PDF SOLUTIONS®

2008 Annual Report

FELLOW STOCKHOLDERS:

Two Thousand and Eight was a year of significant turmoil around the world and ended in the midst of a deep worldwide recession and another downturn in the semiconductor industry. Although PDF Solutions continues to be recognized by our clients for unparalleled technologies and capabilities, and our clients acknowledge the return-on-investment of our engagements, our operating results in 2008 were not immune to the downturn. However, despite financial performance that was below expectations, we look to turn adversity into an advantage with strong progress in a number of strategic areas:

- **Broadening our addressable market**—we continue to significantly diversify our products and business model beyond yield ramps to span the entire semiconductor Process Life Cycle.
- **Leveraging our semiconductor market penetration strategy**—we are developing and expanding key alliances, and structuring longer term contracts with clients.
- **Exploring new markets for our technology**—we have begun receiving positive market feedback with regards to utilization of our Process Control Solutions by solar, LCD, and LED manufacturers.

With solutions that span the entire Process Life Cycle—a term we coined for the time from the design of an IC through volume manufacturing of that IC—we can increase revenue per process node by providing more technology and driving longer term Gainshare contracts. Our industry-first YieldAware™ FDC solution continues to gain traction by addressing our clients' critical issues in the fab with a much lower level of investment than traditional capital-intensive approaches. Also, our newly announced New Product Introduction solution and our *pd*BRIX™ platform leverage our core technology to deliver more value to product groups. By leveraging our go-to-market strategy through strong relationships with process licensors and engaging with their licensee fabs, we create engagement opportunities with their fabless customers. For example, early in 2009 we announced an agreement with IBM to develop a *pd*BRIX™-based platform for IC design that will be designed to layer on top of IBM's manufacturing processes so the enhanced platform can be used by a broad set of manufacturers and fabless companies. As the industry continues to transition to an "asset light"—or fabless—business model this strategy could pay significant dividends to PDF Solutions.

With annual revenues in 2008 down a disappointing 22% sequentially, we responded by taking actions during the year to improve operational efficiencies, reduce overall costs, and relieve our balance sheet of impaired goodwill and other acquired intangible assets. We believe we can position PDF Solutions for growth and profitability when the economy and the semiconductor industry recover if we continue to invest in projects that favorably impact the three strategic areas mentioned above, further align costs and revenues, manage our cash effectively, and continue our firm commitment to drive value in every client engagement.

Sincerely,

John K. Kibarian, Ph.D.
Chief Executive Officer, President and Co-Founder

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended December 31, 2008

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from to

000-31311
(Commission file number)

PDF SOLUTIONS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of Incorporation or organization)	**25-1701361** (I.R.S. Employer Identification No.)
333 West San Carlos Street, Suite 700 **San Jose, California** (Address of Registrant's principal executive offices)	**95110** (Zip Code)

(408) 280-7900
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of Class	Name of Each Exchange on Which Registered
Common Stock, $0.00015 par value	The NASDAQ Stock Market LLC

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if the registrant is a well-known seasoned issuer (as defined in Rule 405 of the Securities Act). Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐ Accelerated filer ☒ Non-accelerated filer ☐ (Do not check if a smaller reporting company) Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes ☐ No ☒

The aggregate market value of the voting stock held by non-affiliates of the Registrant was approximately $80.6 million as of the last business day of the Registrant's most recently completed second quarter, based upon the closing sale price on the NASDAQ Global Market reported for such date. Shares of Common Stock held by each officer and director and by each person who owns 10% or more of the outstanding Common Stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

There were 26,258,240 shares of the Registrant's Common Stock outstanding as of March 6, 2009.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates certain information by reference from the definitive Proxy Statement for our Annual Meeting of Stockholders to be held on May 21, 2009.

TABLE OF CONTENTS

		Page
	PART I	
Item 1.	Business	3
Item 1A.	Risk Factors	12
Item 1B.	Unresolved Staff Comments	22
Item 2.	Properties	22
Item 3.	Legal Proceedings	22
Item 4.	Submission of Matters to a Vote of Security Holders	22
	PART II	
Item 5.	Market for Registrant's Common Equity and Related Stockholder Matters and Issuer Purchases of Equity Securities	23
Item 6.	Selected Financial Data	26
Item 7.	Management's Discussion and Analysis of Financial Condition and Results of Operations	27
Item 7A.	Quantitative and Qualitative Disclosures About Market Risk	44
Item 8.	Financial Statements and Supplementary Data	44
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure	44
Item 9A.	Controls and Procedures	44
Item 9B.	Other Information	45
	PART III	
Item 10.	Directors and Executive Officers of the Registrant	47
Item 11.	Executive Compensation	47
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	47
Item 13.	Certain Relationships and Related Transactions	47
Item 14.	Principal Accounting Fees and Services	47
	PART IV	
Item 15.	Exhibits and Financial Statement Schedules	48
Signatures		86
Index to Exhibits		88

PART I

This Annual Report on Form 10-K, particularly in Item 1 "Business" and Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations," includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 (the "Securities Act") and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). These statements include, but are not limited to, statements concerning: expectations about the effectiveness of our business and technology strategies; expectations regarding stock market and global economic trends; expectations regarding previous and future acquisitions; current semiconductor industry trends; expectations of the success and market acceptance of our intellectual property and our solutions; expectations concerning recent completed acquisitions; expectations that our cash, cash equivalents and cash generated from operations will satisfy our business requirements for the next twelve months; expectations of our future liquidity requirements; and our ability to obtain additional financing when needed. Our actual results could differ materially from those projected in the forward-looking statements as a result of a number of factors, risks and uncertainties discussed in this Form 10-K, especially those contained in Item 1A of this Form 10-K. The words "may," "will," "anticipate," "continue," "could," "projected," "expects," "believes," "intends," and "assumes," the negative of these terms and similar expressions are used to identify forward-looking statements. All forward-looking statements and information included herein is given as of the filing date of this Form 10-K with the Securities and Exchange Commission ("SEC") and based on information available to us at the time of this report and future events or circumstances could differ significantly from these forward-looking statements. Unless required by law, we undertake no obligation to update publicly any such forward-looking statements.

The following information should be read in conjunction with the Consolidated Financial Statements and notes thereto included in this Annual Report on Form 10-K. All references to fiscal year apply to our fiscal year that ends on December 31.

Item 1. *Business*

Business Overview

PDF Solutions is a leading provider of infrastructure technologies and services to lower the cost of integrated circuit ("IC") design and manufacturing, enhance time to market, and improve profitability by addressing design and manufacturing interactions from product design to initial process ramps to mature manufacturing operations. Our technologies and services target the entire "process life cycle," which is the term we have coined for the time from the design of an IC through volume manufacturing of that IC. Our solutions combine proprietary software, physical intellectual property ("IP") in the form of cell libraries for IC designs, test chips, an electrical wafer test system, proven methodologies, and professional services. We analyze yield loss mechanisms to identify, quantify, and correct the issues that cause yield loss. Our analysis drives IC design and manufacturing improvements to enable our customers to optimize technology development process, to increase initial yield when an IC design first enters a manufacturing line, to increase the rate at which yield improves, and to minimize excursions and process variability that cause yield loss throughout mass production. The result of successfully implementing our solutions is the creation of value that can be measured based on improvements to our customers' actual yield. Through our gainshare performance incentives component, we have aligned our financial interests with the yield and performance improvements realized by our customers, and we receive revenue based on this value. Our technologies and services have been sold to leading integrated device manufacturers, fabless semiconductor companies, and foundries.

The key benefits of our solutions to our customers are:

Faster Time to Market. Our solutions are designed to accelerate our customers' time-to-market and increase product profitability. Our solutions, which can predict and improve product yield even before IC product design is complete, transform the traditional design-to-silicon sequence into a primarily concurrent process, thereby shortening our customers' time-to-market. Systematically

incorporating knowledge of the integration of the design and manufacturing processes into our software modules and physical IP enables our customers to introduce products with higher initial yields faster. Our solutions are designed to decrease design and process iterations and reduce our customers' up-front costs, and thus provide our customers with early-mover advantages such as increased market share and higher selling prices.

Faster Time to Volume. After achieving higher initial yields and faster time-to-market, our solutions are designed to enable our customers to isolate and eliminate remaining yield issues to achieve cost efficient volume manufacturing. Once a manufacturing process has been modeled using our solutions, our customers are able to diagnose problems and simulate potential corrections more quickly than using traditional methods. In addition, if process changes are required, improvements can be verified more quickly using our technology than using traditional methods. Our solutions thus enable our customers to quickly reach cost efficient volume, so that they are able to increase margins, improve their competitive position, and capture higher market share.

Increased Manufacturing Efficiencies. Our solutions for product design, product introduction, yield ramp, and process control are designed to allow our customers to achieve a higher yield at mass production and therefore a lower cost of goods sold. In addition, our solutions, which also include fault detection and classification ("FDC") software, are designed to provide our customers with the ability to proactively monitor process health to avoid potential yield problems.

Our long-term business objective is to maximize IC yield by providing the industry standard in technologies and services for the Process Life Cycle. To achieve this objective, we intend to:

Expand Strategic Relationships. We intend to continue to extend and enhance our relationships with companies at various stages of the design-to-silicon process, such as process licensors, manufacturing and test equipment vendors, electronic design automation vendors, silicon IP providers, semiconductor foundries, and contract test and assembly houses. For example, in February 2009, we announced an agreement with IBM to develop an IC design platform to mitigate the effects of escalating design and manufacturing process complexity at the 32-, 28-, and 22-nanometer (nm) dimensions. This *pd*BRIX™-based platform will be designed to layer on top of IBM's world class manufacturing process so it can be used by a broad set of manufacturers and fabless firms.

Extend Our Technology Leadership Position. We intend to extend our technology leadership position by leveraging our experienced engineering staff and codifying the knowledge that we acquire in our solution implementations. For example, we continue to expand and develop new technology that leverages our Characterization Vehicle® (CV®) methodology to embed test structures on product wafers. This provides valuable insight regarding product yield loss during mass production with minimal or no increase in test time and non-product wafers. In addition, we selectively acquire complementary businesses and technologies to increase the scope of our solutions.

Leverage Our Gainshare Performance Incentives Business Model. We intend to continue expanding the gainshare performance incentives component of our customer contracts. We believe this approach allows us to form collaborative and longer-term relationships with our customers by aligning our financial success with that of our customers. Working closely with our customers on their core technologies that implement our solutions, with a common focus on their business results, provides direct and real-time feedback for continual improvement of our solutions. We believe that we will generate expanded relationships with customers that engage us on terms that include a significant gainshare performance incentive component.

Focus on Key IC Product Segments and High-Growth Adjacent Markets. We intend to focus our solutions on high-volume, high-growth IC product segments such as system-on-a-chip, memory, CMOS image sensor, and high-performance central processing units. As a result, we will continue to

expand our solutions for technology drivers such as low-k dielectrics, high-k metal gates, SOI, copper, and 300mm wafer fabs, which are all still somewhat new and are relatively complex manufacturing technologies. We believe that these product segments are particularly attractive because they include complex IC design and manufacturing processes where processed silicon is costly and yield is critical. In addition, we have expanded our efforts to penetrate high growth adjacent markets, such as photovoltaic manufacturing. We are leveraging our yield management system and FDC technology to create products that meet the needs of manufacturing customers in the rapidly growing solar markets.

Industry Background

Rapid technological innovation, with increasingly shorter product life cycles, now fuels the economic growth of the semiconductor industry. IC companies historically ramped production slowly, produced at high volume once products gained market acceptance, and slowly reduced production volume when price and demand started to decrease near the end of the products' life cycles. Now, companies often need to be the first to market and the first to sell the most volume when a product is first introduced so that they have performance and pricing advantages over their competition, or else they lose market opportunity and revenue. Increased IC complexity and compressed product lifecycles create significant challenges to achieve competitive initial yields and optimized performance. For example, it is not uncommon for an initial manufacturing run to yield only 20%, which means that 80% of the ICs produced are wasted. Yield improvement and performance optimization are critical drivers of IC companies' financial results because they typically lead to cost reduction and revenue generation concurrently, causing a leveraged effect on profitability.

Technology and Intellectual Property Protection

We have developed proprietary technologies for yield simulation, analysis, loss detection, and improvement. The foundation for many of our solutions is our CV infrastructure ("CV*i*") that enables our customers to characterize the manufacturing process, and establish fail-rate information needed to calibrate manufacturing yield models, prioritize yield improvement activities and speed-up process learning-cycles. Our CV*i* includes proprietary Characterization Vehicle® test chips, including designs of experiments and layout designs, and a proprietary and patented highly parallel electrical functional-test system, comprised of hardware and software designed to provide an order-of-magnitude reduction in the time required to test our Characterization Vehicle® test chips. In addition our technology embodies many algorithms, which we have developed over the course of many years, and which are implemented in our products including *data*POWER®, pdCV™, mæstria®, and pdBRIX™, among others. Further, our IP includes methodologies that our implementation teams use as guidelines to drive our customers' use of our CV® test chips and technologies, quantify the yield-loss associated with each process module and design block, simulate the impact of changes to the design and/or to the manufacturing process, and analyze the outcome of executing such changes. We continually enhance our core technologies through the codification of knowledge that we gain in our solution implementations.

Our future success and competitive position rely to some extent upon our ability to protect these proprietary technologies and IP, and to prevent competitors from using our systems, methods, and technologies in their products. To accomplish this, we rely primarily on a combination of contractual provisions, confidentiality procedures, trade secrets, and patent, copyright, and trademark laws. We license our products and technologies pursuant to non-exclusive license agreements that impose restrictions on customers' use. In addition, we seek to avoid disclosure of our trade secrets, including requiring employees, customers, and others with access to our proprietary information to execute confidentiality agreements with us and restricting access to our source code. We also seek to protect our software, documentation, and other written materials under trade secret and copyright laws. As of December 31, 2008, we held 31 U.S. patents. We intend to prepare additional patent applications when we feel it is necessary. Characterization Vehicle®, Circuit Surfer®, CV®, *dataPOWER*®, mæstria®, ModelWare®, Optissimo®, pdFasTest®, pDfx®,

PDF Solutions®, Proxecco®, the PDF Solutions logo, Yield Ramp Simulator®, and YRS® are registered trademarks of PDF Solutions, Inc. or its subsidiaries, and Design-to-Silicon-Yield™, *dP*-bitMAP™, *dP*-Defect™, *dP*-Mining™, *dP*-probeMAP™, *dP*-shotMAP™, *dP*-SSA™, *dP*-Variability Analysis™, *dP*-VUE™, *dP*-WorkFlow™, pdBRIX™, pdCV™, and YA-FDC™ are our common law trademarks.

Products and Services

Our solutions consist of integration engineering services, proprietary software, and other technologies designed to address our customers' specific manufacturing and design issues.

Services and Solutions

Manufacturing Process Solutions ("MPS"). The IC manufacturing process typically involves four sequential phases: research and development to establish unit manufacturing processes, such as units for the metal CMP or lithography processes; integration of these unit processes into functional modules, such as metal or contact modules; a yield ramp of lead products through the entire manufacturing line; and volume manufacturing of all products through the life of the process. We offer solutions targeted to each of these phases designed to accelerate the efficiency of yield learning by shortening the learning cycle, learning more per cycle, and reducing the number of silicon wafers required. Our targeted offerings include:

- *Process R&D:* Our process R&D solutions are designed to help customers increase the robustness of their manufacturing processes by characterizing and reducing the variability of unit processes and device performance with respect to layout characteristics within anticipated process design rules.
- *Process Integration and Yield Ramp:* Our process integration and yield ramp solutions are designed to enable our customers to more quickly ramp the yield of new products early in the manufacturing process by characterizing the process-design interactions within each key process module, simulating product yield loss by process module, and prioritizing quantitative yield improvement by design blocks in real products.

