and the performance of this Agreement will not affect
the ownership of any copyrights or other intellectual property rights allocated
in the Ancillary Agreements.

11.3 Neither party will gain, by virtue of this Agreement, any rights of
ownership of copyrights, patents, trade secrets, trademarks or any other
intellectual property rights owned by the other.

11.4 Except as set forth in Section 11.2, Providing Company will own all
copyrights, patents, trade secrets, trademarks and other intellectual property
rights subsisting in the Software Deliverables and other works developed by
Providing Company for purposes of this Agreement.

11.5 Receiving Company grants Providing Company a non-exclusive, worldwide, royalty-free license to use, copy, and make derivative works of, distribute, display, perform and transmit Providing Company's pre-existing copyrighted works or other intellectual property rights solely to the extent necessary to perform its obligations under this Agreement.

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12. Infringement Defense. To the extent Providing Company delivers or licenses

any Software deliverables to Receiving Company after the Separation Date in performance of this Agreement, Providing Company agrees to defend Receiving Company and its directors, officers, employees and agents against any and all claims, actions or suits (any of the foregoing, a "Claim") incurred by or asserted against Receiving Company based upon infringement of a third party patent or other intellectual property right. Receiving Company agrees to notify Providing Company promptly of any Claim and permit Providing Company at Providing Company's expense to defend such Claim and will cooperate in the defense thereof. Providing Company agrees to pay any awards or settlement amounts arising from a Claim. Neither Providing Company nor Receiving Company will enter into or permit any settlement of any such Claim without the express written consent of the other party. Receiving Company may, at its option and expense, have its own counsel participate in any proceeding that is under the direction of Providing Company and will cooperate with Providing Company and its insurer in the disposition of any such matter.

13. Confidentiality. During the term of this Agreement, a party (the

"Recipient") may receive or have access to certain information of the other party (the "Discloser") that is marked as "Confidential Information," including, though not limited to, information or data related to either party's products (including the discovery, invention, research, improvement, development, manufacture, or sale thereof), processes, or general business operations (including sales, costs, profits, pricing methods, organization, employee or customer lists and processes), and any information obtained through access to any information assets or information systems (including computers, networks, voice mail, etc.), which, if not otherwise described above, is of such a nature that a reasonable person would believe to be confidential. The Recipient will protect the confidentiality of Confidential Information under the terms of the Confidential Disclosure Agreement attached as Exhibit D.

14. Limitation of Liability. NEITHER PARTY WILL BE LIABLE TO THE OTHER FOR ANY

LOST PROFITS, LOSS OF DATA, LOSS OF USE, COST OF COVER, BUSINESS INTERRUPTION OR OTHER SPECIAL, INCIDENTAL, INDIRECT, PUNITIVE OR CONSEQUENTIAL DAMAGES, HOWEVER CAUSED, UNDER ANY THEORY OF LIABILITY, ARISING FROM THE PERFORMANCE OF, OR RELATING TO, THIS AGREEMENT. THE FOREGOING LIMITATION WILL NOT LIMIT PROVIDING COMPANY'S OBLIGATIONS WITH RESPECT TO PAYMENT OF DAMAGES OF ANY KIND INCLUDED IN AN AWARD OR SETTLEMENT OF A THIRD PARTY CLAIM UNDER ANY INDEMNITY OR INFRINGEMENT DEFENSE PROVISIONS SPECIFIED HEREIN.

15. Force Majeure. Each party will be excused for any failure or delay in

performing any of its obligations under this Agreement, other than the obligations of Receiving Company to make certain payments to Providing Company pursuant to Section 5 hereof for services rendered, if such failure or delay is caused by Force Majeure. "Force Majeure" means any act of God or the public enemy, any accident, explosion, fire, storm, earthquake, flood, or any other circumstance or event beyond the reasonable control of the party relying upon such circumstance or event.

16. Dispute Resolution.

16.1 Negotiation. The parties shall make a good faith attempt to resolve

any dispute or claim arising out of or related to this Agreement through negotiation. Within thirty (30) days after notice of a dispute or claim is given by either party to the other party, the parties' first tier

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negotiating teams specified in Exhibit E shall meet and make a good faith

attempt to resolve such dispute or claim and shall continue to negotiate in good faith in an effort to resolve the dispute or claim or renegotiate the applicable section or provision without the necessity of any formal proceedings. If the first tier negotiating teams are unable to agree within thirty (30) days of their first meeting, then the parties' second tier negotiating teams specified in Exhibit E shall meet within thirty (30) days after the end of the first

thirty (30) day negotiating period to attempt to resolve the matter. During the course of negotiations under this Section 16.1, all reasonable requests made by one party to the other for information, including requests for copies of relevant documents, will be honored. The specific format for such negotiations will be left to the discretion of the designated negotiating teams but may include the preparation of agreed upon statements of fact or written statements of position furnished to the other party.

16.2 Nonbinding Mediation. In the event that any dispute or claim arising

out of or related to this Agreement is not settled by the parties within fifteen (15) days after the first meeting of the second tier negotiating teams under Section 16.1, the parties will attempt in good faith to resolve such dispute or claim by nonbinding mediation in accordance with the American Arbitration Association Commercial Mediation Rules. The mediation shall be held within thirty (30) days of the end of such fifteen (15) day negotiation period of the second tier negotiating teams. Except as provided below in Section 16.3, no litigation for the resolution of such dispute may be commenced until the parties try in good faith to settle the dispute by such mediation in accordance with such rules and either party has concluded in good faith that amicable resolution through continued mediation of the matter does not appear likely. The costs of mediation shall be shared equally by the parties to the mediation. Any settlement reached by mediation shall be recorded in writing, signed by the parties, and shall be binding on them.

16.3 Proceedings. Nothing herein, however, shall prohibit either party from

initiating litigation or other judicial or administrative proceedings if such party would be substantially harmed by a failure to act during the time that such good faith efforts are being made to resolve the dispute or claim through negotiation or mediation. In the event that litigation is commenced under this Section 16.3, the parties agree to continue to attempt to resolve any dispute according to the terms of Sections 16.1 and 16.2 during the course of such litigation proceedings under this Section 16.3.

17. Miscellaneous.

17.1 Entire Agreement. This Agreement, the Separation and Distribution

Agreement and the other Ancillary Agreements constitute the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof.

17.2 Governing Law. This Agreement will be governed by and construed in

accordance with the laws of the State of California regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto.

17.3 Descriptive Headings. The descriptive headings herein are inserted

for convenience of reference only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

17.4 Notices. All notices and other communications hereunder will be in

writing and will be deemed to have been duly given when delivered in person, by telecopy with answer back, by

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express or overnight mail delivered by a nationally recognized air courier (delivery charges prepaid), or by registered or certified mail (postage prepaid, return receipt requested) to the respective parties as follows:

if to HP:

c/o HP Company
3000 Hanover Street
Palo Alto, CA 94304
Attention: General Counsel
Telecopy: (650)

if to Agilent:

c/o Agilent Technologies, Inc.
3000 Hanover Street
Palo Alto, CA 94304
Attention: General Counsel
Telecopy: (650)

or to such other address as the party to whom notice is given may have previously furnished to the others in writing in the manner set forth above. Any notice or communication delivered in person will be deemed effective upon delivery. Any notice or communication sent by telecopy or by air courier will be deemed effective on the first business day at the place at which such notice or communication is received following the day on which such notice or communication was sent. Any notice or communication sent by registered or certified mail will be deemed effective on the third business day at the place from which such notice or communication was mailed following the day on which such notice or communication was mailed. As used in this Agreement, "business day" means day other than a Saturday, a Sunday or a day on which banking institutions located in the State of California are authorized or obligated by law or executive order to close.

17.6 Nonassignability. Except as specifically permitted under Section 10

above, neither party may, directly or indirectly, in whole or in part, whether by operation of law or otherwise, assign or transfer this Agreement, without the other party's prior written consent, and any attempted assignment, transfer or delegation without such prior written consent shall be voidable at the sole option of such other party. Notwithstanding the foregoing, each party (or its permitted successive assignees or transferees hereunder) may assign or transfer this Agreement as a whole without consent to an entity that succeeds to all or substantially all of the business or assets of such party. Without limiting the foregoing, this Agreement will be binding upon and inure to the benefit of the parties and their permitted successors and assigns.

17.7 Severability. If any term or other provision of this Agreement is

invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement will nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated is not affected in any manner materially adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties will negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible.

17.8 No Waiver; Remedies Cumulative. No failure or delay on the part of

any party in the exercise of any right hereunder will impair such right or be
construed to be a waiver of, or acquiescence in, any breach of any provision of
this Agreement, nor will any single or partial

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exercise of any such right preclude other or further exercise of any other
right. All rights and remedies existing under this Agreement are cumulative to,
and not exclusive of, any rights or remedies otherwise available.

17.9 Amendment. No change or amendment will be made to this Agreement

except by an instrument in writing signed on behalf of each of the parties to
such Agreement.

IN WITNESS WHEREOF, each of the parties has caused this Agreement to be executed
in duplicate originals by its duly authorized representatives.

HEWLETT-PACKARD COMPANY

By:
Title:

AGILENT TECHNOLOGIES, INC.

By:
Title:

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Real Estate Matters Agreement

between

Hewlett-Packard Company

and

Agilent Technologies, Inc.

_____, 1999

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REAL ESTATE MATTERS AGREEMENT

This Real Estate Matters Agreement (this "Agreement") is entered into on _____, 1999 between Hewlett-Packard Company, a Delaware corporation ("HP"),

and Agilent Technologies, Inc., a Delaware corporation ("Agilent"). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to such terms in the Separation Agreement (as defined below).

RECITALS

WHEREAS, HP has transferred or will transfer to Agilent effective as of the Separation Date, substantially all of the business and assets of the Agilent Business owned by HP in accordance with the Master Separation and Distribution Agreement dated as of _____, 1999 between the parties (the "Separation Agreement").

WHEREAS, the parties desire to set forth certain agreements regarding real estate matters.

NOW, THEREFORE, in consideration of the foregoing and the covenants and agreements set forth below, the parties hereto agree as follows:

ARTICLE I

PROPERTY IN THE UNITED STATES

SECTION 1.1 Owned Property

(a) HP shall convey or cause its applicable Subsidiary to convey each of the Owned Properties (together with all rights and easements appurtenant thereto) to Agilent, subject to the other provisions of this Agreement and (to the extent not inconsistent with the provisions of this Agreement) the terms of the Separation Agreement and the other Ancillary Agreements. Such conveyance shall be completed on the Separation Date.

(b) Subject to the completion of the conveyance to Agilent of the relevant Owned Property, with respect to each Owned Property which is a Leaseback Property, Agilent shall grant to HP a lease of that part of the relevant Owned Property identified in the Colocation Sites Spreadsheet and HP shall accept the same. Such lease shall be completed immediately following completion of the transfer of the relevant Owned Property to Agilent.

SECTION 1.2 Leased Property

(a) HP shall assign or cause its applicable Subsidiary to assign, and Agilent shall accept and assume, HP's or its Subsidiary's interest in the Leased Properties, subject to the other provisions of this Agreement and (to the extent not inconsistent with the provisions of this Agreement) the terms of the Separation Agreement and the other Ancillary Agreements. Such assignment shall be completed on the later of: (i) the Separation Date; and (ii) the earlier of (A) the tenth (10th) business day after the relevant Lease Consent has been granted and (B) the date agreed upon by the parties in accordance with Section 1.7(a) below.

(b) Subject to the completion of the assignment to Agilent of the relevant Leased Property, with respect to each Leased Property which is also a Leaseback Property, Agilent shall grant to HP a sublease of that part of the relevant Leased Property identified in the Colocation Sites Spreadsheet and HP shall accept the same. Such sublease shall be completed immediately following completion of the transfer of the relevant Leased Property to Agilent.

SECTION 1.3 Sublease Properties

HP shall grant or cause its applicable Subsidiary to grant to Agilent a sublease of that part of the relevant Sublease Property identified in the Colocation Sites Spreadsheet and Agilent shall accept the same, subject to the other provisions of this Agreement and (to the extent not inconsistent with the provisions of this Agreement) the terms of the Separation Agreement and the other Ancillary Agreements. Such sublease shall be completed on the later of: (a) the Separation Date; and (b) the earlier of (i) the tenth (10th) business day after the relevant Lease Consent has been granted and (ii) the date agreed

upon by the parties in accordance with Section 1.7(a) below.

SECTION 1.4 New Lease Properties

HP shall grant or cause its applicable Subsidiary to grant to Agilent a lease of those parts of the New Lease Properties identified in the Colocation Sites Spreadsheet and Agilent shall accept the same, subject to the other provisions of this Agreement and (to the extent not inconsistent with the provisions of this Agreement) the terms of the Separation Agreement and the other Ancillary Agreements. Such lease shall be completed on the Separation Date.

SECTION 1.5 Obtaining the Lease Consents

(a) Except with respect to any Properties which the parties agree should be dealt with by the Service Level Agreements referred to in Section 1.11 below, HP confirms that, with respect to each Leased Property, Sublease Property and Leaseback Property which is a Leased Property, an application has been made or will be made by the Separation Date to the relevant Landlord for the Lease Consents required with respect to the transactions contemplated by this Agreement.

(b) HP and Agilent will each use their reasonable commercial efforts to obtain the Lease Consents, but HP shall not be required to commence judicial proceedings for a declaration that a Lease Consent has been unreasonably withheld or delayed, nor shall HP be required to pay any consideration in excess of that required by the Relevant Lease or that which is typical in the open market to obtain the relevant Lease Consent.

(c) Agilent and HP will promptly satisfy the lawful requirements of the Landlord, and Agilent will take all steps to assist HP in obtaining the Lease Consents, including, without limitation:

(i) if properly required by the Landlord, entering into an agreement with the relevant Landlord to observe and perform the tenant's obligations contained in the Relevant Lease throughout the remainder of the term of the Relevant Lease, subject to any statutory limitations of such liability;

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(ii) if properly required by the Landlord, providing a guarantee, surety or other security (including, without limitation, a security deposit) for the obligations of Agilent as tenant under the Relevant Lease, and otherwise taking all steps which are necessary and which Agilent is capable of doing to meet the lawful requirements of the Landlord so as to ensure that the Lease Consents are obtained; and

(iii) using all reasonable commercial efforts to assist HP with obtaining the Landlord's consent to the release of any guarantee, surety or other security which HP or its Subsidiary may have previously provided to the Landlord and, if required, offering the same or equivalent security to the Landlord in order to obtain such release.

Notwithstanding the foregoing, (1) except with respect to guarantees, sureties or other security referenced in Section 1.5(c) (ii) above, Agilent shall not be required to obtain a release of any obligation entered into by HP or its Subsidiary with any Landlord or other third party with respect to any Property and (2) Agilent shall not communicate directly with any of the Landlords unless Agilent can show HP reasonable grounds for doing so.

(d) If, with respect to any Leased Properties, HP and Agilent are unable to obtain a release by the Landlord of any guarantee, surety or other security which HP or its Subsidiary has previously provided to the Landlord, Agilent shall indemnify, defend, protect and hold harmless HP and its Subsidiary from and after the Separation Date against all losses, costs, claims, damages, or liabilities incurred by HP or its Subsidiary as a result of such guarantee, surety or other security.

SECTION 1.6 Occupation by Agilent

(a) Subject to compliance with Section 1.6(b) below, in the event that the Actual Completion Date for any Leased Property or Sublease Property does not occur on the Separation Date, Agilent shall, commencing on the Separation Date, be entitled to occupy and receive the rental income from the relevant Property (except to the extent that the same is a Retained Part) as a licensee upon the terms and conditions contained in HP's Lease (as to Leased Properties) or upon the terms and conditions contained in the Sublease Form (as to Sublease Properties). Such license shall not be revocable prior to the date for completion as provided in Sections 1.2(a) and 1.3 unless an enforcement action or forfeiture by the relevant Landlord due to Agilent's occupation of the Property constituting a breach of HP's Lease cannot, in the reasonable opinion of HP, be avoided other than by requiring Agilent to immediately vacate the relevant Property, in which case HP may by notice to Agilent immediately require Agilent to vacate the relevant Property. Agilent will be responsible for all costs, expenses and liabilities incurred by HP or its applicable Subsidiary as a consequence of such occupation, except for any losses, claims, costs, demands and liabilities incurred by HP or its Subsidiary as a result of any enforcement action taken by the Landlord against HP or its Subsidiary with respect to any breach by HP or its Subsidiary of the Relevant Lease in permitting Agilent to so occupy the Property without obtaining the required Lease Consent, for which HP or its Subsidiary shall be solely responsible. Agilent shall not be entitled to make any claim or demand against, or obtain reimbursement from, HP or its applicable Subsidiary with respect to any costs, losses, claims, liabilities or damages incurred by Agilent as a consequence of being obliged to vacate the Property or in obtaining alternative premises, including, without limitation, any enforcement action which a Landlord may take against Agilent.

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(b) In the event that the Actual Completion Date for any Leased Property or Sublease Property does not occur on the Separation Date, whether or not Agilent occupies a Property as licensee as provided in Section 1.6(a) above, Agilent shall, effective as of the Separation Date, (i) pay HP all rents, service charges, insurance premiums and other sums payable by HP or its applicable Subsidiary under any Relevant Lease (as to Leased Properties) or under the Sublease Form (as to Sublease Properties), (ii) observe the tenant's covenants, obligations and conditions contained in HP's Lease (as to Leased Properties) or in the Sublease Form (as to Sublease Properties) and (iii) indemnify, defend, protect and hold harmless HP and its applicable Subsidiary from and against all losses, costs, claims, damages and liabilities arising on account of any breach thereof by Agilent.

(c) HP shall supply promptly to Agilent copies of all invoices, demands, notices and other communications received by HP or its or its applicable Subsidiaries or agents in connection with any of the matters for which Agilent may be liable to make any payment or perform any obligation pursuant to Section 1.6(b), and shall, at Agilent's cost, take any steps and pass on any objections which Agilent may have in connection with any such matters. Agilent shall promptly supply to HP any notices, demands, invoices and other communications received by Agilent or its agents from any Landlord while Agilent occupies any Property without the relevant Lease Consent.

SECTION 1.7 Obligation to Complete

(a) If, with respect to any Leased Property or Sublease Property, at any time the relevant Lease Consent is formally and unconditionally refused in writing, HP and Agilent shall commence good faith negotiations and use commercially reasonable efforts to determine how to allocate the applicable Property, based on the relative importance of the applicable Property to the operations of each party, the size of the applicable Property, the number of employees of each party at the applicable Property and the potential risk and liability to each party in the event an enforcement action is brought by the applicable Landlord. Such commercially reasonable efforts shall include consideration of alternate structures to accommodate the needs of both parties

and the allocation of the costs thereof, including entering into amendments of the size, term or other terms of the Relevant Lease, restructuring a proposed lease assignment to be a sublease and relocating one party. If the parties are unable to agree upon an allocation of the Property within fifteen (15) days after commencement of negotiations between the parties as described above, then either party may, by delivering written notice to the other, require that the matter be referred to the Chief Financial Officers of both parties. In such event, the Chief Financial Officers shall use commercially reasonable efforts to determine the allocation of the Property, including having a meeting or telephone conference within ten (10) days thereafter. If the parties are unable to agree upon the allocation of an applicable Property within fifteen (15) days after the matter is referred to the Chief Financial Officers of the parties as described above, the disposition of the applicable Property and the risks associated therewith shall be allocated between the parties as set forth in subparts (b) and (c) of this section below.

(b) If, with respect to any Leased Property, the parties are unable to agree upon the allocation of a Property as set forth in Section 1.7(a), HP may by written notice to Agilent elect to apply to the relevant Landlord for consent to sublease all of the relevant Property to Agilent for the remainder of the Relevant Lease term less three (3) days at a rent equal to the rent from time to time under the

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Relevant Lease, but otherwise on substantially the same terms and conditions as the Relevant Lease. If HP makes such an election, until such time as the relevant Lease Consent is obtained and a sublease is completed, the provisions of Section 1.6 will apply and, on the grant of the Lease Consent required to sublease the Leased Property in question, HP shall sublease or cause its applicable Subsidiary to sublease to Agilent the relevant Property in accordance with Section 1.3.

(c) If the parties are unable to agree upon the allocation of a Property as set forth in Section 1.7(a) and HP does not make an election pursuant to Section 1.7(b) above, HP may elect by written notice to Agilent to require Agilent to vacate the relevant Property immediately or by such other date as may be specified in the notice served by HP (the "Notice Date"), in which case Agilent shall vacate the relevant Property on the Notice Date but shall indemnify HP and its applicable Subsidiary from and against all costs, claims, losses, liabilities and damages in relation to the relevant Property arising from and including the Separation Date to and including the later of the Notice Date and date on which Agilent vacates the relevant Property, except for any costs, losses, damages, claims and liabilities incurred by HP or its Subsidiary with respect to any enforcement action taken by the Landlord against HP or its Subsidiary with respect to any breach by HP or its Subsidiary of the Relevant Lease in permitting Agilent to so occupy the Property without obtaining the required Lease Consent. Agilent shall not be entitled to make any claim or demand against or obtain reimbursement from HP or its applicable Subsidiary with respect to any costs, losses, claims, liabilities or damages incurred by Agilent as a consequence of being obliged to vacate the Property or obtaining alternative premises, including, without limitation, any enforcement action which a Landlord may take against Agilent.

SECTION 1.8 Form of Transfer

(a) The transfer or assignment to Agilent of each relevant Owned Property and Leased Property shall be in substantially the form attached in Schedule 1 or 2, as applicable, with such amendments as are reasonably required by HP with respect to a particular Property, including, without limitation, in all cases where a relevant Landlord has required a guarantor or surety to guarantee the obligations of Agilent contained in the relevant Lease Consent or any other document which Agilent is required to complete, the giving of such guarantee by a guarantor or surety, and the giving by Agilent and any guarantor or surety of Agilent's obligations of direct obligations to HP or third parties where required under the terms of any of the Lease Consent or any covenant, condition, restriction, easement, lease or other encumbrance to which the Property is

subject.

(b) The subleases to be granted to Agilent with respect to the Sublease Properties shall be substantially in the form of the Sublease Form and shall include such amendments which in the reasonable opinion of HP are necessary with respect to a particular Property or the relevant Lease Consent. Such amendments shall be submitted to Agilent for approval, which approval shall not be unreasonably withheld or delayed.

(c) The leases and subleases to be granted by Agilent to HP with respect to the Leaseback Properties shall be substantially in the form of the Lease Form or the Sublease Form, as applicable, with such amendments as are, in the reasonable opinion of HP, necessary with respect to a particular Property. Such amendments shall be submitted to Agilent for approval, which approval shall not be unreasonably withheld.

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(d) The leases to be granted to Agilent with respect to the New Lease shall be substantially in the form of the Lease Form and shall include such amendments which in the reasonable opinion of HP are necessary with respect to a particular Property. Such amendments shall be submitted to Agilent for approval, which approval shall not be unreasonably withheld or delayed.

SECTION 1.9 Casualty; Lease Termination

The parties hereto shall grant and accept transfers, assignments, leases or subleases of the Properties as described in this Agreement, regardless of any casualty damage or other change in the condition of the Properties. In addition, subject to HP's obligations in Section 5.6 of the Separation Agreement, in the event that HP's Lease with respect to a Leased Property or a Sublease Property is terminated prior to the Separation Date, (a) HP shall not be required to assign or sublease such Property, (b) Agilent shall not be required to accept an assignment or sublease of such Property and (c) neither party shall have any further liability with respect to such Property hereunder.

SECTION 1.10 Tenant's Fixtures and Fittings

The provisions of the Separation Agreement and the other Ancillary Agreements shall apply to any trade fixtures and personal property located at each Property (excluding any trade fixtures and personal property owned by third parties).

SECTION 1.11 Services

(a) HP and Agilent each agree that, on or about the Separation Date, they shall each enter into a Service Level Agreement with the other whereby, with respect to each of the Sublease Properties, the New Lease Properties and the Leaseback Properties, each party shall agree to supply to, or perform for the benefit of, the other party (and the other party shall accept) such Real Estate Services as each party currently supplies to or performs for the benefit of the other with respect to such Properties, on the same terms and conditions as currently apply, and at the cost and other terms as set forth in the Service Level Agreements.

(b) Notwithstanding anything to the contrary herein, the parties agree and acknowledge that there may be circumstances in which the parties mutually agree that a formal lease or sublease will not be entered into in order to establish shared occupancy of a Property, in which case such occupancy shall be (and the Service Level Agreement referenced in Section 1.11(a) above shall provide that the applicable party may occupy the relevant Property) on the terms and conditions set forth in Sections 2-28 of the Lease Form or the terms and conditions set forth in Sections 3 through the first sentence of Section 17 of the Sublease Form, respectively.

SECTION 1.12 Adjustments

(a) HP and Agilent each acknowledge and agree that Additional Properties may be acquired by HP prior to the Separation Date. Such Additional Properties shall be treated hereunder as Owned Properties, Leased Properties, Sublease Properties, New Lease Properties and/or Leaseback Properties by mutual agreement of the parties based on whether the Additional Property was acquired by or for the Agilent Business or HP's other businesses. In the event that the parties are

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unable to agree by the Separation Date as to how any Additional Property is to be treated, the matter shall be determined in accordance with the procedure set forth in Section 1.7(a) above. In the event that the parties are unable to agree within ten (10) business days of the Separation Date as to the allocation of an Additional Property, the matter in dispute shall be determined in accordance with the following guidelines:

(i) Properties which are occupied as to fifty percent (50%) or more of the total area for the purposes of the Agilent Business shall be treated as Owned Properties or Leased Properties (as appropriate) and the part which is not occupied by the Agilent Business or a third party shall be treated as a Leaseback Property; and

(ii) Properties which are occupied as to less than fifty percent (50%) for the purposes of the Agilent Business shall be treated as Sublease Properties or New Lease Properties (as appropriate).

(b) Following agreement or determination with respect to the Additional Properties, the parties shall enter into and complete all such documents as may be required to give effect to such agreement or determination.

(c) HP and Agilent each acknowledge and agree that their respective requirements with regard to each of the Properties may alter between the date of this Agreement and the Separation Date, in which case the parties may mutually agree in writing to re-characterize the relevant Property as an Owned Property, Leased Property, Sublease Property, New Lease Property and/or Leaseback Property as appropriate.

SECTION 1.13 Costs

HP shall pay all reasonable costs and expenses incurred in connection with obtaining the Lease Consents, including, without limitation, Landlord's consent fees and attorneys' fees and any costs and expenses relating to re-negotiation of HP's Leases. HP shall also pay all reasonable costs and expenses in connection with the transfer of the Owned Properties and Leased Properties, including title insurance premiums, escrow fees, recording fees, and any transfer taxes arising as a result of the transfers.

ARTICLE II

PROPERTY OUTSIDE THE UNITED STATES

With respect to each of the properties located outside the United States listed in the Owned and Leased Property Spreadsheet and the Colocation Sites Spreadsheet, as well as any additional properties acquired by HP or a Subsidiary prior to the Separation Date, HP and Agilent shall each enter into (if necessary) or procure that its relevant Subsidiary enter into an agreement with the other party or such Subsidiary of the other party as the other party may direct whereby the parties thereto agree to transfer, assign, lease, sublease, or leaseback, as the case may be, such property, as specified in such spreadsheets in accordance with the Non-US Plan (or with respect to any additional

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properties, in the manner agreed upon by the parties in accordance with the

applicable agreement). Such transfers, assignments, leases, subleases or leasebacks shall, so far as the law in the jurisdiction in which such property is located permits, be on terms and conditions substantially the same as the terms and conditions of this Agreement. In the event of a conflict between the terms of this Agreement and the terms of such local agreements, the terms of the local agreements shall prevail.

ARTICLE III

MISCELLANEOUS

SECTION 3.1 Entire Agreement. This Agreement, the Separation Agreement, the other Ancillary Agreements and the Exhibits and Schedules referenced or attached hereto and thereto, constitutes the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof.

SECTION 3.2 Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto. Notwithstanding the foregoing, the applicable Property transfers shall be performed in accordance with the laws of the state in which the applicable Property is located.

SECTION 3.3 Notices. Any notice, demand, offer, request or other communication required or permitted to be given by either party pursuant to the terms of this Agreement shall be in writing and shall be deemed effectively given the earlier of (i) when received, (ii) when delivered personally, (iii) one (1) business day after being delivered by facsimile (with receipt of appropriate confirmation), (iv) one (1) business day after being deposited with an overnight courier service or (v) four (4) days after being deposited in the U.S. mail, First Class with postage prepaid, and addressed to the attention of the party's General Counsel at the address of its principal executive office or such other address as a party may request by notifying the other in writing.

SECTION 3.4 Parties in Interest. This Agreement, including the Schedules and Exhibits hereto, and the other documents referred to herein, shall be binding upon and inure solely to the benefit of each party hereto and their legal representatives and successors, and nothing in this Agreement, express or implied, is intended to confer upon any other Person any rights or remedies of any nature whatsoever under or by reason of this Agreement.

SECTION 3.5 Counterparts. This Agreement, including the Schedules and Exhibits hereto, and the other documents referred to herein, may be executed in counterparts, each of which shall be deemed to be an original but all of which shall constitute one and the same agreement.

SECTION 3.6 Binding Effect; Assignment. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective legal representatives and successors. This Agreement may not be assigned by any party hereto. The Schedules and/or Exhibits attached hereto

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or referred to herein are an integral part of this Agreement and are hereby incorporated into this Agreement and made a part hereof as if set forth in full herein.

Section 3.7 Severability. If any term or other provision of this Agreement or the Schedules or Exhibits attached hereto is invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify

this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that transactions contemplated hereby are fulfilled to the fullest extent possible.

Section 3.8 Failure or Indulgence Not Waiver. No failure or delay on the part of any party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right.

Section 3.9 Amendment. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to such agreement.

Section 3.10 Authority. Each of the parties hereto represents to the other that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other action, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is a legal, valid and binding obligation, enforceable against it in accordance with its terms subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

Section 3.11 Interpretation. The headings contained in this Agreement, in any Exhibit or Schedule hereto and in the table of contents to this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. Any capitalized term used in any Schedule or Exhibit but not otherwise defined therein, shall have the meaning assigned to such term in this Agreement. When a reference is made in this Agreement to an Article or a Section, Exhibit or Schedule, such reference shall be to an Article or Section of, or an Exhibit or Schedule to, this Agreement unless otherwise indicated.

ARTICLE IV

DEFINITIONS

The following terms, as used herein, shall have the following meanings:

Actual Completion Date means, with respect to each Property, the date upon which completion of the transfer, assignment, lease or sublease of that Property actually takes place.

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Additional Properties means any leased or owned properties acquired by HP in the United States after the date of the Separation Agreement and before the Separation Date.

Colocation Sites Spreadsheet means the spreadsheet prepared by HP entitled "Colocation Sites" dated July 20, 1999, as updated from time to time prior to the Separation Date by mutual written agreement of the parties.

HP's Lease means, in relation to each Property, the lease(s) or sublease(s) or license(s) under which HP or its applicable Subsidiary holds such Property and any other supplemental document completed prior to the Actual Completion Date.

Landlord means the landlord under HP's Lease, and its successors and assigns, and includes the holder of any other interest which is superior to the interest of the landlord under HP's Lease.

Lease Consents means all consents, waivers or amendments required from the Landlord or other third parties under the Relevant Leases to assign the Relevant Leases to Agilent or to sublease the Sublease Properties to Agilent or

to sublease the Leaseback Properties to HP.

Lease Form means the form lease attached hereto as Schedule 4.

Leaseback Properties means each of (a) those Owned Properties located in the United States identified as "Owned" and listed in the "Leaseback Properties" area of the Colocation Sites Spreadsheet, with respect to part of which Agilent is to grant a lease to HP and (b) those Leased Properties located in the United States identified as "Leased" and listed in the "Leaseback Properties" area of the Colocation Sites Spreadsheet, with respect to part of which Agilent is to grant a sublease to HP.

Leased Properties means those Properties located in the United States identified as "Leased" and listed in the Owned and Leased Properties Spreadsheet.

New Lease Properties means those Properties located in the United States identified as "Owned" and listed in the "Sublease and New Lease Properties" area of the Colocation Sites Spreadsheet.

Owned and Leased Properties Spreadsheet means the spreadsheet prepared by HP entitled "Owned & Leased Properties to be Transferred" dated July 20, 1999, as updated from time to time prior to the Separation Date by mutual written agreement of the parties.

Owned Properties means those Properties located in the United States identified as "Owned" and listed in the Owned and Leased Properties Spreadsheet.

Property means the Owned Properties, the Leased Properties, the Sublease Properties, the New Lease Properties, the Leaseback Properties and the Additional Properties.

Real Estate Services means any services relating to the occupation or use of a Property or the carrying out of either the Agilent Business or HP's other businesses at a Property, including, without limitation, cleaning, garbage disposal, repair, maintenance, receptionist services, utilities, mail delivery, copying and facsimile services.