Volume Manufacturing Solutions ("VMS"). Our volume manufacturing solutions are designed to enable our customers to extend our yield ramp services through the life of the process by continuing to collect test data and equipment signals during production and improving yield while reducing the overhead of manufacturing separate test wafers. They enable the customer to collect test data and equipment signals during production to improve yield while simultaneously reducing the overhead of manufacturing. Optional software modules allow customers to perform rapid yield signature detection, characterization, and diagnosis. With this software, we enable mapping and analyzing data from memory bits to wafer to final packaged parts with die identification traceability. Our mæstria® and YA-FDC™ process control software offerings enable our customers to monitor and control process signals to detect and diagnose yield loss related to equipment performance.

Design-for-Manufacturability ("DFM") Solutions. Our DFM solutions are designed to enable our customers to optimize yields within the design cycle before a design is sent to the mask shop to more quickly and cost-effectively manufacture IC products. We target these solutions to customers' requirements by providing the following:

- *Logic DFM Solutions:* Logic DFM solutions include software, IP, and services designed to make yield improvements by trading off density or performance, for example, in the logic portions of an IC design. Our software helps designers optimize the yield of the logic portion by using process-specific yield models and technology files that include yield enhanced extensions to IP design building block elements.

- *Circuit Level DFM Solutions:* Circuit level DFM solutions include software and services designed to anticipate the effects of process variability during analog/mixed signal/RF circuit design to optimize the manufacturability of each block given a pre-characterized manufacturing process.
- *Memory DFM Solutions:* Memory DFM solutions include software and services designed to optimize the memory redundancy and bit cell usage given a pre-characterized manufacturing process.
- *pdBRIX Physical IP Solutions:* pdBRIX physical IP solutions include software, IP and services for identifying and developing a set of large, regularly patterned physical IP building blocks that are tailored to a given manufacturing process and target product application. This solution includes mapping software for inserting these physical IP building blocks into a design flow.

Products

Our Manufacturing Process, Volume Manufacturing, and DFM solutions incorporate the use of various elements of our software products and other technologies, depending on the customers' needs. Our software products and other technologies include the following:

Characterization Vehicle® Infrastructure. Our test chip design engineers develop a design of experiments ("DOEs") to determine how IC design building blocks interact with the manufacturing process. Our CV software utilizes the DOE, as well as a library of building blocks that we know has potential yield and performance impact, to generate CV test chip layouts. Our CV infrastructure includes:

- *CV® Test Chips.* Our family of proprietary test chip products are run through the manufacturing process with intentional process modifications to explore the effects of potential process improvements given natural manufacturing variations. Our custom-designed CV test chips are optimized for our test hardware and analysis software and include DOEs tuned to each customer's process. Our full-reticle short-flow CV test chips provide a fast learning cycle for specific process modules and are fully integrated with third-party failure analysis and inspection tools for complete diagnosis to root cause. Our Scribe CV® products are inserted directly on customers' product wafers and collect data from product wafers about critical layers.
- *pdCV™ Analysis Software.* Our proprietary software accumulates data from our CV test chips, enabling models of the performance effects of process variations on these design building blocks to be generated for use with our Yield Ramp Simulator software.
- *pdFasTest® Electrical Wafer Test System.* Our proprietary system enables fast defect characterization of manufacturing processes. This automated system provides parallel functional testing, thus minimizing the time required to perform millions of electrical measurements to test our CV test chips.

Yield Ramp Simulator® (YRS®) Software. Our YRS software analyzes an IC design to compute its systematic and random yield loss. YRS software allows design attribute extraction and feature-based yield modeling. YRS software takes as input a layout that is typically in industry standard format and proprietary yield models generated by running and testing our CV test chips. YRS software is designed to estimate the yield loss due to optical proximity effects, etch micro-loading, dishing in CMP, and other basic process issues.

Circuit Surfer® Software. Our Circuit Surfer software estimates the parametric performance yield and manufacturability of analog/mixed-signal/RF blocks in a design, such as RF transmission, PLLs/DLLs and logic critical paths. Using our Circuit Surfer software, a design engineer is able to estimate how manufacturing process variations will impact circuit performance and yield and then optimizes the circuit to reduce or eliminate the impact of those variations.

pDfx® Environment. Our pDfx environment, which is only offered to customers in a service format, improves the manufacturability of ICs by providing process-aware DFM. The environment incorporates our pDfx yield models with software tools previously incorporated into and subsequently distributed by commercial Electronic Design Automation ("EDA") tool providers to the IC Design community. These tools are either developed by PDF or frequently in partnership with commercial EDA vendors. Incorporating our pDfx modeling capability into the design flow allows designers to optimize yield, performance, power, and area trade-offs within the design flow before the IC is released to manufacturing. In this manner, customers can further optimize designs for yield within their specific guidelines.

pdBRIX™ Platform. Our pdBRIX platform includes software for identifying and developing a set of physical IP building blocks that are tailored to a given manufacturing process and target product application. This platform also includes mapper software for inserting these physical IP building blocks into a traditional design flow.

dataPOWER® YMS Platform. Our *data*POWER YMS platform collects yield data, loads and stores it in an integrated database and allows product engineers to identify and analyze production yield issues using proprietary yield analysis software tools. *data*POWER software contains powerful visualization and reporting tools, including web-based access through the *dP*-Monitor™ module included in the core product in the newest release, which are flexible to address customers' requirements. Our YMS platform is designed to handle very large data sets, to efficiently improve productivity, yield and time-to-market at our customers' sites. Optional modules extend the base platform to enable defect analysis (*dP*-Defect™), memory analysis (*dP*-bitMAP™), spatial signature analysis (*dP*-SSA™), data-mining (*dP*-Mining™), optimization of die on the wafer (*dP*-shotMAP™), and probe-head optimization (*dP*-probeMAP™), and web-based access (*dP*-VUE™).

mæstria® FDC Software. Our mæstria product provides FDC capabilities to rapidly identify sources of process variations and manufacturing excursions by monitoring equipment parameters through proprietary data collection and analysis features.

YA-FDC™ Service and Software Platform. YA-FDC allows online modeling to create real-time virtual measurements of final product attributes during processing. These models enable optimization decisions for process control, process adjustments, PM scheduling, tool corrective actions, and wafer dispatching. The real-time decision-making based on the models is designed to reduce product variability and cost simultaneously.

With the exception of *data*POWER, mæstria and pdBRIX, the primary distribution method for our software and technologies is through our manufacturing process solutions although, we have in the past and may in the future separately license these and other technologies. Though *data*POWER, mæstria and pdBRIX are primarily licensed separately, they may also be distributed within our Design-to-Silicon-Yield solutions.

Customers

Our current customers are primarily integrated device manufacturers ("IDMs"), but also include fabless semiconductor design companies and foundries. Our customers' targeted product segments vary significantly, including microprocessors, memory, graphics, image sensor solutions, and communications. We believe that the adoption of our solutions by such companies for usage in a wide range of products validates the application of our Design-to-Silicon-Yield solutions to the broader semiconductor market.

Toshiba Corporation ("Toshiba") and IBM represented 18% and 16%, respectively, of our total revenue for the year ended December 31, 2008. Toshiba and IBM represented 19% and 16% respectively, of our total revenue for the year ended December 31, 2007. IBM and Toshiba represented 25% and 12%, respectively, of our total revenue for the year ended December 31, 2006. No other customer accounted for 10% or more of our revenue in years 2008, 2007, and 2006.

Sales and Marketing

Our sales strategy is to pursue targeted accounts through a combination of our direct sales force, sales representatives in some local markets, and strategic alliances. For sales in the United States, we rely on our direct sales team, which primarily operates out of our San Jose, California headquarters. In Japan and Korea, we primarily use our direct sales team. In Taiwan, we use a combination of our direct sales team and a local sales representative, J.I.T. International Co., Ltd. In Singapore, Malaysia, and Indonesia, we use Kromax South Asia PTE LTD, a local sales representative. We expect to continue to establish strategic alliances with process licensors, vendors in the electronic design automation software, capital equipment for IC production, silicon IP and mask-making software segments to create and take advantage of sales channel and co-marketing opportunities.

After we are engaged by a customer and early in the solution implementation, our engineers seek to establish relationships in the organization and gain an understanding of our customers' business issues. Our direct sales and solution implementation teams combine their efforts to deepen our customer relationships by expanding our penetration across the customer's products, processes and technologies. This close working relationship with the customer has the added benefit of helping us identify new product areas and technologies in which we should next focus our research and development efforts.

In the year ended December 31, 2008, we derived 55% of total revenue from customers based in Asia compared to 55% and 50%, respectively, in the years ended December 31, 2007 and 2006. In the year ended December 31, 2008, 27% of our total revenue was derived from customers located in the United States as compared to 31% and 39%, respectively, in the years ended December 31, 2007 and 2006. Additional discussion regarding the risks associated with international operations can be found under Item 1A, "Risk Factors".

See our "Notes to Consolidated Financial Statements", included under Part II, Item 8. "Financial Statements and Supplementary Data" for additional geographic information.

Research and Development

Our research and development focuses on developing and introducing new proprietary technologies, software products and enhancements to our existing solutions. We use a rapid-prototyping paradigm in the context of the customer engagement to achieve these goals. We have made, and expect to continue to make, substantial investments in research and development. The complexity of our Design-to-Silicon-Yield technologies requires expertise in physical IC design and layout, transistor design and semiconductor physics, semiconductor process integration, numerical algorithms, statistics and software development. We believe that our team of engineers will continue to advance our market and technological leadership. We conduct in-house training for our engineers in the technical areas, as well as focusing on ways to enhance client service skills. At any given time, about one quarter of our research and development engineers are operating in the field, partnered with solution implementation engineers in a deliberate strategy to provide direct feedback between technology development and customer needs. Our research and development expenses were $34.0 million, $36.1 million, and $27.6 million in 2008, 2007, and 2006, respectively.

Competition

The semiconductor industry is highly competitive and driven by rapidly changing design and process technologies, evolving standards, short product life cycles, and decreasing prices. While the market for process-design integration technologies and services is in its early stages, it is quickly evolving and we expect market competition to continue to develop and increase. We believe the solution to address the needs of IC companies requires a unified system of yield models, design analysis software, CV test chips, physical IP creation, process control software, and yield management software. Currently, we are the only provider of comprehensive commercial solutions for integrating design and manufacturing processes. We face indirect competition from internal groups at IC companies that use an incomplete set of components

not optimized to accelerate process-design integration. Some providers of yield management software, inspection equipment, electronic design automation, or design IP may seek to broaden their product offerings and compete with us.

We face competition for some of the point applications of our solutions including some of those used by the internal groups at IC companies. Specifically there are several suppliers of yield management and/or prediction systems, such as KLA-Tencor, MKS Instruments, Inc. ("MKS") (through its acquisition of Yield Dynamics, Inc.), Mentor Graphics (through its acquisition of Ponte Solutions), Syntricity Inc., Synopsys, Inc. ("Synopsys"), and TIBCO Software Inc. (through its acquisition of Spotfire, Inc.), and process control software, such as Applied Materials, Inc. (through its acquisition of the software division of Brooks Automation, Inc.), BISTel Inc., and Trancom Technology, Inc., and MKS. ARM Ltd. and Virage Logic Corporation provide standard cells in the physical IP space and Tela provides software for standard cell synthesis, each of which could compete with our pdBRIX solution. In addition, Synopsys now appears to offer directly competing DFM solutions, while other EDA suppliers provide alternative DFM solutions that may compete for the same budgetary funds.

We believe the principal factors affecting competition in our market include demonstrated results and reputation, strength of core technology, ability to create innovative technology, and ability to implement solutions for new technology and product generations. We believe that our solutions compete favorably with respect to these factors.

Employees

As of December 31, 2008, we had 375 employees worldwide, including 174 on client service teams, 124 in research and development, 30 in sales and marketing, and 47 in general and administrative functions. Of these employees, 181 are located in the US, 114 in Asia, and 80 in Europe. Worldwide, we had 382 employees as of December 31, 2007 and 369 as of December 31, 2006.

None of our employees are represented by a labor union. Our employees in France and Italy are subject to collective bargaining agreements in those countries. We believe our relationship with our employees is good.

Executive Officers

The following table and notes set forth information about our current executive officers.

Name	Age	Position
John K. Kibarian, Ph.D.	44	President, Chief Executive Officer, and Director
Joy E. Leo	48	Chief Administration Officer
Keith A. Jones	38	Chief Financial Officer and Vice President, Finance
David A. Joseph	55	Chief Strategy Officer
Cees Hartgring, Ph.D.	55	Vice President, Client Services and Sales
Andre Hawit	47	Vice President, Volume Manufacturing Solutions
James Jensen	56	Vice President, Volume Manufacturing Solutions
P. Steven Melman	54	Vice President, Investor Relations and Strategic Initiatives
Kimon Michaels, Ph.D.	42	Vice President, Design for Manufacturability, and Director

John K. Kibarian, Ph.D., one of our founders, has served as President since November 1991 and has served as our Chief Executive Officer since July 2000. Dr. Kibarian has served as a director since December 1992. Dr. Kibarian received a B.S. in Electrical Engineering, an M.S. E.C.E. and a Ph.D. E.C.E. from Carnegie Mellon University.

Joy E. Leo has served as Chief Administration Officer since July 2008. Prior to joining PDF, Ms. Leo served as Senior Vice President, Chief Financial Officer and Secretary for Credence Systems Corporations, now known as LTX-Credence, a provider of focused, cost-optimized ATE solutions. Ms. Leo served as Vice President of Finance and Administration, Chief Financial Officer and Secretary for Artisan Components, Inc., now known as ARM Holdings PLC. Ms. Leo also served as Vice President of Finance and Administration and Chief Financial Officer for IMP, Inc., as Vice President of Finance, Operations and Administration for Innomedia Incorporated, and Vice President and Chief Financial Officer for Philips Components, a multi-billion dollar division of Royal Philips Electronics N.V. Ms. Leo received a B.A. in Business Administration and Finance from the University of Utah.

Keith A. Jones has served as Chief Financial Officer and Vice President, Finance since January 2006. Mr. Jones served as Director of Finance and SEC Compliance from July 2003 to December 2005. Prior to joining PDF, Mr. Jones served as Assistant Controller for Interwoven, Inc., a provider of enterprise content management solutions, and as Controller for eTime Capital, Inc., a financial software applications company. Prior to that, Mr. Jones served in various positions at Deloitte & Touche LLP, most recently as an Audit Manager. Mr. Jones received a B.S. in Business Administration from California State University, Fresno and is a Certified Public Accountant.

David A. Joseph has served as Chief Strategy Officer since April 2003. Mr. Joseph served as Executive Vice President Sales, Marketing, and Business Development from August 2001 through March 2003, as Vice President, Products and Methods from July 1999 through August 2001 and as Vice President, Business Development from November 1998 through June 1999. Prior to joining PDF, Mr. Joseph served KLA-Tencor, a semiconductor manufacturing company, in various positions, including Japan Business Manager, Vice President Customer Satisfaction and General Manager of Yield Analysis Software. Mr. Joseph received a B.S. in Mathematical Science from Stanford University.

Cees Hartgring, Ph.D., has served as Vice President, Client Services and Sales since June 2007. Dr. Hartgring served as Vice President and General Manager, Manufacturing Process Solutions from January 2004 through May 2007, as Vice President, Worldwide Sales and Strategic Business Development from April 2003 through December 2003 and as Vice President of Sales from September 2002 through March 2003. Prior to joining PDF, Dr. Hartgring served as President and Chief Executive Officer of Trimedia Technologies, a Philips Semiconductor spinout. Dr. Hartgring also held various executive positions at Philips Semiconductor, most recently as Vice President and General Manager of the Trimedia business unit. Dr. Hartgring received an undergraduate degree from the Technical University Delft and an M.S.E.E. and a Ph.D. in Electrical Engineering and Computer Science from the University of California at Berkeley.

Andre Hawit has served as Vice President, Volume Manufacturing Solutions since July 2008. Mr. Hawit served as Vice President, Yield Manufacturing Systems from January 2006 through June 2008, and as Vice President, Software Development from September 2003 through December 2005. Prior to joining PDF, Mr. Hawit was the founder of IDS Software Systems Inc. ("IDS"), a yield management systems software and solutions company. He also held various positions within IDS including President and Chief Executive Officer, and most recently Chief Technology Officer. Mr. Hawit received a B.S. in Electronics and Computer Engineering from San Francisco State University and an M.B.A. from National University School of Business.

James Jensen has served as Vice President, Volume Manufacturing Solutions since July 2008. Mr. Jensen served as Vice President, Business Development from June 2007 through July 2008, as Vice President, Engineering Services for Manufacturing Process Solutions from January 2006 through May 2007, as Co-Vice President, Client Services from November 2003 through December 2005 and as Director of Business Development, Integrated Yield Ramp Solutions, from March 2002 through October 2003. Prior to joining PDF, Mr. Jensen served as General Manager of a semiconductor fabrication facility of Texas Instruments, a semiconductor products company. Prior to that, Mr. Jensen served as Fabrication

Operations Director for Silicon Systems Inc., a semiconductor products company. Mr. Jensen received a B.S. in Physics from the University of Utah and an M.S. in Management from Purdue University.

P. Steven Melman has served as Vice President, Investor Relations and Strategic Initiatives since January 2006. Mr. Melman served as Chief Financial Officer and Vice President, Finance and Administration from July 1998 to December 2005. Prior to joining PDF, Mr. Melman served as Vice President, Finance and Administration with Animation Science Corporation, an animation company. Prior to that, Mr. Melman served as Vice President, Finance and Chief Financial Officer with Business Resource Group, a facilities management and commercial furnishings company. Mr. Melman received a B.S. in Business Administration from Boston University and is a Certified Public Accountant.

Kimon Michaels, Ph.D., one of our founders, has served as Vice President, Design for Manufacturability since June 2007. Dr. Michaels served as Vice President, Field Operations for Manufacturing Process Solutions from January 2006 through May 2007, and has been a Director since November 1995. From March 1993 through December 2005, he served in various vice presidential capacities. He also served as Chief Financial Officer from November 1995 to July 1998. Dr. Michaels received a B.S. in Electrical Engineering, an M.S. E.C.E. and a Ph.D. E.C.E. from Carnegie Mellon University.

Available Information

We file or furnish various reports, such as registration statements, periodic and current reports, proxy statements and other materials with the SEC. Our Internet website address is www.PDF.com. You may obtain, free of charge on our Internet website, copies of our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act, as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. The information we post is intended for reference purposes only; none of the information posted on our website is part of this report or incorporated by reference herein.

In addition to the materials that are posted on our website, you may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, Washington, DC 20549. You may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet site that contains reports, proxy and other information statements, and other information regarding issuers, including us, that file electronically with the SEC. The Internet address of that site is http://www.sec.gov.

Item 1A. ***Risk Factors***

The semiconductor market is volatile and unpredictable, which limits our ability to forecast our business and could negatively impact our results of operations.

The semiconductor industry has experienced significant challenges in 2008 and may continue to face challenges in 2009 as a result of the decline in the macroeconomic environment. As a provider to global semiconductor companies, we are subject to business cycles, the timing, length and volatility of which can be difficult to predict. The semiconductor industry historically has been cyclical due to sudden changes in customers' manufacturing capacity requirements and spending, which depend in part on capacity utilization, demand for customers' IC products, inventory levels relative to demand, and access to affordable capital. These changes have affected the timing and amounts of customers' purchases and investments in our Design-to-Silicon-Yield solutions, and continue to affect our sales, operating expenses and net income. If we are not able to make adjustments to our business quickly to appropriately align our cost structure with prevailing market conditions in periods of low demand, or if we do not have sufficient resources to meet customers' demands in periods of high demand, results could be negatively impacted and could differ greatly from our expectations.

Our business is subject to risks associated with the ongoing financial crisis and weakening global economy.

The recent severe tightening of the credit markets, turmoil in the financial markets, and weakening global economy are contributing to slowdowns in the semiconductor industry, which impacts our ability to make sales. These slowdowns are expected to worsen if these economic conditions are prolonged or deteriorate further. The markets for semiconductors depend largely on consumer spending. Economic uncertainty exacerbates negative trends in consumer spending and may cause some of our customers to delay or refrain altogether from entering into new engagements, licensing new or additional software products, or renewing maintenance and support for existing licensed software at historical levels. This will negatively affect our revenues. Difficulties in obtaining capital and deteriorating market conditions may also lead to the inability of some customers to obtain affordable financing for other purchases, which could tie up funds otherwise budgeted for purchases of our solutions and technologies. Customers with liquidity issues may also lead to additional bad debt expense. Further, these conditions and uncertainty about future economic conditions make it challenging for us to forecast our operating results, make business decisions, and identify the risks that may affect our business, financial condition and results of operations. If we are not able to timely and appropriately adapt to changes resulting from the difficult macroeconomic environment, our business, financial condition, and results of operations may be significantly negatively affected.

If semiconductor designers and manufacturers do not continue to adopt, or they significantly delay adoption of, our Design-to-Silicon-Yield solutions, our revenue will suffer.

If semiconductor designers and manufacturers do not continue to adopt our Design-to-Silicon-Yield solutions, both as currently comprised and as we may offer them in the future, our revenue will decline. We may not be successful if we do not continue to enter into agreements with existing customers and new customers that cover a larger number of IC products and processes. If we do not develop new customer relationships with companies that are IDMs, fabless semiconductor companies, and foundries, as well as system manufacturers, the market acceptance of our solutions will suffer. Factors that may limit adoption of our Design-to-Silicon-Yield solutions by semiconductor companies include:

- our existing and potential customers' delay in their adoption of the next process technology;
- IDMs of logic ICs discontinuing or significantly cutting back their investment in the development of new process technology as a result of a shift to a model of outsourcing a larger proportion, or all, of the mass production of their ICs;
- our inability to keep pace with the rapidly evolving technologies and equipment used in the semiconductor design and manufacturing processes;
- our customers' failure to achieve satisfactory yield improvements using our Design-to-Silicon-Yield solutions; and
- our inability to develop, market, or sell effective solutions that are outside of our traditional MPS logic focus.

Revenue from our gainshare performance incentives is dependent on factors outside of our control, including the volume of ICs that our customers are able to sell to their customers.

Our gainshare performance incentives fee component ties the profits of our customers to our own. Through this component, revenue for a particular product is largely determined by the volume of that product that our customer is able to sell to its customers, which is outside of our control. Decreased demand for semiconductor products decreases the volume of products our customers are able to sell,

which directly decreases our gainshare performance incentives revenue. Important factors that could cause demand for semiconductor products to negatively fluctuate include:

- changes in business and economic conditions, including the current downturn in the semiconductor industry and the overall economy; and
- decreases in consumer confidence caused by changes in market conditions, including changes in the credit market.

Also, our customers may unilaterally decide to implement changes to their manufacturing processes during the period that is covered by gainshare performance incentives component, which could negatively affect yield results. Since we currently work on a small number of large projects, any product that does not achieve commercial viability or a significant increase in yield, or sustain significant volume manufacturing during the time we receive gainshare performance incentives revenue from such customers, could significantly reduce our revenue and results of operations below expectations. In addition, if we work with two directly competitive products, volume in one may offset volume, and thus any of our related gainshare performance incentives, in the other product.

We may not be able to effectively implement our restructuring plans, and our restructuring plans may not result in the expected benefits on our planned schedule, or at all, which could negatively impact our future results of operations.

During the year end December 31, 2008, we initiated restructuring plans in an effort to align our cost structure with expected revenue. We may not be able to successfully complete and realize the expected benefits of our restructuring plans, such as improvements in operating margins and cash flows, in the restructuring periods contemplated or at all. The restructuring plans may involve higher costs or a longer timetable than we currently anticipate, mainly due to the timing and execution of some plans and programs subject to local labor law requirements, and consultation with appropriate work councils. Our inability to realize these benefits may result in an inefficient business structure that could negatively impact our results of operations. We also expect our restructuring plans to cause us to incur substantial costs related to severance and other employee-related costs. Our restructuring plans may also subject us to litigation risks and expenses. In addition, our restructuring plans may have other consequences, such as attrition beyond our planned reduction in workforce or a negative impact on employee morale, and our competitors may seek to gain a competitive advantage over us. The restructuring plans could also cause our remaining employees to be less productive, which in turn may negatively affect our revenue and other operating results in the future.

We generate a large percentage of our total revenue from a limited number of customers, so decreased volumes at any one of these customers, or the loss of any one of these customers could significantly reduce our revenue and results of operations below expectations.

Historically, we have had a small number of large customers for our core Design-to-Silicon-Yield solutions and we expect this to continue in the near term. In the year ended December 31, 2008, two customers accounted for 34% of our total net revenue, with Toshiba Corporation representing 18% and IBM representing 16%. In the year ended December 31, 2007, two customers accounted for 35% of our total net revenue, with Toshiba Corporation representing 19% and IBM representing 16%. We could lose a customer due to its decision not to engage us on future process nodes, its decision not to develop its own future process node, or as a result of industry consolidation. The loss of any of these customers or a decrease in the sales volumes of their products could significantly reduce our total revenue below expectations. In particular, such a loss could cause significant fluctuations in results of operations because our expenses are fixed in the short term and it takes us a long time to replace customers.

If we do not effectively manage and support our operations and integrate recent and planned growth, our business strategy may fail.

We have in the past, and may in the future, experienced interruptions in our information systems on which our global operations depend. Further, physical damage to, failure of, or digital damage (such as significant viruses or worms) to, our information systems could disrupt and delay time-sensitive services or computing operations that we perform for our customers, which could negatively impact our business results and reputation. In addition, we must frequently expand our internal information system to meet increasing demand in storage, computing and communication. Our internal information system is expensive to expand and must be highly secure due to the sensitive nature of our customers' information that we transmit. Building and managing the support necessary for our growth places significant demands on our management and resources. In addition, we are in the process of switching to a new accounting system, which could disrupt our business operations and distract management. These demands may divert these resources from the continued growth of our business and implementation of our business strategy. Further, we must adequately train our new personnel, especially our client service and technical support personnel, to effectively and accurately, respond to and support our customers. If we fail to do this, it could lead to dissatisfaction among our customers, which could slow our growth.

Our stock price may be volatile, and our common stock could decline in value, increasing potential dilution to our stockholders, or we may be delisted from the NASDAQ Global Market.

Our stock price has fluctuated widely during the last few years from a low closing price of $1.41 per share in December 2008 to a high of $19.36 per share in April 2006. This significant reduction in our stock price negatively impacts our ability to raise equity capital in the public markets and increases the cost to us, as measured by dilution to our existing shareholders, of equity financing. In addition, the reduced stock price also increases the cost to us, in terms of dilution, of using our equity for employee compensation or for acquisitions of other businesses. Additionally, in order for our common stock to continue to be quoted on the NASDAQ Global Market ("Nasdaq"), we must satisfy various listing maintenance standards established by Nasdaq, including, among other things, the general requirement, should Nasdaq choose to enforce such requirements again after the April 2009 end date of the current extension of suspension of any such enforcement, that our stock price consistently trades at or above $1.00 per share and that the total market value of our common stock exceed $50,000,000. We may have periods when our stock does not trade at, or the market value of our common stock has been below, the levels required by Nasdaq rules. If we were to be delisted from the Nasdaq and move to an alternative market, which may be less efficient and less broad-based, we may have difficulty accessing capital markets for additional funding, and the ability of our stockholders to sell any of our common stock at all would be severely, if not completely, limited, which could cause our stock price to decline further. Delisting could also have other negative results, including the potential loss of confidence by employees, the loss of institutional investor interest, and fewer business development opportunities. Also, significant volatility in the stock price could be followed by a securities class action lawsuit, which could result in substantial costs and a diversion of our management's attention and resources.

If we fail to protect our IP rights, customers or potential competitors may be able to use our technologies to develop their own solutions which could weaken our competitive position, reduce our revenue, or increase our costs.

Our success depends largely on the proprietary nature of our technologies. We currently rely primarily on contractual, patent, copyright, trademark, and trade secret protection. Our pending patent applications may not result in issued patents, and even if issued, they may not be sufficiently broad to protect our proprietary technologies. Litigation may be necessary from time to time to enforce our IP rights or to determine the validity and scope of the proprietary rights of others. As a result of any such litigation, we

could lose our proprietary rights and incur substantial unexpected operating costs. Litigation could also divert our resources, including our managerial and engineering resources.

Competition in the market for yield improvement solutions and increased integration between IC design and manufacturing may intensify in the future, which could impede our ability to grow or execute our strategy.

Competition in our market may intensify in the future, which could slow our ability to grow or execute our strategy and could lead to increased pricing pressure. Our current and potential customers may choose to develop their own solutions internally, particularly if we are slow in deploying our solutions or improving them to meet market needs. Many of these companies have the financial and technical capability to develop their own solutions. Also, competitors may be able to operate with a lower cost structure than our engineering organization, which would give any such competitor's products a competitive advantage over our solutions. There may be other providers of commercial solutions for systematic IC yield and performance enhancement of which we are not aware. We currently face indirect competition from the internal groups at IC companies and some direct competition from providers of yield management or prediction software such as KLA-Tencor, MKS Instruments, Inc. ("MKS") (through its acquisition of Yield Dynamics, Inc.), Mentor Graphics (through its acquisition of Ponte Solutions), Syntricity Inc., TIBCO Software Inc. (through its acquisition of Spotfire Inc.), and Synopsys, Inc., and process control software, such as Applied Materials, Inc., BISTel Inc., and Trancom Technology, Inc., and MKS. Further, ARM Ltd. and Virage Logic Corporation provide standard cells in the physical IP space and Tela provides software for standard cell synthesis, each of which could compete with our pdBRIX solution. Some providers of yield management software or inspection equipment may seek to broaden their product offerings and compete with us. For example, KLA-Tencor has announced adding the use of test structures to one of their inspection product lines. In addition, we believe that the demand for solutions that address the need for better integration between the silicon design and manufacturing processes may encourage direct competitors to enter into our market. For example, large integrated organizations, such as IDMs, electronic design automation software providers, IC design service companies or semiconductor equipment vendors, may decide to spin-off a business unit that competes with us. Other potential competitors include fabrication facilities that may decide to offer solutions competitive with ours as part of their value proposition to their customers. In addition, Synopsys, Inc. now appears to offer directly competing DFM, while other EDA suppliers provide alternative DFM solutions that may compete for the same budgetary funds. If these potential competitors change the pricing environment or are able to attract industry partners or customers faster than we can, we may not be able to grow and execute our strategy as quickly or at all. In addition, customer preferences may shift away from our solutions as a result of the increase in competition.