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Relevant Leases means those of HP's Leases with respect to which the Landlord's consent is required for assignment or sublease to a third party or which prohibit assignments or subleases.

Retained Parts means those parts of the Owned Properties and the Leased Properties which, following transfer or assignment to Agilent, are intended to be leased or subleased to HP and those parts of the Sublease Properties and the New Lease Properties which will not, and which are not intended to, be leased or subleased to Agilent in accordance with this Agreement.

Sublease Form means the form sublease attached hereto as Schedule 3.

Sublease Property means those Properties located in the United States identified as "Leased" and listed in the "Sublease and New Lease Properties" area of the Colocation Sites Spreadsheet.

[SIGNATURES ON FOLLOWING PAGE]

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IN WITNESS WHEREOF, each of the parties has caused this Agreement to be executed on its behalf by its officers thereunto duly authorized on the day and year first above written.

HEWLETT-PACKARD COMPANY

By:

Name:
Title: President and Chief Executive Officer

AGILENT TECHNOLOGIES, INC.

By:

Name:
Title: President and Chief Executive Officer

Schedule 1

Form Transfer for Owned Properties

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Schedule 2

Form Transfer for Leased Properties

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Schedule 3

Form Sublease for Sublease Properties
and Leased Leaseback Properties

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Schedule 4

Form Lease for New Lease Properties
and Owned Leaseback Properties

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ENVIRONMENTAL MATTERS AGREEMENT

Between

Hewlett-Packard Company

and

Agilent Technologies, Inc.

_____, 1999

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EXHIBITS

- Exhibit 1 - Agilent Schedule 2 Facilities
- Exhibit 2 - Orders from a Governmental Authority

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ENVIRONMENTAL MATTERS AGREEMENT

This Environmental Matters Agreement (this "Agreement") is entered into on _____, 1999 by and between Hewlett-Packard Company, a Delaware corporation

("HP"), and Agilent Technologies, Inc., a Delaware corporation ("Agilent"). Capitalized terms used in this Agreement and not otherwise defined in this Agreement shall have the meaning ascribed to them in the Separation Agreement, Assignment Agreement or Indemnification Agreement (as defined below), as applicable.

RECITALS

WHEREAS, HP hereby and by certain other instruments of even date herewith transfers or will transfer to Agilent effective as of the Separation Date, the Agilent Business in accordance with the Master Separation and Distribution Agreement dated as of August 12, 1999 between the parties ("Separation Agreement") and the Ancillary Agreements, including, but not limited to the General Assignment and Assumption Agreement ("Assignment Agreement"), attached as Exhibit C to the Separation Agreement, and the Indemnification and Insurance Matters Agreement ("Indemnification Agreement"), attached as Exhibit K to the Separation Agreement. It is the intent of the parties hereto, by this Agreement and the other agreements and instruments provided for in the Separation Agreement, to convey to Agilent the Agilent Business.

WHEREAS, under the terms of, the Indemnification Agreement, HP has agreed to indemnify, defend and hold harmless Agilent from and against costs associated with certain Environmental Conditions at the Agilent Schedule 2 Facilities.

WHEREAS, HP hereby agrees to perform remedial activities at the Agilent Schedule 2 Facilities, consistent with such indemnity obligations and under the terms and conditions of this Agreement.

WHEREAS, HP and Agilent desire to establish general requirements and mutual obligations with respect to the performance by HP of remedial activities at the Agilent Schedule 2 Facilities as set forth above.

NOW THEREFORE, in consideration of the foregoing and the covenants and agreements set forth below, the parties hereto agree as follows:

ARTICLE I.

FACILITY REMEDIATION

Section 1.1. Responsibility For Remediation. At its own cost and expense, HP shall perform, or cause to be performed, any and all Remedial Activities that are necessary to fulfill HP's Remediation Obligation. To the extent legally permitted, HP shall also take all responsibility as generator for any Hazardous Materials generated by performance of these Remedial Activities. To the extent required by Environmental Laws, HP will also obtain any permits, authorizations or approvals necessary to

conduct HP's Remediation Obligation, except such permits, if any, as must under applicable laws be obtained by a member of the Agilent Group, or otherwise by an owner or tenant of the relevant Agilent Schedule 2 Facility.

Section 1.2. Standard of Performance. HP's Remediation Obligation shall be performed in accordance with: (i) any applicable Remedial Activity Plans, as approved by the Governmental Authority; and (ii) all applicable Environmental Laws as enforced by the Governmental Authority[ies] with jurisdiction over the Remedial Activities or HP's Remediation Obligation. Notwithstanding the foregoing or anything to the contrary in this Agreement, in the event Agilent or any successor-in-interest to Agilent at an Agilent Schedule 2 Facility decides to change the use of such facility from its existing use on the Separation Date (for example from industrial to commercial use or commercial to residential use), in no event shall HP's Remediation Obligation require HP to comply with any stricter standard applied to such Agilent Schedule 2 Facility as a result of such change in use. Further, HP's Remedial Activities shall be performed in such a manner as to minimize, to the greatest extent feasible, the impact on the use of the Agilent Schedule 2 Facility and the ongoing operations of any member of the Agilent Group or other Authorized Tenant of the Agilent Schedule 2 Facility.

Section 1.3. Performance and Planning of Remedial Activities.

(a) Information to be Provided by HP to Agilent. HP shall provide to

Agilent in a timely fashion, a copy of: (i) any documents submitted to any Governmental Authority regarding any Remedial Activities performed or to be performed by or on behalf of HP under this Agreement, and (ii) analytical results of any environmental sampling conducted on any Agilent Schedule 2 Facilities by or on behalf of HP under this Agreement.

(b) Agilent Opportunity to Comment. HP shall provide Agilent with a

reasonable opportunity to timely review and comment upon, prior to their submission to the Governmental Authority, any report, plan, proposal or other document that: (i) proposes the performance of any Remedial Activities that would disrupt or interfere with the then current day to day operations of any Authorized Tenant of the Agilent Schedule 2 Facilities; (ii) involves the construction on any of the Agilent Schedule 2 Facilities of any above ground remedial fixtures (other than repair and maintenance of any such fixtures or equipment as are present at the Agilent Schedule 2 Facilities on the Separation Date); (iii) proposes any remedy or closure at any of the Agilent Schedule 2 Facilities which allows Environmental Conditions to remain on the Agilent Schedule 2 Facility after remediation has been completed; or (iv) involves the setting of health and safety standards with respect to exposure to Hazardous Materials at any Agilent Schedule 2 Facility.

(c) Agilent Participation. Agilent, or its designated representative,

shall have the right, but not the obligation, to be present and at any meeting with or hearing before any Governmental Authority regarding any proposed Remedial Activities or proposed Remedial Activity Plans described in Section 1.3 (b) above. HP and Agilent further agree to confer in good faith in advance of any such meeting or hearing with respect to any outstanding matters to be addressed at such meeting or hearing and for the purpose of resolving such matter to their mutual satisfaction and presenting a unified position to the Governmental Authority, to the extent consistent with the respective positions of the parties. If the parties cannot reach agreement after such consultation and Agilent reasonably

determines that any proposed Remedial Activities or Remedial Activity Plans will have an adverse impact on the use of, or operations on a particular Agilent Schedule 2 Facility, then Agilent shall have the right to make objections to such proposals to the relevant Governmental Authority.

(d) Consultation With Agilent. HP agrees to consult fully with Agilent

regarding any proposed Remedial Activities or proposed Remedial Activity Plans described in Section 1.3(b) above. HP and Agilent agree to use good faith best efforts to reach agreement on such Remedial Activities or Remedial Activity Plans. In the event that the parties cannot reach agreement after such consultation and Agilent reasonably determines that any proposed Remedial Activities or Remedial Activity Plans will have an adverse impact on the use of, or operations on a particular Agilent Schedule 2 Facility, Agilent shall have the right to make objections to such proposals to the relevant Governmental Authority. The parties also agree that in the event they cannot reach agreement, HP may submit to the Governmental Authority its proposed Remedial Activities or proposed Remedial Activity, as required to meet any deadline which is not, by its terms, subject to extension, to avoid fines and penalties or for the protection of human health, and HP may also proceed with implementation of any aspects of such Remedial Activities or Remedial Activity Plans.

(e) Performance of the Remedial Activities. Following approval of any

Remedial Activity Plans by the applicable Governmental Authority, HP shall proceed with appropriate diligence and expedition to implement and complete the Remedial Activities in accordance with the Remedial Activity Plans and this Agreement.

(f) Agilent's Assistance. Agilent shall use, or cause the relevant member

of the Agilent Group or other Authorized Tenant of the Agilent Schedule 2 Facilities to use, its reasonable best efforts to assist HP in the development, approval, and implementation of Remedial Activity Plans in accordance with applicable laws, including applicable Environmental Laws.

Section 1.4. Compliance With Laws. HP shall require that its employees, consultants, contractors, and subcontractors perform all Remedial Activities under this Agreement in accordance with applicable laws, including applicable Environmental Laws.

Section 1.5. Safety. HP shall be responsible for the maintenance of order and discipline of its employees, consultants, contractors, and subcontractors engaged in the performance of Remedial Activities under this Agreement, and HP shall require that such Remedial Activities be performed in compliance, in all material respects, with applicable laws, regulations, rules, ordinances, codes or requirements of any Governmental Authority (including those relating to occupational safety and health). Except in case of emergency and to the extent that prior notice of such policies is given to HP, HP also will require its employees, consultants, contractors, and subcontractors engaged in performance of Remedial Activities on behalf of HP under this Agreement to observe any health, safety and environmental and site security policies established by Agilent, or by any other Authorized Tenant, for third-party contractors and other non-employees who perform work or services at the Agilent Schedule 2 Facility. Agilent shall have the right to require that a contractor, subcontractor or other representative of HP discontinue any Remedial Activities to the extent such activities pose an imminent risk to property, health, safety or the environment. In such instance, Agilent shall immediately notify HP by telephone that it has taken such action.

Section 1.6. Confidentiality. HP shall treat as confidential property and not disclose to others during or subsequent to the term of this Agreement, any information marked "confidential" regarding any Agilent Group member's or Agilent Schedule 2 Facility Authorized Tenant's plans, programs, facility, processes, products, costs, equipment, operations or customers which may come into the knowledge of HP or its employees, consultants, contractors or subcontractors, unless required by law or ordered to disclose such by a court or administrative body after prior notice to Agilent of the request or order to disclose. HP shall also treat as confidential any non-public information that is disclosed to HP regarding matters covered under Section 5.1, including, without limitation, the identity of any potential purchaser of an Agilent Schedule 2 Facility and any terms and conditions of the purchase and sale agreement for an Agilent Schedule 2 Facility. Agilent shall treat as confidential any non-public information relating to HP that is disclosed to Agilent regarding matters covered under Section 5.1, including, without limitation, any terms and conditions of the purchase and sale agreement for an Agilent Schedule 2 Facility affecting HP's Remediation Obligation. Agilent shall treat as confidential any proprietary remediation technology or information utilized by HP in performance of this Agreement. This provision shall not apply to any information which at the time of disclosure is publicly available or in the public domain through no fault of the disclosing party. Upon request, HP and Agilent agree to require their consultants, contractors and subcontractors who will receive confidential information to sign a confidentiality agreement substantially similar to the terms of this provision.

Section 1.7. Insurance.

(a) The consultants, contractors and subcontractors who perform Remedial Activities under this Agreement shall provide and maintain (or HP shall provide and maintain), comprehensive general liability insurance and comprehensive automobile liability insurance naming Agilent, and any Authorized Tenant of the applicable Agilent Schedule 2 Facility, as additional insureds and providing coverage for claims for damages for bodily injury, including wrongful death, and property damage which may arise from or in connection with the performance of any Remedial Activities. Minimum amounts required are:

Bodily Injury - \$2,000,000 each person, \$2,000,000 each accident

Property Damage - \$2,000,000 each accident

Errors and Omissions - \$1,000,000 each occurrence

Workers' Compensation Insurance - In the amount required by law

(b) Before commencing Remedial Activities at any Agilent Schedule 2 Facility, the party providing the insurance set forth in Section 1.7(a) above shall provide Agilent with certificates of insurance or other appropriate evidence that the insurance required by Section 1.7(a) above has been obtained.

Section 1.8. Construction Activities and Repair Activities.

(a) The provisions of this Section 1.8 shall apply to any Construction Activity or Repair Activity by Agilent or by any Authorized Tenant which involves disturbance or invasion of any Environmental Condition that is part of HP's Remediation Obligation.

(b) If testing conducted in the proposed construction or repair area before initiation of the Construction Activity or the Repair Activity demonstrates that the proposed construction or repair area contains an Environmental Condition in the soil or subsurface that is part of HP's Remediation Obligation and, further, if Agilent provides notice to HP of such Environmental Condition and of said proposed Construction Activity or Repair Activity in the manner provided in Section 5.2, then HP shall (i) promptly and diligently conduct HP's Remediation Obligation of such Environmental Condition identified by the testing to the extent required by the standard of performance set out in Section 1.2 above; and (ii) HP shall reimburse Agilent or the Authorized Tenant for all reasonable Incremental Construction Costs resulting from such Construction Activity or Repair Activity. In the event Agilent or an Authorized Tenant anticipates incurring Incremental Construction Costs, Agilent shall provide HP reasonable advance notice before the costs are incurred.

(c) In the event, as a result of any Construction Activity or Repair Activity, any of the then existing above ground or underground remediation systems (including, without limitation, pump and treat equipment, underground piping, monitoring or extraction wells, carbon absorption systems and the like) are damaged or destroyed, or are required to otherwise be relocated, Agilent shall reimburse HP for all costs associated with such damage, destruction or removal.

ARTICLE II.

SITE ACCESS AND SUPPORT

Section 2.1. Site Access.

(a) Agilent shall afford or cause to be afforded to HP and to HP's employees, consultants, contractors and subcontractors, reasonable access on the terms set forth in this Section 2.1 to all of the Agilent Schedule 2 Facilities for the purpose of performing Remedial Activities:

(i) HP shall provide reasonable advance notice to the Agilent Liaison (as defined in Sections 3.4 and 5.2) of the need for access to any of the Agilent Schedule 2 Facilities, including the purpose and scope of work to be performed, the nature and duration of the access, and such other information as Agilent may reasonably request.

(ii) Remedial Activities for which Agilent shall be responsible for providing access include, without limitation, borings, excavations, monitoring, assessments and evaluations, and construction, installation, operation, and maintenance of necessary equipment and supporting facilities for the treatment of soil and groundwater, and all other Remedial Activities, in all cases as described in the applicable Remedial Activity Plans or as otherwise reasonably

required to fulfill HP's Remediation Obligation.

(b) Agilent shall provide HP with access to and use of those areas necessary for HP's performance of Remedial Activities under this Agreement, including areas for groundwater treatment

equipment and storage and staging of materials and equipment. HP agrees that with respect to its use of any portion of an Agilent Schedule 2 Facility for Remedial Activities, HP shall provide secondary containment for any above ground treatment systems and any Hazardous Materials to be stored on-site overnight or for any longer period (excluding contaminated soils which shall be safely maintained and secured until removal from the Agilent Schedule 2 Facility). HP shall also provide and be responsible for proper security with respect to such storage and treatment system areas.

Section 2.2. Utilities and Support Services. It is HP's intent not to utilize any Agilent utilities or similar support services for implementation of HP's Remediation Obligation under this Agreement. If HP requests any such utilities or support services from Agilent for use by HP, or HP's employees, consultants, contractors, and subcontractors engaged in the performance of Remedial Activities under this Agreement, Agilent agrees that it will negotiate in good faith with HP to reach an agreement to provide such utilities and support services.

Section 2.3. Site Activities. Agilent, its employees, consultants, lessees, contractors, subcontractors or others under Agilent's control or direction, and any Authorized Tenant of any portion of the Agilent Schedule 2 Facility, shall use, operate, and conduct their activities and operations at the Agilent Schedule 2 Facility in a manner that will interfere to the least extent feasible with the Remedial Activities conducted by or on behalf of HP under this Agreement. Agilent shall provide prior written notice to the HP Project Manager (as defined in Sections 3.4 and 5.2) of the need for, scope and duration of any activity, process, or operation at the Agilent Schedule 2 Facility (including without limitation excavation, demolition, landscaping or groundwater pumping) that could have a material adverse effect on the performance of Remedial Activities by HP. Agilent shall provide such notice promptly upon becoming aware of such potential adverse effect. Agilent shall also provide in a timely fashion to HP any analytical results of soil or groundwater sampling at an Agilent Schedule 2 Facility performed by or on behalf of Agilent, or which otherwise comes in to the possession of Agilent.

ARTICLE III.

REGULATORY PROCESSES

Section 3.1. Procedures For Remediation and Other Work.

(a) The parties hereto retain all rights to appeal, seek relief from, or otherwise contest any order or other action by any Governmental Authority with jurisdiction over the matters that are the subject of this Agreement, in a manner consistent with this Agreement and the Indemnification Agreement.

(b) Agilent agrees to support and cooperate with HP, as necessary, in any such challenge by HP of a requirement as to which Agilent has previously agreed with HP. HP agrees that it will not challenge any decision in a manner which will interfere with the operation of the applicable Agilent Schedule 2 Facility. HP further agrees to be responsible for any penalties which may accrue against or be incurred by Agilent or any member of the Agilent Group or Authorized Tenant of the Agilent Schedule 2 Facility as a result of such challenge by HP during the pendency of any such challenge and

to promptly pay any such penalties within the time permitted by law but in any event promptly after exhaustion of any administrative or judicial appeals.

Section 3.2. Communications. In the event of any written notices or other written communication or action by a Governmental Authority relating to or

affecting the Remedial Activities or any Remedial Activity Plans, or any communication from the public evidencing any concerns about the Remedial Activities or Environmental Conditions, the party receiving such notice, communication, or action shall provide a copy to the other party in a timely fashion (or, with respect to any written notice by a Governmental Authority that any Remedial Activities or Environmental Conditions violate Environmental Laws, within five (5) business days of the receipt of such notice) in accordance with Section 5.2. Subject to Agilent's rights under Sections 1.3(c) and (d) above, HP shall be responsible for all contacts and communications with Governmental Authorities in connection with HP's Remediation Obligation and any other matters arising under this Agreement which are the obligation of HP. HP also agrees to promptly reimburse Agilent for any reasonable "out-of-pocket" costs (excluding any internal Agilent charges for administration, management or supervision or other internal charges) incurred by Agilent in providing support to HP during such challenge.

Section 3.3. Regular Meetings. HP shall schedule, as appropriate, regular meetings with Agilent to provide information on the status of HP's Remediation Obligation, including without limitation, the development, approval, and implementation of Remedial Activity Plans, and to consult with and coordinate with Agilent HP's Remedial Activities under this Agreement.

Section 3.4. HP Project Managers/Agilent Liaison. For consultation and coordination with Agilent regarding HP's Remedial Activities under this Agreement, and to manage their respective activities and responsibilities under this Agreement, HP shall designate a Project Manager and Agilent shall designate an Agilent Liaison for each Agilent Schedule 2 Facility. Designation of a Project Manager and of an Agilent Liaison shall be by notice as provided in Section 5.2 of this Agreement. HP may replace any of its Project Managers, and Agilent may replace any of its Liaisons, by providing the same notice under Section 5.2.

Section 3.5. Inspection. Agilent shall have the right to inspect and observe the Remedial Activities performed by or on behalf of HP under this Agreement, at reasonable times and after reasonable prior notice to HP. Inspection or failure to inspect by Agilent shall not constitute a waiver of any provision of this Agreement, or of any of Agilent's rights hereunder. However, Agilent's right or exercise of inspection shall not extend to or include any right or authority to supervise or direct any of HP's employees, consultants, contractors or subcontractors in their performance of any Remedial Activities.

Section 3.6. Notifications. HP, Agilent, and any Authorized Tenant shall notify the other parties within ten (10) days following the occurrence of any Release that causes contamination to soil or groundwater on any Agilent Schedule 2 Facility or otherwise: (i) requires investigation, monitoring, remediation or removal under the Environmental Laws; (ii) may adversely affect any Remedial Activities or Remedial Activity Plans; (iii) is reported to such party's insurance carrier; or (iv) is reported to any Governmental Authority under Environmental Laws. HP also agrees to give Agilent prompt advance notice (if and to the extent HP has notice) of any inspection to be performed on any

Agilent Schedule 2 Facility by any Governmental Authority in connection with the Remedial Activities or HP's Remediation Obligation. Agilent also agrees to give HP prompt advance notice (if and to the extent Agilent has notice) of any inspection to be performed on any Agilent Schedule 2 Facility by any Governmental Authority with jurisdiction over the Remedial Activities or HP's Remediation Obligation.

Section 3.7. Dispute Resolution. If a dispute or disagreement occurs between HP and Agilent concerning any matter arising under this Agreement, the HP Project Manager and the Agilent Liaison shall consult and attempt to resolve the dispute or disagreement. If the HP Project Manager and Agilent Liaison are unable to reach an agreement on the dispute or disagreement within fifteen (15) days (or such other longer period of time as may be mutually agreed to in writing by the HP Project Manager and the Agilent Liaison), then the dispute or disagreement shall be referred to the Claims Committee. If the Claims Committee is unable to reach an agreement on the dispute within thirty (30) days, then the dispute

shall be handled in accordance with the Dispute Resolution procedures set forth in the Section 5.9 of the Separation Agreement. In no event shall the existence of a dispute or disagreement between HP and Agilent, or their consultation under this Section 3.7 to attempt to resolve it, delay the filing or submission of any document, or the performance of any action or activity, beyond the legally required deadline nor prevent either party from pursuing any remedy to which it is entitled under the Indemnification Agreement.

ARTICLE IV.

INDEMNITY AND LIENS

Section 4.1. Indemnity.

(a) Indemnification by HP. In addition to, and without in any way limiting the indemnification obligations of HP in the Indemnification Agreement, HP shall protect, indemnify, defend and hold harmless the Agilent Indemnitees and any Authorized Tenant from and against any Liabilities and Environmental Actions to the extent arising at any time out of, relating to, or resulting from the negligence or willful misconduct of any member of the HP Group or their agents, employees, consultants or contractors in connection with the Remedial Activities or any other obligations of HP under this Agreement.

(b) Indemnification by Agilent. In addition to, and without in any way limiting the indemnification obligations of Agilent in the Indemnification Agreement, Agilent shall protect, indemnify, defend and hold harmless the HP Indemnitees from and against any Liabilities and Environmental Actions to the extent arising at any time out of, relating to, or resulting from: (i) Exacerbation, to the extent caused by the operations or activities of any member of the Agilent Group or their agents, employees, consultants, contractors or Authorized Tenants occurring at any Agilent Schedule 2 Facility; or (ii) the negligence or willful misconduct of any member of the Agilent Group, or their agents, employees, consultants, contractors or Authorized Tenants at any Agilent Schedule 2 Facility in connection with the Remedial Activities or any obligations of Agilent under this Agreement.

Section 4.2. Liens. HP shall not permit or suffer any mechanics' or materialmen's or other liens arising from the provision of labor or materials for work performed as part of or in connection with any Remedial Activities undertaken by or on behalf of HP under this Agreement. If Agilent becomes aware of any such liens, Agilent shall provide prompt notice of said lien to HP, but failure to provide such notice shall relieve HP from its obligations only to the extent of the prejudice caused thereby. If any such liens attach or claims therefor are made, then, within ten (10) days after receipt of notice thereof, HP will procure the discharge thereof by payment, bond, or such other means as may be required or permitted by applicable law.

Section 4.3. Limitation on Liability. IN NO EVENT SHALL ANY MEMBER OF THE AGILENT GROUP OR ANY MEMBER OF THE HP GROUP BE LIABLE TO THE OTHER UNDER THIS ARTICLE IV FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, INCIDENTAL OR PUNITIVE DAMAGES OR LOST PROFITS, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (INCLUDING NEGLIGENCE) ARISING IN ANY WAY OUT OF THIS AGREEMENT, WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES; PROVIDED, HOWEVER, THAT THE FOREGOING LIMITATIONS SHALL NOT LIMIT EACH PARTY'S INDEMNIFICATION OBLIGATIONS UNDER SECTION 4.1 WITH RESPECT TO ANY LOSSES ASSERTED AGAINST AN INDEMNIFIED PARTY BY ANY THIRD PARTIES (INCLUDING, WITHOUT LIMITATION, ANY GOVERNMENTAL AUTHORITIES).

ARTICLE V.

MISCELLANEOUS

Section 5.1. Sale of an Agilent Schedule 2 Facility. In the event that any member of the Agilent Group decides to sell an Agilent Schedule 2 Facility at which HP (or its agents or permitted assignees) is continuing to perform Remedial Activities, Agilent shall promptly notify HP of the intent to sell. Agilent shall permit HP to: (i) participate in the negotiations with third

parties regarding environmental issues and environmental disclosures related to the sale of the Agilent Schedule 2 Facility; and (ii) promptly review and comment to Agilent or the third party upon any portion of a draft purchase and sale agreement for an Agilent Schedule 2 Facility that addresses environmental liabilities and obligations so that HP has the reasonable opportunity to minimize any adverse impact of the sale of an Agilent Schedule 2 Facility on HP's Remediation Obligations; provided that HP shall not have the right to prevent Agilent from selling the Agilent Schedule 2 Facility.

Section 5.2. Notices.

(a) All notices or other communications hereunder shall be made in writing and shall be given either by personal delivery, by nationally recognized overnight courier (with charges prepaid) or by facsimile transmission (with telephone confirmation), and shall be deemed to have been given or made if personally delivered, on the day of such personal delivery; if sent by overnight courier, on the next business day following the date deposited with such overnight courier service; or if by facsimile transmission, on the business day transmitted to receiving facsimile machine with receipt confirmed by

telephone, in each case addressed to the respective parties at the following addresses (or such other address for a party as shall be specified by like notice):

If to HP:

[List one general contact to notify at HP, and if applicable one specific contact at the relevant member of the HP for each Agilent Schedule 2 Facility]

Attention:

Telephone:

Facsimile:

If to Agilent:

[List one general contact to notify at Agilent, and if applicable one specific contact at the relevant member of the Agilent Group for each Agilent Schedule 2 Facility]

Attention:

Telephone:

Facsimile:

(b) Notice provided, as specified in this section, to the HP Project Manager or Agilent Liaison, as applicable, shall also satisfy the requirements of this section.

(c) Either party may change its address or designated individual for notice under this section by delivery of written notice to the other party as provided in this section.

Section 5.3. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto.

Section 5.4. Counterparts. This Agreement, including the Schedules and Exhibits hereto, and the other documents referred to herein, may be executed in counterparts, each of which shall be deemed to be an original but all of which shall constitute one and the same agreement.

Section 5.5. Parties in Interest. This Agreement shall be binding upon HP,

HP's Subsidiaries, Agilent and Agilent's Subsidiaries. This Agreement shall inure solely to the benefit of the Agilent Indemnitees and the HP Indemnitees and their respective permitted assigns, and except as set forth in this Section 5.5, nothing in this Agreement, express or implied, is intended to confer upon any other Person any rights or remedies of any nature whatsoever under or by reason of this Agreement.

HP hereby agrees to execute, for the benefit of any Agilent Indemnitee, such documents as may be reasonably requested by such Agilent Indemnitee, evidencing HP's agreement that the obligations of HP set forth in this Agreement inure to the benefit of and are enforceable by such Agilent Indemnitee. Agilent hereby agrees to execute, for the benefit of any HP Indemnitee, such documents as may be reasonably requested by such HP Indemnitee, evidencing Agilent's agreement that the obligations of Agilent set forth in this Agreement inure to the benefit of and are enforceable by such HP Indemnitee.

Section 5.6. Assignment. Neither party may assign this Agreement without the express written consent of the other party, which consent can only be withheld if the party denying consent, in the reasonable exercise of its discretion, determines that such assignment would materially increase its obligations, or materially diminish its rights under this Agreement. This Agreement shall be deemed to constitute a separate Agreement for each Agilent Schedule 2 Facility such that the Agreement can be separately assigned to a third party by either HP or Agilent (subject to the conditions of this Section 5.6) with respect to one or more Agilent Schedule 2 Facilit[ies], and not assigned as to other Agilent Schedule 2 Facilities.

Section 5.7. Authority. Each of the parties hereto represents to the other that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other action, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is a legal, valid and binding obligation, enforceable against it in accordance with its terms subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

Section 5.8. Interpretation. The headings contained in this Agreement, in any Exhibit or Schedule hereto and in the table of contents to this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. Any capitalized term used in any Schedule or Exhibit but not otherwise defined therein, shall have the meaning assigned to such term in this Agreement. When a reference is made in this Agreement to an Article or a Section, Exhibit or Schedule, such reference shall be to an Article or Section of, or an Exhibit or Schedule to, this Agreement unless otherwise indicated.

Section 5.9. Amendments. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to this Agreement.

Section 5.10. Severability. If any term or other provision of this Agreement or the Schedules or Exhibits attached hereto is determined by a nonappealable decision by a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an

acceptable manner to the end that transactions contemplated hereby are fulfilled to the fullest extent possible.

Section 5.11. Failure or Indulgence Not Waiver. No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right.

Section 5.12. Entire Agreement. This Agreement, the Master Separation Agreement, the other Ancillary Agreements and the Exhibits and Schedules attached hereto and thereto, constitutes the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof.

Section 5.13. Authority. Each of the parties hereto represents to the other that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other action, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is a legal, valid and binding obligation, enforceable against it in accordance with its terms subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

ARTICLE VI.

DEFINITIONS

Section 6.1. Agilent Group. "Agilent Group" means Agilent, each Subsidiary and Affiliated Company of Agilent immediately after the Separation Date or that is contemplated to be a Subsidiary or Affiliated Company of Agilent pursuant to the Non-US Plan and each Person that becomes a Subsidiary or Affiliate Company of Agilent after the Separation Date.

Section 6.2. Agilent Indemnitees. "Agilent Indemnitees" means Agilent, each member of the Agilent Group and each of their respective directors, officers and employees.

Section 6.3. Agilent Schedule 2 Facilities. "Agilent Schedule 2 Facilities" means the real property, groundwater, surface water and improvements thereon which shall be owned or occupied by a member of the Agilent Group on and after the Separation Date and which are identified on a disclosure schedule entitled "The Agilent Schedule 2 Facilities", which schedule shall be delivered to Agilent by HP on the Separation Date and attached to this Agreement as Exhibit 1.
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Section 6.4. Authorized Tenant. "Authorized Tenant" means, any owner, lessee, sublessee or other party with a contractual right to occupy all or any portion of an Agilent Schedule 2 Facility (or their agents, employees, consultants, contractors) during the period of time that any Agilent Group

member has the contractual right to occupy (as an owner, tenant or otherwise) such Agilent Schedule 2 Facility.

Section 6.5. Claims Committee. "Claims Committee" means a committee composed of (i) either the General Counsel or Associate General Counsel of HP and (i) either the General Counsel or Associate General Counsel of Agilent.

Section 6.6. Construction Activity. "Construction Activity" means any expansion or modification of any existing improvement or construction of a new improvement by any member of the Agilent Group or any Authorized Tenant on any Agilent Schedule 2 Facility.

Section 6.7. Environmental Conditions. "Environmental Conditions" means the presence in the environment, including the soil, groundwater, surface water or ambient air, of any Hazardous Material at a level which requires investigation

or remediation (including, without limitation, investigation, study, health or risk assessment, monitoring, removal, treatment or transport) under any Environmental Laws.

Section 6.8. Environmental Laws. "Environmental Laws" means all laws and regulations of any Governmental Authority with jurisdiction that relate to the protection of the environment (including ambient air, surface water, ground water, land surface or subsurface strata) including laws and regulations relating to the Release of Hazardous Materials, or otherwise relating to the treatment, storage, disposal, transport or handling of Hazardous Materials, or to the exposure of any individual to a Release of Hazardous Materials.

Section 6.9. Exacerbation. "Exacerbation" means any exacerbation, aggravation or worsening of any Environmental Conditions on, under or about any of the Agilent Schedule 2 Facilities that is caused by any member of the Agilent Group or an Authorized Tenant to such an extent that: (i) Remedial Activities that were not previously required as part of HP's Remediation Obligation become necessary to fulfill HP's Remediation Obligation, or (ii) HP otherwise incurs additional costs with respect to HP's Remediation Obligation.

Section 6.10. Governmental Authority. "Governmental Authority" means any federal, state, local, foreign or international court, government, department, commission, board, bureau, agency, official or other regulatory, administrative or governmental authority.

Section 6.11. Hazardous Materials. "Hazardous Materials" means chemicals, pollutants, contaminants, wastes, toxic substances, radioactive and biological materials, hazardous substances, petroleum and petroleum products or any fraction thereof.

Section 6.12. HP Group. "HP Group" means HP, each Subsidiary and Affiliated Company of HP (other than any member of the Agilent Group) immediately after the Separation Date, after giving effect to the Non-US Plan and each Person that becomes a Subsidiary or Affiliate Company of HP after the Separation Date.

Section 6.13. HP Indemnites. "HP Indemnites" means HP, each member of the HP Group and each of their respective directors, officers and employees.

Section 6.14. HP's Remediation Obligation. "HP's Remediation Obligation" means all Remedial Activities (as defined below) which are necessary or required in order to comply with and fulfill Environmental Laws (including without limitation the orders of Governmental Authorities listed on Exhibit 2 to this

Agreement and any consent decrees, consent agreement, or memorandums of understanding with Governmental Authorities, and permits, approvals, plans, settlement agreements) and that are applicable to Environmental Conditions on, under or about any Agilent Schedule 2 Facility as to which HP is obligated to indemnify Agilent under Section 1.4(b)(i) of the Indemnification Agreement.

Section 6.15. Incremental Construction Costs. "Incremental Construction Costs" means, with respect to any Construction Activity in an area of any of the Agilent Schedule 2 Facilities that is affected by Environmental Conditions, the excess of (A) costs reasonably incurred by Agilent or any Authorized Tenant in connection with the Construction Activity to the extent such costs are necessitated by the presence of the Environmental Conditions, over (B) the costs that would have been incurred by Agilent or any Authorized Tenant in connection with the Construction Activity had such Environmental Conditions not been present.

Section 6.16. Losses. "Losses" means all losses, damages, claims, obligations, suits, judgments, fines, penalties, liabilities, costs and expenses of any kind or character.

Section 6.17. Person. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization and a governmental entity or any department, agency or political subdivision thereof.

Section 6.18. Release. "Release" means any release, spilled, emission, leaking, pumping, injection, deposit, disposal, discharge, dispersal, leaching, or migration into the indoor or outdoor environment, without limitation, the movement Hazardous Materials through ambient air, soil, surface water, groundwater, wetlands, land or subsurface strata.

Section 6.19. Remedial Activities. "Remedial Activities" means any activities undertaken or required to be undertaken by or on behalf of HP in the performance of HP's Remediation Obligation including, without limitation: reporting, investigation, feasibility study, remediation, treatment, removal, transport, disposal, characterization, sampling, health assessment, risk assessment, encapsulation, monitoring, study, report, assessment or analysis of Environmental Conditions

Section 6.20. Remedial Activity Plans. "Remedial Activity Plans" means any plan or other document prepared by or on behalf of HP which describes the specifications for construction, operation, maintenance, performance, termination or completion of any Remedial Activities that are part of HP's Remedial Obligation, including any changes, modifications or amendments thereto.

Section 6.21. Repair Activity. "Repair Activity" means any repair, maintenance or replacement of any improvements, utilities, fixtures and equipment or tangible personal property that are present on any Agilent Schedule 2 Facility as of the Separation Date.

[SIGNATURES ON FOLLOWING PAGE]

IN WITNESS WHEREOF, each of the parties hereto has caused this Agreement to be duly executed in its name and on its behalf, all as of the date first written above.

HEWLETT-PACKARD COMPANY

AGILENT TECHNOLOGIES, INC.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

EXHIBIT 1

Agilent Schedule 2 Facilities
[To be attached on the Separation Date]

EXHIBIT 2

Orders from a Governmental Authority
[To be attached on the Separation Date]

MASTER CONFIDENTIAL DISCLOSURE AGREEMENT

between

HEWLETT-PACKARD COMPANY

and

AGILENT TECHNOLOGIES, INC.

Effective as of _____, 1999

MASTER CONFIDENTIAL DISCLOSURE AGREEMENT

This Master Confidential Disclosure Agreement (the "Agreement") is effective as of _____, 1999 (the "Effective Date"), between Hewlett-Packard Company, a Delaware corporation ("HP"), having an office at 3000 Hanover Street, Palo Alto, California 94304 and Agilent Technologies, Inc., a Delaware corporation ("Agilent"), having an office at 3000 Hanover Street, Palo Alto, California 94304.

WHEREAS, the Board of Directors of HP has determined that it is in the best interest of HP and its stockholders to separate HP's existing businesses into two independent businesses;

WHEREAS, as part of the foregoing, HP and Agilent have entered into a Master Separation Agreement (as defined below), which provides, among other things, for the separation of certain Agilent assets and Agilent liabilities, the initial public offering of Agilent stock, the distribution of such stock and the execution and delivery of certain other agreements in order to facilitate and provide for the foregoing; and

WHEREAS, also as part of the foregoing, the parties further desire to enter into this Agreement to provide for the protection of their Confidential Information (as defined below).

NOW, THEREFORE, in consideration of the mutual promises of the parties, and of good and valuable consideration, it is agreed by and between the parties as follows:

ARTICLE I

DEFINITIONS

For the purpose of this Agreement the following capitalized terms are defined in this Article I and shall have the meaning specified herein:

1.1 AFFILIATED COMPANY. "Affiliated Company" means, with respect to HP, any entity in which HP holds a 50% or less ownership interest and that is listed on Exhibit A hereto and, with respect to Agilent, any entity in which Agilent holds a 50% or less ownership interest and that is listed on Exhibit A hereto; provided, however, that any such entity listed in Exhibit A shall be considered

to be an Affiliated Company under this Agreement only if it agrees in writing to be bound by the terms and conditions of this Agreement. Exhibit A may be amended from time to time after the date hereof upon mutual consent of the parties.

1.2 ANCILLARY AGREEMENTS. "Ancillary Agreements" means the items and agreements listed in Section 2.1 of the Master Separation Agreement and all agreements and documents contemplated by such agreements.

1.3 CONFIDENTIAL INFORMATION.

(a) "Confidential Information" means information, technical data and know-how which is not otherwise in the public domain and of which the owner actively undertakes to restrict or

control the disclosure to Third Parties in a manner reasonably intended to maintain its confidentiality, and which is either (i) the subject of any Transaction Agreement and known to or in the possession of the Receiving Party as of the Separation Date or (ii) disclosed to the Receiving Party pursuant to any Transaction Agreement during the period from the Separation Date to November 1, 2001. Confidential Information may include information relating to, by way of example, research, products, services, customers, markets, software, developments, inventions, processes, designs, drawings, engineering, marketing or finances, and may be in writing, disclosed orally or learned by inspection of computer programming code, equipment or facilities.

(b) Confidential Information of Third Parties that is known to, in the possession of or acquired by a Receiving Party pursuant to a relationship with the Disclosing Party shall be deemed the Disclosing Party's Confidential Information for purposes herein.

(c) Notwithstanding the foregoing provisions of this Section 1.3, Confidential Information shall exclude information that: (i) was in the Receiving Party's possession before receipt from the Disclosing Party and obtained from a source other than the Disclosing Party and other than through the prior relationship of the Disclosing Party and the Receiving Party before the Separation Date; (ii) is or becomes a matter of public knowledge through no fault of the Receiving Party; (iii) is rightfully received by the Receiving Party from a Third Party without a duty of confidentiality; (iv) is disclosed by the Disclosing Party to a Third Party without a duty of confidentiality on the Third Party; (v) is independently developed by the Receiving Party; (iv) is disclosed under operation of law; or (vii) is disclosed by the Receiving Party with the Disclosing Party's prior written approval.

1.4 CONFIDENTIALITY PERIOD. "Confidentiality Period" means, (i) with respect to Confidential Information that is not Highly Confidential Information, three (3) years, and (ii) with respect to Highly Confidential Information, ten (10) years, after either (A) the Separation Date with respect to Confidential Information of the Disclosing Party that is known to or in the possession of the Receiving Party as of the Separation Date or (B) the date of disclosure with respect to Confidential Information that is disclosed by the Disclosing Party to the Receiving Party after the Separation Date. Notwithstanding the foregoing, the Confidentiality Period with respect to Highly Confidential Information described in Section 1.7(ii) shall continue only for so long as the restriction in Article IV of the ICB Technology Agreement continues with respect to such Highly Confidential Information, but, in any event no less than three (3) years.

1.5 DISCLOSING PARTY. "Disclosing Party" means the party owning or disclosing the relevant Confidential Information.

1.6 DISTRIBUTION DATE. "Distribution Date" has the meaning set forth in the Master Separation Agreement.

1.7 HIGHLY CONFIDENTIAL INFORMATION. "Highly Confidential Information" means Confidential Information that is (i) source code for products that are commercially released or for which substantial steps have been taken to commercialization; (ii) ICB Technology (as defined in the ICB Technology

Agreement) that is Confidential Information; or (iii) listed in the Highly Confidential Information Database.

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1.8 HIGHLY CONFIDENTIAL INFORMATION DATABASE. "Highly Confidential Information Database" means the Highly Confidential Information Database, as it may be updated by the parties upon mutual agreement to add Highly Confidential Information.

1.9 ICBT TECHNOLOGY AGREEMENT. "ICBT Technology Agreement" means the ICBT Technology Ownership and License Agreement between the parties.

1.10 MASTER SEPARATION AGREEMENT. "Master Separation Agreement" means the Master Separation and Distribution Agreement between the parties.

1.11 PERSON. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization, and a governmental entity or any department, agency or political subdivision thereof.

1.12 RECEIVING PARTY. "Receiving Party" means the non-owning party or recipient of the relevant Confidential Information.

1.13 SEPARATION DATE. "Separation Date" means 12:01 a.m., Pacific Time, November 1, 1999 or such other date as may be fixed by the Board of Directors of HP.

1.14 SUBSIDIARY. "Subsidiary" means with respect to any specified Person, any corporation, any limited liability company, any partnership or other legal entity of which such Person owns, directly or indirectly, more than 50% of the stock or other equity interest entitled to vote on the election of the members of the board of directors or similar governing body. Unless the context otherwise requires, reference to HP and its Subsidiaries shall not include the subsidiaries of HP that will be transferred to Agilent after giving effect to the Separation (as defined in the Master Separation Agreement), including the actions taken pursuant to the Non-US Plan (as defined in the Master Separation Agreement). For example, if HP owns 70% of the stock of another corporation, and that corporation owns 60% of the equity interest of a limited liability company, then that corporation is a Subsidiary of HP but that limited liability company is not. However, if such corporation owns 90% of the equity interest of a limited liability company, then that limited liability company is a Subsidiary of HP. For the avoidance of doubt, this definition of Subsidiary is different from the definition of Subsidiary in the Master Separation Agreement.

1.15 THIRD PARTY. "Third Party" means a Person other than HP and its Subsidiaries and Affiliated Companies and Agilent and its Subsidiaries and Affiliated Companies.

1.16 TRANSACTION AGREEMENTS. "Transaction Agreements" means the Master Separation Agreement and the Ancillary Agreements.

ARTICLE II

CONFIDENTIALITY

2.1 CONFIDENTIALITY AND NON-USE OBLIGATIONS. During the Confidentiality Period, the Receiving Party shall (i) protect the Confidential Information of the Disclosing Party by using the same degree of care, but no less than a reasonable degree of care, to prevent the

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unauthorized use, dissemination, or publication of the Confidential Information as Receiving Party uses to protect its own confidential information of a like nature, (ii) not use such Confidential Information in violation of any use

restriction in any Transaction Agreement, and (iii) not disclose such Confidential Information to any Third Party, except as expressly permitted under this Agreement, in the Transaction Agreements or in any other agreements entered into between the parties in writing, without prior written consent of the Disclosing Party.

2.2 DISCLOSURE TO SUBLICENSEES. The Receiving Party has the right to disclose to its sublicensees permitted under a Transaction Agreement portions of Confidential Information as reasonably necessary in the exercise of the Receiving Party's sublicense rights under such Transaction Agreement, subject to the sublicensee's agreement in writing to confidentiality and non-use terms at least as protective of the Disclosing Party as the provisions of this Agreement.

2.3 CONTRACT MANUFACTURERS AND FOUNDRIES. The Receiving Party has the right to disclose to its contract manufacturers and foundries permitted under any Transaction Agreement portions of the Confidential Information as reasonably necessary in the exercise of the Receiving Party's "have made" rights under any Transaction Agreement, subject to the contract manufacturer's and foundry's agreement in writing to confidentiality and non-use terms at least as protective of the Disclosing Party as the provisions of this Agreement.

2.4 RESIDUALS. Notwithstanding any other provision of this Agreement, the Receiving Party shall be free, and the Disclosing Party hereby grants to the Receiving Party the right, to use for any purpose the Residuals resulting from access to or work with the Confidential Information of the Disclosing Party. "Residuals" means information retained in the unaided memory of an individual who has had access to Confidential Information without conscious attempt by such individual to memorize such information. The Receiving Party shall have no obligation to pay royalties for any use of Residuals.

2.5 COMPELLED DISCLOSURE. If the Receiving Party or any of its respective Subsidiaries or Affiliated Companies believes that it will be compelled by a court or other authority to disclose Confidential Information of the Disclosing Party, it shall (i) give the Disclosing Party prompt written notice so that the Disclosing Party may take steps to oppose such disclosure, but in any event the Receiving Party shall not be prohibited from complying with such requirement and (ii) cooperate with the Disclosing Party in its attempts to oppose such disclosure.

2.6 NO RESTRICTION ON DISCLOSING PARTY. Nothing in this Agreement shall restrict the Disclosing Party from using, disclosing, or disseminating its own Confidential Information in any way.

2.7 NO RESTRICTION ON REASSIGNMENT. This Agreement shall not restrict reassignment of the Receiving Party's employees.

2.8 THIRD PARTY RESTRICTIONS. Nothing in the Agreement supersedes any restriction imposed by Third Parties on their Confidential Information, and there is no obligation on the Disclosing Party to conform Third Party agreements to the terms of this Agreement.

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ARTICLE III

WARRANTY DISCLAIMER

EACH PARTY ACKNOWLEDGES AND AGREES THAT ALL CONFIDENTIAL INFORMATION IS PROVIDED ON AN "AS IS, WHERE IS" BASIS AND THAT NEITHER PARTY NOR ANY OF ITS SUBSIDIARIES OR AFFILIATED COMPANIES HAS MADE OR WILL MAKE ANY WARRANTY WHATSOEVER, EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, ENFORCEABILITY OR NON-INFRINGEMENT.

ARTICLE IV

CONFIDENTIALITY OF AGREEMENT

Each party agrees that the terms and conditions of the Transaction Agreements marked as confidential shall be treated as Confidential Information and that neither party will disclose such terms or conditions to any Third Party without the prior written consent of the other party, provided, however, that each party may disclose such terms and conditions of such agreements marked as confidential:

(a) as required by any court or other governmental body (subject to Section 2.5);

(b) as otherwise required by law (subject to Section 2.5);

(c) in confidence, to legal counsel of the parties, accountants, and other professional advisors;

(d) in confidence to banks, investors and other financing sources and their advisors;

(e) in connection with the enforcement of this Agreement or rights under this Agreement; or

(f) in confidence, in connection with an actual or prospective merger or acquisition or similar transaction.

ARTICLE V

TERM AND TERMINATION

5.1 TERM. This Agreement shall remain in full force and effect unless and until terminated by the mutual written agreement of the parties.

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5.2 SURVIVAL. Articles II (with respect to Confidential Information acquired or disclosed prior to the date of termination), III, IV, VI, VII and VIII shall survive any termination of this Agreement.

ARTICLE VI

DISPUTE RESOLUTION

6.1 NEGOTIATION. The parties shall make a good faith attempt to resolve any dispute or claim arising out of or related to this Agreement through negotiation. Within thirty (30) days after notice of a dispute or claim is given by either party to the other party, the parties' first tier negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet and make a good faith attempt to resolve such dispute or claim and shall continue to negotiate in good faith in an effort to resolve the dispute or claim or renegotiate the applicable section or provision without the necessity of any formal proceedings. If the first tier negotiating teams are unable to agree within thirty (30) days of their first meeting, then the parties' second tier negotiating teams (as determined by each party's Director of Intellectual Property or his or her delegate) shall meet within thirty (30) days after the end of the first thirty (30) day negotiating period to attempt to resolve the matter. During the course of negotiations under this Section 6.1, all reasonable requests made by one party to the other for information, including requests for copies of relevant documents, will be honored. The specific format for such negotiations will be left to the discretion of the designated negotiating teams but may include the preparation of agreed upon statements of fact or written statements of position furnished to the other party.

6.2 NONBINDING MEDIATION. In the event that any dispute or claim arising out of or related to this Agreement is not settled by the parties within fifteen (15) days after the first meeting of the second tier negotiating teams under

Section 6.1, the parties will attempt in good faith to resolve such dispute or claim by nonbinding mediation in accordance with the American Arbitration Association Commercial Mediation Rules. The mediation shall be held within thirty (30) days of the end of such fifteen (15) day negotiation period of the second tier negotiating teams. Except as provided below in Section 6.3, no litigation for the resolution of such dispute may be commenced until the parties try in good faith to settle the dispute by such mediation in accordance with such rules and either party has concluded in good faith that amicable resolution through continued mediation of the matter does not appear likely. The costs of mediation shall be shared equally by the parties to the mediation. Any settlement reached by mediation shall be recorded in writing, signed by the parties, and shall be binding on them.

6.3 PROCEEDINGS. Nothing herein, however, shall prohibit either party from initiating litigation or other judicial or administrative proceedings if such party would be substantially harmed by a failure to act during the time that such good faith efforts are being made to resolve the dispute or claim through negotiation or mediation. In the event that litigation is commenced under this Section 6.3, the parties agree to continue to attempt to resolve any dispute or claim according to the terms of Sections 6.1 and 6.2 during the course of such litigation proceedings under this Section 6.3.

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ARTICLE VII

LIMITATION OF LIABILITY.

IN NO EVENT SHALL EITHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES BE LIABLE TO THE OTHER PARTY OR ITS SUBSIDIARIES OR AFFILIATED COMPANIES FOR ANY SPECIAL, CONSEQUENTIAL, INDIRECT, INCIDENTAL OR PUNITIVE DAMAGES OR LOST PROFITS, HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY (INCLUDING NEGLIGENCE) ARISING IN ANY WAY OUT OF THIS AGREEMENT, WHETHER OR NOT SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

ARTICLE VIII

MISCELLANEOUS PROVISIONS

8.1 EXPORT RESTRICTIONS. Both parties shall adhere to all applicable laws, regulations and rules relating to the export of technical data, and shall not export or reexport any technical data, any products received from Disclosing Party, or the direct product of such technical data, to any proscribed country listed in such applicable laws, regulations and rules unless properly authorized.

8.2 NO IMPLIED LICENSES. Nothing contained in this Agreement shall be construed as conferring any rights by implication, estoppel or otherwise, under any intellectual property right, other than the rights expressly granted in this Agreement with respect to Confidential Information. Neither party is required hereunder to furnish or disclose to the other any technical or other information.

8.3 INFRINGEMENT SUITS. Neither party shall have any obligation hereunder to institute any action or suit against Third Parties for misappropriation of any of its Confidential Information or to defend any action or suit brought by a Third Party that alleges infringement of any intellectual property rights by the Receiving Party's authorized use of the Disclosing Party's Confidential Information.

8.4 NO OTHER OBLIGATIONS. NEITHER PARTY ASSUMES ANY RESPONSIBILITIES OR OBLIGATIONS WHATSOEVER, OTHER THAN THE RESPONSIBILITIES AND OBLIGATIONS EXPRESSLY SET FORTH IN THIS AGREEMENT OR A SEPARATE WRITTEN AGREEMENT BETWEEN THE PARTIES.

8.5 ENTIRE AGREEMENT. This Agreement, the Master Separation Agreement and the other Ancillary Agreements constitute the entire agreement between the

parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof. Notwithstanding the foregoing, the parties agree that any agreements entered into between them on or after the Separation Date for the protection of specific Confidential Information shall supersede the terms of this Agreement with respect to such Confidential Information.

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8.6 GOVERNING LAW. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto.

8.7 DESCRIPTIVE HEADINGS. The descriptive headings herein are inserted for convenience of reference only and are not intended to be part of or to affect the meaning or interpretation of this Agreement.

8.8 NOTICES. All notices and other communications hereunder shall be in writing and shall be deemed to have been duly given when delivered in person, by telecopy with answer back, by express or overnight mail delivered by a nationally recognized air courier (delivery charges prepaid), by registered or certified mail (postage prepaid, return receipt requested) or by e-mail with receipt confirmed by return e-mail to the respective parties as follows:

if to HP:

c/o Hewlett-Packard Company
3000 Hanover Street
Palo Alto, CA 94304
Attention: Associate General Counsel and
Director of Intellectual Property
Telecopy: (650) 852-8194

if to Agilent:

c/o Agilent Technologies, Inc.
3000 Hanover Street
Palo Alto, CA 94304
Attention: Assistant General Counsel and
Director of Intellectual Property
Telecopy: (650) 813-3095

or to such other address as the party to whom notice is given may have previously furnished to the other in writing in the manner set forth above. Any notice or communication delivered in person shall be deemed effective on delivery. Any notice or communication sent by e-mail, telecopy or by air courier shall be deemed effective on the first Business Day following the day on which such notice or communication was sent. Any notice or communication sent by registered or certified mail shall be deemed effective on the third Business Day following the day on which such notice or communication was mailed. As used in this Section 8.8, "Business Day" means any day other than a Saturday, a Sunday or a day on which banking institutions located in the State of California are authorized or obligated by law or executive order to close.

8.9 NONASSIGNABILITY. Neither party may, directly or indirectly, in whole or in part, whether by operation of law or otherwise, assign or transfer this Agreement, without the other party's prior written consent, and any attempted assignment, transfer or delegation without such prior written consent shall be voidable at the sole option of such other party. Notwithstanding the

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foregoing, each party (or its permitted successive assignees or transferees hereunder) may assign or transfer this Agreement as a whole without consent to a Person that succeeds to all or substantially all of the business or assets of

such party. Without limiting the foregoing, this Agreement will be binding upon and inure to the benefit of the parties and their permitted successors and assigns.

8.10 SEVERABILITY. If any term or other provision of this Agreement is determined by a nonappealable decision of a court, administrative agency or binding arbitrator by any court or in any binding arbitration to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to either party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end that the transactions contemplated hereby are fulfilled to the fullest extent possible.

8.11 FAILURE OR INDULGENCE NOT WAIVER; REMEDIES CUMULATIVE. No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right. All rights and remedies existing under this Agreement are cumulative to, and not exclusive of, any rights or remedies otherwise available.

8.12 AMENDMENT. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to such agreement.

8.13 COUNTERPARTS. This Agreement may be executed in two or more counterparts, all of which, taken together, shall be considered to be one and the same instrument.

WHEREFORE, the parties have signed this Master Confidential Disclosure Agreement effective as of the date first set forth above.

HEWLETT-PACKARD COMPANY

AGILENT TECHNOLOGIES, INC.

By: _____

By: _____

Name: _____

Name: _____

Title: _____

Title: _____

EXHIBIT A
TO MASTER CONFIDENTIAL DISCLOSURE AGREEMENT

AFFILIATED COMPANIES

1. Hewlett-Packard Company Affiliated Companies

ImagineCard

Idea LLC

Intria-HP

Intria-HP Potomac

Ericsson-HP Telecom (Sweden)

Ericsson-HP Telecom (France)

Hua-Pua

Putial Ome

PT Berka Services

Liquidity Management Group

Hugin Expert

Syc

Sopura Systems

2. Agilent Affiliated Companies

Chartered Semiconductor Partners Singapore

LumiLEDS

Indemnification and Insurance Matters Agreement

between

Hewlett-Packard Company

and

Agilent Technologies, Inc.

_____, 1999

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INDEMNIFICATION AND INSURANCE MATTERS AGREEMENT

This Indemnification and Insurance Matters Agreement (this "Agreement") is entered into on _____, 1999 between Hewlett-Packard Company, a Delaware corporation ("HP"), and Agilent Technologies, Inc., a Delaware corporation ("Agilent"). Capitalized terms used herein and not otherwise defined herein shall have the meanings ascribed to such terms in the Article IV below.

RECITALS

WHEREAS, HP and its Subsidiaries have transferred or will transfer to Agilent and its Subsidiaries effective as of the Separation Date, substantially all of the assets of the Agilent Business in accordance with the Master Separation and Distribution Agreement dated as of August 12, 1999 between the parties (the "Separation Agreement").

WHEREAS, the parties desire to set forth certain agreements regarding indemnification and insurance.

NOW, THEREFORE, in consideration of the foregoing and the covenants and agreements set forth below, the parties hereto agree as follows:

ARTICLE I.

MUTUAL RELEASES; INDEMNIFICATION

SECTION 1.1. Release of Pre-Closing Claims.

(a) Agilent Release. Except as provided in Section 1.1(c), effective as of the Separation Date, Agilent does hereby, for itself and as agent for each member of the Agilent Group, remise, release and forever discharge the HP Indemnitees from any and all Liabilities whatsoever, whether at law or in equity (including any right of contribution), whether arising under any contract or agreement, by operation of law or otherwise, existing or arising from any acts or events occurring or failing to occur or alleged to have occurred or to have failed to occur or any conditions existing or alleged to have existed on or before the Separation Date, including in connection with the transactions and all other activities to implement any of the Separation, the IPO and the Distribution.

(b) HP Release. Except as provided in Section 1.1(c), effective as of the Separation Date, HP does hereby, for itself and as agent for each member of the HP Group, remise, release and forever discharge the Agilent Indemnitees from any and all Liabilities whatsoever, whether at law or in equity (including any right of contribution), whether arising under any contract or agreement, by operation of law or otherwise, existing or arising from any acts or events occurring or failing to occur or alleged to have occurred or to have failed to occur or any conditions existing or alleged to have existed on or before the Separation Date, including in connection with the transactions and all other activities to implement any of the Separation, the IPO and the Distribution.

(c) No Impairment. Nothing contained in Section 1.1(a) or (b) shall impair any right of any Person to enforce the Separation Agreement or any Ancillary Agreement (including this Agreement), in each case in accordance with its terms.

(d) No Actions as to Released Claims. Agilent agrees, for itself and as agent for each member of the Agilent Group, not to make any claim or demand, or commence any Action asserting any claim or demand, including any claim of contribution or any indemnification, against HP or any member of the HP Group, or any other Person released pursuant to Section 1.1(a), with respect to any Liabilities released pursuant to Section 1.1(a). HP agrees, for itself and as agent for each member of the HP Group, not to make any claim or demand, or commence any Action asserting any claim or demand, including any claim of contribution or any indemnification, against Agilent or any member of the Agilent Group, or any other Person released pursuant to Section 1.1(b), with respect to any Liabilities released pursuant to Section 1.1(b).

(e) Further Instruments. At any time, at the request of any other party, each party shall cause each member of its respective Group to execute and deliver releases reflecting the provisions hereof.

SECTION 1.2. Indemnification by Agilent. Except as otherwise provided in this Agreement, Agilent shall, for itself and as agent for each member of the Agilent Group, indemnify, defend (or, where applicable, pay the defense costs for) and hold harmless the HP Indemnitees from and against any and all Liabilities that any third party seeks to impose upon the HP Indemnitees, or which are imposed upon the HP Indemnitees, and that relate to, arise out of or result from any of the following items (without duplication):

- (i) the Agilent Business, any Agilent Liability or any Agilent Contract;
- (ii) any breach by Agilent or any member of the Agilent Group of the Separation Agreement or any of the Ancillary Agreements (including this Agreement); and
- (iii) any IPO Liabilities in excess of the Shared HP Percentage.

In the event that any member of the Agilent Group makes a payment to the HP Indemnitees hereunder, and any of the HP Indemnitees subsequently diminishes the Liability on account of which such payment was made, either directly or through a third-party recovery, HP will promptly repay (or will procure an HP Indemnitee to promptly repay) such member of the Agilent Group the amount by which the payment made by such member of the Agilent Group exceeds the actual cost of the associated indemnified Liability. This Section 1.2 shall not apply to any Liability indemnified under Section 1.4.

SECTION 1.3. Indemnification by HP. Except as otherwise provided in this Agreement, HP shall, for itself and as agent for each member of the HP Group, indemnify, defend (or, where applicable, pay the defense costs for) and hold harmless the Agilent Indemnitees from and against any and all Liabilities that any third party seeks to impose upon the Agilent Indemnitees, or which

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are imposed upon the Agilent Indemnitees, and that relate to, arise out of or result from any of the following items (without duplication):

- (i) the HP Business or any Liability of the HP Group other than the Agilent Liabilities;
- (ii) any breach by HP or any member of the HP Group of the Separation Agreement or any of the Ancillary Agreements (including this Agreement); and
- (iii) any IPO Liabilities in excess of the Shared Agilent Percentage.

In the event that any member of the HP Group makes a payment to the Agilent Indemnitees hereunder, and any of the Agilent Indemnitees subsequently diminishes the Liability on account of which such payment was made, either directly or through a third-party recovery, Agilent will promptly repay (or will procure an Agilent Indemnatee to promptly repay) such member of the HP Group the amount by which the payment made by such member of the HP Group exceeds the actual cost of the indemnified Liability. This Section 1.3 shall not apply to any Liability indemnified under Section 1.4.

SECTION 1.4. Indemnification With Respect to Environmental Actions and Conditions.

(a) Indemnification by Agilent. Agilent shall, for itself and as agent for each member of the Agilent Group, indemnify, defend and hold harmless the HP Indemnitees from and against any and all Environmental Actions relating to, arising out of or resulting from any of the following items:

(i) Except as arising out of the operations of the HP Group on and after the Separation Date, Environmental Conditions (x) arising out of operations occurring on and after the Separation Date at any of the Agilent Schedule 2 Facilities, or (y) on any of the Agilent Schedule 2 Facilities arising from an event causing contamination that first occurs on or after the Separation Date (including any Release of Hazardous Materials occurring after the Separation Date that migrates to any of the Agilent Schedule 2 Facilities); and

(ii) Except as arising out of the operations of the HP Group on and after the Separation Date or as a result of a Release from any HP Facilities, Environmental Conditions on, under, about or arising out of operations occurring at any time, whether before or after the Separation Date, at any of the Agilent Schedule 1 Facilities (including any Release of Hazardous Materials occurring after the Separation Date that migrates at any time to any of the Agilent Schedule 1 Facilities);

(b) Indemnification by HP. HP shall, for itself and as agent for each member of the HP Group, indemnify, defend and hold harmless the Agilent Indemnitees from and against any and all Environmental Actions relating to, arising out of or resulting from any of the following items:

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(i) Environmental Conditions (x) existing on, under, about or in the vicinity of any of the Agilent Schedule 2 Facilities prior to the Separation Date (including any Release of Hazardous Materials occurring prior to the Separation Date which migrates to any of the Agilent Schedule 2 Facilities after the Separation Date), or (y) arising out of operations occurring on or before the Separation Date at any of the Agilent Schedule 2 Facilities;

(ii) Except as arising out of the operations of the Agilent Group on and after the Separation Date, Environmental Conditions on, under, about or arising out of operations occurring at any time, whether before or after the Separation Date, at any of the HP Facilities; and

(iii) Pre-Separation Third Party Site Liabilities.

(c) Agreement Regarding Payments to Indemnatee. In the event an Indemnifying Party makes any payment to or on behalf of an Indemnatee with respect to an Environmental Action for which the Indemnifying Party is obligated to indemnify under this Section 1.4, and the Indemnatee subsequently receives any payment from a third party on account of the same financial obligation covered by the payment made by the Indemnifying Party for that Environmental Action or otherwise diminishes the financial obligation, the Indemnatee will promptly pay the Indemnifying Party the amount by which the payment made by the Indemnifying Party, exceeds the actual cost of the financial obligation.

SECTION 1.5. Procedures for Defense, Settlement and Indemnification of Third Party Claims.

(a) Notice of Claims. If an HP Indemnitee or an Agilent Indemnitee (as applicable) (an "Indemnitee") shall receive notice or otherwise learn of the assertion by a Person (including any Governmental Authority) who is not a member of the HP Group or the Agilent Group of any claim or of the commencement by any such Person of any Action (collectively, a "Third Party Claim") with respect to which a party (an "Indemnifying Party") may be obligated to provide indemnification to such Indemnitee pursuant to Section 1.2, 1.3 or 1.4, or any other section of the Separation Agreement or any Ancillary Agreement (including this Agreement), HP and Agilent (as applicable) will ensure that such Indemnitee shall give such Indemnifying Party written notice thereof within 30 days after becoming aware of such Third Party Claim. Any such notice shall describe the Third Party Claim in reasonable detail. Notwithstanding the foregoing, the delay or failure of any Indemnitee or other Person to give notice as provided in this Section 1.5(a) shall not relieve the related Indemnifying Party of its obligations under this Article I, except to the extent that such Indemnifying Party is actually and substantially prejudiced by such delay or failure to give notice.

(b) Claims Involving Commingled Products or Employees. If a Third Party Claim (including a claim relating to the Year 2000 problem) involves (i) a commingled product with components supplied by both the Agilent Business and the HP Business, (ii) an employee, consultant or contractor that was employed by both the Agilent Business and the HP Business or (iii) any similar claims involving both the Agilent Business and the HP Business (collectively, "Commingled

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Claims"), the Claims Committee shall have the power to resolve whether and to the extent any Commingled Claim is an Agilent Contingent Liability.