We face operational and financial risks associated with international operations that could negatively impact our revenue.

We have in the past expanded our non-U.S. operations and may in the future continue such expansion by establishing overseas subsidiaries, offices, or contractor relationships in locations, if and when, deemed appropriate by our management. Thus, the success of our business is subject to risks inherent in doing business internationally, including in particular:

- some of our key engineers and other personnel are foreign nationals and they may have difficulty gaining access to the United States and other countries in which our customers or our offices may be located and it may be difficult for us to recruit and retain qualified technical and managerial employees in foreign offices;
- greater difficulty in collecting account receivables resulting in longer collection periods;

- language and other cultural differences may inhibit our sales and marketing efforts and create internal communication problems among our U.S. and foreign research and development teams, increasing the difficulty of managing multiple, remote locations performing various development, quality assurance, and yield ramp analysis projects;
- compliance with, inconsistencies among, and unexpected changes in, a wide variety of foreign laws and regulatory environments with which we are not familiar, including, among other issues, with respect to employees, protection of our IP, and a wide variety of operational regulations and trade and export controls under domestic, foreign, and international law;
- currency risk due to the fact that expenses for our international offices are denominated in the local currency, including the Euro, while virtually all of our revenue is denominated in U.S. dollars;
- currency risk associated with cash denominated in foreign currencies, including the Euro, held by foreign subsidiaries we have acquired;
- quarantine, private travel limitation, or business disruption in regions affecting our operations, stemming from actual, imminent or perceived outbreak of human pandemic or contagious disease;
- in the event a larger portion of our revenue becomes denominated in foreign currencies, we would be subject to a potentially significant exchange rate risk; and
- economic or political instability, including but not limited to armed conflict, terrorism, interference with information or communication of networks or systems, and the resulting disruption to economic activity and business operations.

Revenues generated from customers in Asia accounted for 55% of total revenue in the years ended December 31, 2008 and 2007. Thus, in Asia, in particular, we face the following additional risks:

- a downturn in Asian economies which could limit our ability to retain existing customers and attract new ones in Asia; and
- if the U.S. dollar increases in value relative to local currencies, including for example, the Japanese Yen, the cost of our solutions will be more expensive to existing and potential local customers and therefore less competitive.

In the Middle East, we use a third-party service provider, whose headquarters are not located in a U.S. embargoed country, to provide software quality assurance and other services for certain of our software products. The political uncertainty surrounding the region could disrupt our third-party service provider's operations and thus negatively affect the range of services we are able to provide or our cost for such services.

Our earnings per share and other key operating results may be unusually high in a given quarter, thereby raising investors' expectations, and then unusually low in the next quarter, thereby disappointing investors, which could cause our stock price to drop.

Historically, our quarterly operating results have fluctuated. Our future quarterly operating results will likely fluctuate from time to time and may not meet the expectations of securities analysts and investors in some future period. The price of our common stock has declined significantly in the recent past and may continue to decline if we fail to meet expectations about our revenue or expenses.

Measurement of our gainshare performance incentives requires data collection and is subject to customer agreement, which can result in uncertainty and cause quarterly results to fluctuate.

We can only recognize revenue based on gainshare performance incentives once we have reached agreement with our customers on their level of yield performance improvements. Because measuring the amount of yield improvement is inherently complicated and dependent on our customers' internal

information systems, there may be uncertainty as to some components of measurement. This could result in our recognition of less revenue than expected. In addition, any delay in measuring revenue attributable to our gainshare performance incentives could cause all of the associated revenue to be delayed until the next quarter. Since we currently have only a few large customers and we are relying on gainshare performance incentives as a significant component of our total revenue, any delay could significantly harm our quarterly results.

Changes in the structure of our customer contracts, including the mix between fixed and variable revenue and the mix of elements, including perpetual and term-based licenses, can adversely affect the amount and timing of our total revenue.

Our long-term success is largely dependent upon our ability to structure our future customer contracts to include a larger gainshare performance incentives component relative to the fixed fee component. We typically recognize the fixed fee component earlier than the gainshare performance incentives component so if we are successful in increasing the gainshare performance incentives component of our customer contracts, we will experience an adverse impact on our operating results in the short term as we reduce the fixed fee component. Due to acquisitions and expanded business strategies, the mix of elements in some of our contracts has changed recently and the relative importance of the software component in some of our contracts has increased. We have experienced, and may in the future experience, delays in the expected recognition of revenue associated with generally accepted accounting principles regarding the timing of revenue recognition in multi-element software arrangements, including the effect of acceptance criteria as a result of the change in our contracts. If we fail to meet contractual acceptance criteria on time or at all, the total revenue we receive under a contract could be delayed or decline. Further, if we mix term-based licenses with perpetual licenses, it will impact the timing of the recognition of revenue from that customer. In addition, by increasing the gainshare performance incentives or the software component, we may increase the variability or timing of recognition of our revenue, and therefore increase the risk that our total future revenue will be lower than expected and fluctuate significantly from period to period.

It typically takes us a long time to sell our unique solutions to new customers and into new markets, and that can result in uncertainty and delays in generating revenue.

Our gainshare performance incentives business model is unique and our Design-to-Silicon-Yield solutions are often unfamiliar to new customers. This results in a lengthier sales cycle compared to some of our competitors and requires a significant amount of our senior management's time and effort. Furthermore, we need to target those individuals within a customer's organization who have overall responsibility for the profitability of an IC. These individuals tend to be senior management or executive officers. We may face difficulty identifying and establishing contact with such individuals. Even after initial acceptance, due to the complexity of structuring the gainshare performance incentives component, the negotiation and documentation processes can be lengthy. It can take nine months or more to reach a signed contract with a customer. Unexpected delays in our sales cycle could cause our revenue to fall short of expectations. By way of example, one of the industries that we have recently targeted that we believe would greatly benefit from our yield management system and FDC technology is the rapidly growing solar panel industry. Our efforts to leverage our products in this industry may not be successful. Further, ongoing negotiations and evaluation projects with photovoltaic manufacturers may not result in significant revenue for us if we are unable to close new engagements in these markets on terms favorable to us, in a timely manner, or at all, or if we are unable to successfully deliver our products and services to such markets.

We have a history of losses, we may incur losses in the future and we may be unable to reach, or thereafter maintain, profitability.

We have experienced losses in the past and in the current fiscal year ended December 31, 2008. We may not achieve, and thereafter maintain, profitability if our revenue increases more slowly than we expect or if it decreases. In addition, virtually all of our operating expenses are fixed in the short term, so any shortfall in anticipated revenue in a given period could significantly reduce our operating results below expectations. Our accumulated deficit was $112.6 million as of December 31, 2008. We expect to continue to incur significant expenses in connection with:

- funding for research and development;
- expansion of our solution implementation teams;
- expansion of our sales and marketing efforts; and
- additional non-cash charges relating to amortization and stock-based compensation.

As a result, if we do not significantly increase revenue to reach or maintain profitability on a quarterly or annual basis, our stock price could decline. We may be subject to additional impairment of our long-lived assets.

We intend to pursue additional strategic relationships, which are necessary to maximize our growth, but could substantially divert management attention and resources.

We have in the past, and may in the future, sought to establish and maintain strategic relationships with industry leaders at each stage of the IC design and manufacturing processes, This requires us to expend significant resources and to commit a significant amount of management's time and attention, although any such relationship may not be successful. If we are unable to enter into strategic relationships with these companies, we will not be as effective at modeling existing technologies or at keeping ahead of the technology curve as new technologies are introduced. In the past, the absence of an established working relationship with key companies in the industry has meant that we have had to exclude the effect of their component parts from our modeling analysis, which reduces the overall effectiveness of our analysis and limits our ability to improve yield.

Our solution implementations may take longer than we anticipate, which could cause us to lose customers and may result in adjustments to our operating results.

Our solution implementations require a team of engineers to collaborate with our customers to address complex yield loss issues by using our software and other technologies. We must estimate the amount of time needed to complete an existing solution implementation in order to estimate when the engineers will be able to commence a new solution implementation. In addition, our accounting for solution implementation contracts, which generate fixed fees, sometimes require adjustments to profit and loss based on revised estimates during the performance of the contract. These adjustments may have a material effect on our results of operations in the period in which they are made. The estimates giving rise to these risks, which are inherent in fixed-price contracts, include the forecasting of costs and schedules, and contract revenues related to contract performance.

If we are not able to attract, retain, motivate, and strategically locate talented employees, including some key executives, our business may suffer.

Our success and competitiveness depend on our ability to attract, retain, motivate, and strategically locate in our offices around the globe talented employees, including some of our key executives. Achieving this objective may be difficult due to many factors, including fluctuations in global economic and industry conditions, changes in our management or leadership, the hiring practices at our competitors or customers,

cost reduction activities, and the effectiveness of our compensation programs, including equity-based programs. Further, we have had, and expect to continue to have, difficulty in obtaining visas permitting entry for some of our employees that are foreign nationals into the United States, and delays in obtaining visas permitting entry into other key countries, for several of our key personnel, which disrupts our ability to strategically locate our personnel. If we lose the services of any of our key executives or a significant number of our engineers, it could disrupt our ability to implement our business strategy. If we do not successfully attract, retain and motivate key employees, including key executives, we may be unable to realize our business objectives and our operating results may suffer.

Inadvertent disclosure of our customers' confidential information could result in costly litigation and cause us to lose existing and potential customers.

Our customers consider their product yield information and other confidential information, which we must gather in the course of our engagement with the customer, to be extremely competitively sensitive. If we inadvertently disclosed or were required to disclose this information, we would likely lose existing and potential customers and could be subject to costly litigation. In addition, to avoid potential disclosure of confidential information to competitors, some of our customers may, in the future, ask us not to work with key competitive products, which could limit our revenue opportunities.

Our technologies could infringe the IP rights of others, causing costly litigation and the loss of significant rights.

Significant litigation regarding intellectual property rights exists in the semiconductor industry. It is possible that a third party may claim that our technologies infringe their intellectual property rights or misappropriate their trade secrets. Any claim, even if without merit, could be time consuming to defend, result in costly litigation, or require us to enter into royalty or licensing agreements, which may not be available to us on acceptable terms, or at all. A successful claim of infringement against us in connection with the use of our technologies could adversely affect our business.

Defects in our proprietary technologies, hardware and software tools, and the cost of support to remedy any such defects could decrease our revenue and our competitive market share.

If the software, hardware, or proprietary technologies we provide to a customer contain defects that increase our customer's cost of goods sold and time-to-market or damage our customer's property, these defects could significantly decrease the market acceptance of our solutions. Further, the cost of support resources required to remedy any defects in our technologies, hardware, or software tools could exceed our expectations. Any actual or perceived defects with our software, hardware, or proprietary technologies may also hinder our ability to attract or retain industry partners or customers, leading to a decrease in our revenue. These defects are frequently found during the period following introduction of new software, hardware, or proprietary technologies or enhancements to existing software, hardware, or proprietary technologies. Our software, hardware, and proprietary technologies may contain errors not discovered until after customer implementation of the silicon design and manufacturing process recommended by us. If our software, hardware, or proprietary technologies contain errors or defects, it could require us to expend significant resources to remedy these problems, which could reduce margins and result in the diversion of technical and other resources from our other development efforts.

Failing to maintain the effectiveness of our internal control over financial reporting could cause the cost related to remediation to increase and could cause our stock price to decline.

In the future, our management may identify deficiencies regarding the design and effectiveness of our system of internal control over financial reporting that we engage in pursuant to Section 404 of the Sarbanes-Oxley Act ("Section 404") as part of our Form 10-K. Such deficiencies could include those arising from turnover of qualified personnel or arising as a result of acquisitions, which we may not be able

to remediate in time to meet the continuing reporting deadlines imposed by Section 404 and the costs of which may harm our results of operations. In addition, if we fail to maintain the adequacy of our internal controls, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that our management can conclude on an ongoing basis that we have effective internal controls. We also may not be able to retain an independent registered public accounting firm with sufficient resources to attest to and report on our internal controls in a timely manner. Moreover, our registered public accounting firm may not agree with our management's future assessments and may deem our controls ineffective if we are unable to remediate on a timely basis. If in the future we are unable to assert that we maintain effective internal controls, our investors could lose confidence in the accuracy and completeness of our financial reports that in turn could cause our stock price to decline.

We may not be able to raise necessary funds to support our growth or execute our strategy.

Unanticipated efforts to support more rapid expansion, develop or enhance Design-to-Silicon-Yield solutions, respond to competitive pressures or acquire complementary businesses or technologies could impact our future capital requirements and the adequacy of our available funds. In such event, we may need to raise additional funds through public or private financings, strategic relationships or other arrangements. We may not be able to raise necessary funds on terms favorable to us, or at all.

Recent or potential acquisitions may adversely affect our business by diverting management's attention, increasing our expenses or by being more difficult to integrate than expected.

Our success in realizing the strategic benefits, the timing of this realization, and growth opportunities to be gained from acquiring technology or companies and incorporating into PDF the operations of recently acquired businesses, including Si Automation S.A. ("SiA"), a French company, acquired in October 2006, and Fabbrix, Inc. ("Fabbrix"), a U.S. company, acquired in May 2007, including those acquired in October 2008 from Triant Holdings, Inc. and Triant Technologies (2005) Inc. ("Triant"), both Canadian companies, depend upon our ability to successfully identify the technology or company, negotiate favorable terms, close the related transaction in a timely manner, and integrate those businesses or assets. We may be unable to identify suitable acquisition or investment candidates at reasonable prices or on reasonable terms, or consummate future acquisitions or investments at all or in a timely manner, each of which could slow our growth strategy. Further, the integration of acquired businesses or assets is a complex, costly and time-consuming process. The difficulties of combining our existing operations associated with acquired businesses or assets include:

- consolidating research and development operations;
- integrating acquired products and business technology into our existing product lines;
- coordinating effective sales and marketing functions;
- preserving research and development, marketing, customer and other important relationships; and
- minimizing the diversion of management's attention from ongoing business concerns.

Changes in effective tax rates could negatively affect our operating results.

We conduct our business globally and, as a result, are subject to taxation in the United States and foreign countries. Our future tax rates could be affected by numerous factors, including changes in tax laws or the interpretation of such tax laws and changes in accounting policies. Our filings are subject to reviews or audit by the Internal Revenue Service and state, local and foreign taxing authorities. We cannot be sure that any final determination in an audit would not be materially different than the treatment reflected in our historical income tax provisions and accruals. If additional taxes are assessed as a result of an audit, there could be a significant negative effect on our income tax provision and net income in the period or periods for which that determination is made.

The uncertainty in the credit markets might impact the value of certain auction-rate securities we have and we might have to record impairment in the future.

Credit concerns in the capital markets have significantly reduced our ability to liquidate auction-rate securities that we classify as available-for-sale securities on our balance sheet. The liquidity of the securities has been reduced by the uncertainty in the credit markets and the exposure of these securities to the financial condition of bond insurance companies. All auction-rate securities we hold have been failing to sell at auction since February 2008 due to an insufficient number of bidders. We reviewed the value of these securities for impairment as of December 31, 2008, concluded that these securities were temporarily impaired, and recorded an unrealized loss of $282,000. In future periods, the estimated fair value of our auction-rate securities could decline further based on market conditions, which could result in additional impairment.

Item 1B. ***Unresolved Staff Comments***

None.