(c) Claims Committee. Any of the parties may refer any dispute regarding the provisions of this Article I to the Claims Committee for resolution. All determinations of the Claims Committee, if unanimous, shall be binding on all of the parties and their respective successors and assigns. The Claims Committee shall reach a resolution that minimizes expenses for all parties and seeks to avoid hiring multiple counsel. In determining whether a Commingled Claim is an Agilent Contingent Liability, the Claims Committee shall consider whether the event, act or omission giving rise the Liability relates primarily to the Agilent Business. In the event a Liability arises from both an event, act or omission relating primarily to the Agilent Business and an event, act or omission relating primarily to the HP Business, the Claims Committee shall apportion the Liability in accordance with relative fault, and it may re-apportion the Liability as it learns of additional facts bearing on that assessment. In the event that the Claims Committee cannot reach a unanimous determination as to the nature, status or handling of any such claims within 30 days after such referral (unless the Claims Committee unanimously agrees to a longer time period), the issue will be submitted for resolution pursuant to the procedures set forth in the dispute resolution provisions contained in Section 5.9 of the Separation Agreement.

(d) Defense of Commingled Claims. With respect to Commingled Claims, the party whose business sold the product, who last employed the employee or whose business is primarily related to the event, act or omission giving rise to the potential Liability shall manage the defense of, and may seek to settle or compromise, any such Commingled Claims. If the party managing the defense of such Commingled Claim is an Indemnitee with respect thereto, the costs and expenses of such defense shall be borne by the Indemnifying Party to the extent of the indemnity provided in the Separation Agreement, this Agreement or any Ancillary Agreement.

(e) Defense of Claims Involving IPO Liabilities. HP shall manage the defense of, and may seek to settle or compromise, any Third Party Claim involving IPO Liabilities, and the costs and expenses thereof shall be included in the calculation of the amount of the indemnification obligations pursuant to Section 1.2(iii) and Section 1.3(iii) of this Agreement.

(f) Defense By Indemnifying Party. Other than in the case of a Commingled Claim or a Third Party Claim involving IPO Liabilities, an Indemnifying Party will manage the defense of and (unless the Indemnifying Party has specified any reservations or exceptions to the obligation to manage the defense or to indemnify that have been referred to, but not resolved by, the Claims Committee) may settle or compromise any Third Party Claim. Within 30 days after the receipt of notice from an Indemnitee in accordance with Section 1.5(a) (or sooner, if the nature of such Third Party Claim so requires), the Indemnifying Party shall notify the Indemnitee that the Indemnifying Party will assume responsibility for managing the defense of such Third Party Claim, which notice shall specify any reservations or exceptions.

(g) Defense By Indemnitee. If an Indemnifying Party fails to assume responsibility for managing the defense of a Third Party Claim, or fails to notify an Indemnitee that it will assume responsibility as provided in Section 1.5(f), such Indemnitee may manage the defense of such Third

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Party Claim; provided, however, that the Indemnifying Party shall reimburse all such costs and expenses in the event it is ultimately determined, in accordance with the procedures governing the Claims Committee, that the Indemnifying Party is obligated to indemnify the Indemnitee with respect to such Third Party Claim.

(h) No Settlement By Indemnitee Without Consent. Unless the Indemnifying Party has failed to manage the defense of the Third Party Claim in accordance with the terms of this Agreement, no Indemnitee may settle or compromise any Third Party Claim without the consent of the Indemnifying Party.

(i) No Consent to Certain Judgments or Settlements Without Consent. Notwithstanding Section 1.5(f) above, no party shall consent to entry of any judgment or enter into any settlement of a Third Party Claim without the consent of the other party (such consent not to be unreasonably withheld) if the effect of such judgment or settlement is to (A) permit any injunction, declaratory judgment, other order or other nonmonetary relief to be entered, directly or indirectly, against the other party or (B) affect the other party in a material fashion due to the allocation of Liabilities and related indemnities set forth in the Separation Agreement, this Agreement or any other Ancillary Agreement.

SECTION 1.6. Agilent Contingent Liabilities In Excess of \$50 Million.

(a) Excess Portions. Notwithstanding anything to the contrary in this Agreement or the Assignment Agreement, if the aggregate amount paid by the Agilent Group, less any related Insurance Proceeds and any other amounts recovered (including by way of set off) from third parties unaffiliated with HP, in respect of any single Agilent Contingent Liability or any Related Agilent Contingent Liabilities is in excess of \$50 million, arising from written demands made or suits or similar proceedings filed within four years following the Separation Date that demand or seek monetary damages, services or non-monetary relief, Agilent shall be entitled to reimbursement from HP for the Shared HP Percentage of the Excess Portion.

(b) Insurance Proceeds. In the event that after any payment is made by HP to Agilent in accordance with the allocation set forth in Section 1.6(a), any member of the Agilent Group receives any Insurance Proceeds or obtains any other amounts that, in any such case, would reduce the amount paid by the Agilent Group in respect of the applicable Agilent Contingent Liability or Liabilities, Agilent will promptly notify HP of the receipt of such Insurance Proceeds or otherwise and will promptly reimburse HP for the amount of any payment that Agilent would not have been entitled to receive if it had received such Insurance Proceeds on or prior to the date it received a payment pursuant to this Section.

(c) Notice of Agilent Contingent Liabilities Involving an Excess Portion. Agilent agrees to use its reasonable commercial efforts to advise HP if it

becomes aware of one or more Agilent Contingent Liabilities that may, in the aggregate, result in payments of \$50 million or more; provided, however, that no delay or failure to give any such notice shall relieve HP of any obligation pursuant to this Agreement unless it is actually and substantially prejudiced as a result of such delay or failure.

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(d) Termination Upon Assignment or Change of Control. Notwithstanding anything to the contrary in this Agreement or any other Ancillary Agreement, the right to receive reimbursement under this Section 1.6 may not be assigned or delegated by Agilent and shall terminate upon a Change of Control of Agilent (other than as a result of the Distribution).

SECTION 1.7. Additional Matters.

(a) Cooperation in Defense and Settlement. With respect to any Third Party Claim that implicates both Agilent and HP in a material fashion due to the allocation of Liabilities, responsibilities for management of defense and related indemnities set forth in the Separation Agreement, this Agreement or any of the Ancillary Agreements, the parties agree to cooperate fully and maintain a joint defense (in a manner that will preserve the attorney-client privilege with respect thereto) so as to minimize such Liabilities and defense costs associated therewith. The party that is not responsible for managing the defense of such Third Party Claims shall, upon reasonable request, be consulted with respect to significant matters relating thereto and may, if necessary or helpful, associate counsel to assist in the defense of such claims.

(b) Substitution. In the event of an Action in which the Indemnifying Party is not a named defendant, if either the Indemnatee or the Indemnifying Party shall so request, the parties shall endeavor to substitute the Indemnifying Party for the named defendant. If such substitution or addition cannot be achieved for any reason or is not requested, the rights and obligations of the parties regarding indemnification and the management of the defense of claims as set forth in this Article I shall not be altered.

(c) Subrogation. In the event of payment by or on behalf of any Indemnifying Party to or on behalf of any Indemnatee in connection with any Third Party Claim, such Indemnifying Party shall be subrogated to and shall stand in the place of such Indemnatee, in whole or in part based upon whether the Indemnifying Party has paid all or only part of the Indemnatee's Liability, as to any events or circumstances in respect of which such Indemnatee may have any right, defense or claim relating to such Third Party Claim against any claimant or plaintiff asserting such Third Party Claim or against any other person. Such Indemnatee shall cooperate with such Indemnifying Party in a reasonable manner, and at the cost and expense of such Indemnifying Party, in prosecuting any subrogated right, defense or claim.

(d) Not Applicable to Taxes. This Agreement shall not apply to Taxes (which are covered by the Tax Sharing Agreement).

SECTION 1.8. Survival of Indemnities. Subject to Section 1.6(d) and Section 3.7, the rights and obligations of the members of the HP Group and the Agilent Group under this Article I shall survive the sale or other transfer by any party of any Assets or businesses or the assignment by it of any Liabilities or the sale by any member of the HP Group or the Agilent Group of the capital stock or other equity interests of any Subsidiary to any Person.

SECTION 1.9. Alleged Infringement or Misappropriation against HP for Products Ordered from the Agilent Business.

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(a) Definitions. As used in this Section 1.9, the following terms have the following meanings. "Agilent Product" means any product of the Agilent Business that was or is furnished by the Agilent Business prior to the Separation Date or

(to the extent that there is no separate agreement between the purchaser and seller governing the purchase and sale of such product) on or after the Separation Date. "Eligible Buyer" means any member of the HP Group, HP Subcontractors and other third parties mutually agreed to in writing by the parties who purchase Agilent Products from the Agilent Business. "HP Subcontractors" means third party entities which perform contract work for any member of the HP Group and which acquire Agilent Products from the Agilent Business. HP Subcontractors are independent contractors of a member of the HP Group, and are not legally related to any member of the HP Group as agent, employee, partner, joint venture or other manner.

(b) Obligation. Agilent shall manage the defense of any third party claim, suit, or proceeding brought against any member of the HP Group, any Eligible Buyer, or their customers insofar as it is based on a claim that any Agilent Product constitutes an infringement of any third party's patent, copyright, trademark, trade name, or unauthorized trade secret use; provided that (i) Agilent is notified promptly in writing of such claim and is supplied with information and assistance as reasonably necessary, and (ii) Agilent is given sole control to handle the defense or settlement of any such claim, suit or proceeding. Agilent agrees to pay all damages and costs awarded therein against HP, any Eligible Buyer, or their customers.

(c) Enjoined Products. In case any Agilent Product or any part thereof in such suit is held to constitute an infringement for which Agilent is liable and its use is enjoined, Agilent shall, at its own expense and at its option, either (i) procure for HP, the Eligible Buyers and their customers the right to continue to use the Agilent Product, or (ii) if applicable, replace the Agilent Product with a noninfringing Agilent Product of equivalent function and performance, or modify it so it becomes noninfringing without detracting from function or performance; provided, however, that if any of the foregoing alternatives are not reasonably possible, then (iii) accept return of the Agilent Product and refund to HP or the Eligible Buyer, as applicable, the price paid for the infringing Agilent Product less a reasonable sum for past use.

(d) Exceptions. Notwithstanding the foregoing, Agilent shall have no responsibility for claims arising from (i) modifications of the Agilent Product made by HP or any Eligible Buyer if such claim would not have arisen but for such modifications, or (ii) combination or use of the Agilent Product with products not supplied by Agilent if such claim would not have arisen but for such combination or use, or (iii) Agilent's compliance with HP's designs or specifications, or (iv) Agilent Product use prohibited by specifications or related application notes.

SECTION 1.10. Claims of Alleged Infringement or Misappropriation against Agilent for Products from HP Business.

(a) Definitions. As used in this Section 1.10, the following terms have the following meanings. "HP Product" means any product of the HP Business that was or is furnished by the HP Business prior to the Separation Date or (to the extent that there is no separate agreement between the purchaser and seller governing the purchase and sale of such product) on or after the Separation

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Date. "Eligible Buyer" means any member of the Agilent Group, Agilent Subcontractors and other third parties mutually agreed to in writing by the parties who purchase HP Products from the HP Business. "Agilent Subcontractors" means third party entities which perform contract work for any member of the Agilent Group and which acquire HP Products from the HP Business. Agilent Subcontractors are independent contractors of a member of the Agilent Group, and are not legally related to any member of the Agilent Group as agent, employee, partner, joint venture or other manner.

(b) Obligation. HP shall manage the defense of any third party claim, suit, or proceeding brought against any member of the Agilent Group, any Eligible Buyer, or their customers insofar as it is based on a claim that any HP Product constitutes an infringement of any third party's patent, copyright,

trademark, trade name, or unauthorized trade secret use; provided that (i) HP is notified promptly in writing of such claim and is supplied with information and assistance as reasonably necessary, and (ii) HP is given sole control to handle the defense or settlement of any such claim, suit or proceeding. HP agrees to pay all damages and costs awarded therein against Agilent, any Eligible Buyer, or their customers.

(c) Enjoined Products. In case any HP Product or any part thereof in such suit is held to constitute an infringement for which HP is liable and its use is enjoined, HP shall, at its own expense and at its option, either (i) procure for Agilent, the Eligible Buyers and their customers the right to continue to use the HP Product, or (ii) if applicable, replace the HP Product with a noninfringing HP Product of equivalent function and performance, or modify it so it becomes noninfringing without detracting from function or performance; provided, however, that if any of the foregoing alternatives are not reasonably possible, then (iii) accept return of the HP Product and refund to Agilent or the Eligible Buyer, as applicable, the price paid for the infringing HP Product less a reasonable sum for past use.

(d) Exceptions. Notwithstanding the foregoing, HP shall have no responsibility for claims arising from (i) modifications of the HP Product made by Agilent or any Eligible Buyer if such claim would not have arisen but for such modifications, or (ii) combination or use of the HP Product with products not supplied by HP if such claim would not have arisen but for such combination or use, or (iii) HP's compliance with Agilent's designs or specifications, or (iv) HP Product use prohibited by specifications or related application notes.

SECTION 1.11. Reimbursement For Certain Losses and Liabilities Not Covered By HP's Insurance Policies. Except as set forth in Section 1.2(iii) and Section 1.3(iii), notwithstanding anything to the contrary in this Agreement or the Assignment Agreement, if:

(a) the Agilent Group suffers one or more losses of real property, personal property or business interruption resulting therefrom arising from an earthquake occurring between the Separation Date and Distribution Date; or

(b) the Agilent Group suffers one or more first-party property losses between the Separation Date and the Distribution Date of a type that is covered by HP's Insurance Policies or that is covered by standard form insurance policies in use at the time; or

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(c) events, acts or omissions occur between the Separation Date and the Distribution Date that give rise to one or more Third Party Claims that result in an Agilent Liability (including the costs of defending against such claims) of a type that is covered by HP's Insurance Policies or that is covered by standard form insurance policies in use at the time, but only to the extent that suits or similar proceedings are filed or written demands are made in connection with such Third Party Claims within four years following the Distribution Date that seek or demand monetary damages, services or non-monetary relief; or

(d) Releases first occur between the Separation Date and the Distribution Date that give rise to one or more Environmental Actions that result in an Agilent Liability (including the costs of defending against such Environmental Actions), but only to the extent that suits or similar proceedings are filed, orders or decrees are issued, written notice that such Environmental Action will be commenced is received by Agilent or HP, or written demands are made in connection with such Environmental Actions within four years following the Distribution Date that seek or demand monetary damages, services or non-monetary relief; and

(e) the aggregate amount of Agilent's loss and Liabilities described in clauses (a), (b), (c) and (d), exclusive of amounts covered by HP's Insurance Policies or other insurance policies that provide coverage to Agilent, exceeds \$20 million,

then HP shall reimburse Agilent to the extent that the aggregate amount of Agilent's loss and Liabilities described in clauses (a), (b), (c) and (d), exclusive of amounts covered by HP's Insurance Policies or other insurance policies that provide coverage to Agilent, exceeds \$20 million, exceeds \$20 million.

(f) Interpretation. In the case of any Agilent Liability a portion of which arises out of events, acts or omissions occurring prior to the Separation Date and a portion of which arises out of events, acts or omissions occurring on or after the Separation Date but prior to the Distribution Date, only that portion that arises out of events, acts or omissions occurring on or after the Separation Date and prior to the Distribution Date shall be subject to this Section 1.11. In the case of any Agilent Liability a portion of which arises out of events, acts or omissions occurring prior to the Distribution Date and a portion of which arises out of events, acts or omissions occurring on or after the Distribution Date, only that portion that arises out of events, acts or omissions occurring prior to the Distribution Date shall be subject to this Section 1.11. For purposes of the foregoing, an Agilent Liability shall be deemed to have arisen out of events, acts or omission occurring on or after the Separation Date and before the Distribution Date if all the elements necessary for the assertion of a claim with respect to such Agilent Liability shall have occurred on or prior to Distribution Date, such that the claim, were it asserted in an Action on or after the Separation Date but prior to the Distribution Date, would not be dismissed by a court on ripeness or similar grounds. For purposes of clarification of the foregoing, the parties agree that no Agilent Liability relating to, arising out of or resulting from any obligation of any Person to perform the executory portion of any contract or agreement existing as of the Distribution Date, or to satisfy any obligation accrued under any Plan (as defined in the Employee Matters Agreement) as of the Separation Date, shall be subject to this Section 1.11. For purposes of determining whether a claim relating to the Year 2000 problem is subject to this Section 1.11, claims relating to products shipped on or after the Separation Date but prior to the Distribution Date shall be deemed to have arisen during such period. This Section 1.11(f) shall not apply to any Agilent Liability covered by Section 1.11(d).

ARTICLE II.

INSURANCE MATTERS

SECTION 2.1. Agilent Insurance Coverage During the Transition Period.

(a) Maintain Comparable Insurance. Throughout the period beginning on the Separation Date and ending on the Distribution Date (i.e., the "Insurance Transition Period"), HP shall, subject to insurance market conditions and other factors beyond its control, maintain policies of insurance, including for the benefit of Agilent or any of its Subsidiaries, directors, officers, employees or other covered parties (collectively, the "Agilent Covered Parties") which are comparable to those maintained generally by HP; provided, however, that if HP determines that (i) the amount or scope of such coverage will be reduced to a level materially inferior to the level of coverage in existence immediately prior to the Insurance Transition Period or (ii) the retention or deductible level applicable to such coverage, if any, will be increased to a level materially greater than the levels in existence immediately prior to the Insurance Transition Period, HP shall give Agilent notice of such determination as promptly as practicable. Upon notice of such determination, Agilent shall be entitled to no less than 60 days to evaluate its options regarding continuance of coverage hereunder and may cancel its interest in all or any portion of such coverage as of any day within such 60 day period. Except as provided below, during the Insurance Transition Period, such

policies of insurance shall cover Agilent Covered Parties for liabilities and losses insured prior to the Distribution Date.

(b) Reimbursement for Premiums. Agilent shall promptly pay or reimburse HP, as the case may be, for premium expenses, and Agilent Covered Parties shall promptly pay or reimburse HP for any costs and expenses which HP may incur in connection with the insurance coverages maintained pursuant to this Section 2.1, including but not limited to any subsequent premium adjustments. All payments and reimbursements by Agilent and Agilent Covered Parties to HP shall be made within fifteen (15) days after Agilent's receipt of an invoice from HP.

SECTION 2.2. Cooperation and Agreement Not to Release Carriers. Each of HP and Agilent will share such information as is reasonably necessary in order to permit the other to manage and conduct its insurance matters in an orderly fashion. Each of HP and Agilent, at the request of the other, shall cooperate with and use commercially reasonable efforts to assist the other in recoveries for claims made under any insurance policy for the benefit of any insured party, and neither HP nor Agilent, nor any of their Subsidiaries, shall take any action which would intentionally jeopardize or otherwise interfere with either party's ability to collect any proceeds payable pursuant to any insurance policy. Except as otherwise contemplated by the Separation Agreement, this Agreement or any Ancillary Agreement, after the Separation Date, neither HP nor Agilent shall (and shall ensure that no member of their respective Groups shall), without the consent of the other, provide any insurance carrier with a release, or amend, modify or waive any rights under any such policy or agreement, if such release, amendment, modification or waiver would adversely affect any rights or potential rights of any member of the other Group thereunder. However, nothing in this Section 2.2 shall (A) preclude any member of any Group from presenting any claim or from exhausting any policy limit, (B) require any member of any Group to pay any premium or other amount or to incur any Liability, (C) require any member of any Group to renew, extend or continue any policy in force or (D) except as otherwise provided in Section 2.12, apply to HP in connection with rights to coverage for Environmental Actions under Insurance Policies in effect prior to the Separation Date.

SECTION 2.3. Agilent Insurance Coverage After the Insurance Transition Period. From and after expiration of the Insurance Transition Period, Agilent, and Agilent alone, shall be responsible for obtaining and maintaining insurance programs for its risk of loss and such insurance arrangements shall be separate and apart from HP's insurance programs. Notwithstanding the foregoing, HP, upon the request of Agilent, shall use all commercially reasonable efforts to assist Agilent in the transition to its own separate insurance programs from and after the Insurance Transition Period, and shall provide Agilent with any information that is in the possession of HP and is reasonably available and necessary to either obtain insurance coverages for Agilent or to assist Agilent in preventing unintended self-insurance, in whatever form.

SECTION 2.4. Responsibilities for Self-insured Obligations. Agilent will reimburse HP for all amounts necessary to exhaust or otherwise satisfy all applicable self-insured retentions, amounts for fronted policies, deductibles and retrospective premium adjustments and similar amounts not covered by Insurance Policies in connection with Agilent Liabilities and Insured Agilent Liabilities.

SECTION 2.5. Procedures With Respect to Insured Agilent Liabilities.

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(a) Reimbursement. Agilent will reimburse HP for all amounts incurred to pursue insurance recoveries from Insurance Policies for Insured Agilent Liabilities.

(b) Management of Claims. The defense of claims, suits or actions giving rise to potential or actual Insured Agilent Liabilities will be managed (in conjunction with HP's insurers, as appropriate) by the party that would have had responsibility for managing such claims, suits or actions had such Insured Agilent Liabilities been Agilent Liabilities.

Section 2.6. Insufficient Limits Of Liability For Hp Liabilities And Agilent Liabilities

(a) Insufficient Limits of Liability. In the event that there are insufficient limits of liability available under HP's Insurance Policies in effect prior to the Distribution Date to cover the Liabilities of HP and/or Agilent that would otherwise be covered by such Insurance Policies, then to the extent that other insurance is not available to HP and/or Agilent for such Liabilities an adjustment will be made in accordance with the following procedures:

(i) Each party will be allocated an amount equal to their Shared Percentage of the lesser of (A) the available limits of liability available under HP's Insurance Policies in effect prior to the Distribution Date net of uncollectible amounts attributable to insurer insolvencies, and (B) the proceeds received from HP's Insurance Policies if the Liabilities are the subject of disputed coverage claims and, following consultation with each other, HP and/or Agilent agree to accept less than full policy limits from HP's and Agilent's insurers (the "Coverage Amount").

(ii) A party who receives more than its share of the Coverage Amount (the "Overallocated Party") agrees to reimburse the other party (the "Underallocated Party") to the extent that the Liabilities of the Underallocated Party that would have been covered under such Insurance Policies (subject to the limitations of Section 2.12) is less than the Underallocated Party's share of the Coverage Amount.

(iii) This Section 2.6(a) shall terminate three years following the Distribution Date; provided, however, that either party may extend the three year period applicable to these provisions by up to five additional two-year periods, or as otherwise shall be agreed to in order to accomplish the allocation objective set forth above and in order to have access to any available coverage under the Insurance Policies.

(b) Illustrations. The following illustrations are intended to provide guidance concerning how this Section is intended to apply to claims implicating insurance policies issued prior to the Distribution Date. The effects of Section 1.11 are not considered in these illustrations.

(i) Illustration No. 1. Ten separate claims are brought arising from ten separate "occurrences," each resulting in an Agilent Liability of \$10 million. The self-insured retention is \$10 million "per occurrence." Result: This Section is inapplicable. Agilent may pursue self-insurance, to the extent it is permitted to do so by law, subject to reimbursement of HP under Section 2.4 of this Agreement.

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(ii) Illustration No. 2. Ten separate claims are brought arising from ten separate "occurrences," each resulting in an Agilent Liability of \$40 million, for a total of \$400 million. Fifteen separate claims are brought arising from fifteen separate "occurrences," each resulting in an HP Liability of \$40 million, for a total of \$600 million. The limits of liability in the Insurance Policies applicable to the claims is \$200 million. The self-insured retention is \$10 million "per occurrence." Therefore, Agilent and HP each incur the first \$10 million "per occurrence," leaving a remaining liability (after the payment of self-insured retentions) of \$30 million "per occurrence," or \$300 million in the aggregate for Agilent and \$450 million in the aggregate for HP. The Agilent Liabilities are incurred prior to the HP Liabilities, and paid for by HP's Insurance Policies in effect prior to the Distribution Date, which are exhausted by these payments. This leaves Agilent with an additional liability of \$100 million (plus its self-insured retentions of \$100 million). Result: The \$200 million limit is split 82/18: \$164 million is allocated to HP and \$36 million is allocated to Agilent. Agilent should pay HP \$164 million, HP's share of the Coverage Amount.

(iii) Illustration No. 3. Same as Illustration No. 2, except that HP's claims (\$200 million) were paid for by HP's Insurance Policies in effect prior to the Distribution Date, which are exhausted by these payments. This leaves

Agilent with a liability of \$300 million (plus its self-insured retentions of \$100 million). HP should pay Agilent \$36 million.

Section 2.7. Cooperation . HP and Agilent will cooperate with each other in all respects, and they shall execute any additional documents which are reasonably necessary, to effectuate the provisions of this Article II.

Section 2.8. No Assignment Or Waiver . This Agreement shall not be considered as an attempted assignment of any policy of insurance or as a contract of insurance and shall not be construed to waive any right or remedy of any member of the HP Group in respect of any Insurance Policy or any other contract or policy of insurance.

Section 2.9. No Liability . Agilent does hereby, for itself and as agent for each other member of the Agilent Group, agree that no member of the HP Group or any HP Indemnitee shall have any Liability whatsoever as a result of the insurance policies and practices of HP and its Subsidiaries as in effect at any time prior to the Distribution Date, including as a result of the level or scope of any such insurance, the creditworthiness of any insurance carrier, the terms and conditions of any policy, the adequacy or timeliness of any notice to any insurance carrier with respect to any claim or potential claim or otherwise.

Section 2.10. No Restrictions . Nothing in this Agreement shall be deemed to restrict any member of the Agilent Group from acquiring at its own expense any other insurance policy in respect of any Liabilities or covering any period.

Section 2.11. Further Agreements. The Parties acknowledge that they intend to allocate financial obligations without violating any laws regarding insurance, self-insurance or other financial responsibility. If it is determined that any action undertaken pursuant to the Separation Agreement, this Agreement or any Ancillary Agreement is violative of any insurance, self-insurance or related financial responsibility law or regulation, the parties agree to work together to do whatever is

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necessary to comply with such law or regulation while trying to accomplish, as much as possible, the allocation of financial obligations as intended in the Separation Agreement, this Agreement and any Ancillary Agreement.

Section 2.12. Agreement Regarding Insurance Covering Environmental Actions Notwithstanding anything to the contrary in this Agreement (including Article II hereof), the Separation Agreement or any Ancillary Agreement:

(a) Except as set forth in Section 2.12(b), Agilent shall not make any claim against, or be entitled to any proceeds from, any primary, umbrella or excess general liability policy in effect prior to the Separation Date for any Environmental Actions;

(b) In the event that a claim arises out of an Environmental Action in connection with an Agilent Schedule 1 Facility and the claim could be covered under any primary, umbrella or excess general liability policy in effect prior to the Separation Date, and provided that at the time the claim is made HP has not fully and finally released or agreed to release (at HP's sole discretion) the insurance carrier with respect to coverage applicable to that claim under such policy, Agilent shall be permitted to submit the claim to HP for submission to the relevant insurance carrier, HP shall control all negotiations on the claim and the policy with the insurance carrier and Agilent shall be entitled to an equitable apportionment of any proceeds received by HP from the policy.

Section 2.13. Matters Governed By Employee Matters Agreement. This Article II shall not apply to any insurance policies that are the subject of the Employee Matters Agreement.

ARTICLE III.

MISCELLANEOUS

Section 3.1. Entire Agreement. This Agreement, the Master Separation Agreement, the other Ancillary Agreements and the Exhibits and Schedules attached hereto and thereto, constitutes the entire agreement between the parties with respect to the subject matter hereof and shall supersede all prior written and oral and all contemporaneous oral agreements and understandings with respect to the subject matter hereof.

Section 3.2. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware as to all matters regardless of the laws that might otherwise govern under principles of conflicts of laws applicable thereto.

Section 3.3. Notices. Any notice, demand, offer, request or other communication required or permitted to be given by either party pursuant to the terms of this Agreement shall be in writing and shall be deemed effectively given the earlier of (i) when received, (ii) when delivered personally, (iii) one (1) business day after being delivered by facsimile (with receipt of appropriate confirmation), (iv) one (1) business day after being deposited with an overnight courier service or (v) four (4) days after being deposited in the U.S. mail, First Class with postage prepaid, and

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addressed to the attention of the party's General Counsel at the address of its principal executive office or such other address as a party may request by notifying the other in writing.

Section 3.4. Parties In Interest. This Agreement, including the Schedules and Exhibits hereto, and the other documents referred to herein, shall be binding upon HP, HP's Subsidiaries, Agilent and Agilent's Subsidiaries and inure solely to the benefit of the Agilent Indemnitees and the HP Indemnitees and their respective permitted assigns, and nothing in this Agreement, express or implied, is intended to confer upon any other Person any rights or remedies of any nature whatsoever under or by reason of this Agreement.

Section 3.5. Other Agreements Evidencing Indemnification Obligations. HP hereby agrees to execute, for the benefit of any Agilent Indemnitee, such documents as may be reasonably requested by such Agilent Indemnitee, evidencing HP's agreement that the indemnification obligations of HP set forth in this Agreement inure to the benefit of and are enforceable by such Agilent Indemnitee. Agilent hereby agrees to execute, for the benefit of any HP Indemnitee, such documents as may be reasonably requested by such HP Indemnitee, evidencing Agilent's agreement that the indemnification obligations of Agilent set forth in this Agreement inure to the benefit of and are enforceable by such HP Indemnitee.

Section 3.6. Counterparts. This Agreement, including the Schedules and Exhibits hereto, and the other documents referred to herein, may be executed in counterparts, each of which shall be deemed to be an original but all of which shall constitute one and the same agreement.

Section 3.7. Assignment. The rights and obligations in this Agreement may not be assigned or delegated by any party hereto, in whole or in part, without the express prior written consent of the other party hereto.

Section 3.8. Severability. If any term or other provision of this Agreement or the Schedules or Exhibits attached hereto is determined by a nonappealable decision by a court, administrative agency or arbitrator to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other conditions and provisions of this Agreement shall nevertheless remain in full force and effect so long as the economic or legal substance of the transactions contemplated hereby is not affected in any manner materially adverse to any party. Upon such determination that any term or other provision is invalid, illegal or incapable of being enforced, the parties hereto shall negotiate in good faith to modify this Agreement so as to effect the original intent of the parties as closely as possible in an acceptable manner to the end

that transactions contemplated hereby are fulfilled to the fullest extent possible.

Section 3.9. Failure Or Indulgence Not Waiver. No failure or delay on the part of either party hereto in the exercise of any right hereunder shall impair such right or be construed to be a waiver of, or acquiescence in, any breach of any representation, warranty or agreement herein, nor shall any single or partial exercise of any such right preclude other or further exercise thereof or of any other right.

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Section 3.10. Amendment. No change or amendment will be made to this Agreement except by an instrument in writing signed on behalf of each of the parties to this Agreement.

Section 3.11. Authority. Each of the parties hereto represents to the other that (a) it has the corporate or other requisite power and authority to execute, deliver and perform this Agreement, (b) the execution, delivery and performance of this Agreement by it have been duly authorized by all necessary corporate or other action, (c) it has duly and validly executed and delivered this Agreement, and (d) this Agreement is a legal, valid and binding obligation, enforceable against it in accordance with its terms subject to applicable bankruptcy, insolvency, reorganization, moratorium or other similar laws affecting creditors' rights generally and general equity principles.

Section 3.12. Interpretation. The headings contained in this Agreement, in any Exhibit or Schedule hereto and in the table of contents to this Agreement are for reference purposes only and shall not affect in any way the meaning or interpretation of this Agreement. Any capitalized term used in any Schedule or Exhibit but not otherwise defined therein, shall have the meaning assigned to such term in this Agreement. When a reference is made in this Agreement to an Article or a Section, Exhibit or Schedule, such reference shall be to an Article or Section of, or an Exhibit or Schedule to, this Agreement unless otherwise indicated.

ARTICLE IV.

DEFINITIONS

Section 4.1. Action. "Action" means any demand, action, suit, countersuit, arbitration, inquiry, proceeding or investigation by or before any federal, state, local, foreign or international governmental authority or any arbitration or mediation tribunal.

Section 4.2. Affiliated Company. "Affiliated Company" means, with respect to HP, any entity in which HP holds a 50% or less ownership interest that is listed on Schedule 7.1(a) to the Separation Agreement and, with respect to Agilent, any entity in which Agilent holds a 50% or less ownership interest and that is listed on Schedule 7.1(b) to the Separation Agreement. Schedules 7.1(a) and 7.1(b) may be amended from time to time after the date hereof upon mutual written consent of the parties.

Section 4.3. Agilent Business. "Agilent Business" means (a) the business and operations of the business entities of HP currently known under the following names, as described in the IPO Registration Statement and as such business and operations will continue following the Separation Date: (i) the Test and Measurement Organization, (ii) the Semiconductor Products Group, (iii) the Chemical Analysis Group, (iv) the Healthcare Solutions Group and (v) the portion of HP Labs and infrastructure organizations related to these businesses and (b) except as otherwise expressly provided herein, any terminated, divested or discontinued businesses or operations that at the time of termination, divestiture or discontinuation primarily related to the Agilent Business as then conducted.