Item 2. ***Properties***

Our principal executive offices are located in San Jose, California where we lease approximately 39,300 square feet under a lease that expires in August 2013. We lease 11,200 square feet of office and laboratory space in San Diego, California under a lease that expires in July 2013. We lease other sales offices and laboratory spaces in Pennsylvania, Texas, and New Hampshire in the United States. In addition, we have offices in France, Germany, Italy, China, Japan, Korea, Singapore, and Taiwan with an aggregate of square footage of approximately 33,200 square feet each under various leases that expire at different times through 2013. We believe our existing facilities and those in negotiation are adequate to meet our current needs and are being utilized consistently with our past practice.

Item 3. ***Legal Proceedings***

We are not currently party to any material legal proceedings.

Item 4. ***Submission of Matters to a Vote of Security Holders***

No matters were submitted to a vote of security holders during the fourth quarter of 2008.

PART II

Item 5. ***Market for Registrant's Common Equity and Related Stockholder Matters and Issuer Purchases of Equity Securities***

Our common stock trades on the NASDAQ Global Market under the symbol "PDFS". As of February 25, 2009 we had approximately 205 stockholders of record and the closing price of our common stock was $1.10 per share as reported by the NASDAQ Global Market. The number of stockholders of record does not include individuals whose stock is in nominee or "street name" accounts through brokers.

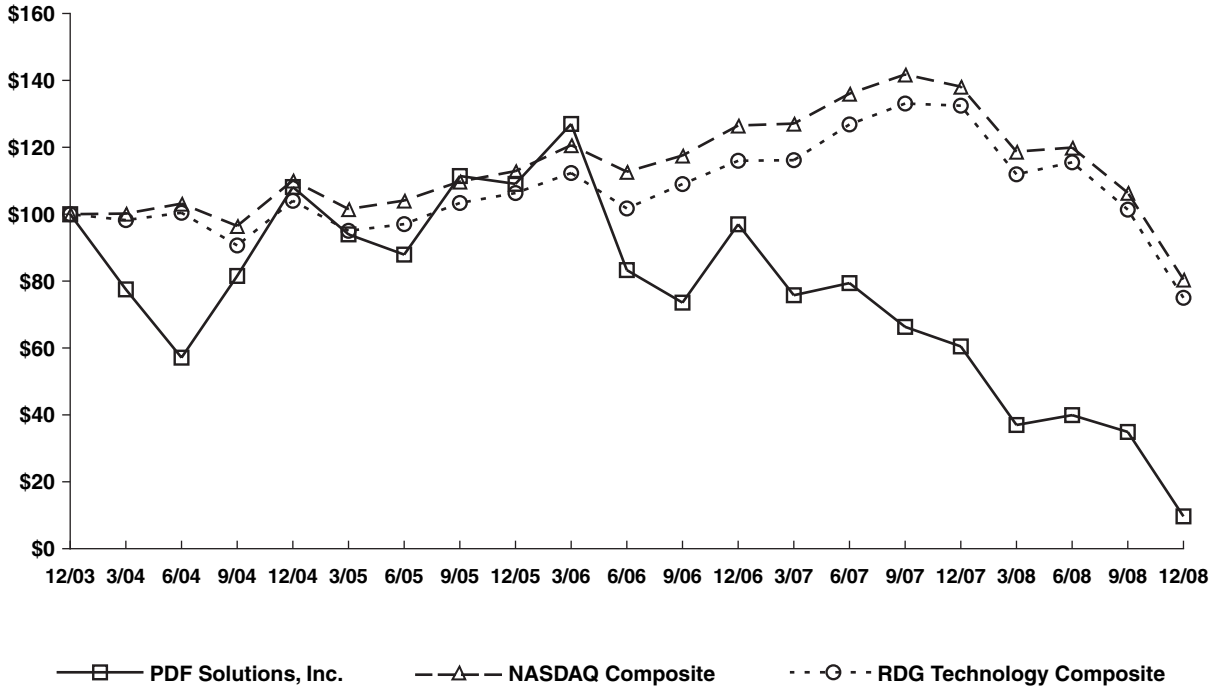
The following table sets forth for the periods indicated the high and low closing sale prices for our common stock as reported by the NASDAQ Global Market:

2008	High	Low
First Quarter	$9.01	$4.70
Second Quarter	$6.24	$4.30
Third Quarter	$6.79	$4.55
Fourth Quarter	$5.41	$1.41

2007	High	Low
First Quarter	$14.82	$10.00
Second Quarter	$12.16	$ 9.87
Third Quarter	$12.49	$ 9.36
Fourth Quarter	$10.22	$ 7.21

The following graph compares the cumulative total stockholder return data for our stock since December 31, 2003 to the cumulative return over such period of (i) The NASDAQ Composite Index and (ii) the RDG Technology Composite Index. The graph assumes that $100 was invested on December 31, 2003. The graph further assumes that such amount was initially invested in the Common Stock of the Company at a per share price of $14.90 (closing price on December 31, 2003) and that of any dividends were reinvested. This performance graph is not "soliciting material," is not deemed filed with the SEC and is not to be incorporated by reference in any filing by us under the Securities Act or the Exchange Act whether made before or after the date hereof and irrespective of any general incorporation language in any such filing. The stock price performance on the following graph is not necessarily indicative of future stock price performance.

COMPARISON OF 5 YEARS CUMULATIVE TOTAL RETURNS*
Among PDF Solutions, Inc., The NASDAQ Composite Index
And The RDG Technology Composite Index



* $100 invested on 12/31/03 in stock or index-including reinvestment of dividends.
Fiscal year ending December 31.

The information under the heading "Equity Compensation Plan Information" in our definitive Proxy Statement (our "Proxy Statement") to be filed with the SEC in connection with our 2008 Annual Meeting of Stockholders is incorporated into Item 5 of this report by reference.

The table below sets forth the information with respect to purchases made by or on behalf of the Company or any "affiliated purchaser" (as the term is defined in Rule 10b-18(a)(3) under the Exchange Act) of our common stock during the fourth quarter of the year ended December 31, 2008 (in thousands except per share amounts):

ISSUER PURCHASES OF EQUITY SECURITIES

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs(1)	Approximate Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs(1)
Month #1 (October 1, 2008 through October 31, 2008)	—	$ —	—	$5,369
Month #2 (November 1, 2008 through November 30, 2008)	715	$2.36	715	$3,683
Month #3 (December 1, 2008 through December 31, 2008)	950	$2.19	950	$1,599
Total	1,665	$2.26	1,665	

(1) On March 26, 2003, our Board of Directors approved a share repurchase program to purchase up to $10.0 million of our outstanding common stock. The program was completed in August 2007 with 988,000 shares repurchased at the average price of $10.12. On October 29, 2007, the Board of Directors approved a new program to repurchase up to an additional $10.0 million of the Company's common stock on the open market. The right to repurchase stock under this program will expire on October 29, 2010. As of December 31, 2008, 2,428,000 shares had been repurchased under this program and $1.6 million remained available for repurchases.

Dividend Policy

No cash dividends were declared or paid in 2008 or 2007. We currently intend to retain all available funds to finance future internal growth and product development and therefore do not anticipate paying any cash dividends on our common stock for the foreseeable future.

Item 6. ***Selected Financial Data.***

The following selected consolidated financial information has been derived from the audited consolidated financial statements. The information set forth below is not necessarily indicative of results of future operations and should be read in conjunction with Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and notes to those statements included therein and in Part IV of this Form 10-K.

	Year Ended December 31,				
	2008(3)(4)	2007(2)	2006(1)	2005	2004
	(In thousands, except per share amounts)				
Consolidated Statements of Operations Data:					
Revenue:					
Design-to-silicon-yield solutions:					
Services	$ 50,273	$63,731	$45,382	$52,719	$49,573
Software licenses	4,840	6,645	10,774	9,319	4,971
Gainshare performance incentives	18,924	24,087	20,028	11,890	7,802
Total revenue	74,037	94,463	76,184	73,928	62,346
Cost of design-to-silicon-yield solutions:					
Services	28,926	32,279	27,418	24,319	21,811
Software licenses	185	191	209	293	83
Amortization and impairment of acquired technology	6,012	5,148	5,270	5,064	5,209
Total costs of design-to silicon-yield solutions	35,123	37,618	32,897	29,676	27,103
Gross margin	38,914	56,845	43,287	44,252	35,243
Operating expenses:					
Research and development	33,994	36,074	27,613	22,204	20,999
Selling, general and administrative	21,778	24,891	19,814	16,146	15,243
Amortization of other acquired intangible assets	893	3,422	1,459	940	1,406
Restructuring charges	3,401	—	—	—	—
Impairment on goodwill and other acquired intangible assets	66,830	—	—	—	—
Write-off of in-process research and development	—	—	800	—	—
Total operating expenses	126,896	64,387	49,686	39,290	37,648
Income (loss) from operations	(87,982)	(7,542)	(6,399)	4,962	(2,405)
Interest and other income, net	353	1,891	2,827	1,658	675
Income (loss) before taxes	(87,629)	(5,651)	(3,572)	6,620	(1,730)
Income tax provision (benefit)	8,099	(2,724)	(3,133)	96	(1,116)
Net income (loss)	$ (95,728)	$ (2,927)	$ (439)	$ 6,524	$ (614)
Net income (loss) per share:					
Basic	$ (3.48)	$ (0.10)	$ (0.02)	$ 0.25	$ (0.02)
Diluted	$ (3.48)	$ (0.10)	$ (0.02)	$ 0.24	$ (0.02)
Weighted average common shares:					
Basic	27,514	28,066	26,885	25,983	25,330
Diluted	27,514	28,066	26,885	27,473	25,330

Stock-based compensation expense included in these consolidated statements of operations was recorded under Accounting Principles Board ("APB") Opinion No. 25, *Accounting for Stock Issued to Employees* ("APB No. 25") for the years 2004 through 2005 and under Statement of Financial Accounting Standards ("SFAS") No. 123 (revised 2004), *Share-Based Payment* ("SFAS No. 123(R)") for the years 2006 through 2008.

For the years ended December 31, 2008, 2007, and 2006, the income tax provision includes income tax benefit from stock-based compensation.

	December 31,				
	2008(3)(4)	2007(2)	2006(1)	2005	2004
			(In thousands)		
Consolidated Balance Sheets Data:					
Cash and cash equivalents	$31,686	$ 35,315	$ 36,451	$ 60,506	$ 45,660
Short-term investments	9,051	9,949	16,402	—	—
Working capital	56,331	72,456	66,586	68,534	51,312
Total assets	79,627	179,351	168,857	139,892	125,407
Total stockholders' equity	59,770	156,470	148,219	122,681	108,798

(1) In October 2006, we completed our acquisition of all the outstanding stock of SiA. SiA developed and licensed fault detection and classification ("FDC") software applications and services. The aggregate purchase price of $36.6 million included the payment in cash of $25.5 million, the issuance of 699,000 shares of PDF common stock valued at $9.4 million and acquisition costs of $1.7 million.

(2) In May 2007, we completed our acquisition of all the outstanding stock of Fabbrix. Fabbrix developed DFM software applications. The aggregate purchase price of $6.2 million included the payment in cash of $2.7 million, the issuance of 272,000 shares of PDF common stock valued at $2.9 million and acquisition costs of $674,000.

(3) In October 2008, we completed our acquisition of substantially all of the assets of Triant. Triant developed and licensed FDC software applications and services. The aggregate purchase price of $1.9 million included the payment in cash of $1.6 million and acquisition costs of $312,000.

(4) In the fourth fiscal quarter of 2008, the Company recorded an impairment of goodwill and intangible assets of $70.3 million.

Item 7. *Management's Discussion and Analysis of Financial Condition and Results of Operations*

Overview

We analyze our customers' IC design and manufacturing processes to identify, quantify, and correct the issues that cause yield loss to improve our customers' profitability by improving time-to-market, increasing yield and reducing total design and manufacturing costs. We package our solutions in various ways to meet our customers' specific business and budgetary needs, each of which provides us various revenue streams. We receive a mix of fixed fees and variable, performance-based fees for the vast majority of our Integrated Yield Ramp offerings. The fixed fees are typically reflective of the length of time and the resources needed to characterize a customer's manufacturing process and receive preliminary results of proposed yield improvement suggestions. The variable fee, or what we call gainshare, usually depends on our achieving certain yield targets by a deadline. Variable fees are currently typically tied to wafer volume on the node size of the manufacturing facility where we performed the yield improvement. We receive license fees and service fees for related installation, integration, training, and maintenance and support services for our software that we license on a stand-alone basis.

History

From our incorporation in 1992 through late 1995, we were primarily focused on research and development of our proprietary manufacturing process simulation and yield and performance modeling software. From late 1995 through late 1998, we continued to refine and sell our software, while expanding our offering to include yield and performance improvement consulting services. In late 1998, we began to sell our software and consulting services, together with our newly developed proprietary technologies, under the term Design-to-Silicon-Yield solutions, reflecting our current business model. In April 2000, we expanded our research and development team and gained additional technology by acquiring AISS. AISS now operates as PDF Solutions, GmbH, a German company, which continues to develop software and provide development services to the semiconductor industry. In July 2001, we completed the initial public offering of our common stock. In 2003, we enhanced our product and service offerings, including increased software applications, through the acquisitions of IDS and WaferYield. In 2006, we further complemented our technology offering by acquiring SiA and adding its FDC software capabilities to our integrated solution. In 2007, we increased our IP solutions portfolio, particularly in logic design technology, through the acquisition of Fabbrix. In 2008, we solidified our market leading position in the FDC software market, particularly in Korea, and now provide complementary technology to our mæstria product through the acquisition of certain assets of Triant.

Industry Trend

Subject to the current general economic downturn, demand for consumer electronics and communications devices continues to drive technological innovation in the semiconductor industry as the need for products with greater performance, lower power consumption, reduced costs and smaller size continues to grow with each new product generation. In addition, advances in computing systems and mobile devices have fueled demand for higher capacity memory chips. To meet these demands, IC manufacturers and designers are constantly challenged to improve the overall performance of their ICs by designing and manufacturing ICs with more embedded applications to create greater functionality while lowering cost per transistor. As a result, both logic and memory manufacturers have migrated to more and more advanced manufacturing nodes, capable of integrating more devices with higher performance, higher density, and lower power. As this trend continues, companies will continually be challenged to improve process capabilities to optimally produce ICs with minimal random and systematic yield loss, which is driven by the lack of compatibility between the design and its respective manufacturing process. We believe that as volume production of deep submicron ICs continues to grow, the difficulties of integrating IC designs with their respective processes and ramping new manufacturing processes will create a greater need for products and services that address the yield loss and escalating cost issues the semiconductor industry is facing today and will face in the future.

Financial Highlights

The semiconductor industry is currently experiencing significant challenges, primarily due to a deteriorating macroeconomic environment, and it is unclear when a turnaround may occur. As a result of this downturn, some of our customers faced financial challenges in fiscal 2008 and may continue to face such challenges in fiscal 2009. The current economic downturn has contributed to the substantial reduction in our revenue and could continue to harm our business, operating results and financial condition.

Due to the current decline in our stock price and market capitalization, our fiscal 2008 net loss, expected future net losses, reduced future cash flow estimates, and slower growth rates in our industry, we recorded impairment totaling $64.0 million in fiscal 2008, representing all of our acquired goodwill. We also recorded impairment of $6.3 million relating to our acquired intangible assets, and valuation allowance on our deferred tax assets of $24.4 million.

We plan operating expense levels primarily based on forecasted revenue levels. To partially offset the impact of our expected decrease in revenue, we have implemented cost savings initiatives, including reducing headcount and other discretionary spending. During the year ended December 31, 2008, we initiated two restructuring plans to improve our operating results and to align our cost structure with expected revenue.