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Section 4.4. Agilent Contingent Liability. "Agilent Contingent Liability" means any Liability, other than Liabilities for Taxes (which are governed by the Tax Sharing Agreement), of a member of the HP Group or the Agilent Group that primarily relates to the Agilent Business, whenever arising, to any Person other than a member of the HP Group or the Agilent Group, if and to the extent that (i) such Liability arises out of the events, acts or omissions occurring as of the Separation Date and (ii) the existence or scope of the obligation of a member of the HP Group or the Agilent Group as of the Separation Date with respect to such Liability was not acknowledged, fixed or determined in any material respect, due to a dispute or other uncertainty as of the Separation Date or as a result of the failure of such Liability to have been discovered or asserted as of the Separation Date (it being understood that the existence of a litigation or other reserve with respect to any Liability shall not be sufficient for such Liability to be considered acknowledged, fixed or determined). In the case of any Liability a portion of which arises out of events, acts or omissions occurring prior to the Separation Date and a portion of which arises out of events, acts or omissions occurring on or after the Separation Date, only that portion that arises out of events, acts or omissions occurring prior to the Separation Date shall be considered an Agilent Contingent Liability. For purposes of the foregoing, a Liability shall be deemed to have arisen out of events, acts or omissions occurring prior to the Separation Date if all the elements necessary for the assertion of a claim with respect to such Liability shall have occurred on or prior to the Separation Date, such that the claim, were it asserted in an Action on or prior to the Separation Date, would not be dismissed by a court on ripeness or similar grounds. For purposes of clarification of the foregoing, the parties agree that no Liability relating to, arising out of or resulting from any obligation of any Person to perform the executory portion of any contract or agreement existing as of the Separation Date, or to satisfy any obligation accrued under any Plan (as defined in the Employee Matters Agreement) as of the Separation Date, shall be deemed to be an Agilent Contingent Liability. For purposes of determining whether a claim relating to the Year 2000 problem is an Agilent Contingent Liability, claims relating to products shipped prior to the Separation Date shall be deemed to have arisen prior to the Separation Date.

Section 4.5. Agilent Contracts. "Agilent Contracts" has the meaning set forth in Section 4.8 of the Assignment Agreement.

Section 4.6. Agilent Covered Parties. "Agilent Covered Parties" shall have the meaning set forth in Section 2.1(a) of this Agreement.

Section 4.7. Agilent Facilities. "Agilent Facilities" means the total of the Agilent Schedule 1 Facilities and the Agilent Schedule 2 Facilities.

Section 4.8. Agilent Group. "Agilent Group" means Agilent, each Subsidiary and Affiliated Company of Agilent immediately after the Separation Date or that is contemplated to be a Subsidiary or Affiliated Company of Agilent pursuant to the Non-US Plan and each Person that becomes a Subsidiary or Affiliate Company of Agilent after the Separation Date.

Section 4.9. Agilent Indemnitees. "Agilent Indemnitees" means Agilent, each member of the Agilent Group and each of their respective directors, officers and employees.

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Section 4.10. Agilent Liabilities. "Agilent Liabilities" has the meaning set forth in Section 1.3 of the Assignment Agreement.

Section 4.11. Agilent Schedule 1 Facilities. "Agilent Schedule 1 Facilities" means the real property, groundwater, surface water and improvements on those properties listed on the Owned and Leased Properties Spreadsheet (as defined in the Real Estate Matters Agreement) excluding the Agilent Schedule 2 Facilities. In the event that, prior to the Separation Date, any property listed on the Owned and Leased Properties Spreadsheet dated July 20, 1999 is transferred to a third party (excluding any member of the HP Group or the

Agilent Group), HP and Agilent shall mutually agree, for the purposes of the indemnification obligations set forth in Section 1.4 of this Agreement, whether such property shall be considered an Agilent Schedule 1 Facility or an HP Facility.

Section 4.12. Agilent Schedule 2 Facilities. "Agilent Schedule 2 Facilities" means the real property, groundwater, surface water and improvements thereon which shall be owned or occupied by a member of the Agilent Group on and after the Separation Date and which are identified on a disclosure letter entitled "The Agilent Schedule 2 Facilities," which disclosure letter shall be delivered to Agilent by HP on the Separation Date.

Section 4.13. Assets. "Assets" has the meaning set forth in Section 4.14 of the Assignment Agreement.

Section 4.14. Assignment Agreement. "Assignment Agreement" means the General Assignment and Assumption Agreement attached as Exhibit C to the Separation Agreement.

Section 4.15. Change of Control. "Change of Control" with respect to any Person means the occurrence of any of the following events:

(i) Any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended) is or becomes the "beneficial owner" (as defined in Rule 13d-3 under said Act), directly or indirectly, of securities of such Person representing 50% or more of the total voting power represented by such Person's then outstanding voting securities; or

(ii) A change in the composition of the Board of Directors of such Person occurring within a two-year period as a result of which fewer than a majority of the directors are "Incumbent Directors." "Incumbent Directors" shall mean directors who either (A) are directors of such Person as of the date hereof, or (B) are elected, or nominated for election, to the Board of Directors with the affirmative votes (either by a specific vote or by approval of the proxy statement of such Person in which such person is named as a nominee for election as a director without objection to such nomination) of at least three-quarters of the Incumbent Directors at the time of such election or nomination (but shall not include an individual whose election or nomination is in connection with an actual or threatened proxy contest relating to the election of directors of such Person); or

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(iii) The consummation of (A) a merger or consolidation of such Person with any other corporation, other than a merger or consolidation which would result in the voting securities of such Person outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into voting securities of the surviving entity or the entity that controls such surviving entity) at least fifty percent (50%) of the total voting power represented by the voting securities of such Person, such surviving entity or the entity that controls such Person or such surviving entity outstanding immediately after such merger or consolidation, or (B) the sale or disposition by such Person of all or substantially all such Person's assets; or

(iv) The shareholders of such Person approve a plan of complete liquidation of such Person.

Section 4.16. Claims Committee. "Claims Committee" means a committee composed of (i) either the General Counsel or Associate General Counsel of HP and (i) either the General Counsel or Associate General Counsel of Agilent.

Section 4.17. Commingled Claims. "Commingled Claims" has the meaning set forth in Section 1.5(b) of this Agreement.

Section 4.18. Coverage Amount. "Coverage Amount" has the meaning set forth in Section 2.6(a) of this Agreement.

Section 4.19. Employee Matters Agreement. "Employee Matters Agreement" means the Employee Matters Agreement attached as Exhibit E to the Separation Agreement.

Section 4.20. Environmental Actions. "Environmental Actions" means any notice, claim, act, cause of action, order, decree or investigation by any third party (including, without limitation, any Governmental Authority) alleging potential liability (including potential liability for investigatory costs, cleanup costs, governmental response costs, natural resources damages, damage to flora or fauna caused by Environmental Conditions, real property damages, personal injuries or penalties) arising out of, based on or resulting from the Release of any Hazardous Materials. "Environmental Actions" shall not include any personal injury claim made by any employee of the Agilent Group or the HP Group arising during the course or scope of the employment of such employee for the HP Group or for the Agilent Group.

Section 4.21. Environmental Conditions. "Environmental Conditions" means the presence in the environment, including the soil, groundwater, surface water or ambient air, of any Hazardous Material at a level which requires investigation or remediation (including, without limitation, investigation, study, health or risk assessment, monitoring, removal, treatment or transport) under any Environmental Laws.

Section 4.22. Environmental Laws. "Environmental Laws" means all laws and regulations of any Governmental Authority with jurisdiction that relate to the protection of the environment (including ambient air, surface water, ground water, land surface or subsurface strata) including laws and regulations relating to the Release of Hazardous Materials, or otherwise relating

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to the treatment, storage, disposal, transport or handling of Hazardous Materials, or to the exposure of any individual to a Release of Hazardous Materials.

Section 4.23. Excess Portion. "Excess Portion" means that portion, if any, of the aggregate amount actually paid by Agilent (together with any members of the Agilent Group), in respect of any single Agilent Contingent Liability or any Related Agilent Contingent Liabilities that is in excess of \$50 million.

Section 4.24. Hazardous Materials. "Hazardous Materials" means chemicals, pollutants, contaminants, wastes, toxic substances, radioactive and biological materials, hazardous substances, petroleum and petroleum products or any fraction thereof.

Section 4.25. HP Business. "HP Business" means any business of HP other than the Agilent Business.

Section 4.26. HP Facilities. "HP Facilities" means all of the real property and improvements thereon owned or occupied at any time on or before the Separation Date by HP, whether for the HP Business or the Agilent Business, excluding the Agilent Facilities.

Section 4.27. HP Group. "HP Group" means HP, each Subsidiary and Affiliated Company of HP (other than any member of the Agilent Group) immediately after the Separation Date, after giving effect to the Non-US Plan and each Person that becomes a Subsidiary or Affiliate Company of HP after the Separation Date.

Section 4.28. HP Indemnitees. "HP Indemnitees" means HP, each member of the HP Group and each of their respective directors, officers and employees.

Section 4.29. Indemnatee. "Indemnatee" has the meaning set forth in Section 1.5(a) hereof.

Section 4.30. Insurance Policies. "Insurance Policies" means insurance policies pursuant to which a Person makes a true risk transfer to an insurer.

Section 4.31. Insurance Proceeds. "Insurance Proceeds" means those monies:

- (a) received by an insured from an insurance carrier; or
- (b) paid by an insurance carrier on behalf of the insured;

from Insurance Policies.

Section 4.32. Insurance Transition Period. "Insurance Transition Period" has the meaning set forth in Section 2.1 of this Agreement.

Section 4.33. Insured Agilent Liability. "Insured Agilent Liability" means any Agilent Liability to the extent that (i) it is covered under the terms of HP's Insurance Policies in effect prior

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to the Distribution Date and (ii) Agilent is not a named insured under, or otherwise entitled to the benefits of, such Insurance Policies.

Section 4.34. IPO Liabilities. "IPO Liabilities" means any Liabilities of the Agilent Group or the HP Group relating to, arising out of or resulting from any untrue statement or alleged untrue statement of a material fact or omission or alleged omission to state a material fact required to be stated therein or necessary to make the statements therein not misleading, with respect to all information contained in any IPO Registration Statement or any preliminary, final or supplemental prospectus forming a part of a IPO Registration Statement.

Section 4.35. IPO Registration Statement. "IPO Registration Statement" means the registration statement on Form S-1 pursuant to the Securities Act to be filed with the SEC registering the shares of common stock of Agilent to be issued in the IPO, together with all amendments thereto.

Section 4.36. Liabilities. "Liabilities" has the meaning set forth in the Assignment Agreement.

Section 4.37. Non-US Plan. "Non-US Plan" means the plan of reorganization described in Exhibit M of the Separation Agreement.

Section 4.38. Person. "Person" means an individual, a partnership, a corporation, a limited liability company, an association, a joint stock company, a trust, a joint venture, an unincorporated organization and a governmental entity or any department, agency or political subdivision thereof.

Section 4.39. Pre-Separation Third Party Site Liabilities. "Pre-Separation Third Party Site Liabilities" means any and all Environmental Actions arising out of Hazardous Materials found on, under or about any landfill any waste storage, transfer or recycling site and resulting from or arising out of Hazardous Materials stored, treated, recycled disposed or otherwise handled at such site prior to the Separation Date (whether for the operation of the Agilent Business or for the operation of any past or presently (as of the date hereof) existing HP Business as operated on or before the Separation Date).

Section 4.40. Prime Rate. "Prime Rate" means the prime rate as published in the Wall Street Journal on the date of determination.

Section 4.41. Related Agilent Contingent Liabilities. "Related Agilent Contingent Liabilities" means any set or group of Agilent Contingent Liabilities arising from any single Action (including any group of Actions that are consolidated as a single Action and any Action or Actions certified as a class action) or any Action that is brought or threatened to be brought as a class action and that is settled.

Section 4.42. Release. "Release" means any release, spill, emission, leaking, pumping, injection, deposit, disposal, discharge, dispersal, leaching or migration into the indoor or outdoor environment, including, without limitation, the movement of Hazardous Materials through ambient air, soil,

surface water, groundwater, wetlands, land or subsurface strata.

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Section 4.43. Separation. "Separation" means the transfer and contribution from HP to Agilent, and Agilent's receipt and assumption of, directly or indirectly, substantially all of the Assets and Liabilities currently associated with the Agilent Business and the stock, investments or similar interests currently held by HP in subsidiaries and other entities that conduct such business.

Section 4.44. Separation Agreement. "Separation Agreement" means the Master Separation and Distribution Agreement dated as of August 12, 1999, of which this is an Exhibit thereto.

Section 4.45. Separation Date. "Separation Date" means 12:01 a.m., Pacific Time, November 1, 1999, or such date as may be fixed by the Board of Directors of HP.

Section 4.46. Shared Agilent Percentage. "Shared Agilent Percentage" means 18%.

Section 4.47. Shared HP Percentage. "Shared HP Percentage" means 82%.

Section 4.48. Shared Percentage. "Shared Percentage" means the Shared Agilent Percentage or the Shared HP Percentage, as the case may be.

Section 4.49. Subsidiary. "Subsidiary" means with respect to any specified Person, any corporation, any limited liability company, any partnership or other legal entity of which such Person or its Subsidiaries owns, directly or indirectly, more than 50% of the stock or other equity interest entitled to vote on the election of the members of the board of directors or similar governing body. Unless context otherwise requires, reference to HP and its Subsidiaries shall not include the subsidiaries of HP that will be transferred to Agilent after giving effect to the Separation, including the actions taken pursuant to the Non-US Plan.

Section 4.50. Tax Sharing Agreement. "Tax Sharing Agreement" means the Tax Sharing Agreement, attached as Exhibit F to the Separation Agreement.

Section 4.51. Taxes. "Taxes" has the meaning set forth in the Tax Sharing Agreement.

Section 4.52. Third Party Claim. "Third Party Claim" has the meaning set forth in Section 1.5(a) of this Agreement.

[SIGNATURES ON FOLLOWING PAGE]

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IN WITNESS WHEREOF, each of the parties has caused this Agreement to be executed on its behalf by its officers thereunto duly authorized on the day and year first above written.

HEWLETT PACKARD COMPANY

By: _____
Name:
Title: President and Chief Executive
Officer

AGILENT TECHNOLOGIES, INC.

By: _____
Name:
Title: President and Chief Executive
Officer

AMENDED AND RESTATED
CERTIFICATE OF INCORPORATION

OF

HP MEASUREMENT, INC.

HP Measurement, Inc., a corporation organized and existing under the laws of the State of Delaware, does hereby certify:

1. The name of the corporation is HP Measurement, Inc. HP Measurement, Inc. was originally incorporated under the same name, and the original Certificate of Incorporation was filed with the Secretary of State of the State of Delaware on May 4, 1999.

2. Pursuant to Sections 242 and 228 of the General Corporation Law of the State of Delaware, the amendments and restatement herein set forth have been duly approved by the Board of Directors and stockholders of HP Measurement, Inc.

3. Pursuant to Section 245 of the General Corporation Law of the State of Delaware, this Amended and Restated Certificate of Incorporation restates and integrates and amends the provisions of the Amended and Restated Certificate of Incorporation of this corporation.

4. The text of the Restated Certificate of Incorporation is hereby restated and amended to read in its entirety as follows:

ARTICLE I

The name of the Corporation is Agilent Technologies, Inc. (the "Corporation").

ARTICLE II

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, Wilmington, Delaware 19801, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The nature of the business or purposes to be conducted or promoted by the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended.

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ARTICLE IV

The Corporation is authorized to issue two classes of stock to be designated, respectively, Common Stock, par value \$0.01 per share ("Common Stock") and Preferred Stock, par value \$0.01 per share ("Preferred Stock"). The total number of shares of Common Stock that the Corporation shall have authority to issue is 2,000,000,000. The total number of shares of Preferred Stock that the Corporation shall have authority to issue is 125,000,000. The Preferred Stock may be issued from time to time in one or more series.

The Corporation shall from time to time in accordance with the laws of the State of Delaware increase the authorized amount of its Common Stock if at any time the number of shares of Common Stock remaining unissued and available for issuance shall not be sufficient to permit conversion of all outstanding

Preferred Stock.

The Board of Directors is hereby authorized, subject to limitations prescribed by law and the provisions of this Article IV, by resolution to provide for the issuance of the shares of Preferred Stock in one or more series, and to establish from time to time the number of shares to be included in each such series, and to fix the designation, powers, privileges, preferences, and relative participating, optional or other rights, if any, of the shares of each such series and the qualifications, limitations or restrictions thereof.

The authority of the Board of Directors with respect to each series shall include, but not be limited to, determination of the following:

A. The number of shares constituting that series (including an increase or decrease in the number of shares of any such series (but not below the number of shares in any such series then outstanding)) and the distinctive designation of that series;

B. The dividend rate on the shares of that series, whether dividends shall be cumulative, and, if so, from which date or dates, and the relative rights of priority, if any, of payment of dividends on shares of that series;

C. Whether that series shall have the voting rights (including multiple or fractional votes per share) in addition to the voting rights provided by law, and, if so, the terms of such voting rights;

D. Whether that series shall have conversion privileges, and, if so, the terms and conditions of such privileges, including provision for adjustment of the conversion rate in such events as the Board of Directors shall determine;

E. Whether or not the shares of that series shall be redeemable, and, if so, the terms and conditions of such redemption, including the date or dates upon or after which they shall be redeemable, and the amount per share payable in case of redemption, which amount may vary under different conditions and at different redemption rates;

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F. Whether that series shall have a sinking fund for the redemption or purchase of shares of that series, and, if so, the terms and the amount of such sinking funds;

G. The rights of the shares of that series in the event of voluntary or involuntary liquidation, dissolution or winding up of the Corporation, and the relative rights of priority, if any, of payment of shares of that series; and

H. Any other relative rights, preferences and limitations of that series.

No holders of shares of the Corporation of any class, now or hereafter authorized, shall have any preferential or preemptive rights to subscribe for, purchase or receive any shares of the Corporation of any class, now or hereafter authorized, or any options or warrants for such shares, or any rights to subscribe for, purchase or receive any securities convertible to or exchangeable for such shares, which may at any time be issued, sold or offered for sale by the Corporation, except in the case of any shares of Preferred Stock to which such rights are specifically granted by any resolution or resolutions of the Board of Directors adopted pursuant to this Article IV.

ARTICLE V

Effective as of the time at which Hewlett-Packard Company, a Delaware corporation, and its affiliates shall cease to be the beneficial owner of an aggregate of at least a majority of the then outstanding shares of Common Stock

(the "Trigger Date"), any action required or permitted to be taken by the stockholders of the Corporation must be effected at a duly called annual or special meeting of such holders and may not be effected by any consent in writing by such holders. Effective as of the Trigger Date, except as otherwise required by law and subject to the rights of the holders of any class or series of stock having a preference over the Common Stock as to dividends or upon liquidation, special meetings of stockholders of the Corporation for any purpose or purposes may be called only by the Board of Directors or by the Chairman of the Board of Directors of the Corporation and, effective as of the Trigger Date, any power of stockholders to call a special meeting is specifically denied. No business other than that stated in the notice shall be transacted at any special meeting.

ARTICLE VI

The Corporation is to have perpetual existence.

ARTICLE VII

For the management of the business and for the conduct of affairs of the Corporation, and in further definition, limitation and regulation of powers of the Corporation, of its directors and of its stockholders or any class thereof, as the case may be, it is further provided that:

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A. The management of the business and the conduct of the affairs of the Corporation shall be vested in its Board of Directors. The number of directors of this Corporation shall be fixed and may be changed from time to time by resolution of the Board of Directors.

B. The Directors, other than those who may be elected by the holders of any class or series of stock having a preference over the Common Stock as to dividends or upon liquidation, shall be classified, with respect to the time for which they severally hold office, into three classes, as nearly equal in number as possible, one class to be originally elected for a term expiring at the annual meeting of stockholders to be held in 2000, another class to be originally elected for a term expiring at the annual meeting of stockholders to be held in 2001, and another class to be originally elected for a term expiring at the annual meeting of stockholders to be held in 2002, with each class to hold office until its successor is duly elected and qualified. At each succeeding annual meeting of stockholders, directors elected to succeed those directors whose terms then expire shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election.

C. Notwithstanding the foregoing provisions of this Article VII, each director shall serve until his or her successor is duly elected and qualified or until his or her death, resignation or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

D. Any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal, or other causes unless the Board of Directors determines by resolution that any such vacancies or newly created directorships shall be filled by stockholders, and except as otherwise provided by law, shall be filled only by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors and not by the stockholders.

E. In furtherance and not in limitation of the powers conferred by the laws of the State of Delaware, the Board of Directors is expressly authorized to make, alter, amend or repeal the Bylaws of the Corporation.

F. The directors of the Corporation need not be elected by written ballot unless the Bylaws of the Corporation so provide.

G. Advance notice of stockholder nomination for the election of directors and of any other business to be brought by stockholders before any meeting of the stockholders of the Corporation shall be given in the manner provided in the Bylaws of the Corporation.

ARTICLE VIII

A. To the fullest extent permitted by the Delaware General Corporation Law as the same exists or as may hereafter be amended, no director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director.

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B. The Corporation may indemnify to the fullest extent permitted by law any person made or threatened to be made a party to an action or proceeding, whether criminal, civil, administrative or investigative, by reason of the fact that he, his testator or intestate is or was a director, officer or employee of the Corporation or any predecessor of the Corporation or serves or served at any other enterprise as a director, officer or employee at the request of the Corporation or any predecessor to the Corporation.

C. Neither any amendment nor repeal of this Article VIII, nor the adoption of any provision of this Corporation's Certificate of Incorporation inconsistent with this Article VIII, shall eliminate or reduce the effect of this Article VIII, in respect of any matter occurring, or any action or proceeding accruing or arising or that, but for this Article VIII, would accrue or arise, prior to such amendment, repeal or adoption of an inconsistent provision.

ARTICLE IX

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the laws of the State of Delaware) outside of the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the Bylaws of the Corporation.

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ARTICLE X

Except as provided in Article VIII above, the Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by the laws of the state of Delaware, and all rights conferred upon stockholders herein are granted subject to this reservation. Notwithstanding anything contained in this Certificate of Incorporation to the contrary, the affirmative vote of the holders of at least 80% of the voting power of all shares of the Corporation entitled to vote generally in the election of directors (the "Voting Stock") then outstanding, voting together as a single class shall be required to alter, amend, adopt any provision inconsistent with or repeal Article V or VII or this sentence.

IN WITNESS WHEREOF, HP Measurement, Inc. has caused this Amended and Restated Certificate of Incorporation to be executed by D. Craig Nordlund, its Secretary this 29th day of July 1999.

/s/ D. CRAIG NORDLUND

D. CRAIG NORDLUND
Associate General Counsel
and Secretary

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BYLAWS
OF
AGILENT TECHNOLOGIES, INC.

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BYLAWS
OF
AGILENT TECHNOLOGIES, INC.

ARTICLE I

CORPORATE OFFICES

1.1 Registered Office. The registered office of the corporation shall be fixed in the Certificate of Incorporation of the corporation.

1.2 Other Offices. The board of directors may at any time establish branch or subordinate offices at any place or places where the corporation is qualified to do business.

ARTICLE II

MEETINGS OF STOCKHOLDERS

2.1 Place of Meetings. Meetings of stockholders shall be held at any place within or outside the State of Delaware designated by the board of directors. In the absence of any such designation, stockholders' meetings shall be held at the registered office of the corporation.

2.2 Annual Meeting.

(a) The annual meeting of stockholders shall be held each year on a date and at a time designated by the board of directors. At the meeting, directors shall be elected, and any other proper business may be transacted.

(b) At an annual meeting of the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be: (A) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the board of directors, (B) otherwise properly brought before the meeting by or at the direction of the board of directors, or (C) otherwise properly brought before the meeting by a stockholder. For nominations or other business to be properly brought before a stockholders meeting by a stockholder pursuant to clause (C) of the preceding sentence, the stockholder must have given timely notice thereof in writing to the Secretary of the corporation and such other business must otherwise be a proper matter for stockholder action. To be timely, a stockholder's notice shall be delivered to the Secretary at the principal executive offices of the corporation not less than one hundred twenty (120) calendar days in advance of the first anniversary of the preceding year's annual meeting; provided, however, that in the event that (i) no annual meeting was held in the previous year or (ii) the date of the annual meeting has been changed by more than thirty (30) days from the date of the previous year's meeting, notice by the stockholder to be timely must be so delivered not earlier than the close of business on the later of: (i) the day one hundred twenty (120) calendar days in advance of such meeting or (ii) the day ten (10) calendar days following the day on which public announcement of the date of the meeting is first made. For purposes of determining whether a stockholder's notice shall have been delivered in a timely manner for the annual meeting of stockholders in 2000, the first anniversary of the previous year's meeting shall be deemed to be February 23, 2000. In no event shall the public announcement of an adjournment of a stockholders meeting commence a new time period for the giving of a stockholder's notice as described above. A stockholder's notice to the secretary shall set forth as to each matter the stockholder proposes to bring before the annual meeting: (a) a brief description of the business desired to be brought before the meeting, (b) the name and address, as they appear on the corporation's books, of the stockholder proposing such business, (c) the class number of shares of the corporation which are

owned beneficially by such stockholder, (d) any material interest of the stockholder in such business, and (e) any other information that is required to be provided by the stockholder

pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (the "1934 Act") (or any successor thereto) in such stockholder's capacity as a proponent of a stockholder proposal. Notwithstanding anything in these Bylaws to the contrary, no business shall be conducted at any annual meeting except in accordance with the procedures set forth in this paragraph (b). The chairman of the annual meeting shall, if the facts warrant, determine and declare at the meeting that business was not properly brought before the meeting and in accordance with the provisions of this paragraph (b), and, if he should so determine, he shall so declare at the meeting that any such business not properly brought before the meeting shall not be transacted.

- (c) Only persons who are nominated in accordance with the procedures set forth in this paragraph (c) shall be eligible for election as directors. Nominations of persons for election to the board of directors of the corporation may be made at a meeting of stockholders by or at the direction of the board of directors or by any stockholder of the corporation entitled to vote in the election of directors at the meeting who complies with the notice procedures set forth in this paragraph (c). Such nominations, other than those made by or at the direction of the board of directors, shall be made pursuant to timely notice in writing to the secretary of the corporation in accordance with the provisions of paragraph (b) of this Section 2.2. Such stockholder's notice shall set forth (i) as to each person, if any, whom the stockholder proposes to nominate for election or re-election as a director: (A) the name, age, business address and residence address of such person, (B) the principal occupation or employment of such person, (C) the class and number of shares of the corporation which are beneficially owned by such person, (D) a description of all arrangements or understandings between the stockholder and each nominee and any other person or persons (naming such person or persons) pursuant to which the nominations are to be made by the stockholder, and (E) any other information relating to such person that is required to be disclosed in solicitations of proxies for elections of directors, or is otherwise required, in each case pursuant to Regulation 14A under the 1934 Act (or any successor thereto) (including without limitation such person's written consent to being named in the proxy statement, if any, as a nominee and to serving as a director if elected); and (ii) as to such stockholder giving notice, the information required to be provided pursuant to paragraph (b) of this Section 2.2. At the request of the board of directors, any person nominated by a stockholder for election as a director shall furnish to the secretary of the corporation that information required to be set forth in the stockholder's notice of nomination which pertains to the nominee. No person shall be eligible for election as a director of the corporation unless nominated in accordance with the procedures set forth in this paragraph (c). The chairman of the meeting shall, if the facts warrant, determine and declare at the meeting that a nomination was not made in accordance with the procedures prescribed by these Bylaws, and if he should so determine, he shall so declare at the meeting, and the defective nomination shall be disregarded.

2.3 Special Meeting. A special meeting of the stockholders may be called at any time by the board of directors or the chairman of the board. In addition, prior to the Trigger Date (as defined in the Certificate of Incorporation), the corporation will call a special meeting of stockholders promptly upon request by Hewlett-Packard Company, a Delaware corporation, so long as such entity is a stockholder of the corporation. Special meetings of the stockholders may not be called by any other person or persons. Only such business shall be considered at a special meeting of stockholders as shall have been stated in the notice for such meeting.

2.4 Organization. Meetings of stockholders shall be presided over by the chairman of the board, if any, or in his or her absence by the vice chairman of the board, if any, or in his or her absence, or in the absence of the foregoing persons by a chairman of the meeting, which chairman must be an officer or director of the Company, designated by the board of directors. The secretary or in his or her absence an assistant secretary or in the absence of the secretary and all assistant secretaries a person whom the chairman of the meeting shall appoint shall act as secretary of the meeting and keep a record of the proceedings thereof.

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The board of directors of the corporation shall be entitled to make such rules or regulations for the conduct of meetings of stockholders as it shall deem necessary, appropriate or convenient. Subject to such rules and regulations of the board of directors, if any, the chairman of the meeting shall have the right and authority to prescribe such rules, regulations and procedures and to do all such acts as, in the judgment of such chairman, are necessary, appropriate or convenient for the proper conduct of the meeting, including, without limitation, establishing an agenda or order of business for the meeting, rules and procedures for maintaining order at the meeting and the safety of those present, limitations on participation in such meeting to stockholders of record of the corporation and their duly authorized and constituted proxies, and such other persons as the chairman shall permit, restrictions on entry to the meeting after the time fixed for the commencement thereof, limitations on the time allotted to questions or comments by participants and regulation of the opening and closing of the polls for balloting and matters which are to be voted on by ballot. Unless and to the extent determined by the board of directors or the chairman of the meeting, meetings of stockholders shall not be required to be held in accordance with rules of parliamentary procedure.

2.5 Notice of Stockholders' Meetings. All notices of meetings of stockholders shall be sent or otherwise given in accordance with Section 2.6 of these Bylaws not less than ten (10) nor more than sixty (60) days before the date of the meeting. The notice shall specify the place, date, and hour of the meeting and (i) in the case of a special meeting, the purpose or purposes for which the meeting is called (no business other than that specified in the notice may be transacted) or (ii) in the case of the annual meeting, those matters which the board of directors, at the time of giving the notice, intends to present for action by the stockholders (but any proper matter may be presented at the meeting for such action). The notice of any meeting at which directors are to be elected shall include the name of any nominee or nominees who, at the time of the notice, the board intends to present for election.

2.6 Manner of Giving Notice; Affidavit of Notice. Notice of any meeting of stockholders shall be given either personally or by mail, telecopy, telegram or other electronic or wireless means. Notices not personally delivered shall be sent charges prepaid and shall be addressed to the stockholder at the address of that stockholder appearing on the books of the corporation or given by the stockholder to the corporation for the purpose of notice. Notice shall be deemed to have been given at the time when delivered personally or deposited in the mail or at the time of transmission when sent by telecopy, telegram or other electronic or wireless means.

An affidavit of the mailing or other means of giving any notice of any stockholders' meeting, executed by the secretary, assistant secretary or any transfer agent of the corporation giving the notice, shall be prima facie evidence of the giving of such notice or report.

2.7 Quorum. The holders of a majority in voting power of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the Certificate of Incorporation. If, however, such quorum is not present or represented at any meeting of the stockholders, then either (i) the chairman of the meeting or (ii) the stockholders by the vote of the holders of a

majority of the stock, present in person or represented by proxy shall have power to adjourn the meeting in accordance with Section 2.8 of these Bylaws.

When a quorum is present at any meeting, the vote of the holders of a majority of the stock having voting power present in person or represented by proxy shall decide any question brought before such meeting, unless the question is one upon which, by express provision of the laws of the State of Delaware or of the Certificate of Incorporation or these Bylaws, a vote of a greater number or voting by classes is required, in which case such express provision shall govern and control the decision of the question.

If a quorum be initially present, the stockholders may continue to transact business until adjournment, notwithstanding the withdrawal of enough stockholders to leave less than a quorum, if any action taken is approved by a majority of the stockholders initially constituting the quorum.

2.8 Adjourned Meeting; Notice. Any stockholders' meeting, annual or special, whether or not a quorum is present, may be adjourned from time to time by the vote of the majority of the voting power of the shares represented at that meeting, either in person or by proxy. In the absence of a quorum, no other business may be transacted at that meeting except as provided in Section 2.7 of these Bylaws.

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When any meeting of stockholders, either annual or special, is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place are announced at the meeting at which the adjournment is taken. However, if a new record date for the adjourned meeting is fixed or if the adjournment is for more than thirty (30) days from the date set for the original meeting, then notice of the adjourned meeting shall be given. Notice of any such adjourned meeting shall be given to each stockholder of record entitled to vote at the adjourned meeting in accordance with the provisions of Sections 2.5 and 2.6 of these Bylaws. At any adjourned meeting the corporation may transact any business which might have been transacted at the original meeting.

2.9 Voting. The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.12 of these Bylaws, subject to the provisions of Sections 217 and 218 of the General Corporation Law of Delaware (relating to voting rights of fiduciaries, pledgers and joint owners, and to voting trusts and other voting agreements).

Except as may be otherwise provided in the Certificate of Incorporation, by these Bylaws or required by law, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

Any stockholder entitled to vote on any matter may vote part of the shares in favor of the proposal and refrain from voting the remaining shares or, except when the matter is the election of directors, may vote them against the proposal; but if the stockholder fails to specify the number of shares which the stockholder is voting affirmatively, it will be conclusively presumed that the stockholder's approving vote is with respect to all shares which the stockholder is entitled to vote.

2.10 Validation of Meetings; Waiver of Notice; Consent. The transactions of any meeting of stockholders, either annual or special, however called and noticed, and wherever held, shall be as valid as though they had been taken at a meeting duly held after regular call and notice, if a quorum be present either in person or by proxy.

Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the Certificate of Incorporation or these Bylaws, a written waiver thereto, signed by the person entitled to notice, whether before or after the time stated therein, will be deemed equivalent to notice. Attendance by a person at a meeting shall also constitute a waiver of notice of and presence at that meeting, except when the person objects at the

beginning of the meeting to the transaction of any business because the meeting is not lawfully called or convened. Attendance at a meeting is not a waiver of any right to object to the consideration of matters required by law to be included in the notice of the meeting but not so included, if that objection is expressly made at the meeting. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice unless so required by the Certificate of Incorporation or these Bylaws.

2.11 No Stockholder Action by Written Consent. Effective as of the Trigger Date, any action required or permitted to be taken by the stockholders of the corporation must be effected at a duly called annual or special meeting of such holders and may not be effected by any consent in writing by such holders.

2.12 Record Date for Stockholder Notice; Voting; Giving Consents. For purposes of determining the stockholders entitled to notice of any meeting or to vote thereat, the board of directors may fix, in advance, a record date, which shall not be more than sixty (60) days nor less than ten (10) days before the date of any such meeting, and in such event only stockholders of record on the date so fixed are entitled to notice and to vote, notwithstanding any transfer of any shares on the books of the corporation after the record date, except as otherwise provided in the Certificate of Incorporation, by these Bylaws, by agreement or by applicable law.

If the board of directors does not so fix a record date, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the business day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the business day next preceding the day on which the meeting is held.

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A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting unless the board of directors fixes a new record date for the adjourned meeting, but the board of directors shall fix a new record date if the meeting is adjourned for more than thirty (30) days from the date set for the original meeting.

The record date for any other purpose shall be as provided in Section 8.1 of these Bylaws.

2.13 Proxies. Every person entitled to vote for directors, or on any other matter, shall have the right to do so either in person or by one or more agents authorized by a written proxy filed with the secretary of the corporation. A written proxy may be in the form of a telegram, cablegram, or other means of electronic transmission which sets forth or is submitted with information from which it can be determined that the telegram, cablegram, or other means of electronic transmission was authorized by the person. No such proxy shall be voted or acted upon after three (3) years from its date, unless the proxy provides for a longer period. A duly executed proxy shall be irrevocable if it states that it is irrevocable and if, and only as long as, it is coupled with an interest sufficient in law to support an irrevocable power. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212(e) of the General Corporation Law of Delaware. A stockholder may revoke any proxy which is not irrevocable by attending the meeting and voting in person or by filing an instrument in writing revoking the proxy or by filing another duly executed proxy bearing a later date with the secretary of the corporation.

A proxy is not revoked by the death or incapacity of the maker unless, before the vote is counted, written notice of such death or incapacity is received by the corporation.

2.14 Inspectors of Election. Before any meeting of stockholders, the

board of directors shall appoint an inspector or inspectors of election to act at the meeting or its adjournment. The number of inspectors shall be either one (1) or three (3). If any person appointed as inspector fails to appear or fails or refuses to act, then the chairman of the meeting may, and upon the request of any stockholder or a stockholder's proxy shall, appoint a person to fill that vacancy.

Such inspectors shall:

- (a) determine the number of shares outstanding and the voting power of each, the number of shares represented at the meeting, the existence of a quorum, and the authenticity, validity, and effect of proxies;
- (b) receive votes, ballots or consents;
- (c) hear and determine all challenges and questions in any way arising in connection with the right to vote;
- (d) count and tabulate all votes or consents;
- (e) determine when the polls shall close;
- (f) determine the result; and
- (g) do any other acts that may be proper to conduct the election or vote with fairness to all stockholders.

The inspectors of election shall perform their duties impartially, in good faith, to the best of their ability and as expeditiously as is practical. If there are three (3) inspectors of election, the decision, act or certificate of a majority is effective in all respects as the decision, act or certificate of all. Any report or certificate made by the inspectors of election is prima facie evidence of the facts stated therein.

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ARTICLE III

DIRECTORS

3.1 Powers. Subject to the provisions of the General Corporation Law of Delaware and to any limitations in the Certificate of Incorporation or these Bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the corporation shall be managed and all corporate powers shall be exercised by or under the direction of the board of directors.

3.2 Number. The authorized number of directors shall be fixed and may be changed from time to time by resolution of the Board of Directors.

No reduction of the authorized number of directors shall have the effect of removing any director before that director's term of office expires. If for any cause, the directors shall not have been elected at an annual meeting, they may be elected as soon thereafter as convenient at a special meeting of the stockholders called for that purpose in the manner provided in these Bylaws.

3.3 Election and Term of Office of Directors. Except as provided in the Certificate of Incorporation or Section 3.4 of these Bylaws, directors shall be classified, with respect to the time for which they severally hold office, into three classes, as nearly equal in number as possible, one class to be originally elected for a term expiring at the annual meeting of stockholders to be held in 2000, another class to be originally elected for a term expiring at the annual meeting of stockholders to be held in 2001, and another class to be originally elected for a term expiring at the annual meeting of stockholders to be held in 2002, with each class to hold office until its successor is duly

elected and qualified. At each succeeding annual meeting of stockholders, directors elected to succeed those directors whose terms then expire shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election, with each director to hold office until such person's successor shall have been elected and qualified or until such person's earlier resignation or removal. Each director, including a director elected or appointed to fill a vacancy, shall hold office until his successor is elected and qualified or until his earlier resignation or removal.

Directors need not be stockholders unless so required by the Certificate of Incorporation or by these Bylaws; wherein other qualifications for directors may be prescribed.

Election of directors need not be by written ballot unless so required by the Certificate of Incorporation or by these Bylaws; wherein other qualifications for directors may be prescribed.

3.4 Resignation and Vacancies. Any director may resign effective on giving written notice to the chairman of the board, the president, the secretary or the board of directors, unless the notice specifies a later time for that resignation to become effective. If the resignation of a director is effective at a future time, the board of directors may elect a successor to take office when the resignation becomes effective.

Unless otherwise provided in the Certificate of Incorporation or these Bylaws:

- (i) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, even if less than a quorum, or by a sole remaining director. Each director so elected shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred and until a successor has been elected and qualified.

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- (ii) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected.

If at any time, by reason of death or resignation or other cause, the corporation should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders solely for the purpose of electing directors in accordance with the provisions of the Certificate of Incorporation or these Bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the General Corporation Law of Delaware.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole board (as constituted immediately prior to any such increase), then the Court of Chancery may, upon application of any stockholder or stockholders holding at least ten percent (10%) of the total number of the then outstanding shares having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the General Corporation Law of Delaware as far as applicable.

3.5 Removal. Unless otherwise restricted by statute, by the Certificate of Incorporation or by these Bylaws, any director or the entire board of directors may be removed from office only for cause by the holders of a majority of the shares then entitled to vote at an election of directors.

3.6 Place of Meetings; Meetings by Telephone. Regular meetings of the board of directors may be held at any place within or outside the State of Delaware that has been designated from time to time by resolution of the board of directors. In the absence of such a designation, regular meetings shall be held at the principal executive office of the corporation. Special meetings of the board of directors may be held at any place within or outside the State of Delaware that has been designated in the notice of the meeting or, if not stated in the notice or if there is no notice, at the principal executive office of the corporation.

Any meeting, regular or special, may be held by conference telephone or similar communication equipment, so long as all directors participating in the meeting can hear one another; and all such directors shall be deemed to be present in person at the meeting.

3.7 Regular Meetings. Regular meetings of the board of directors may be held without notice if the times of such meetings are fixed by the board of directors.

3.8 Special Meetings; Notice. Special meetings of the board of directors for any purpose or purposes may be called at any time by the chairman of the board, the vice chairman of the board, the president, the chairman of the executive committee, any vice president or the secretary or by any two (2) or more of the directors.

Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by mail, telecopy, telegram or other electronic or wireless means, charges prepaid, addressed to each director at that director's address as it is shown on the records of the corporation or if the address is not readily ascertainable, notice shall be addressed to the director at the city or place in which the meetings of directors are regularly held. If the notice is mailed, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is delivered personally or by telephone, telecopy, telegram or other electronic or wireless means, it shall be delivered personally or by telephone or other electronic or wireless means or to the telegraph company at least twenty-four (24) hours before the time of the holding of the meeting. Any oral notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice

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has reason to believe will promptly communicate it to the director. If the meeting is to be held at the principal executive office of the corporation, the notice need not specify the place of the meeting. Moreover, a notice of special meeting need not state the purpose of such meeting, and, unless indicated in the notice thereof, any and all business may be transacted at a special meeting.

3.9 Quorum. A majority of the authorized number of directors shall constitute a quorum for the transaction of business, except to fill vacancies in the board of directors as provided in Section 3.4 and to adjourn as provided in Section 3.11 of these Bylaws. Every act or decision done or made by a majority of the directors present at a duly held meeting at which a quorum is present shall be regarded as the act of the board of directors, subject to the provisions of the Certificate of Incorporation and applicable law.

A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.

3.10 Waiver of Notice. Notice of a meeting need not be given to any director (i) who signs a waiver of notice or a consent to holding the meeting or an approval of the minutes thereof, whether before or after the meeting, or (ii) who attends the meeting without protesting, prior thereto or at its commencement, the lack of notice to such directors. The transactions of any meeting of the board, however called and noticed or wherever held, are as valid as though had at a meeting duly held after regular call and notice if a quorum is present and if, either before or after the meeting, each of the directors not present signs a written waiver of notice. All such waivers shall be filed with the corporate records or made part of the minutes of the meeting. A waiver of notice need not specify the purpose of any regular or special meeting of the board of directors.

3.11 Adjournment. A majority of the directors present, whether or not constituting a quorum, may adjourn any meeting to another time and place.

3.12 Notice of Adjournment. Notice of the time and place of holding an adjourned meeting need not be given if announced unless the meeting is adjourned for more than twenty-four (24) hours. If the meeting is adjourned for more than twenty-four (24) hours, then notice of the time and place of the adjourned meeting shall be given before the adjourned meeting takes place, in the manner specified in Section 3.8 of these Bylaws, to the directors who were not present at the time of the adjournment.

3.13 Board Action by Written Consent Without a Meeting. Any action required or permitted to be taken by the board of directors may be taken without a meeting, provided that all members of the board of directors individually or collectively consent in writing to that action. Such action by written consent shall have the same force and effect as a unanimous vote of the board of directors. Such written consent and any counterparts thereof shall be filed with the minutes of the proceedings of the board.

3.14 Organization. Meetings of the board of directors shall be presided over by the chairman of the board, if any, or in his or her absence by the vice chairman of the board, if any, or in his or her absence by the chairman of the executive committee, if any, or in his or her absence by the president, if any, or in his or her absence by the executive vice president. In the absence of all such directors, a president pro tem chosen by a majority of the directors present shall preside at the meeting. The secretary shall act as secretary of the meeting, but in his or her absence the chairman of the meeting may appoint any person to act as secretary of the meeting.

3.15 Fees and Compensation of Directors. Directors and members of committees may receive such compensation, if any, for their services and such reimbursement of expenses as may be fixed or determined by resolution of the board of directors. This Section 3.15 shall not be construed to preclude any director from serving the corporation in any other capacity as an officer, agent, employee or otherwise and receiving compensation for those services.

ARTICLE IV

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COMMITTEES

4.1 Committees of Directors. The board of directors may designate one (1) or more committees, each consisting of one or more directors, to serve at the pleasure of the board of directors. The board of directors may designate one (1) or more directors as alternate members of any committee, who may replace any absent member at any meeting of the committee. Any committee, to the extent provided in the resolution of the board, shall have all the authority of the board, but no such committee shall have the power or authority to (i) approve or adopt or recommend to the stockholders any action or matter that requires the approval of the stockholders or (ii) adopt, amend or repeal any Bylaw of the corporation.

4.2 Meetings and Action of Committees. Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of Article III of these Bylaws, Section 3.6 (place of meetings), Section 3.7 (regular meetings), Section 3.8 (special meetings and notice), Section 3.9 (quorum), Section 3.10 (waiver of notice), Section 3.11 (adjournment), Section 3.12 (notice of adjournment), and Section 3.13 (action without meeting), with such changes in the context of those Bylaws as are necessary to substitute the committee and its members for the board of directors and its members; provided, however, that the time of regular meetings of committees may be determined either by resolution of the board of directors or by resolution of the committee, that special meetings of committees may also be called by resolution of the board of directors, and that notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The board of directors may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws.

4.3 Committee Minutes. Each committee shall keep regular minutes of its meetings and report the same to the board of directors when required.

4.4 Executive Committee. In the event that the board of directors appoints an executive committee, such executive committee, in all cases in which specific directions to the contrary shall not have been given by the board of directors, shall have and may exercise, during the intervals between the meetings of the board of directors, all the powers and authority of the board of directors in the management of the business and affairs of the corporation (except as provided in Section 4.1 hereof) in such manner as the executive committee may deem in the best interests of the corporation.

ARTICLE V

OFFICERS

5.1 Officers. The officers of this corporation shall consist of a president, one or more vice presidents, a secretary and a chief financial officer who shall be chosen by the Board of Directors and such other officers, including but not limited to a chairman of the board, a vice chairman of the board, a chairman of the executive committee and a treasurer as the board of directors shall deem expedient, who shall be chosen in such manner and hold their offices for such terms as the board of directors may prescribe. Any two or more of such offices may be held by the same person. The board of directors may designate one or more vice presidents as executive vice presidents or senior vice presidents. Either the chairman of the board, the vice chairman of the board, the chairman of the executive committee, or the president, as the board of directors may designate from time to time, shall be the chief executive officer of the corporation. The board of directors may from time to time designate the president or any executive vice president as the chief operating officer of the corporation. Any vice president, treasurer or assistant treasurer, or assistant secretary respectively may exercise any of the powers of the president, the chief financial officer, or the secretary, respectively, as directed by the board of directors and shall perform such other duties as are imposed upon such officer by the Bylaws or the board of directors.

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5.2 Election of Officers. In addition to officers elected by the board of directors in accordance with Sections 5.1 and 5.3, the corporation may have one or more appointed vice presidents. Such vice presidents may be appointed by the chairman of the board or the president and shall have such duties as may be established by the chairman or president. Vice presidents appointed pursuant to this Section 5.2 may be removed in accordance with Section 5.4.

5.3 Terms of Office and Compensation. The term of office and salary of each of said officers and the manner and time of the payment of such salaries

shall be fixed and determined by the board of directors and may be altered by said board from time to time at its pleasure, subject to the rights, if any, of said officers under any contract of employment.

5.4 Removal; Resignation of Officers and Vacancies. Any officer of the corporation may be removed at the pleasure of the board of directors at any meeting or, except in the case of an officer chosen by the board of directors, at the pleasure of any officer who may be granted such power by a resolution of the board of directors. Any officer may resign at any time upon written notice to the corporation without prejudice to the rights, if any, of the corporation under any contract to which the officer is a party. If any vacancy occurs in any office of the corporation, the board of directors may elect a successor to fill such vacancy for the remainder of the unexpired term and until a successor is duly chosen and qualified.

5.5 Chairman of the Board. The chairman of the board, if such an officer be elected, shall have general supervision, direction and control of the corporation's business and its officers, and, if present, preside at meetings of the stockholders and the board of directors and exercise and perform such other powers and duties as may from time to time be assigned to him by the board of directors or as may be prescribed by these Bylaws. The chairman of the board shall report to the board of directors.

5.6 Vice Chairman of the Board. The vice chairman of the board of directors, if there shall be one, shall, in the case of the absence, disability or death of the chairman, exercise all the powers and perform all the duties of the chairman of the board. The vice chairman shall have such other powers and perform such other duties as may be granted or prescribed by the board of directors.

5.7 Chairman of Executive Committee. The chairman of the executive committee, if there be one, shall have the power to call meetings of the board of directors to be held subject to the limitations prescribed by law or by these Bylaws, at such times and at such places as the chairman of the executive committee shall deem proper. The chairman of the executive committee shall have such other powers and be subject to such other duties as the board of directors may from time to time prescribe.

5.8 President. The powers and duties of the president are:

- (a) To call meetings of the board of directors to be held, subject to the limitations prescribed by law or by these Bylaws, at such times and at such places as the president shall deem proper.
- (b) To affix the signature of the corporation to all deeds, conveyances, mortgages, leases, obligations, bonds, certificates and other papers and instruments in writing which have been authorized by the board of directors or which, in the judgment of the president, should be executed on behalf of the corporation, and to sign certificates for shares of stock of the corporation.
- (c) To have such other powers and be subject to such other duties as the board of directors may from time to time prescribe.

5.9 Vice Presidents. In case of the absence, disability or death of the president, the elected vice president, or one of the elected vice presidents, shall exercise all the powers and perform all the duties of the president. If there is more than one elected vice president, the order in which the elected vice presidents shall succeed to the powers and duties

of the president shall be as fixed by the board of directors. The elected vice president or elected vice presidents shall have such other powers and perform such other duties as may be granted or prescribed by the board of directors.

Vice presidents appointed pursuant to Section 5.2 shall have such powers and duties as may be fixed by the chairman or president, except that such appointed vice presidents may not exercise the powers and duties of the president.

5.10 Secretary. The powers and duties of the secretary are:

- (a) To keep a book of minutes at the principal office of the corporation, or such other place as the board of directors may order, of all meetings of its directors and stockholders with the time and place of holding, whether regular or special, and, if special, how authorized, the notice thereof given, the names of those present at directors' meetings, the number of shares present or represented at stockholders' meetings and the proceedings thereof.
- (b) To keep the seal of the corporation and affix the same to all instruments which may require it.
- (c) To keep or cause to be kept at the principal office of the corporation, or at the office of the transfer agent or agents, a share register, or duplicate share registers, showing the names of the stockholders and their addresses, the number of and classes of shares, and the number and date of cancellation of every certificate surrendered for cancellation.
- (d) To keep a supply of certificates for shares of the corporation, to fill in all certificates issued, and to make a proper record of each such issuance; provided, that so long as the corporation shall have one or more duly appointed and acting transfer agents of the shares, or any class or series of shares, of the corporation, such duties with respect to such shares shall be performed by such transfer agent or transfer agents.
- (e) To transfer upon the share books of the corporation any and all shares of the corporation; provided, that so long as the corporation shall have one or more duly appointed and acting transfer agents of the shares, or any class or series of shares, of the corporation, such duties with respect to such shares shall be performed by such transfer agent or transfer agents, and the method of transfer of each certificate shall be subject to the reasonable regulations of the transfer agent to which the certificate is presented for transfer, and also, if the corporation then has one or more duly appointed and acting registrars, to the reasonable regulations of the registrar to which the new certificate is presented for registration; and provided, further that no certificate for shares of stock shall be issued or delivered or, if issued or delivered, shall have any validity whatsoever until and unless it has been signed or authenticated in the manner provided in Section 8.5 hereof.
- (f) To make service and publication of all notices that may be necessary or proper, and without command or direction from anyone. In case of the absence, disability, refusal, or neglect of the secretary to make service or publication of any notices, then such notices may be served and/or published by the president or a vice president, or by any person thereunto authorized by either of them or by the board of directors or by the holders of a majority of the outstanding shares of the corporation.
- (g) Generally to do and perform all such duties as pertain to the office of secretary and as may be required by the board of directors.

5.11 Chief Financial Officer. The powers and duties of the chief

financial officer are:

- (a) To supervise the corporate-wide treasury functions and financial reporting to external bodies.
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- (b) To have the custody of all funds, securities, evidence of indebtedness and other valuable documents of the corporation and, at the chief financial officer's discretion, to cause any or all thereof to be deposited for account of the corporation at such depository as may be designated from time to time by the board of directors.
 - (c) To receive or cause to be received, and to give or cause to be given, receipts and acquittances for monies paid in for the account of the corporation.
 - (d) To disburse, or cause to be disbursed, all funds of the corporation as may be directed by the board of directors, taking proper vouchers for such disbursements.
 - (e) To render to the president and to the board of directors, whenever they may require, accounts of all transactions and of the financial condition of the corporation.
 - (f) Generally to do and perform all such duties as pertain to the office of chief financial officer and as may be required by the board of directors.

ARTICLE VI

INDEMNIFICATION OF DIRECTORS, OFFICERS, EMPLOYEES AND OTHER AGENTS

6.1 Indemnification of Directors and Officers. The corporation shall, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware, indemnify each of its directors and officers against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the corporation; provided, however, that the corporation may modify the extent of such indemnification by individual contracts with its directors and executive officers and, provided, further, that the corporation shall not be required to indemnify any director or officer in connection with any proceeding (or part thereof) initiated by such person unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized in advance by the board of directors of the corporation, (iii) such indemnification is provided by the corporation, in its sole discretion, pursuant to the powers vested in the corporation under the General Corporation Law of Delaware or (iv) such indemnification is required to be made pursuant to an individual contract. For purposes of this Section 6.1, a "director" or "officer" of the corporation includes any person (i) who is or was a director or officer of the corporation, (ii) who is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, or (iii) who was a director or officer of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.2 Indemnification of Others. The corporation shall have the power, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware, to indemnify each of its employees and agents (other than directors and officers) against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the corporation. For purposes of this Section

6.2, an "employee" or "agent" of the corporation (other than a director or officer) includes any person (i) who is or was an employee or agent of the corporation, (ii) who is or was serving at the request of the corporation as an employee or agent of another corporation, partnership, joint venture, trust or other enterprise, or (iii) who was an employee or agent of a corporation which was a predecessor corporation of the corporation or of another enterprise at the request of such predecessor corporation.

6.3 Insurance. The corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against

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any liability asserted against him or her and incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the corporation would have the power to indemnify him or her against such liability under the provisions of the General Corporation Law of Delaware.

6.4 Expenses. The corporation shall advance to any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, prior to the final disposition of the proceeding, promptly following request therefor, all expenses incurred by any director or officer in connection with such proceeding, upon receipt of an undertaking by or on behalf of such person to repay said amounts if it should be determined ultimately that such person is not entitled to be indemnified under this Bylaw or otherwise; provided, however, that the corporation shall not be required to advance expenses to any director or officer in connection with any proceeding (or part thereof) initiated by such person unless the proceeding was authorized in advance by the board of directors of the corporation.

Notwithstanding the foregoing, unless otherwise determined pursuant to Section 6.5, no advance shall be made by the corporation to an officer of the corporation (except by reason of the fact that such officer is or was a director of the corporation in which event this paragraph shall not apply) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, if a determination is reasonably and promptly made (i) by the board of directors by a majority vote of a quorum consisting of directors who were not parties to the proceeding, or (ii) if such quorum is not obtainable, or, even if obtainable, a quorum of disinterested directors so directs, by independent legal counsel in a written opinion, that the facts known to the decision-making party at the time such determination is made demonstrate clearly and convincingly that such person acted in bad faith or in a manner that such person did not believe to be in or not opposed to the best interests of the corporation.

6.5 Non-Exclusivity of Rights. The rights conferred on any person by this Bylaw shall not be exclusive of any other right which such person may have or hereafter acquire under any statute, provision of the Certificate of Incorporation, Bylaws, agreement, vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in another capacity while holding office. The corporation is specifically authorized to enter into individual contracts with any or all of its directors, officers, employees or agents respecting indemnification and advances, to the fullest extent not prohibited by the General Corporation Law of Delaware.

6.6 Survival of Rights. The rights conferred on any person by this Bylaw shall continue as to a person who has ceased to be a director, officer, employee or other agent and shall inure to the benefit of the heirs, executors and administrators of such a person.

6.7 Amendments. Any repeal or modification of this Bylaw shall only

be prospective and shall not affect the rights under this Bylaw in effect at the time of the alleged occurrence of any action or omission to act that is the cause of any proceeding against any agent of the corporation.

ARTICLE VII

RECORDS AND REPORTS

7.1 Maintenance and Inspection of Records. The corporation shall, either at its principal executive office or at such place or places as designated by the board of directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these Bylaws as amended to date, accounting books and other records.

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Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent to so act on behalf of the stockholder. The demand under oath shall be directed to the corporation at its registered office in Delaware or at its principal place of business.

7.2 Inspection by Director. Any director shall have the right to examine the corporation's stock ledger, a list of its stockholders and its other books and records for a purpose reasonably related to his or her position as a director. The Court of Chancery is hereby vested with the exclusive jurisdiction to determine whether a director is entitled to the inspection sought. The Court may summarily order the corporation to permit the director to inspect any and all books and records, the stock ledger, and the stock list and to make copies or extracts therefrom. The Court may, in its discretion, prescribe any limitations or conditions with reference to the inspection, or award such other and further relief as the Court may deem just and proper.

7.3 Representation of Shares of Other Corporations. The president or any other officer of this corporation authorized by the board of directors is authorized to vote, represent, and exercise on behalf of this corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this corporation. The authority herein granted may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by such person having the authority.

ARTICLE VIII

GENERAL MATTERS

8.1 Record Date for Purposes Other than Notice and Voting. For purposes of determining the stockholders entitled to receive payment of any dividend or other distribution or allotment of any rights or the stockholders entitled to exercise any rights in respect of any other lawful action, the board of directors may fix, in advance, a record date, which shall not be more than sixty (60) days before any such action. In that case, only stockholders of record at the close of business on the date so fixed are entitled to receive the dividend, distribution or allotment of rights, or to exercise such rights, as the case may be, notwithstanding any transfer of any shares on the books of the corporation after the record date so fixed, except as otherwise provided in the

Certificate of Incorporation, by these Bylaws, by agreement or by law.

If the board of directors does not so fix a record date, then the record date for determining stockholders for any such purpose shall be at the close of business on the day on which the board adopts the applicable resolution or the sixtieth (60th) day before the date of that action, whichever is later.

8.2 Checks; Drafts; Evidences of Indebtedness. From time to time, the board of directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the corporation, and only the persons so authorized shall sign or endorse those instruments.

8.3 Corporate Contracts and Instruments; How Executed. The board of directors, except as otherwise provided in these Bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the board of directors or within the agency power of an officer, no officer, agent or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

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8.4 Fiscal Year. The fiscal year of this corporation shall begin on the first day of November of each year and end on the last day of October of the following year.

8.5 Stock Certificates. There shall be issued to each holder of fully paid shares of the capital stock of the corporation a certificate or certificates for such shares. Every holder of shares of the corporation shall be entitled to have a certificate signed by, or in the name of the corporation by, the chairman or vice chairman of the board of directors, or the president or a vice president, and by the treasurer or an assistant treasurer, or the secretary or an assistant secretary of such corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the corporation with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

8.6 Special Designation on Certificates. If the corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the corporation shall issue to represent such class or series of stock a statement that the corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

8.7 Lost Certificates. The corporation may issue a new share certificate or new certificate for any other security in the place of any certificate theretofore issued by it, alleged to have been lost, stolen or destroyed, and the corporation may require the owner of the lost, stolen or destroyed certificate or the owner's legal representative to give the corporation a bond (or other adequate security) sufficient to indemnify it

against any claim that may be made against it (including any expense or liability) on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate. The board of directors may adopt such other provisions and restrictions with reference to lost certificates, not inconsistent with applicable law, as it shall in its discretion deem appropriate.

8.8 Construction; Definitions. Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the General Corporation Law of Delaware shall govern the construction of these Bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

8.9 Provisions Additional to Provisions of Law. All restrictions, limitations, requirements and other provisions of these Bylaws shall be construed, insofar as possible, as supplemental and additional to all provisions of law applicable to the subject matter thereof and shall be fully complied with in addition to the said provisions of law unless such compliance shall be illegal.

8.10 Provisions Contrary to Provisions of Law. Any article, section, subsection, subdivision, sentence, clause or phrase of these Bylaws which upon being construed in the manner provided in Section 8.9 hereof, shall be contrary to or inconsistent with any applicable provisions of law, shall not apply so long as said provisions of law shall remain in effect, but such result shall not affect the validity or applicability of any other portions of these Bylaws, it being hereby declared that these Bylaws would have been adopted and each article, section, subsection, subdivision, sentence, clause or phrase thereof, irrespective of the fact that any one or more articles, sections, subsections, subdivisions, sentences, clauses or phrases is or are illegal.

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8.11 Notices. Any reference in these Bylaws to the time a notice is given or sent means, unless otherwise expressly provided, the time a written notice by mail is deposited in the United States mails, postage prepaid; or the time any other written notice is personally delivered to the recipient or is delivered to a common carrier for transmission, or actually transmitted by the person giving the notice by electronic means, to the recipient; or the time any oral notice is communicated, in person or by telephone or wireless, to the recipient or to a person at the office of the recipient who the person giving the notice has reason to believe will promptly communicate it to the recipient.

ARTICLE IX

AMENDMENTS

Subject to Section 6.7 hereof, the original or other bylaws of the corporation may be adopted, amended or repealed (1) at any annual or special meeting of stockholders, by the affirmative vote of the holders of a majority of the voting power of the stock issued and outstanding and entitled to vote thereat, provided, however, that any proposed alteration or repeal of, or the adoption of any By-Law inconsistent with, Section 2.2, 2.3, 2.5 or 2.11 of Article II of the By-Laws or with Section 3.2, 3.3, 3.4 or 3.5 of Article III of the By-Laws or this sentence, by the stockholders shall require the affirmative vote of the holders of at least 80% of the voting power of all Voting Stock then outstanding, voting together as a single class; and, provided, further, however, that in the case of any such stockholder action at a special meeting of stockholders, notice of the proposed alteration, repeal or adoption of the new By-Law or By-Laws must be contained in the notice of such special meeting, or (2) by the affirmative vote of a majority of the Board of Directors. The fact that the power to amend these By-Laws has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal bylaws.

Whenever an amendment or new bylaw is adopted, it shall be copied in the book of bylaws with the original bylaws, in the appropriate place. If any bylaw is repealed, the fact of repeal with the date of the meeting at which the repeal was enacted or the filing of the operative written consent(s) shall be stated in said book.

YOKOGAWA ELECTRIC CORPORATION
AND
HEWLETT-PACKARD COMPANY
AGREEMENT FOR THE REDEMPTION AND SALE OF SHARES AND
TERMINATION OF JOINT VENTURE RELATIONSHIP

Preamble

THIS AGREEMENT BY AND BETWEEN YOKOGAWA ELECTRIC CORPORATION AND HEWLETT-PACKARD COMPANY IS DATED JULY 6, 1999, AND IS BASED ON THE FOLLOWING FACTS:

1. Yokogawa Electric Corporation, a corporation organized and existing under the laws of Japan, hereinafter called YOKOGAWA; and Hewlett-Packard Company, a corporation organized and existing under the laws of the State of Delaware, U.S.A., hereinafter called HP, established as of August 13, 1963, a joint venture company formerly known as Yokogawa-Hewlett-Packard, Ltd. and now known as Hewlett-Packard Japan Ltd., a Japanese corporation, hereinafter referred to as HPJ, which was fifty-one per cent (51%) owned by YOKOGAWA and forty-nine per cent (49%) owned by HP.
2. In accordance with the Yokogawa-Hokushin Electric Corporation - Hewlett-Packard Company Agreement for Yokogawa-Hewlett-Packard, Ltd. last executed on August 23, 1983 ("the 1983 JVA"), YOKOGAWA and HP agreed among other things to change the ownership of HPJ resulting in HP's owning seventy-five per cent (75%) of HPJ and YOKOGAWA's owning twenty-five per cent (25%) of HPJ.
3. HP's ownership interest in HPJ is held by two wholly-owned subsidiaries of HP, Hewlett-Packard World Trade, Inc. ("HPWT"), which owns ten per cent (10%) of HPJ, and Hewlett-Packard Europe B.V. ("HPE"), which owns sixty-five per cent (65%) of HPJ.
4. YOKOGAWA has now decided to dispose of its twenty-five per cent (25%) ownership interest in HPJ and HP now wishes to own one hundred per cent (100%) of HPJ.
5. YOKOGAWA and HP have determined that it is in the best interests of their respective companies to terminate their joint venture relationship with respect to HPJ.