The following were our financial highlights for the year ended December 31, 2008.

- Total revenue was $74.0 million, which was a decrease of $20.4 million, or 22%, compared to the year ended December 31, 2007. Design-to-Silicon-Yield solutions revenue was $55.1 million, which was a decrease of $15.3 million, of 22%, from the year ended December 31, 2007. The decrease in Design-to-Silicon Yield solutions revenue was primarily the result of lower bookings, as customers have delayed purchases for capacity expansion and investment in leading-edge technology. The dramatic downturn in the semiconductor industry combined with weakness in worldwide economies has been the primary contributors to this reduction. Gainshare performance incentives revenue was $18.9 million, which was a decrease of $5.2 million, or 21%, from the year ended December 31, 2007. The decrease in revenue from gainshare performance incentives was primarily the result of reduced volumes in customer manufacturing facilities.
- Net loss for the year ended December 31, 2008 was $95.7 million, an increase of $92.8 million compared to net loss of $2.9 million for the year ended December 31, 2007. The increase in net loss was primarily attributable to an impairment on goodwill and intangible assets, decreases in revenue, and the establishment of a valuation allowance against deferred tax assets, partially offset by decreases in operating expenses, the result of cost control efforts.
- Net loss per basic and diluted share was $3.48 for the year ended December 31, 2008 compared to $0.10 for the year ended December 31, 2007, an increase in net loss of $3.38 per basic and diluted share.
- Cash, cash equivalents and investments decreased $3.8 million to $41.5 million during the year ended December 31, 2008, primarily due to the repurchase of $6.9 million of our common stock, the negative effect of changes in foreign currency exchange rates of $1.7 million, payments of $1.6 million for businesses acquired, and capital expenditures of $1.1 million, partially offset by net cash provided by operating activities of $7.6 million.

Acquisitions

On May 24, 2007, we completed the acquisition of Fabbrix, Inc. ("Fabbrix"), a provider of silicon intellectual property designed to create highly manufacturable and area-efficient designs targeted for advanced technology nodes. With this acquisition, we have enhanced our strength in silicon characterization to enable a true co-optimization of the manufacturing fabric and the logic elements. Total cost for the acquisition was $6.2 million, which included $2.7 million cash, 272,000 shares of our common stock valued at $2.9 million, and $674,000 in acquisition costs. Pursuant to the terms of the acquisition, $405,000 in cash and 41,000 shares of our common stock were held in escrow as security against certain financial and other contingencies. The escrow, less amounts deducted to satisfy contingencies, was required to be released no later than on the 18 month anniversary of the acquisition and was released to the selling stockholders in November 2008. In connection with this Fabbrix acquisition, we recorded $2.2 million of goodwill and $7.8 million of identifiable intangible assets with a weighted average life of 5.4 years.

On October 7, 2008, we completed the acquisition of substantially all of the assets of Triant's FDC business, excluding certain receivables, but including certain customer contracts and technologies. Triant developed and licensed FDC software applications and services dedicated to the semiconductor industry to enable customers to rapidly identify sources of process variations and manufacturing excursions. This

acquisition creates additional opportunities for our leading process control solutions within the installed customer base, including leading semiconductor, flat panel display, and wafer manufacturers. Total cost for the acquisition was $1.9 million, which included $1.6 million in cash and $312,000 in acquisition costs. Pursuant to the terms of the acquisition, $374,000 in cash was held in escrow as security against certain financial and other contingencies. The cash held in escrow, less amounts deducted to satisfy contingencies was required to be released following the statutory notice to creditors associated with Triant's liquidation and wind up process. The escrow was released to Triant in February 2009. In connection with the acquisition, we recorded $1.7 million of identifiable intangible assets with a weighted average life of 3.4 years and $147,000 of goodwill. The consolidated financial statements for the year ended December 31, 2008 include the results of Triant since the date of acquisition.

Subsequent to the acquisition of Triant, we completed our annual goodwill impairment test as prescribed under SFAS No. 142. In addition, due to the continued decline within the semiconductor industry brought on by the deteriorating global economic environment, we anticipated further declines in our future operational results. As a result, we determined these factors, among others, to be impairment indicators which triggered the necessity of an impairment analysis under SFAS No. 144 for our long-lived assets. These tests also included the goodwill and certain intangible assets recognized as part of the acquisition of Triant. This determination relating to our Triant acquisition was in part made after several public announcements were issued by a key customer of Triant's, regarding its own financial outlook and anticipated capital expenditure spending levels; which in turn caused us to revise our projected revenue from what had been expected at the date of the acquisition.

Critical Accounting Policies

Financial Reporting Release No. 60 requires all companies to include a discussion of critical accounting policies or methods used in the preparation of financial statements. Note 1 of "Notes to Consolidated Financial Statements" includes a summary of the significant accounting policies and methods used in the preparation of our consolidated financial statements. The following is a brief discussion of the more significant accounting policies and methods that we use.

General

Our discussion and analysis of our financial condition and results of operations are based on our consolidated financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Our preparation of these consolidated financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. We based our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. The most significant estimates and assumptions relate to revenue recognition, software development costs, recoverability of goodwill and acquired intangible assets, estimated useful lives of acquired intangibles and the realization of deferred tax assets. Actual amounts may differ from such estimates under different assumptions or conditions.

Revenue Recognition

We derive revenue from two sources: Design-to-Silicon-Yield Solutions and Gainshare Performance Incentives. We recognize revenue in accordance with the provisions of American Institute of Certified Public Accountants' Statement of Position ("SOP") No. 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts* and SOP No. 97-2, *Software Revenue Recognition*, as amended.

Design-to-Silicon-Yield Solutions—Revenue that is derived from Design-to-Silicon-Yield solutions comes from services and software licenses. We recognize revenue for each element of Design-to-Silicon-Yield solutions as follows:

Services—We generate a significant portion of our Design-to-Silicon-Yield solutions revenue from fixed-price solution implementation service contracts delivered over a specific period of time. These contracts require accurate estimation of cost to perform obligations and overall scope of each engagement. Revenue under contracts for solution implementation services is recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting. Losses on solution implementation contracts are recognized in the period when they become evident. Revisions in profit estimates are reflected in the period in which the conditions that require the revisions become known and can be estimated. If we do not accurately estimate the resources required or the scope of work to be performed, or do not manage the projects properly within the planned period of time or satisfy our obligations under contracts, resulting contract margins could be materially different than those anticipated when the contract was executed. Any such reductions in contract margin could have a material negative impact on our operating results.

On occasion, we have licensed our software products as a component of our fixed price services contracts. In such instances, the software products are licensed to customers over a specified term of the agreement with support and maintenance to be provided over the license term. Under these arrangements, where vendor-specific objective evidence of fair value ("VSOE") exists for the support and maintenance element, the support and maintenance revenue is recognized separately over the term of the supporting period. The remaining fee is recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting. VSOE for maintenance, in these instances, is generally established based upon a negotiated renewal rate. Under arrangements where software products are licensed as a component of its fixed-price service contract and where VSOE does not exist to allocate a portion of the total fixed-price to the undelivered elements, revenue is recognized for the total fixed-price as the lesser of either the percentage of completion method of contract accounting or ratably over the longer of either the term of the agreement or the supporting period. Costs incurred under these arrangements are deferred and recognized in proportion to revenue recognized under these arrangements.

Revenue from related support and maintenance services is recognized ratably over the term of the support and maintenance contract, generally one year, while revenue from consulting, installation and training services is recognized as services are performed. When bundled with software licenses in multiple element arrangements, support and maintenance, consulting (other than for our fixed price solution implementations), installation, and training revenue is allocated to each element of a transaction based upon its fair value as determined by our VSOE. VSOE is generally established for maintenance based upon negotiated renewal rates while VSOE for consulting, installation, and training is established based upon our customary pricing for such services when sold separately. When VSOE does not exist to allocate a portion of the total fee to the undelivered elements, revenue is recognized ratably over the longest service period of the undelivered elements

Software Licenses—We also license our software products separate from our integrated solution implementations. For software license arrangements that do not require significant modification or customization of the underlying software, software license revenue is recognized under the residual method when (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the fee is fixed or determinable, (4) collectibility is probable, and (5) the arrangement does not require services that are essential to the functionality of the software. When arrangements include multiple elements such as support and maintenance, consulting (other than for our fixed price solution implementations), installation, and training, revenue is allocated to each element of a transaction based upon its fair value as determined by our VSOE and such services are recorded as services. VSOE is generally established for maintenance based upon negotiated renewal rates while VSOE for

consulting, installation and training services is established based upon our customary pricing for such services when sold separately. When VSOE does not exist to allocate a portion of the total fee to the undelivered elements, revenue is recognized ratably over the longest period of the undelivered elements. Revenue for software licenses with extended payment terms is not recognized in excess of amounts due. For software license arrangements that require significant modification or customization of the underlying software, the software license revenue is recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting, and such revenue is recorded as services.

Gainshare Performance Incentives—When we enter into a contract to provide yield improvement services, the contract usually includes two components: (1) a fixed fee for performance by us of services delivered over a specific period of time; and (2) a gainshare performance incentives component where the customer may pay a variable fee, usually after the fixed fee period has ended. Revenue derived from gainshare performance incentives represents profit sharing and performance incentives earned based upon our customers reaching certain defined operational levels established in related solution implementation service contracts. Gainshare performance incentives periods are usually subsequent to the delivery of all contractual services and therefore have no cost to us. Due to the uncertainties surrounding attainment of such operational levels, we recognize gainshare performance incentives revenue (to the extent of completion of the related solution implementation contract) upon receipt of performance reports or other related information from our customers supporting the determination of amounts and probability of collection. Gainshare performance incentives revenue is dependent on many factors which are outside our control, including among others, continued production of the related ICs by our customers, sustained yield improvements by our customers and our ability to enter into new Design-to-Silicon-Yield solutions contracts containing provisions for gainshare performance incentives.

Software Development Costs

Costs for the development of new software products and substantial enhancements to existing software products are expensed as incurred until technological feasibility has been established, at which time any additional costs would be capitalized in accordance with SFAS No. 86, *Computer Software to be Sold, Leased or Otherwise Marketed*. Because we believe our current process for developing software is essentially completed concurrently with the establishment of technological feasibility, no costs have been capitalized to date.

Goodwill and Intangible Assets

During the fourth quarter of fiscal 2008, we observed impairment indicators, relating to our long-lived assets, including the trading of common stock below our book value and a further deterioration in the semiconductor industry, brought on by the deteriorating global economic environment, which triggered the necessity of an impairment test as of December 31, 2008. As such, in accordance with SFAS No. 144, we assessed the recoverability of our long-lived assets by comparing the carrying value of those intangible assets to the undiscounted cash flows of the asset group. The analysis indicated that the carrying value of those assets exceeded the undiscounted cash flows. As such, we determined that certain acquired intangible assets were impaired. We measured the amount of impairment by calculating the amount by which the carrying value of the assets exceeded their estimated fair values, which were based on projected discounted future net cash flows. As a result of this impairment analysis, we recorded an impairment of $6.3 million during the fourth fiscal quarter of 2008.

In accordance with SFAS No. 142, goodwill is measured and tested for impairment on an annual basis and more frequently in certain circumstances, accordingly, we have selected December 31 as the date to perform the annual testing requirements. We perform a two-step testing on goodwill impairment. The first step requires that we compare the estimated fair value of our single reporting unit to the carrying value of the reporting unit, including goodwill. If the fair value of the reporting unit is greater than the carrying,

goodwill is not considered to be impaired and no further testing is required. If the fair value of the reporting unit is less than the carrying value, we are required to complete the second step which compares the implied fair value of the reporting unit goodwill with the carrying value of that goodwill An impairment is recognized in an amount equal to the excess of the carrying value of the goodwill over the implied fair value of that goodwill.

As discussed in Note 12, Customer and Geographic Information, we consider ourselves to be in one operating segment. In addition, we have determined that our operating segment is also our reporting unit as the operating segment comprises only a single component. To determine the reporting unit's fair value, we used the income valuation approach. In determining our overall conclusion of reporting unit's fair value, we also consider the estimated values derived from the income valuation approach as compared to the valuation under the market approach as one measure that the estimated value is reasonable.

The income approach provides an estimate of fair value based on discounted expected future cash flows. Estimates and assumptions with respect to the determination of the fair value of our reporting unit using the income approach include our operating forecasts, revenue growth rates, and risk-commensurate discount rates and costs of capital. Our estimates of revenues and costs are based on historical data, various internal estimates and a variety of external sources, and are developed as part of our routine long-range planning process.

The market approach provides an estimate of the fair value of our reporting unit using various prices or market multiples applied to the reporting unit's operating results and then applying an appropriate control premium, which is determined by considering control premiums offered as part of acquisitions in both our market segment and comparable market segments.

We completed our annual impairment analysis of goodwill as of December 31, 2008, including the second step prescribed by SFAS No. 142. As part of the second step of our goodwill impairment test, we determined the fair value of our goodwill by allocating the estimated fair value of our reporting unit to our assets and liabilities, including the estimated fair value of our unrecorded intangible assets, on a fair value basis. After allocating its assets and liabilities on a fair value basis, we recorded an impairment of all of our goodwill of $64.0 million.

Allocating assets and liabilities on a fair value basis and determining the fair value of unrecorded intangible assets required that we make assumptions and estimates about the fair value of assets and liabilities where the fair values of those assets and liabilities were not readily available or observable. In addition, we made estimates regarding our forecasted revenue, expenses and cash flows, our research and development activities, our customer turnover rates, applicable discount rates and costs of capital and the marketability of our current and future technology.

We are currently amortizing our remaining acquired intangible assets over estimated useful lives of one to seven years, which are based on the estimated period of benefit to be delivered from such assets. However, a decrease in the estimated useful lives of such assets would cause additional amortization expense or impairment on such asset in future periods.

Income Taxes

We account for temporary differences between book and tax entries by recording deferred tax assets and liabilities in accordance with SFAS No. 109, *Accounting for Income Taxes*, ("SFAS No. 109"), which established financial accounting and reporting standards for the effect of income taxes. We must assess the likelihood that our deferred tax assets will be recovered from future taxable income and, to the extent we believe that recover is not likely, we must establish a valuation allowance. Changes in the net deferred tax assets, less offsetting valuation allowance, in a period are recorded through the income tax provision in the condensed consolidated statements of operations. For the year ended December 31, 2008, we concluded that a valuation allowance was required based on our evaluation and weighting of the positive and negative

evidence. See Note 10 to the consolidated financial statements for further discussion. If, in the future, we determine that these deferred tax assets are more likely than not to be realized, a release of all or part, of the related valuation allowance could result in a material income tax benefit in the period such determination is made.

In June, 2006, the Financial Accounting Standard Board ("FASB") issued Financial Interpretation No. 48, *Accounting for Uncertainty in Income Taxes—An Interpretation of FASB Statement No. 109* ("FIN No. 48"), which clarifies the accounting for uncertainty in income taxes recognized in an enterprise's financial statements in accordance with SFAS No. 109. Additionally, the Interpretation provides guidance on measurement, de-recognition, classification, interest and penalties, accounting for interim periods, disclosure and transition. The Interpretation is effective for fiscal years beginning after December 15, 2006. We adopted the provisions of FIN No. 48 on January 1, 2007. See Note 10 to the consolidated financial statements for a further discussion on the income taxes.