THEREFORE, THE PARTIES AGREE AS FOLLOWS:

Article 1

Definitions

- 1.1 "Agreement" shall mean this agreement.
- 1.2 "HP Affiliate" shall mean any company in which HP, either directly or indirectly owns more than fifty per cent (50%) of the voting stock.
- 1.3 "Party(ies)" shall mean YOKOGAWA and HP, either singly or collectively.
- 1.4 "Initial Redemption Shares" shall mean three hundred eighty-eight thousand nine hundred three (388,903) shares of HPJ stock owned by YOKOGAWA.
- 1.5 "Initial Redemption Date" shall mean a date prior to January 31, 2000, as mutually agreed by the Parties.
- 1.6 "Redemption" shall mean a redemption of shares in HPJ in accordance with Article 212-2 of the Japanese Commercial Code.

1.7 "Remaining Shares" shall mean one hundred fifty-five thousand five hundred sixty-two (155,562) shares of HPJ stock owned by YOKOGAWA.

1.8 "Sale Date" shall mean a date after April 1, 2000, and prior to May 1, 2000, as mutually agreed by the Parties.

1.9 "Sale Shares" shall mean three hundred eighty-eight thousand nine hundred three (388,903) shares of HPJ stock owned by YOKOGAWA.

1.10 "Share Price" shall mean sixty-four thousand two hundred eighty-three (64,283) Japanese Yen.

1.11 "Shares" shall mean all of the shares of HPJ owned by YOKOGAWA which correspond to the sum of the Initial Redemption Shares, the Sale Shares and the Remaining Shares.

1.12 "Weighted Share Price" shall equal the Share Price plus three and seven tenths percent (3.7%) compounded annually from February 1, 2000, until the date of payment.

Article 2

Redemption and Sale of Shares

2.1 On the Initial Redemption Date, HP will cause HPJ to redeem the Initial Redemption Shares and YOKOGAWA will tender such Initial Redemption Shares in exchange for Twenty-five Billion Japanese Yen ((Yen)25,000,000,000) (the "Initial Redemption Price").

2.2 On the Sale Date, HP will purchase and YOKOGAWA will sell the Sale Shares in exchange for Twenty-five Billion Japanese Yen ((Yen)25,000,000,000) (the "Sale Price").

2.3 With respect to the Remaining Shares, the Parties agree as follows:

2.3.1 Commencing with HPJ's shareholder meeting following the close of HPJ's fiscal year 2000 ending as of October 31, 2000, HP will use its best efforts, taking into account all potential tax consequences, to cause HPJ to redeem the Remaining Shares. This redemption will be conducted using HPJ's current and retained earnings at a price per share equal to the Weighted Share Price multiplied by 1.089. This formula is based on the assumption that YOKOGAWA will be subject to tax equal to eighty-two (82) Yen for each one thousand (1,000) Yen received by way of the redemption of the Remaining Shares. If this assumption should change at any time, including the case in which YOKOGAWA's tax burden is reduced pursuant to 2.3.5 below, the formula shall be changed to reflect YOKOGAWA's tax cost with respect to such redemptions.

2.3.2 YOKOGAWA shall have and is hereby granted a put option ("Put Option") to sell and to require HP or its designated HP Affiliate or Affiliates to purchase some or all of the Remaining Shares as specified by YOKOGAWA from time to time. Except as provided in 2.3.3 below, the price for the Remaining Shares sold and purchased pursuant to this Put Option shall be the Weighted Share Price without adjustment for taxes paid by YOKOGAWA. This Put Option shall expire on March 31, 2003.

2.3.3 On the expiration of the Put Option, YOKOGAWA shall be deemed to have exercised the Put Option with respect to any of the Remaining Shares still owned by YOKOGAWA and HP or its designated HP Affiliate will be required to purchase such Remaining Shares at the Weighted Share Price multiplied by 1.69. This formula is based on the assumption that YOKOGAWA will be subject to tax equal to four hundred eight (408) Yen for each one thousand (1,000) Yen received by

way of the sale of the Remaining Shares upon expiration of the Put Option. If this assumption should change at any time, including the case in which

YOKOGAWA's tax burden is reduced pursuant to 2.3.5 below, the formula shall be changed to reflect YOKOGAWA's tax cost with respect to such sale.

2.3.4 HP or its designated HP Affiliate or Affiliates shall have and are hereby granted a call option ("Call Option") to purchase and to require YOKOGAWA to sell to HP or its Affiliates some or all of the Remaining Shares as specified by HP from time to time. The price for the Remaining Shares sold and purchased pursuant to this Call Option shall be the Weighted Share Price multiplied by 1.69. This formula is based on the assumption that YOKOGAWA will be subject to tax equal to four hundred eight (408) Yen for each one thousand (1,000) Yen received by way of the sale of the Remaining Shares pursuant to this Call Option. If this assumption should change at any time, the formula shall be changed to reflect YOKOGAWA's tax cost with respect to such sale. The Call Option shall expire on expiration of the Put Option.

2.3.5 YOKOGAWA will, in its sole discretion, consider utilizing available tax losses to minimize its taxes with respect to the transactions contemplated in 2.3.1 and 2.3.3 above (including minimization of the gross up multiples in 2.3.1 and 2.3.3).

Article 3

Terms

3.1 YOKOGAWA represents and warrants to HP that YOKOGAWA is the lawful owner and holder of, and has good and negotiable title to, the Shares and that the Shares are free and clear of any mortgages, burdens, debts, doubts, liens, retention rights, commitments, attachments, pledges, options, preemptive rights, obligations, charges or encumbrances of any kind whatsoever.

3.2 The Redemption Price, the Sale Price and the payments made pursuant to Article 2.3 above constitute the only consideration to be paid by HP and HP Affiliates for the Shares.

3.3 On or before November 1, 1999, YOKOGAWA will deliver to HPJ letters of resignation of Mr. Fumio Mizoguchi as a director of HPJ and Jouichi Ueba as a statutory auditor of HPJ.

3.4 HP shall pay or cause HPJ and its designated HP Affiliate(s) to pay to YOKOGAWA the Initial Redemption Price, the Sale Price and the consideration paid pursuant to Article 2.3 above in immediately available

Japanese Yen no later than the end of business hours of the Redemption Date and the Sale Date, as the case may be, by wire transfer to an account designated by YOKOGAWA in writing. The account information will be provided by YOKOGAWA at least four (4) business days prior to the payment.

Article 4

Miscellaneous Terms

4.1 This Agreement represents the entire understanding of the Parties and supersedes all other previous representations, negotiations, commitments, writings and agreements, oral or written, agreed prior to the signing of this Agreement pertaining to HPJ, including but not limited to the 1983 JVA which is hereby terminated. However, neither Party anticipates that the termination of the joint venture with respect to HPJ will have any adverse effect on other relationships between the Parties.

4.2 YOKOGAWA shall exercise and HP shall cause its HP Affiliates to exercise their respective voting rights in HPJ at future General Shareholders Meetings of HPJ for the purpose of implementing this Agreement. HP assures that all of the necessary and required legal steps, including without limitation HPJ's board approval, shall be duly and timely taken by HPJ.

4.3 The Parties agree that the terms of this Agreement are confidential and may

not be disclosed without the prior written consent of the other party. To this end, the Parties shall agree on a communications plan and agree not to make any statements to third parties which are inconsistent with the agreed plan. The obligations of confidentiality imposed hereunder shall not apply to terms which:

- a. are or become a matter of public knowledge through no fault of any party hereto or
- b. are disclosed under operation of law.

4.4 No Party shall have any right to assign or transfer any rights provided to it hereunder to any person, firm or corporation without the prior written consent of the other Party; provided, however, that HP may assign its rights and obligations under Article 2.2 above to an HP Affiliate.

4.5 This Agreement shall be construed and enforced according to the laws of Japan.

4.6 The Parties shall use best efforts to resolve amicably all disputes which may arise between them, out of, in relation to or in connection with this

Agreement. If any such dispute is not resolved within a reasonable period of time, and in any case not more than sixty (60) days, after written notice by one Party to the other Party, such dispute shall be finally settled by arbitration in Geneva, Switzerland, in accordance with the then existing Rules of Arbitration of the International Chamber of Commerce by three (3) arbitrators to be selected in accordance with said rules. The language of the arbitration shall be English.

4.7 All notices, requests, demands or other communications required or permitted by, or resulting from this Agreement, by either of the Parties hereto to the other shall be given to or made as follows:

To: Yokogawa Electric Corporation
9-32, 2-chome, Naka-cho
Musashino-shi, Tokyo, Japan
Attention: General Counsel
Fax No.: 81-422-52-5941

To: Hewlett-Packard Company
3000 Hanover Street
Palo Alto, California 94304 USA
Attention: General Counsel
Fax No.: (650) 852-8019

Any notice so given shall be deemed to be received in case of fax twenty-four (24) hours after dispatch, or in the case of letter: (a) upon receipt, or fourteen (14) days after posting, whichever is less, for airmail sent between Japan and the United States or any other country, or (b) upon receipt or seven (7) days after posting, whichever is less, for mail sent within Japan, the United States or any other country.

Either Party may amend the information set forth in this Article at any time by written notice to the other Party.

4.8 This Agreement shall not be amended, altered, extended or modified except by an instrument in writing expressly referring to this Agreement and signed by the Parties hereto.

IN WITNESS WHEREOF, THE PARTIES HERETO HAVE CAUSED THIS AGREEMENT TO BE EXECUTED ON THE DAY AND YEAR WRITTEN ABOVE.

YOKOGAWA ELECTRIC CORPORATION

By: /s/ Isao Uchida

Isao Uchida
President and Chief Executive Officer

HEWLETT-PACKARD COMPANY

By: /s/ Lewis E. Platt

Lewis E. Platt
Chairman, President and Chief Executive Officer

Witnessed by:

HEWLETT-PACKARD JAPAN, LTD.

By: /s/ Katsuto Kohtani

Katsuto Kohtani
Chairman

AGILENT TECHNOLOGIES, INC.

INDEMNIFICATION AGREEMENT

This Indemnification Agreement ("Agreement") is entered into as of _____, ___ by and between Agilent Technologies, Inc., a Delaware corporation (the "Company") and _____ ("Indemnitee").

RECITALS

A. The Company and Indemnitee recognize the continued difficulty in obtaining liability insurance for its directors, officers, employees, agents and fiduciaries, the significant increases in the cost of such insurance and the general reductions in the coverage of such insurance.

B. The Company and Indemnitee further recognize the substantial increase in corporate litigation in general, subjecting directors, officers, employees, agents and fiduciaries to expensive litigation risks at the same time as the availability and coverage of liability insurance has been severely limited.

C. Indemnitee does not regard the current protection available as adequate under the present circumstances, and Indemnitee and other directors, officers, employees, agents and fiduciaries of the Company may not be willing to continue to serve in such capacities without additional protection.

D. The Company desires to attract and retain the services of highly qualified individuals, such as Indemnitee, to serve the Company and, in part, in order to induce Indemnitee to continue to provide services to the Company, wishes to provide for the indemnification and advancing of expenses to Indemnitee to the maximum extent permitted by law.

E. In view of the considerations set forth above, the Company desires that Indemnitee be indemnified by the Company as set forth herein.

NOW, THEREFORE, the Company and Indemnitee hereby agree as follows:

1. Indemnification.

(a) Indemnification of Expenses. The Company shall indemnify

Indemnitee to the fullest extent permitted by law if Indemnitee was or is or becomes a party to or witness or other participant in, or is threatened to be made a party to or witness or other participant in, any threatened, pending or completed action, suit, proceeding or alternative dispute resolution mecha-

nism, or any hearing, inquiry or investigation that Indemnitee in good faith believes might lead to the institution of any such action, suit, proceeding or alternative dispute resolution mechanism, whether civil, criminal, administrative, investigative or other (hereinafter a "Claim") by reason of (or arising in part out of) any event or occurrence related to the fact that Indemnitee is or was a director, officer, employee, agent or fiduciary of the Company, or any subsidiary of the Company, or is or was serving at the request of the Company as a director, officer, employee, agent or fiduciary of another corporation, partnership, joint venture, trust or other enterprise, or by reason of any action or inaction on the part of Indemnitee while serving in such capacity (hereinafter an "Indemnifiable Event") against any and all expenses

(including attorneys' fees and all other costs, expenses and obligations incurred in connection with investigating, defending, being a witness in or participating in (including on appeal), or preparing to defend, be a witness in or participate in, any such action, suit, proceeding, alternative dispute resolution mechanism, hearing, inquiry or investigation), judgments, fines, penalties and amounts paid in settlement (if such settlement is approved in advance by the Company, which approval shall not be unreasonably withheld) of such Claim and any federal, state, local or foreign taxes imposed on Indemnitee as a result of the actual or deemed receipt of any payments under this Agreement (collectively, hereinafter "Expenses"), including all interest, assessments and other charges paid or payable in connection with or in respect of such Expenses. Such payment of Expenses shall be made by the Company as soon as practicable but in any event no later than five days after written demand by Indemnitee therefor is presented to the Company.

(b) Reviewing Party. Notwithstanding the foregoing, (i) the

obligations of the Company under Section 1(a) shall be subject to the condition that the Reviewing Party (as described in Section 10(e) hereof) shall not have determined (in a written opinion, in any case in which the Independent Legal Counsel referred to in Section 1(c) hereof is involved) that Indemnitee would not be permitted to be indemnified under applicable law, and (ii) the obligation of the Company to make an advance payment of Expenses to Indemnitee pursuant to Section 2(a) (an "Expense Advance") shall be subject to the condition that, if, when and to the extent that the Reviewing Party determines that Indemnitee would not be permitted to be so indemnified under applicable law, the Company shall be entitled to be reimbursed by Indemnitee (who hereby agrees to reimburse the Company) for all such amounts theretofore paid; provided, however, that if Indemnitee has commenced or thereafter commences legal proceedings in a court of competent jurisdiction to secure a determination that Indemnitee should be indemnified under applicable law, any determination made by the Reviewing Party that Indemnitee would not be permitted to be indemnified under applicable law shall not be binding and Indemnitee shall not be required to reimburse the Company for any Expense Advance until a final judicial determination is made with respect thereto (as to which all rights of appeal therefrom have been exhausted or lapsed). Indemnitees' obligation to reimburse the Company for any Expense Advance shall be unsecured and no interest shall be charged thereon. If there has not been a Change in Control (as defined in Section 10(c) hereof), the Reviewing Party shall be selected by the Board of Directors, and if there has been such a Change in Control (other than a Change in Control which has been approved by a majority of the Company's Board of Directors who were directors immediately prior to such Change in Control), the Reviewing Party shall be the Independent Legal Counsel referred to in

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Section 1(c) hereof. If there has been no determination by the Reviewing Party or if the Reviewing Party determines that Indemnitee substantively would not be permitted to be indemnified in whole or in part under applicable law, Indemnitee shall have the right to commence litigation seeking an initial determination by the court or challenging any such determination by the Reviewing Party or any aspect thereof, including the legal or factual bases therefor, and the Company hereby consents to service of process and to appear in any such proceeding. Any determination by the Reviewing Party otherwise shall be conclusive and binding on the Company and Indemnitee.

(c) Change in Control. The Company agrees that if there is a Change

in Control of the Company (other than a Change in Control which has been approved by a majority of the Company's Board of Directors who were directors immediately prior to such Change in Control) then, with respect to all matters thereafter arising concerning the rights of Indemnitees to payments of Expenses and Expense Advances under this Agreement or any other agreement or under the Company's Certificate of Incorporation or Bylaws as now or hereafter in effect, Independent Legal Counsel (as defined in Section 10(d) hereof) shall be selected by Indemnitee and approved by the Company (which approval shall not be unreasonably withheld). Such counsel, among other things, shall render its

written opinion to the Company and Indemnitee as to whether and to what extent Indemnitee would be permitted to be indemnified under applicable law and the Company agrees to abide by such opinion. The Company agrees to pay the reasonable fees of the Independent Legal Counsel referred to above and to fully indemnify such counsel against any and all expenses (including attorneys' fees), claims, liabilities and damages arising out of or relating to this Agreement or its engagement pursuant hereto.

(d) Mandatory Payment of Expenses. Notwithstanding any other

provision of this Agreement other than Section 9 hereof, to the extent that Indemnitee has been successful on the merits or otherwise, including, without limitation, the dismissal of an action without prejudice, in defense of any action, suit, proceeding, inquiry or investigation referred to in Section (1)(a) hereof or in the defense of any claim, issue or matter therein, Indemnitee shall be indemnified against all Expenses incurred by Indemnitee in connection therewith.

2. Expenses; Indemnification Procedure.

(a) Advancement of Expenses. The Company shall advance all Expenses

incurred by Indemnitee. The advances to be made hereunder shall be paid by the Company to Indemnitee as soon as practicable but in any event no later than five days after written demand by Indemnitee therefor to the Company.

(b) Notice/Cooperation by Indemnitee. Indemnitee shall, as a

condition precedent to Indemnitees' right to be indemnified under this Agreement, give the Company notice in writing as soon as practicable of any Claim made against Indemnitee for which indemnification will or could be sought under this Agreement. Notice to the Company shall be directed to the Chief Executive Officer of the Company at the address shown on the signature page of this

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Agreement (or such other address as the Company shall designate in writing to Indemnitee). In addition, Indemnitee shall give the Company such information and cooperation as it may reasonably require and as shall be within Indemnitees' power.

(c) No Presumptions; Burden of Proof. For purposes of this Agreement,

the termination of any Claim by judgment, order, settlement (whether with or without court approval) or conviction, or upon a plea of nolo contendere, or its

equivalent, shall not create a presumption that Indemnitee did not meet any particular standard of conduct or have any particular belief or that a court has determined that indemnification is not permitted by applicable law. In addition, neither the failure of the Reviewing Party to have made a determination as to whether Indemnitee has met any particular standard of conduct or had any particular belief, nor an actual determination by the Reviewing Party that Indemnitee has not met such standard of conduct or did not have such belief, prior to the commencement of legal proceedings by Indemnitee to secure a judicial determination that Indemnitee should be indemnified under applicable law, shall be a defense to Indemnitee's claim or create a presumption that Indemnitee has not met any particular standard of conduct or did not have any particular belief. In connection with any determination by the Reviewing Party or otherwise as to whether Indemnitee is entitled to be indemnified hereunder, the burden of proof shall be on the Company to establish that Indemnitee is not so entitled.

(d) Notice to Insurers. If, at the time of the receipt by the Company

of a notice of a Claim pursuant to Section 2(b) hereof, the Company has

liability insurance in effect which may cover such Claim, the Company shall give prompt notice of the commencement of such Claim to the insurers in accordance with the procedures set forth in the respective policies. The Company shall thereafter take all necessary or desirable action to cause such insurers to pay, on behalf of Indemnitee, all amounts payable as a result of such action, suit, proceeding, inquiry or investigation in accordance with the terms of such policies.

(e) Selection of Counsel. In the event the Company shall be obligated

hereunder to pay the Expenses of any Claim, the Company shall be entitled to assume the defense of such Claim with counsel approved by Indemnitee, which approval shall not be unreasonably withheld, upon the delivery to Indemnitee of written notice of its election so to do. After delivery of such notice, approval of such counsel by Indemnitee and the retention of such counsel by the Company, the Company will not be liable to Indemnitee under this Agreement for any fees of counsel subsequently incurred by Indemnitee with respect to the same Claim; provided that, (i) Indemnitee shall have the right to employ Indemnitees' counsel in any such Claim at Indemnitee expense and (ii) if (A) the employment of counsel by Indemnitee has been previously authorized by the Company, (B) Indemnitee shall have reasonably concluded that there is a conflict of interest between the Company and Indemnitee in the conduct of any such defense, or (C) the Company shall not continue to retain such counsel to defend such Claim, then the fees and expenses of Indemnitee counsel shall be at the expense of the Company. The Company shall have the right to conduct such defense as it sees fit in its sole discretion, including the right to settle any claim against Indemnitee without the consent of the Indemnitee.

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3. Additional Indemnification Rights; Nonexclusivity.

(a) Scope. The Company hereby agrees to indemnify Indemnitee to the

fullest extent permitted by law, notwithstanding that such indemnification is not specifically authorized by the other provisions of this Agreement, the Company's Certificate of Incorporation, the Company's Bylaws or by statute. In the event of any change after the date of this Agreement in any applicable law, statute or rule which expands the right of a Delaware corporation to indemnify a member of its Board of Directors or an officer, employee, agent or fiduciary, it is the intent of the parties hereto that Indemnitee shall enjoy by this Agreement the greater benefits afforded by such change. In the event of any change in any applicable law, statute or rule which narrows the right of a Delaware corporation to indemnify a member of its Board of Directors or an officer, employee, agent or fiduciary, such change, to the extent not otherwise required by such law, statute or rule to be applied to this Agreement, shall have no effect on this Agreement or the parties' rights and obligations hereunder except as set forth in Section 8(a) hereof.

(b) Nonexclusivity. The indemnification provided by this Agreement

shall be in addition to any rights to which Indemnitee may be entitled under the Company's Certificate of Incorporation, its Bylaws, any agreement, any vote of stockholders or disinterested directors, the General Corporation Law of the State of Delaware, or otherwise. The indemnification provided under this Agreement shall continue as to Indemnitee for any action Indemnitee took or did not take while serving in an indemnified capacity even though Indemnitee may have ceased to serve in such capacity.

4. No Duplication of Payments. The Company shall not be liable under this

Agreement to make any payment in connection with any Claim made against Indemnitee to the extent Indemnitee has otherwise actually received payment (under any insurance policy, Certificate of Incorporation, Bylaw or otherwise) of the amounts otherwise indemnifiable hereunder.

5. Partial Indemnification. If Indemnitee is entitled under any provision

of this Agreement to indemnification by the Company for some or a portion of Expenses incurred in connection with any Claim, but not, however, for all of the total amount thereof, the Company shall nevertheless indemnify Indemnitee for the portion of such Expenses to which Indemnitee are entitled.

6. Mutual Acknowledgement. Both the Company and Indemnitee acknowledge

that in certain instances, Federal law or applicable public policy may prohibit the Company from indemnifying its directors, officers, employees, agents or fiduciaries under this Agreement or otherwise. Indemnitee understands and acknowledges that the Company has undertaken or may be required in the future to undertake with the Securities and Exchange Commission to submit the question of indemnification to a court in certain circumstances for a determination of the Company's right under public policy to indemnify Indemnitee.

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7. Liability Insurance. To the extent the Company maintains liability

insurance applicable to directors, officers, employees, agents or fiduciaries, Indemnitee shall be covered by such policies in such a manner as to provide Indemnitee the same rights and benefits as are accorded to the most favorably insured of the Company's directors, if Indemnitee is a director; or of the Company's officers, if Indemnitee is not a director of the Company but is an officer; or of the Company's key employees, agents or fiduciaries, if Indemnitee is not an officer or director but is a key employee, agent or fiduciary.

8. Exceptions. Any other provision herein to the contrary

notwithstanding, the Company shall not be obligated pursuant to the terms of this Agreement :

(a) Excluded Action or Omissions. (i) To indemnify Indemnitee for

Indemnitee's acts, omissions or transactions from which Indemnitee or the Indemnitee may not be indemnified under applicable law; or (ii) to indemnify Indemnitee for Indemnitee's intentional acts or transactions in violation of the Company's policies;

(b) Claims Initiated by Indemnitee. To indemnify or advance expenses

to Indemnitee with respect to Claims initiated or brought voluntarily by Indemnitee and not by way of defense, except (i) with respect to actions or proceedings brought to establish or enforce a right to indemnification under this Agreement or any other agreement or insurance policy or under the Company's Certificate of Incorporation or Bylaws now or hereafter in effect relating to Claims for Indemnifiable Events, (ii) in specific cases if the Board of Directors has approved the initiation or bringing of such Claim, or (iii) as otherwise required under Section 145 of the Delaware General Corporation Law, regardless of whether Indemnitee ultimately is determined to be entitled to such indemnification, advance expense payment or insurance recovery, as the case may be;

(c) Lack of Good Faith. To indemnify Indemnitee for any expenses

incurred by Indemnitee with respect to any proceeding instituted by Indemnitee to enforce or interpret this Agreement, if a court of competent jurisdiction determines that each of the material assertions made by Indemnitee in such proceeding was not made in good faith or was frivolous; or

(d) Claims Under Section 16(b). To indemnify Indemnitee for expenses

and the payment of profits arising from the purchase and sale by Indemnitee of securities in violation of Section 16(b) of the Securities Exchange Act of 1934, as amended, or any similar successor statute.

9. Period of Limitations. No legal action shall be brought and no cause

of action shall be asserted by or in the right of the Company against Indemnitee, Indemnitee's estate, spouse, heirs, executors or personal or legal representatives after the expiration of two years from the date of accrual of such cause of action, and any claim or cause of action of the Company shall be extinguished and deemed released unless asserted by the timely filing of a legal action within such two-year period; provided, however, that if any shorter

period of limitations is otherwise applicable to any such cause of action, such shorter period shall govern.

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10. Construction of Certain Phrases.

(a) For purposes of this Agreement, references to the "Company" shall include, in addition to the resulting corporation, any constituent corporation (including any constituent of a constituent) absorbed in a consolidation or merger which, if its separate existence had continued, would have had power and authority to indemnify its directors, officers, employees, agents or fiduciaries, so that if Indemnitee is or was a director, officer, employee, agent or fiduciary of such constituent corporation, or is or was serving at the request of such constituent corporation as a director, officer, employee, agent or fiduciary of another corporation, partnership, joint venture, employee benefit plan, trust or other enterprise, Indemnitee shall stand in the same position under the provisions of this Agreement with respect to the resulting or surviving corporation as Indemnitee would have with respect to such constituent corporation if its separate existence had continued.

(b) For purposes of this Agreement, references to "other enterprises" shall include employee benefit plans; references to "fines" shall include any excise taxes assessed on Indemnitee with respect to an employee benefit plan; and references to "serving at the request of the Company" shall include any service as a director, officer, employee, agent or fiduciary of the Company which imposes duties on, or involves services by, such director, officer, employee, agent or fiduciary with respect to an employee benefit plan, its participants or its beneficiaries; and if Indemnitee acted in good faith and in a manner Indemnitee reasonably believed to be in the interest of the participants and beneficiaries of an employee benefit plan, Indemnitee shall be deemed to have acted in a manner "not opposed to the best interests of the Company" as referred to in this Agreement.

(c) For purposes of this Agreement a "Change in Control" shall be deemed to have occurred if (i) any "person" (as such term is used in Sections 13(d) and 14(d) of the Securities Exchange Act of 1934, as amended), other than a trustee or other fiduciary holding securities under an employee benefit plan of the Company or a corporation owned directly or indirectly by the stockholders of the Company in substantially the same proportions as their ownership of stock of the Company, (A) who is or becomes the beneficial owner, directly or indirectly, of securities of the Company representing 10% or more of the combined voting power of the Company's then outstanding Voting Securities, increases his beneficial ownership of such securities by 5% or more over the percentage so owned by such person, or (B) becomes the "beneficial owner" (as defined in Rule 13d-3 under said Act), directly or indirectly, of securities of the Company representing more than 20% of the total voting power represented by the Company's then outstanding Voting Securities, (ii) during any period of two consecutive years, individuals who at the beginning of such period constitute the Board of Directors of the Company and any new director whose election by the Board of Directors or nomination for election by the Company's stockholders was approved by a vote of at least two-thirds of the directors then still in office who either were directors at the beginning of the period or whose election or nomination for election was previously so approved, cease for any reason to constitute a majority thereof, or (iii)

the stockholders of the Company approve a merger or consolidation of the Company with any other corporation other than a merger or consolidation which would result in the Voting Securities of the Company outstanding immediately prior thereto continuing to represent (either by remaining outstanding or by being converted into Voting Securities of the surviving entity) at least 80% of the total voting power represented by the Voting Securities of the Company or such surviving entity outstanding immediately after such merger or consolidation, or the stockholders of the Company approve a plan of complete liquidation of the Company or an agreement for the sale or disposition by the Company of (in one transaction or a series of transactions) all or substantially all of the Company's assets.

(d) For purposes of this Agreement, "Independent Legal Counsel" shall mean an attorney or firm of attorneys, selected in accordance with the provisions of Section 1(c) hereof, who shall not have otherwise performed services for the Company or Indemnitee within the last three years (other than with respect to matters concerning the rights of Indemnitee under this Agreement, or of other indemnitees under similar indemnity agreements).

(e) For purposes of this Agreement, a "Reviewing Party" shall mean any appropriate person or body consisting of a member or members of the Company's Board of Directors or any other person or body appointed by the Board of Directors who is not a party to the particular Claim for which Indemnitee are seeking indemnification, or Independent Legal Counsel.

(f) For purposes of this Agreement, "Voting Securities" shall mean any securities of the Company that vote generally in the election of directors.

11. Counterparts. This Agreement may be executed in one or more

counterparts, each of which shall constitute an original.

12. Binding Effect; Successors and Assigns. This Agreement shall be

binding upon and inure to the benefit of and be enforceable by the parties hereto and their respective successors, assigns, including any direct or indirect successor by purchase, merger, consolidation or otherwise to all or substantially all of the business and/or assets of the Company, spouses, heirs, and personal and legal representatives. The Company shall require and cause any successor (whether direct or indirect by purchase, merger, consolidation or otherwise) to all, substantially all, or a substantial part, of the business and/or assets of the Company, by written agreement in form and substance satisfactory to Indemnitee, expressly to assume and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform if no such succession had taken place. This Agreement shall continue in effect with respect to Claims relating to Indemnifiable Events regardless of whether Indemnitee continues to serve as a director, officer, employee, agent or fiduciary of the Company or of any other enterprise at the Company's request.

13. Attorneys' Fees. In the event that any action is instituted by

Indemnitee under this Agreement or under any liability insurance policies maintained by the Company to enforce or interpret any of the terms hereof or thereof, Indemnitee shall be entitled to be paid all Expenses incurred by Indemnitee with respect to such action, regardless of whether Indemnitee is ultimately successful in such action, and shall be entitled to the advancement of Expenses with respect to such action, unless, as a part of such action, a court of competent jurisdiction over such action determines that each of the material assertions made by Indemnitee as a basis for such action was not made in good faith or was frivolous. In the event of an action instituted by or in the name of the Company under this Agreement to enforce or interpret any of the

terms of this Agreement, Indemnitee shall be entitled to be paid all Expenses incurred by Indemnitee in defense of such action (including costs and expenses incurred with respect to Indemnitee counterclaims and cross-claims made in such action), and shall be entitled to the advancement of Expenses with respect to such action, unless, as a part of such action, a court having jurisdiction over such action determines that each of Indemnitee material defenses to such action was made in bad faith or was frivolous.

14. Notice. All notices and other communications required or permitted

hereunder shall be in writing, shall be effective when given, and shall in any event be deemed to be given (a) five (5) days after deposit with the U.S. Postal Service or other applicable postal service, if delivered by first class mail, postage prepaid, (b) upon delivery, if delivered by hand, (c) one business day after the business day of deposit with Federal Express or similar overnight courier, freight prepaid, or (d) one day after the business day of delivery by facsimile transmission, if delivered by facsimile transmission, with copy by first class mail, postage prepaid, and shall be addressed if to Indemnitee, at the Indemnitee address as set forth beneath Indemnitee signatures to this Agreement and if to the Company at the address of its principal corporate offices (attention: Secretary) or at such other address as such party may designate by ten days' advance written notice to the other party hereto.

15. Consent to Jurisdiction. The Company and Indemnitee each hereby

irrevocably consent to the jurisdiction of the courts of the State of Delaware for all purposes in connection with any action or proceeding which arises out of or relates to this Agreement and agree that any action instituted under this Agreement shall be commenced, prosecuted and continued only in the Court of Chancery of the State of Delaware in and for New Castle County, which shall be the exclusive and only proper forum for adjudicating such a claim.

16. Severability. The provisions of this Agreement shall be severable in

the event that any of the provisions hereof (including any provision within a single section, paragraph or sentence) are held by a court of competent jurisdiction to be invalid, void or otherwise unenforceable, and the remaining provisions shall remain enforceable to the fullest extent permitted by law. Furthermore, to the fullest extent possible, the provisions of this Agreement (including, without limitations, each portion of this Agreement containing any provision held to be invalid, void or otherwise unenforceable, that is not itself invalid, void or unenforceable) shall be

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construed so as to give effect to the intent manifested by the provision held invalid, illegal or unenforceable.

17. Choice of Law. This Agreement shall be governed by and its provisions

construed and enforced in accordance with the laws of the State of Delaware, as applied to contracts between Delaware residents, entered into and to be performed entirely within the State of Delaware, without regard to the conflict of laws principles thereof.

18. Subrogation. In the event of payment under this Agreement, the

Company shall be subrogated to the extent of such payment to all of the rights of recovery of Indemnitee who shall execute all documents required and shall do all acts that may be necessary to secure such rights and to enable the Company effectively to bring suit to enforce such rights.

19. Amendment and Termination. No amendment, modification, termination or

cancellation of this Agreement shall be effective unless it is in writing signed by both the parties hereto. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provisions hereof

(whether or not similar) nor shall such waiver constitute a continuing waiver.

20. Integration and Entire Agreement. This Agreement sets forth the

entire understanding between the parties hereto and supersedes and merges all
previous written and oral negotiations, commitments, understandings and
agreements relating to the subject matter hereof between the parties hereto.