Stock-Based Compensation

Effective January 1, 2006, we adopted the provisions of SFAS No. 123(R). The statement eliminates the ability to account for share-based compensation transactions using APB No. 25 and requires that the cost of share-based payment transactions (including those with employees and non-employees) be recognized in the financial statements based on estimated fair values. SFAS No. 123(R) applies to all share-based payment transactions in which we acquire goods or services by issuing our shares, share options, or other equity instruments or by incurring liabilities based on the price of our shares or that require settlement by the issuance of equity instruments. We elected to use the modified prospective transition method upon adopting this statement and accordingly prior periods have not been restated to reflect the impact of SFAS No. 123(R). Under this transition method, stock-based compensation expense for the years ended December 31, 2006, 2007 and 2008 include compensation expense for all stock-based compensation awards granted prior to, but not yet vested as of January 1, 2006, based on the grant date fair value estimated in accordance with the original provision of SFAS No. 123, *Accounting for Stock-Based Compensation* ("SFAS No. 123"). Stock-based compensation expense for all stock-based compensation awards granted after January 1, 2006 is based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R). We recognize the compensation costs of stock purchase rights and stock options granted after January 1, 2006 on a straight-line basis over the vesting periods of the applicable stock purchase rights and stock options, generally four years. Prior to adoption of SFAS No. 123(R), we presented all tax benefits resulting from stock purchase rights and stock options as operating cash flow in our statement of cash flows. In accordance with SFAS No. l23(R), the cash flows resulting from excess tax benefits are classified as financing cash flows.

Prior to the adoption of SFAS No. 123(R), we accounted for stock-based compensation in accordance with APB No. 25, and complied with the disclosure provisions of SFAS No. 123 as amended by SFAS No. 148, *Accounting for Stock-Based Compensation—Transition and Disclosures*. Deferred compensation recognized under APB No. 25 was amortized to expense using the graded vesting method. In March 2005, the SEC issued Staff Accounting Bulletin No. 107 ("SAB 107") regarding the SEC's interpretation of SFAS No. 123(R) and the valuation of share-based payments for public companies. We have applied the provisions of SAB 107 in its adoption of SFAS No. 123(R). In December 2007, the SEC issued Staff Accounting Bulletin No. 110 ("SAB 110") to amend the SEC's views discussed in SAB 107 regarding the use of the simplified method in developing an estimate of expected life of share options in accordance with SFAS No. 123(R). SAB 110 is effective for us beginning in the first quarter of fiscal year 2008. In the fourth fiscal quarter of 2007, the Company had enough historical data to determine its expected life. See Note 8 to the Consolidated Financial Statements for a further discussion on stock-based compensation.

Recent Accounting Pronouncements and Accounting Changes

See our Note 1, "Business and Significant Accounting Policies" of "Notes to Consolidated Financial Statements" included under Part IV, Item 15 of this Form 10-K for a description of recent accounting pronouncements and accounting changes, including the expected dates of adoption and estimated effects, if any, on our consolidated financial statements.

Results of Operations

The following table sets forth, for the years indicated, the percentage of total revenue represented by the line items reflected in our consolidated statements of operations:

	Years Ended December 31,		
	2008	2007	2006
Revenues:			
Design-to-silicon-yield solutions:			
Services	68%	67%	60%
Software licenses	6	7	14
Gainshare performance incentives	26	26	26
Total revenues	100	100	100
Cost of design-to-silicon-yield solutions:			
Services	39	34	36
Software licenses	—	—	—
Amortization and impairment of acquired technology	8	6	7
Total cost of design-to silicon-yield solutions	47	40	43
Gross margin	53	60	57
Operating expenses:			
Research and development	46	38	37
Selling, general and administrative	29	26	26
Amortization of other acquired intangible assets	1	4	2
Restructuring charges	5	—	—
Impairment on goodwill and other acquired intangible assets	90	—	—
Write-off of in-process research and development	—	—	1
Total operating expenses	171	68	66
Loss from operations	(118)	(8)	(9)
Interest and other income, net	—	2	4
Loss before taxes	(118)	(6)	(5)
Income tax provision (benefit)	11	(3)	(4)
Net loss	(129)%	(3)%	(1)%

Years Ended December 31, 2008 and 2007

Revenue	2008	2007	$ Change	% Change	2008 % of Revenue	2007 % of Revenue
	(In thousands, except for %'s)					
Design-to-silicon-yield solutions:						
Services	$50,273	$63,731	$(13,458)	(21)%	68%	67%
Software licenses	4,840	6,645	(1,805)	(27)	6	7
Gainshare performance incentives	18,924	24,087	(5,163)	(21)	26	26
Total	$74,037	$94,463	$(20,426)	(22)%	100%	100%

Design-to-Silicon-Yield Solutions. Design-to-Silicon-Yield solutions revenue is derived from services (including solution implementations, software support and maintenance, consulting, and training) and software licenses, provided during our customer yield improvement engagements and solution product sales.

Services. Services revenue decreased $13.5 million for the year ended December 31, 2008 compared to the year ended December 31, 2007, primarily due to a decrease of $7.9 million in fixed fee integrated solutions and a decrease of $6.6 million in revenue from software related consulting services. The decreases were primarily the result of lower bookings, as customers have delayed purchases for capacity expansion and investment in leading edge technology in anticipation of a significant downturn in the semiconductor industry. The dramatic downturn in the semiconductor industry combined with the current worldwide economic downturn have been the primary contributors to this shortfall. Our services revenue may fluctuate in the future and is dependent on a number of factors, including our ability to obtain new customers.

Software licenses. Software licenses revenue decreased $1.8 million for the year ended December 31, 2008 compared to the year ended December 31, 2007, primarily due to customers delaying purchases for capacity expansion. The dramatic downturn in the semiconductor industry combined with the current worldwide economic downturn have been the primary contributors to this shortfall. Our software licenses revenue may fluctuate in the future and is dependent on a number of factors, including the semiconductor industry's acceptance of our products, the timing of purchases by existing customers, and our ability to attract new customers and further penetration of our current customer base.

Gainshare Performance Incentives. Gainshare performance incentives revenue represents profit sharing and performance incentives earned based upon our customer reaching certain defined operational levels. Revenue derived from gainshare performance incentives decreased $5.2 million for the year ended December 31, 2008 compared to the year ended December 31, 2007, primarily due to decreases in wafer volumes at our customers' sites. Revenue from gainshare performance incentives was generated from seven customers and thirteen engagements for the year ended December 31, 2008 and seven customers and twelve engagements for the year ended December 31, 2007. Our gainshare performance incentives revenue may continue to fluctuate from period to period. Gainshare performance incentives revenue is dependent on many factors that are outside our control, including among others, consumer demand for our customers' ICs, sustained yield improvements by our customers and our ability to enter into new Design-to-Silicon-Yield solutions contracts containing provisions for gainshare performance incentives.

Cost of Design-to-Silicon-Yield Solutions	2008	2007	$ Change	% Change	2008 % of Revenue	2007 % of Revenue
	(In thousands, except for %'s)					
Services	$28,926	$32,279	$(3,353)	(10)%	39%	34%
Software licenses	185	191	(6)	(3)	—	—
Amortization and impairment of acquired technology	6,012	5,148	864	17	8	6
Total	$35,123	$37,618	$(2,495)	(7)%	47%	40%

Costs of Design-to-Silicon-Yield Solutions. Costs of Design-to-Silicon-Yield solutions consist of costs incurred to provide and support our services and costs recognized in connection with licensing our software.

Services. Services costs consist of material, labor, overhead costs, and stock-based compensation charges associated with solution implementations. Costs include purchased materials, employee compensation and benefits, travel and facilities-related costs. The costs of Design-to-Silicon-Yield

services decreased $3.4 million for the year ended December 31, 2008 compared to the year ended December 31, 2007. The decrease was primarily due to a decrease of $2.5 million in deployment of our pdFasTest products and a decrease of $991,000 in personnel expenses in the U.S., the result of our cost control efforts. If we do not accurately estimate the resources required or the scope of work to be performed, or we do not manage the projects properly within the planned period of time or satisfy our obligations under contracts, resulting contract margins could be materially different than those anticipated when the contract was executed. Any such reductions in contract margin could have a material negative impact on our operating results.

Software licenses. Software license costs consist of costs associated with licensing third-party software sold in conjunction with our software products and expenses incurred to produce and distribute our product documentation. The costs of Design-to-Silicon-Yield solutions software licenses decreased moderately, by $6,000, for the year ended December 31, 2008 compared to the year ended December 31, 2007. We expect the cost of software licenses to fluctuate in the future as a result of royalties and license fees paid for third-party applications incorporated in our software products as a result of timing and product mix of such license sales.

Amortization and Impairment of Acquired Technology. Amortization and Impairment of acquired technology consists of amortization of intangibles acquired as a result of certain business combinations. Amortization of acquired technology expense decreased $2.6 million for the year ended December 31, 2008 compared to the year ended December 31, 2007, primarily due to certain intangible assets becoming fully amortized. We anticipate amortization of acquired technology to be $1.4 million in 2009, $1.3 million in 2010, $626,000 in 2011, and $261,000 in 2012. Impairment of acquired technology consisted of a $3.4 million impairment recognized in the fourth fiscal quarter of 2008.

Research and Development	2008	2007	$ Change	% Change	2008 % of Revenue	2007 % of Revenue
	(In thousands, except for %'s)					
Research and development	$33,994	$36,074	$(2,080)	(6)%	46%	38%

Research and Development. Research and development expenses consist primarily of personnel-related costs to support product development activities, including compensation and benefits, outside development services, travel, facilities cost allocations, and stock-based compensation charges. Research and development expenses decreased $2.1 million for the year ended December 31, 2008 compared to the year ended December 31, 2007 primarily due to a decrease of $1.6 million in expenses in our French subsidiary and a decrease of $1.5 million in personnel expenses in the U.S., both the result of our cost control efforts. We anticipate our expenses in research and development will fluctuate in absolute dollars from period to period as a result of cost control initiatives and the timing of when we hire new personnel based on the scope and timing of product development projects.

Selling, General and Administrative	2008	2007	$ Change	% Change	2008 % of Revenue	2007 % of Revenue
	(In thousands, except for %'s)					
Selling, general and administrative	$21,778	$24,891	$(3,113)	(13)%	29%	26%

Selling, General and Administrative. Selling, general and administrative expenses consist primarily of compensation and benefits for sales, marketing and general and administrative personnel in addition to outside sales commissions, legal and accounting services, marketing communications, travel and facilities cost allocations, and stock-based compensation charges. Selling, general and administrative expenses decreased $3.1 million for the year ended December 31, 2008 compared to the year ended December 31,

2007 primarily due to a decrease of $1.1 million in personnel expenses in the U.S. and a decrease of $834,000 in outside sales commission as a result of our cost control efforts. We anticipate our selling, general and administrative expenses will fluctuate in absolute dollars from period to period as a result of cost control initiatives and the need to support sales efforts in the future.

Amortization of Other Acquired Intangible Assets	2008	2007	$ Change	% Change	2008 % of Revenue	2007 % of Revenue
	(In thousands, except for %'s)					
Amortization of other acquired intangible assets	$893	$3,422	$(2,529)	(74)%	1%	4%

Amortization of Other Acquired Intangible Assets. Amortization of other acquired intangible assets consists of the amortization of intangibles acquired as a result of certain business combinations. Amortization of other acquired intangible assets for the year ended December 31, 2008 decreased $2.5 million compared to the year ended December 31, 2007, primarily the result of certain intangible assets becoming fully amortized. We anticipate amortization of other acquired intangible assets to be $344,000 in 2009, $293,000 in 2010, $204,000 in 2011, $174,000 in 2012, and $105,000 in 2013 and thereafter.

Restructuring Charges	2008	2007	$ Change	% Change	2008 % of Revenue	2007 % of Revenue
	(In thousands, except for %'s)					
Restructuring charges	$3,401	$—	$3,401	N/A	5%	—%

Restructuring Charges. Restructuring charges of $3.4 million for the year ended December 31, 2008 were related to expenses incurred as a result of the restructuring plans announced on April 29, 2008 and October 28, 2008. Restructuring charges related to the plan announced on April 29, 2008 were $1.5 million, primarily consisting of employee severance costs of $1.4 million. Restructuring charges related to the plan announced on October 28, 2008 were $1.9 million, primarily consisting of facility abandonment costs of $985,000 and employee severance costs of $938,000.

Impairment on Goodwill and Other Acquired Intangible Assets	2008	2007	$ Change	% Change	2008 % of Revenue	2007 % of Revenue
	(In thousands, except for %'s)					
Impairment on goodwill and other acquired intangible assets	$66,830	$—	$66,830	N/A	90%	—%

Impairment on Goodwill and Other Acquired Intangible Assets. During the fourth fiscal quarter of 2008, we recognized an impairment of $64.0 million on our goodwill and $2.8 million on our other acquired intangible assets, as a result of management's review for potential impairment on the carrying value of such assets due to the deterioration of our operating results and the dramatic downturn in the semiconductor industry combined with weakness in worldwide economies. There was no impairment recorded during the year ended December 31, 2007.

Interest and Other Income, Net	2008	2007	$ Change	% Change	2008 % of Revenue	2007 % of Revenue
	(In thousands, except for %'s)					
Interest and other income, net	$353	$1,891	$(1,538)	(81)%	—%	2%

Interest and Other Income, Net. Interest and other income, net, decreased $1.5 million for the year ended December 31, 2008 compared to the year ended December 31, 2007, primarily due to decreases in interest income from lower average cash, cash equivalent and investments balance and lower interest rates during the period.

Income Tax Provision (Benefit)	2008	2007	$ Change	% Change	2008 % of Revenue	2007 % of Revenue
	(In thousands, except for %'s)					
Income tax provision (benefit)	$8,099	$(2,724)	$10,823	(397)%	11%	(3)%

Income Tax Provision (Benefit). Income tax provision increased $10.8 million for the year ended December 31, 2008 compared to income tax benefit of $2.7 million for the year ended December 31, 2007, primarily due to the establishment of a valuation allowance for deferred tax assets for the year ended December 31, 2008. During the nine months ended September 30, 2008, a valuation allowance was established for substantially all net deferred tax assets after management concluded that it was more likely than not that, based on the objective evidence available, our net deferred tax assets would not be fully realizable.

Years Ended December 31, 2007 and 2006

Revenue	2007	2006	$ Change	% Change	2007 % of Revenue	2006 % of Revenue
	(In thousands, except for %'s)					
Design-to-silicon-yield solutions:						
Services	$63,731	$45,382	$18,349	40%	67%	60%
Software licenses	6,645	10,774	(4,129)	(38)	7	14
Gainshare performance incentives	24,087	20,028	4,059	20	26	26
Total	$94,463	$76,184	$18,279	24%	100%	100%

Design-to-Silicon-Yield Solutions.

Services. Services revenue increased $18.3 million for the year ended December 31, 2007 compared to the year ended December 31, 2006, primarily as a result of the acquisition of SiA, our French subsidiary, in October 2006, and to a lesser extent due to an increase in fixed fee integrated solutions. Services revenue derived from the acquired business increased approximately $10.7 million for the year ended December 31, 2007 compared to the year ended December 31, 2006. Services revenues derived from our acquisition of SiA included $5.1 million in recognized revenue related to sales of licenses bundled with services for which VSOE did not exist for the year ended December 31, 2007 compared to $521,000 for the year ended December 31, 2006. Services revenue from fixed fee integrated solutions increased $7.1 million for the year ended December 31, 2007 compared to the year ended December 31, 2006 primarily due to new contracts signed during 2007.