21. No Construction as Employment Agreement. Nothing contained in this

Agreement shall be construed as giving Indemnitee any right to be retained in
the employ of the Company or any of its subsidiaries.

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IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of
the date first above written.

AGILENT TECHNOLOGIES, INC.

By:

Title:

Address:

AGREED TO AND ACCEPTED BY:

Signature: _____

Name: _____

Address: _____

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CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the use in this Registration Statement on Form S-1 of our report dated August 13, 1999, relating to the consolidated financial statements of Agilent Technologies, Inc., which appears in such Registration Statement. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP

San Jose, California

August 13, 1999

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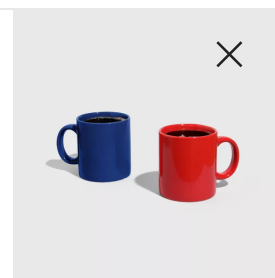
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EXHIBIT 9



Wake up to a daily email on what matters from Mike Allen

Type your email



Dan Primack Oct 29



Twist Bioscience IPO faces challenge from Agilent

Synthetic genetics company Twist Bioscience expects to go public this week, after raising around \$280 million in venture capital funding.

What's new: Biotech giant Agilent, which previously employed Twist co-founder and CEO Emily Leproust, is seeking to make the IPO more difficult.

- The two companies have been locked in litigation since early 2016, with Agilent claiming that Leproust stole trade secrets and improperly poached Agilent employees.
- Twist has vigorously defended itself, insisting that its technology includes a key difference (namely the inclusion of silicone), and calling Agilent's lawsuit a baseless effort to “stifle innovation and competition.”

Axios has learned that Agilent today plans to send a letter to the SEC, accusing Twist of making several false and misleading statements in its IPO filing documents. It also will ask the SEC to require Twist to make revisions.

- Twist did file an amended S-1 document early this morning, but it did not seem to address any of Agilent's pending claims. For example, Twist says that Leproust co-founded and became CEO of the company in April 2013, but Agilent says that she acknowledged under oath to doing both more than a year earlier, while still employed at Agilent.

Bottom line: Twist has argued that Agilent is trying to disrupt its business. Agilent, by sending this letter just days before a scheduled IPO, is doing nothing to disabuse that notion — and holds more cards, given that there is no way for Twist to prove its case prior to pricing.



INITIAL PUBLIC OFFERINGS (IPO) >





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Trump agrees to end shutdown without border wall funding

Photo: Win McNamee/Getty Images

President Trump announced Friday afternoon that he will sign a short-term spending bill as soon as today that would reopen the government until Feb. 15, postponing the stalemate over funding for his border wall and other immigration measures for three weeks.

The big picture: This is a significant concession by Trump, with Democrats long having argued that the government should be reopened before negotiations on border wall funding begin. As part of the deal, the House and Senate will go to conference to attempt to reach a consensus on border security. The 800,000 federal workers on furlough for the past 35 days will also receive backpay.

GOVERNMENT SHUTDOWN >



 Axios 2 hours ago





Roger Stone. Photo: Joe Raedle via Getty Images

Trump associate Roger Stone told a crowd of reporters outside his arraignment Friday that he will plead not guilty to charges brought by special counsel Robert Mueller, and that he will never testify against President Trump, who he called one of his "oldest friends."

"As I have said previously, there is no circumstance whatsoever under which I will bear false witness against the president, nor will I make up lies to ease the pressure on myself. I look forward to being fully and completely vindicated."

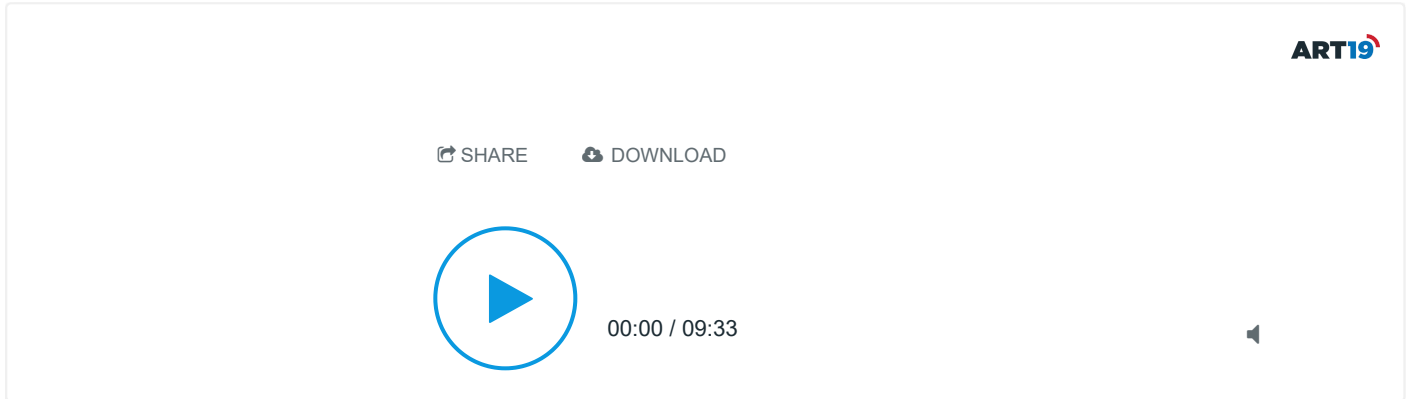
The backdrop: Stone was arrested in a raid this morning in Florida early Friday, after being indicted by the Mueller investigation on seven counts, including obstruction of an official proceeding, making false statements and witness tampering. He told reporters that the Mueller investigation is "politically motivated" and that there is no evidence of collusion.

ROGER STONE >





Dan and Axios' Mike Allen discuss Elizabeth Warren and the Democratic Party's push to tax wealth, and how Trump may respond.



Go deeper: Rise of the 99% voter

PRO RATA PODCAST >



 Axios 3 hours ago



Everyone caught up in the Trump investigations

The long trail of legal news about President Trump's associates — which now includes the indictment and arrest of Roger Stone — makes it easy to lose track of the broader storyline of Robert Mueller's Russia investigation. Here's a map to help you keep every move straight.

How it works: The map shows the people have been convicted, pleaded guilty or charged. Go deeper for other key figures and moments of the investigation. Note that Cohen's first guilty plea and Manafort's conviction were on charges unrelated to Russia — but they highlight Trump's broader legal jeopardy.



Paul Manafort
Former Trump campaign chairman

Pleaded guilty



Michael Cohen
Trump's former lawyer



Michael Flynn
Former national security adviser



Rick Gates
Manafort associate, Business partner



Alex van der Zwaan
Manafort associate, Dutch lawyer



George Papadopoulos
Former Trump campaign adviser



Richard Pineda
Californ resident

Charged/Indicted



13 Russian nationals/
3 entities



12 Russian military intel officers



Konstantin Kilimnik
Manafort assoc., Russian aide



Roger Stone
Trump adviser

Diagram: Andrew Witherspoon/Axios

∨ The others 563 WORDS

MUELLER INVESTIGATION >



Axios 4 hours ago



FAA limits flights to 3 major airports over shutdown staff shortage



Photo: John Moore/ Getty Images

The Federal Aviation Administration has begun to limit flights to New York City's LaGuardia Airport along with Newark and Philadelphia, citing staff shortages for air traffic controllers.

Why it matters: TSA and air traffic control workers are calling out sick at higher numbers than usual, since they're not being paid as a result of the partial government shutdown. Friday's delays are the first time air traffic control staffing has affected flights. Per Axios' Jonathan Swan, Republican members of leadership have been privately speculating that it would take an airport crisis to break the shutdown impasse.

▼ The FAA's statement

GOVERNMENT SHUTDOWN >



Stef W. Kight 6 hours ago



What the Roger Stone indictment tells us about the Trump campaign



Roger Stone. Photo: Drew Angerer/Getty Images

Roger Stone's indictment by the Mueller investigation reveals a series of alleged conversations between the Republican operative and Trump campaign officials regarding the timing and content of Wikileaks' email dumps during the 2016 campaign — which Stone allegedly lied about under oath.

Why it matters: Multiple Trump campaign officials — although we don't know who — were allegedly told by Stone ahead of time about WikiLeaks releases considered damaging to Hillary Clinton. One campaign official was even instructed to reach out to Stone about future releases following the DNC email release in July 2016.

▼ Go deeper 338 WORDS

MUELLER INVESTIGATION >



Andrew Freedman 6 hours ago





Potential temperature where the troposphere meets the stratosphere, showing a lobe of the polar vortex over the Midwest. Image: Weatherbell.com

The coldest air of the season will roar into the Midwest and Ohio Valley next week as a lobe of the polar vortex comes south from the Arctic Ocean. The cold will eventually reach the Mid-Atlantic and Northeast.

Why it matters: The extreme cold outbreak may set daily temperature records, including records for the coldest high temperature on a particular date. It's also possible that an all-time cold record or two will be tied or broken. Temperatures hovering in the single digits or lower on Wednesday and Thursday in cities such as Minneapolis, Chicago, , Milwaukee and St. Louis, combined with the wind chill, will make it downright dangerous to be outside at times.

▼ Go deeper 404 WORDS

EXTREME WEATHER >





The rise of the 99% voter: Eat the rich

Illustration: Aïda Amer/Axios

The “wealth tax” reportedly being considered by Sen. Elizabeth Warren (D-Mass.) reflects the fact that income inequality has become an early battleground of the 2020 campaign.

Why it matters: This is new in American politics, pushed by rising awareness of — and efforts to weaponize — the top 1%. At the same time, the left has more of a platform than ever, with liberal ideas dominating the primary so far, and Democrats in control of the House.

∨ Go deeper 185 WORDS

2020 PRESIDENTIAL ELECTION >



Sara Fischer 7 hours ago





Illustration: Axios Visuals

The hottest new trend in TV tech is "addressable" ads, or TV ads that can be targeted to specific households via user data. By the end of this year, almost every major TV network and provider will have rolled out their version of an addressable ad product.

Why it matters: It's a huge departure from the way TV ads have been bought and sold for decades. Struggling networks hope personalized ads will make the TV experience better for users who are ditching TV for ad-free streaming services like Netflix — and they're also drawn by the opportunity of a digital advertising market that isn't already controlled by Google and Facebook.

∨ Go deeper 519 WORDS

TELEVISION ADVERTISING >



EXHIBIT 10



Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, California 95051

408 345 8886 telephone
408 345 8474 facsimile
www.agilent.com

October 29, 2018

William Hinman, Director
SEC Division of Corporation Finance
100 F Street NE
Washington, DC 20549

VIA FACSIMILE

To the United States Securities and Exchange Commission:

We write to report false and/or misleading statements in the Form S-1 Registration Statement that Twist Bioscience Corporation ("Twist" or the "Company") filed publicly with the Securities and Exchange Commission ("SEC") on October 2, 2018 (attached as Appendix A). Twist is a defendant in the lawsuit *Agilent v. Twist* (Docket No. 16-CV-291137), filed February 3, 2016, currently pending in the Santa Clara Superior Court in California.

It is unlawful for a company to "make any untrue statement of a material fact or to omit to state a material fact necessary in order to make the statements made, in the light of the circumstances under which they were made, not misleading . . . in connection with the . . . sale of any security." 17 C.F.R. § 240.10b-5. "Rule 10b-5 is violated when corporate 'insiders' privy to information material to the sale of corporate securities fail to disclose the information for deceptive or manipulative purposes." *OCM Principal Opportunities Fund, L.P. v. CIBC World Mkts. Corp.*, 157 Cal. App. 4th 835, 861, 68 Cal. Rptr. 3d 828, 853 (2007).

I. **Twist's S-1 Fails to Disclose that Twist CEO Emily Leproust Formed Twist While an Employee at Agilent, and Became its CEO 17 Months Prior to Resigning from Agilent.**

In the Agilent litigation, Twist's Chief Executive Officer Emily Leproust admitted under oath that she accepted the position as CEO of Twist in November 2011 while she was still employed at Agilent. Indeed, Twist's S-1 discloses that Ms. Leproust received a portion of 18,000,000 shares of Twist stock while she was still employed at Agilent.

However, in describing Twist's co-founders and executive officers, Twist's Form S-1 Registration Statement omits her **November 2011** acceptance of the CEO position—17 months prior to her departure from Agilent—and instead states:

Emily M. Leproust, Ph.D. has served as our President and Chief Executive Officer and as a member of our board of directors since **April 2013**, and she was appointed as Chair of our board of directors effective as of the effective time of this registration statement. Prior to cofounding Twist Bioscience, Ms. Leproust served in various positions at Agilent most recently as its Director, Applications and Chemistry R&D from February 2009 to April 2013. (Emphasis added.)



Twist's statement that Ms. Leproust occupied her "most recent[]" roles at Agilent "[p]rior to cofounding Twist" (emphasis added) is inconsistent with the fact that she co-founded Twist, became its CEO 17 months before her departure from Agilent, and took many actions to build Twist as a company prior to leaving Agilent.

II. **Twist's S-1 Fails to Disclose the Material Fact that its CEO Emily Leproust and Other Twist Employees Took and Retained Hundreds of Confidential Documents Containing Agilent's Trade Secrets and Proprietary Information.**

In Twist's Form S-1 Registration Statement, Twist describes its litigation with Agilent, but the description is materially misleading because it omits the fact that Twist employees have admitted to taking and retaining hundreds of confidential Agilent documents for years while developing the Twist technology. See *Matrixx Initiatives, Inc. v. Siracusano*, 563 U.S. 27, 44 (2011) (Disclosure is required under Rule 10b-5 "when necessary 'to make . . . statements made, in the light of the circumstances under which they were made, not misleading.'" (citation omitted)). Specifically, Twist employees—including its Chief Executive Officer, Emily Leproust, and its former Chief Financial Officer, Solange Glaize—took hundreds of Agilent documents marked "Confidential" using thumb drives, cloud accounts, and their personal email accounts.

They took these documents despite being under contractual obligations to return all Agilent property to Agilent upon the conclusion of their employment. And, Twist retained these highly sensitive documents for years while building their technology despite repeated requests from Agilent to return its property and valuable technology. Finally, as described more fully in Agilent's Second Amended Complaint, these documents that were taken from Agilent contain proprietary descriptions of Agilent's oligonucleotide ("oligo") synthesis technology processes from experiment to implementation. They also include experimental designs, data analyses, troubleshooting secrets, method refining, plans for technological next steps, and proprietary market analyses. Worse yet, many document Agilent trade secrets.

We believe Twist's Form S-1 Registration Statement must be revised to more accurately describe the facts above.

Sincerely,

/s/ Agilent Technologies, Inc.
Agilent Technologies, Inc.

EXHIBIT 11

Agilent Sends Letter to the SEC Regarding Material Misstatements in Twist Bioscience's S-1 Registration Statement

Press Release

SANTA CLARA, Calif., October 29, 2018

Agilent Technologies Inc. (NYSE: A) today announced that it sent a letter to the Division of Corporation Finance of the U.S. Securities and Exchange Commission (SEC) regarding misstatements in the S-1 Registration Statement filed by Twist Bioscience Corp.

The letter informs the SEC that "Twist's S-1 Fails to Disclose that Twist CEO Emily Leproust Formed Twist While an Employee at Agilent, and Became its CEO 17 Months *Prior* to Resigning from Agilent." The letter also informs the SEC that "Twist's S-1 Fails to Disclose the Material Fact that its CEO Emily Leproust and Other Twist Employees Took and Retained Hundreds of Confidential Documents Containing Agilent's Trade Secrets and Proprietary Information."

Ms. Leproust admitted under oath that she secretly became Twist's CEO 17 months prior to leaving Agilent. Agilent's Proposed Second Amended Complaint (accessible [here](#)) describes in detail Agilent's allegations that during that time, Ms. Leproust raised money to start a competitive company that would misappropriate Agilent's innovations of the past 20 years, poach Agilent's employees, and compete in the same markets with the same basic technology—all while owing a statutory duty of loyalty to Agilent.

The full text of Agilent's letter to the SEC is available [here](#).

About Agilent Technologies

Agilent Technologies Inc. (NYSE: A) is a global leader in life sciences, diagnostics, and applied chemical markets. With more than 50 years of insight and innovation, Agilent instruments, software, services, solutions, and people provide trusted answers to customers' most challenging questions. The company generated revenues of \$4.47 billion in fiscal 2017 and employs 14,500 people worldwide. Information about Agilent is available at www.agilent.com.

EXHIBIT 12

Alex Padilla
California Secretary of State

Business Search - Entity Detail

The California Business Search is updated daily and reflects work processed through Thursday, January 24, 2019. Please refer to document [Processing Times](#) for the received dates of filings currently being processed. The data provided is not a complete or certified record of an entity. Not all images are available online.

C3548142 TWIST BIOSCIENCE CORPORATION

Registration Date: 02/19/2013
Jurisdiction: DELAWARE
Entity Type: FOREIGN STOCK
Status: ACTIVE
Agent for Service of Process: EMILY M LEPROUST
 455 MISSION BAY BLVD SOUTH, SUITE 545
 SAN FRANCISCO CA 94158
Entity Address: 455 MISSION BAY BLVD SOUTH, SUITE 545
 SAN FRANCISCO CA 94158
Entity Mailing Address: 455 MISSION BAY BLVD SOUTH, SUITE 545
 SAN FRANCISCO CA 94158

A Statement of Information is due EVERY year beginning five months before and through the end of February.

Document Type	↕	File Date	⌵	PDF
SI-COMPLETE		01/15/2018		
SI-COMPLETE		11/05/2015		
REGISTRATION		02/19/2013		

* Indicates the information is not contained in the California Secretary of State's database.

- If the status of the corporation is "Surrender," the agent for service of process is automatically revoked. Please refer to California Corporations Code [section 2114](#) for information relating to service upon corporations that have surrendered.
- For information on checking or reserving a name, refer to [Name Availability](#).
- If the image is not available online, for information on ordering a copy refer to [Information Requests](#).
- For information on ordering certificates, status reports, certified copies of documents and copies of documents not currently available in the Business Search or to request a more extensive search for records, refer to [Information Requests](#).
- For help with searching an entity name, refer to [Search Tips](#).
- For descriptions of the various fields and status types, refer to [Frequently Asked Questions](#).

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EXHIBIT 13

Twist Bioscience prices IPO at \$14, the low end of the range

October 31, 2018, 09:23:00 AM EDT By Renaissance Capital, Renaissance Capital

Twist Bioscience, which manufactures synthetic genes and other DNA-based products, raised \$70 million by offering 5 million shares at \$14, the low end of the range of \$14 to \$16. Twist Bioscience plans to list on the Nasdaq under the symbol TWST. J.P. Morgan and Cowen acted as lead managers on the deal.

The article [Twist Bioscience prices IPO at \\$14, the low end of the range](#) originally appeared on IPO investment manager Renaissance Capital's web site renaissancecapital.com.

Investment Disclosure: The information and opinions expressed herein were prepared by Renaissance Capital's research analysts and do not constitute an offer to buy or sell any security. Renaissance Capital's [Renaissance IPO ETF \(symbol: IPO\)](#) , [Renaissance International ETF \(symbol: IPOS\)](#) , or separately managed institutional accounts may have investments in securities of companies mentioned.

The views and opinions expressed herein are the views and opinions of the author and do not necessarily reflect those of Nasdaq, Inc.

EXHIBIT 14

Agilent Sends Letter to the SEC Regarding Material Misstatements in Twist Bioscience's S-1 Registration Statement

SANTA CLARA, Calif.--([BUSINESS WIRE](#))--Agilent Technologies Inc. (NYSE: A) today announced that it sent a letter to the Division of Corporation Finance of the U.S. Securities and Exchange Commission (SEC) regarding misstatements in the S-1 Registration Statement filed by Twist Bioscience Corp.

“Twist’s S-1 Fails to Disclose the Material Fact that its CEO Emily Leproust and Other Twist Employees Took and Retained Hundreds of Confidential Documents Containing Agilent’s Trade Secrets and Proprietary Information.”

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The letter informs the SEC that “Twist’s S-1 Fails to Disclose that Twist CEO Emily Leproust Formed Twist While an Employee at Agilent, and Became its CEO 17 Months *Prior* to Resigning from Agilent.” The letter also informs the SEC that “Twist’s S-1 Fails to Disclose the Material Fact that its CEO Emily Leproust and Other Twist Employees Took and Retained Hundreds of Confidential Documents Containing Agilent’s Trade Secrets and Proprietary Information.”

Ms. Leproust admitted under oath that she secretly became Twist’s CEO 17 months prior to leaving Agilent. Agilent’s Proposed Second Amended Complaint ([accessible here](#)) describes in detail Agilent’s allegations that during that time, Ms. Leproust raised money to start a competitive company that would misappropriate Agilent’s innovations of the past 20 years, poach Agilent’s employees, and compete in the same markets with the same basic technology—all while owing a statutory duty of loyalty to Agilent.

The full text of Agilent’s letter to the SEC is available [here](#).

About Agilent Technologies

Agilent Technologies Inc. (NYSE: A) is a global leader in life sciences, diagnostics, and applied chemical markets. With more than 50 years of insight and innovation, Agilent instruments, software, services, solutions, and people provide trusted answers to customers' most challenging questions. The company generated revenues of \$4.47 billion in fiscal 2017 and employs 14,500 people worldwide. Information about Agilent is available at www.agilent.com.

EXHIBIT 15

Agilent contests Twist Bioscience's stock offering document

by Marc S. Reisch



Credit: Terry Way Photography

Emily Leproust

Agilent Technologies has sent a letter to the U.S. Securities & Exchange Commission questioning the accuracy of Twist Bioscience's registration of securities for an initial public offering (IPO) of stock.

But the letter comes too late to forestall an IPO. The synthetic DNA maker completed its offering of shares today on the NASDAQ stock exchange, pricing them at \$14.00 and raising \$70 million.

The letter highlights an ongoing dispute between Agilent, a scientific instrument maker, and [Twist](#). In 2016, [Agilent sued Twist](#), charging that Twist cofounder Emily Leproust stole trade secrets from Agilent when she worked there. Twist denied the charge, saying Leproust was a loyal employee who served as Agilent's chemistry R&D director until she left the company to join Twist in 2013.

In its letter to SEC, Agilent says Leproust admitted under oath that she became Twist's CEO in 2011 while still employed at Agilent. The admission, Agilent says, came out of the ongoing trade secret dispute. However, the stock registration document "omits her November 2011 acceptance of the CEO position," Agilent says.

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In addition, while the registration document acknowledges the ongoing litigation between the two firms, Agilent charges that its description of the dispute is "materially misleading." Agilent says Leproust and other Twist employees have admitted to taking confidential Agilent documents while Twist developed its technology. Those material facts were also left out of the registration form, Agilent claims.

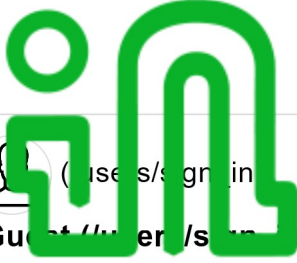
Responding to Agilent's letter to SEC, a Twist spokesperson says, "We continue to believe that Agilent's claims lack merit, and we will continue to defend ourselves vigorously."

Chemical & Engineering News

ISSN 0009-2347

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EXHIBIT 16



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2018-10-29 09:39  [\(/posts/1088249\)](/posts/1088249)


 1


Agilent Sends Letter to the SEC Regarding Material Misstatements in Twist Bioscience's S-1 Registration Statement

\$A Agilent Technologies Inc. (NYSE:A) today announced that it sent a letter to the Division of Corporation Finance of the U.S. Securities and Exchange Commission (SEC) regarding misstatements in the S-1 Registration Statement filed by Twist Bioscience Corp. Ms. Leproust admitted under oath that she secretly became Twist's CEO 17 months prior to leaving Agilent. <https://finance.yahoo.com/news/agilent-sen...> (<https://finance.yahoo.com/news/agilent-sends-letter-sec-regarding-163900195.html?.tsrc=rss>)

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EXHIBIT 17

Agilent writes SEC to dispute Twist Bioscience CEO's tenure in IPO filing

Jan. 14 2019 — The Latin America multichannel and broadband industry is heading into 2019 with positive headwinds. Demand for convergent services and economic recovery in larger markets should drive industry growth in 2019. The big caveat is the economy, with external shocks threatening to decelerate economic growth. Amid this environment, we expect the M&A market to remain active, with transactions in Mexico and Central America highly likely. New virtual multichannel, satellite broadband and IPTV services should also gain a foothold in the region.

Pay TV and broadband growth trend strengthens in 2019

Kagan estimates Latin America's multichannel and broadband subscriber bases should expand during 2019, with broadband net adds projected to be almost double those of multichannel. The trend toward convergent services is expected to help cable regain strength in the multichannel market, accounting for the majority of net additions. Multichannel revenues are forecast to grow, with Argentina, Brazil and Mexico expected to be the biggest contributors to multichannel revenue growth. The importance of fiber technologies is rising, concentrating the highest share of fixed broadband net additions during 2019.

Already a client? Refer to the regional profile linked [here](#) for additional details.

Economy: Outlook for 2019

The World Bank projects Latin American and Caribbean GDP will expand 2.3% during 2019. However, deteriorating external conditions and local challenges might hinder economic growth. Recovering private consumption and investments should drive GDP growth in the region for 2019, although foreign exchange volatility and rising financing costs could weaken this trend. Prospects for fiscal consolidation in Argentina and Brazil remain challenging due to political opposition, especially in Argentina, where general elections are to be held in October. Venezuela's economic prospects remain dire, worsened by the recent drop in oil prices.

M&A: Mexico and Central America to remain active

The possibility of Telefónica SA divesting its Mexican and Central American operations, along with Millicom International Cellular SA's and Liberty Latin America Ltd.'s continued competition for acquisition targets in Central America to strengthen their positions in the region, raises the prospects for active Latin American M&A in 2019. Investment funds and Latin American telecommunication groups seem to be competing for Telefónica's assets in Mexico and Central America. Liberty Latin America is actively looking for acquisition opportunities in Latin America through its Chilean subsidiary VTR and is cited as a potential buyer for Telefónica assets, along with competitors Millicom, Entel Chile and AT&T Inc., although the latter may be barred in Mexico due to the mobile market concentration that would result.

AT&T Inc.'s acquisition of Time Warner Inc. may also lead to changes in its Latin

American operations. After the failed IPO of DIRECTV Latin America LLC (now named Vrio) in 2018, the company may still need to divest some assets in Brazil due to local regulations preventing pay TV operations from owning content producers.

Brazilian regulator Anatel also raised spectrum caps at the end of 2018, opening up the country's mobile market for consolidation. Embattled former iDEN carrier Nextel Telecomunicações SA has been looking for a buyer for years, and Telecom Italia SpA's TIM Participações SA has already announced it has made an initial offer. Regional telco Sercomtel Telecom may also choose to sell its spectrum assets — which may be allowed if a telecom reform bill currently under discussion in the Senate is passed — or even the whole company.

In Argentina, regulatory conditions for the approval of Telecom Argentina's merger with Cablevisión Argentina may lead the company to divest many assets in 2019. The operator must sell off its fixed broadband business in 28 areas of the country where the merger could affect competition, as well as excess wireless spectrum above the regulatory cap.

Already a client? Please click [here](#) for our annual global mobile spectrum roundup, and [here](#) for an overview of upcoming global spectrum auctions.

A final ruling by the Court of Cundinamarca put to rest the Bogotá municipality's proposal to sell Empresa de Telecomunicaciones de Bogotá SA ESP, or ETB. The court cited irregularities in the approval of the proposal as its basis to nullify the decision. Nevertheless, the court said the ruling does not prohibit the sale of ETB, but that the municipality will have to initiate a new approval process to achieve it.

Effects of election results

The election of Jair Bolsonaro in Brazil and Andrés Manuel López Obrador in Mexico introduced some uncertainty into the Latin American political picture. Both presidents are in the opposite side of the political spectrum, Bolsonaro on the right and AMLO on the left. Nevertheless, both candidates ran on a populist agenda, with ambitious campaign promises that pose a risk to fiscal discipline. Ivan Duque, Colombia's new president, is likely to maintain his predecessor's market-friendly policies, while Argentina's Mauricio Macri's inability to implement fiscal reform may cost him the presidency in general elections in October 2019.

In the telecommunications sector, AMLO pledged to promote market efficiency and close the gap in access to telecommunications, whereas Bolsonaro's program remains vague on issues related to media and telecommunications.

Already a client? Please click [here](#) for additional insights about AMLO election, and [here](#) for insights on Bolsonaro election.

LatAm countries with upcoming 2019 elections

Argentina
Bolivia
Dominican Republic
El Salvador
Guatemala
Panama
Uruguay

Virtual multichannel

DIRECTV Latin America launched Latin America's first virtual multichannel services in November in Colombia and Chile. The company is expected to expand the offer, DIRECTV Go, to Argentina and other Latin American markets during 2019. Telecom Argentina executives have also hinted that the company's video-on-demand/TV Everywhere service, Cablevisión Flow, which offers over 200 linear channels to pay TV subscribers, may soon be launched as a virtual multichannel service for nonsubscribers.

Telefónica has also been quietly rolling out access to its TV Everywhere platform, which includes several linear channels, to nonpay TV subscribers in some Latin American markets, such as Central America and Chile. The Movistar Play Full offer is available as a value-added service to Telefónica's mobile and fixed broadband, and to voice subscribers for an extra fee.

Satellite broadband

Penetration of residential satellite broadband is set to increase as more Ka-band satellites become available in the region and new operators enter the market. Hughes Communications Inc. continued to expand its HughesNet service, launched in Brazil in 2016 and Colombia in 2017, to Peru and Ecuador during 2018. Competitors Al Yah Satellite Communication Co. PJSC and ViaSat Inc. also began operating in the Brazilian market during 2018, while satellite operator Hispasat SA launched a white-label service in the region.

Dish México announced it would partner with Hispasat SA and Gilat Satellite Networks Ltd. to launch satellite broadband service in Mexico. Dish México will leverage Amazonas 5, Hispasat's high-throughput satellite, to reach underserved markets. Amazonas 5 has the potential to reach 77% of Mexico's population. The broadband service will use Gilat's SkyEdge II-c platform to provide high-value services to Mexican consumers and small and medium-sized enterprises.

Already a client? Please click [here](#) and [here](#) to learn more about satellite broadband service offers currently available in Latin America.

Argentina quad-play

Following new regulations allowing telcos to offer multichannel services, Claro Argentina and Telefónica de Argentina SA launched IPTV offers during 2018, but coverage remains limited, as convergent services were initially only permitted in the major cities of Buenos Aires, Rosario and Córdoba, in order to protect small operators in other regions. In 2019, this will be expanded to cities with populations below 600,000. Delays in passing a telecoms reform bill allowing telcos to offer DTH may lead the two companies to abandon plans for a national satellite pay TV offer, choosing to focus on high-end convergent services based on their growing fiber networks.

Meanwhile, Argentina's largest player, Telecom Argentina, will be allowed to offer convergent services only in 2019, as part of antitrust regulators' restrictions for approval of its merger with Cablevisión Argentina.

IPTV gets a boost from new Telefónica strategy

Telefónica made a strategic decision during 2017 to prioritize investments in fiber deployments to power ultrafast broadband and IPTV services, as well as expanding its VOD portfolio for fiber-based subscribers with STB-embedded over-the-top services such as Netflix and Amazon Prime. Based on this, as well as the continued entry of new players and migration of many existing telco and cable networks to fiber, we revised our IPTV forecast up for 2019.

Regulatory outlook

In Brazil and Argentina, "mini-reform" bills for the telecommunications industry remain stalled in Congress but are expected to finally be approved in 2019. Argentina's "Ley Corta," as it became known for being a reduced version of the government's originally proposed telecoms reforms, allows telcos to offer direct-to-home services in major cities starting in 2020, with gradual expansion to smaller towns up to 2022. Although passed by the Senate in July 2018, the bill, which also bans exclusive network agreements in order to encourage network sharing, among other measures, still awaits voting in the Chamber of Deputies.

Meanwhile, the Brazilian Senate is expected to resume discussions on the PLC 79 bill, which have been frozen since 2016. The reform would require telcos Telefônica Brasil and Oi SA to migrate their public fixed telephony concession contracts to a private service authorization contract, as is the case with their mobile and broadband businesses. In exchange, the companies would have to invest in broadband expansion the value of the public fixed telephony infrastructure they would be incorporating. The value of these "reversionary assets" and where these investments should be made are to be defined by the regulator Anatel and may take a year to implement. The PLC 79 bill also tackles several other measures favored by the industry, including a reduction in tariffs for satellite broadband services, which is expected to encourage more competitive prices, allowing telcos to sell spectrum assets and exempting broadcasters from regulatory tariffs.

The Mexican Congress reduced the annual budget for the telecommunications regulator, Instituto Federal de Telecomunicaciones, or IFT, by 25% compared to 2018. The budget cut would weaken the IFT amid regulatory battles with América Móvil SAB de CV's Teléfonos de México SA de CV and other important Mexican players.

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