Software licenses. Software licenses revenue decreased $4.1 million for the year ended December 31, 2007 compared to the year ended December 31, 2006, primarily due to weakness in attracting new customers in light of customer capital spending constraints.

Gainshare Performance Incentives. Revenue derived from gainshare performance incentives increased $4.1 million for the year ended December 31, 2007 compared to the year ended December 31, 2006, primarily due to improved yields and related volumes at our customers' sites.

Cost of Design-to-Silicon-Yield Solutions	2007	2006	$ Change	% Change	2007 % of Revenue	2006 % of Revenue
	(In thousands, except for %'s)					
Services	$32,279	$27,418	$4,861	18%	34%	36%
Software licenses	191	209	(18)	(9)	—	—
Amortization of acquired technology	5,148	5,270	(122)	(2)	6	7
Total	$37,618	$32,897	$4,721	14%	40%	43%

Costs of Design-to-Silicon-Yield Solutions.

Services. The costs of Design-to-Silicon-Yield services increased $4.9 million for the year ended December 31, 2007 compared to the year ended December 31, 2006, primarily due to an increase of $2.0 million in expenses related to additional revenues driven by our acquisition of SiA in October 2006, and an increase of $993,000 in costs associated with the deployment of our pdFasTest products at new engagements signed during the year ended December 31, 2007.

Software Licenses. The costs of Design-to-Silicon-Yield solutions software licenses decreased moderately $18,000 for the year ended December 31, 2007 compared to the year ended December 31, 2006.

Amortization of Acquired Technology. Amortization of acquired technology expense decreased $122,000 for the year ended December 31, 2007 compared to the year ended December 31, 2006, primarily due to a decrease of $1.9 million in amortization from certain intangible assets becoming fully amortized during the fiscal year 2007, partially offset by an increase of $1.8 million in amortization of technology acquired from our acquisitions of SiA in October 2006 and Fabbrix in May 2007.

Research and Development	2007	2006	$ Change	% Change	2007 % of Revenue	2006 % of Revenue
	(In thousands, except for %'s)					
Research and development	$36,074	$27,613	$8,461	31%	38%	37%

Research and Development. Research and development expenses increased $8.5 million for the year ended December 31, 2007 compared to the year ended December 31, 2006, primarily the result of the acquisition of SiA in October 2006. Expenses in our French subsidiary increased approximately $6.0 million for the twelve months in fiscal year 2007 compared to the two months in fiscal year 2006.

Selling, General and Administrative	2007	2006	$ Change	% Change	2007 % of Revenue	2006 % of Revenue
	(In thousands, except for %'s)					
Selling, general and administrative	$24,891	$19,814	$5,077	26%	26%	26%

Selling, General and Administrative. Selling, general and administrative expenses increased $5.1 million for the year ended December 31, 2007 compared to the year ended December 31, 2006, primarily due to increased operating costs as a result of the acquisition of SiA in October 2006, and to a lesser extent to increases in outside sales commissions and legal expenses incurred as a result defending our intellectual property rights. Selling, general and administrative expenses incurred by our French

subsidiary increased $3.1 million for the twelve months in fiscal year 2007 compared to the two months in fiscal year 2006. Outside sales commission increased $644,000 for the year ended December 31, 2007 compared to the year ended December 31, 2006 as a result of increases in revenue.

Amortization of Other Acquired Intangible Assets	2007	2006	$ Change	% Change	2007 % of Revenue	2006 % of Revenue
	(In thousands, except for %'s)					
Amortization of other acquired intangible assets .	$3,422	$1,459	$1,963	135%	4%	2%

Amortization of Other Acquired Intangible Assets. Amortization of other acquired intangible assets increased $2.0 million for the year ended December 31, 2007 compared to the year ended December 31, 2006 as a result of the acquisition of SiA in October 2006.

Write-off of In-Process Research and Development	2007	2006	$ Change	% Change	2007 % of Revenue	2006 % of Revenue
	(In thousands, except for %'s)					
Write-off of in-process research and development . . .	$—	$800	$(800)	(100)%	—%	1%

Write-off of In-process Research and Development. Write-off of in-process research and development of $800,000 in the year ended December 31, 2006 was related to the acquisition of SiA and was associated with acquired technology that had not reached technological feasibility and for which there was no alternative future use. At December 31, 2006, the acquired technology was not being developed and did not have alternative future use. We determined the fair value of the acquired in-process technology by estimating the cash flows related to projects under development and the estimated revenues and operating profits related to those projects. The resulting estimated cash flows were discounted to their net present value. There was no such expense in 2007.

Interest and Other Income, Net	2007	2006	$ Change	% Change	2007 % of Revenue	2006 % of Revenue
	(In thousands, except for %'s)					
Interest and other income, net	$1,891	$2,827	$(936)	(33)%	2%	4%

Interest and Other Income, Net. Interest and other income, net, decreased $936,000 for the year ended December 31, 2007 compared to the year ended December 31, 2006, primarily due to lower average cash, cash equivalent, and short-term investments balance during the period. During fiscal year 2007, we spent $6.0 million to repurchase treasury stock, and made payments of $4.6 million in connection with those acquisitions. We also spent $2.2 million to purchase property and equipment.

Income Tax Benefit	2007	2006	$ Change	% Change	2007 % of Revenue	2006 % of Revenue
	(In thousands, except for %'s)					
Income tax benefit	$(2,724)	$(3,133)	$409	(13)%	(3)%	(4)%

Income Tax Benefit. Income tax benefit decreased $409,000 for the year ended December 31, 2007 compared to the year ended December 31, 2006, primarily due to a decrease of $2.1 million in tax credits claimed, partially offset by the increase of $728,000 in statutory tax benefit for the year ended December 31, 2007. In the year ended December 31, 2006, we performed a study that allowed us to claim additional research and development credits for prior years.

Liquidity and Capital Resources

Operating Activities

Cash flows from operating activities consist of net loss adjusted for certain non-cash items and changes in assets and liabilities. Net cash provided by operating activities was $7.6 million for the year ended December 31, 2008, an increase of $6.2 million compared to $1.4 million for the year ended December 31, 2007, primarily due to a decrease in accounts receivable, partially offset by a higher net loss after adjustment for certain non-cash items including impairment on goodwill and intangible assets, a valuation allowance for deferred taxes, and amortization of acquired intangible assets.

Accounts receivable decreased $13.6 million as of December 31, 2008 compared to December 31, 2007 primarily due to a decline in revenue for the year ended December 31, 2008. Accounts receivable increased $11.0 million as of December 31, 2007 compared to December 31, 2006 primarily due to increased revenue for the year ended December 31, 2007 as well as the timing of billing schedules specified in the contract agreements related to both design-to-silicon-yield solutions and gainshare performance incentives. Accounts payable decreased $2.1 million as of December 31, 2008 compared to December 31, 2007 primarily due to the timing of vendor payments and decreased expenditures, the result of our cost control efforts.

Investing Activities

Cash flows from investing activities consist of proceeds from investment maturities and sales, offset by payments for investments acquired, payments for businesses acquired, and payments for capital expenditures. Net cash used in investing activities was $2.9 million for the year ended December 31, 2008, an increase of $3.1 million compared to net cash provided by investing activities of $203,000 for the year ended December 31, 2007, primarily due to lower proceeds from investment maturities and sales, partially offset by smaller payments for businesses acquired and capital expenditures. Our payments for businesses acquired were $1.6 million for the year ended December 31, 2008 compared to $4.6 million for the year ended December 31, 2007. Our payments for purchases of property and equipment were $1.1 million for the year ended December 31, 2008 compared to $2.2 million for the year ended December 31, 2007. As of December 31, 2008, we had not invested in derivative securities.

Financing Activities

Cash flows from financing activities consist of proceeds from sales of shares through employee equity incentive plans, payments for purchase of treasury stock, and principal payments on long-term obligations. Net cash used in financing activities was $6.6 million for the year ended December 31, 2008, an increase of $2.9 million compared to $3.7 million for the year ended December 31, 2007, primarily due to lower proceeds from the exercise of stock options and our employee stock purchase plan and higher payments for the repurchase of our common stock on the open market. Proceeds from the exercise of stock options and our employee stock purchase plan were $653,000 for the year ended December 31, 2008 compared to $2.9 million for the year ended December 31, 2007. Payments for the repurchase of our common stock were $6.9 million for the year ended December 31, 2008 compared to $6.0 million for the year ended December 31, 2007.

Liquidity

As of December 31, 2008, our working capital was $56.3 million compared to $72.5 million as of December 31, 2007. Cash, cash equivalents, and short-term investments as of December 31, 2008 were $40.7 million, a decrease of $4.5 million compared to $45.3 million as of December 31, 2007, primarily attributable to the repurchase of $6.9 million of our common stock. We anticipate that our overall expenses, as well as planned capital expenditures, may constitute a material use of our cash resources. In addition, we may use cash resources to repurchase common stock or fund potential investments in, or

acquisitions of, complementary products, technologies or businesses. We believe that our existing cash resources and anticipated funds from operations will satisfy our cash requirements to fund our operating activities, capital expenditures and other obligations for at least the next twelve months. However, in the event that during such period, or thereafter, we are not successful in generating sufficient cash flows from our operations we may need to raise additional capital through private or public financings, strategic relationships or other arrangements, which may not be available to us on acceptable terms or at all, particularly in current capital market environment.

As of December 31, 2008, our investments included auction-rate securities with a fair value of $718,000, which are variable rate debt instruments whose interest rates are reset through a "dutch" auction process at regular intervals, typically every 28 days. See Item 7A. "Quantitative and Qualitative Disclosures About Market Risk" in Part II and Note 3 to "Notes to Consolidated Financial Statements" in Part IV in this Form 10-K for further discussion.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, investments in special purpose entities or undisclosed borrowings or debt, other than operating leases on our facilities. As of December 31, 2008, other than Euro denominated receivables, we had no foreign currency contracts outstanding.

We indemnify certain customers from third-party claims of intellectual property infringement relating to the use of our products. Historically, costs related to these guarantees of indemnification have not been significant. We are unable to estimate the maximum potential impact of these guarantees on our future results of operations.

Contractual Obligations

The following table summarizes our known contractual obligations (in thousands):

	Payments Due by Period				
Contractual Obligations	**2009**	**2010-2011**	**2012-2013**	**Other**	**Total**
Debt principal(1)	$ 334	$ 501	$ —	$ —	$ 835
Debt interest	20	17	—	—	37
Capital lease obligations (including interest)	38	12	—	—	50
Operating lease obligations	2,939	5,179	3,984	—	12,102
Unrecognized tax benefits(2)	—	—	—	3,356	3,356
Total	$3,331	$5,709	$3,984	$3,356	$16,380

(1) Amount represents the repayment of an interest free loan of €550,000 and a €400,000 euros loan with a variable interest rate based on the EURIBOR plus 160 basis points.

(2) Due to the inherent uncertainty of the tax positions, it is not practicable to assign this liability to any particular years in the table.

Operating lease amounts include minimum rental payments under our operating leases for our office facilities, as well as limited computer, office equipment, and vehicles that we utilize under lease agreements. These agreements expire at various dates through 2013. Capital lease amounts include $3,000 of imputed interest. Capital leases were contracted to purchase computer, software, office equipment, and vehicles in our French subsidiary.

Item 7A. ***Quantitative and Qualitative Disclosures About Market Risk***

The following discusses our exposure to market risk related to changes in interest rates and foreign currency exchange rates. We do not currently own any equity investments, nor do we expect to own any in the foreseeable future. This discussion contains forward-looking statements that are subject to risks and uncertainties. Actual results could vary materially as a result of a number of factors.

Interest Rate Risk. As of December 31, 2008, we had cash, cash equivalents, and short term investments of $40.7 million. Cash and cash equivalents consisted of cash, highly liquid money market instruments and commercial paper with maturities of 90 days or less. Short-term investments consisted of debt securities with maturities of more than three months but less than twelve months. Because of the short maturities of those instruments, a sudden change in market interest rates would not have a material impact on the fair value of the portfolio. We would not expect our operating results or cash flows to be affected to any significant degree by the effect of a sudden change in market interest on our portfolio. A hypothetical increase in market interest rates of 100 basis points from the market rates in effect at December 31, 2008 would cause the fair value of these investments to decrease by an immaterial amount which would not have significantly impacted our financial position or results of operations. Declines in interest rates over time will result in lower interest income and interest expense.

As of December 31, 2008, we held auction-rate securities with a par value of $1.0 million. Auction-rate securities are variable rate debt instruments whose interest rates are reset through a "dutch" auction process at regular intervals, typically every 28 days. A portion of these securities are insured by third party bond insurers and are collateralized by student loans guaranteed by governmental agencies and private entities. The liquidity of the securities has been negatively impacted by the uncertainty in the credit markets and the exposure of these securities to the financial condition of bond insurance companies. All auction-rate securities we hold have been failing to sell at auction since February 2008 due to an insufficient number of bidders. We reviewed the value of these securities for impairment as of December 31, 2008, and concluded that these securities were temporarily impaired, and recorded an unrealized loss of $282,000. In future periods, the estimated fair value of our auction-rate securities could decline further based on market conditions, which could result in additional impairment.

Foreign Currency and Exchange Risk. Certain of our sales contracts are denominated in a currency other than the functional currency of the selling entity. Therefore, a portion of our revenue is subject to foreign currency risks. The effect of an immediate 10% adverse change in exchange rates on foreign denominated receivables as of December 31, 2008 would result in a loss of an immaterial amount. As of December 31, 2008, we did not have outstanding hedging contracts, although we may enter into such contracts in the future. We intend to monitor our foreign currency exposure. Future exchange rate fluctuations may have a material negative impact on our business.

Item 8. ***Financial Statements and Supplementary Data***

The consolidated financial statements and supplementary data required by this Item 8 are listed in Item 15(a)(1) of this Form 10-K.

Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure***

None.

Item 9A. ***Controls and Procedures***

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Our Chief Executive Officer and our Chief Financial Officer, after evaluating the effectiveness of our "disclosure controls and procedures" (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act as of the end of the period covered by this Form 10-K, have concluded that our disclosure controls and

procedures are effective and designed to ensure that information required to be disclosed by us in the reports we file and submit under the Exchange Act is (i) recorded, processed, summarized and reported within the timeframes specified in the rules and forms of the SEC, and (ii) is accumulated and communicated to our management, including our principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Under the supervision and with the participation of our management, including our principal executive officer and principal financial officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting based on the framework in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in Internal Control—Integrated Framework, our management concluded that our internal control over financial reporting was effective as of December 31, 2008.

The effectiveness of our internal control over financial reporting as of December 31, 2008 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is included herein.

Changes in Internal Control

There were no changes in the our internal control over financial reporting identified in connection with the evaluation required by paragraph (d) of Rule 13a-15 or Rule 15d-15 of the Exchange Act that occurred during the our fourth fiscal quarter of 2008 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. ***Other Information.***

None.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
PDF Solutions, Inc.
San Jose, California

We have audited the internal control over financial reporting of PDF Solutions, Inc. and subsidiaries (the "Company") as of December 31, 2008, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2008, based on the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements and financial statement schedule as of and for the year ended December 31, 2008, of the Company and our report dated March 16, 2009, expressed an unqualified opinion on those consolidated financial statements and financial statement schedule and included an explanatory paragraph regarding the adoption of Emerging Issues Task Force Issue No. 06-02, *Accounting for Sabbatical Leave and Other Similar Benefits Pursuant to FASB Statement No. 43* and Financial Accounting Standards Board Interpretation No. 48 *Accounting for Uncertainty in Income Taxes—an interpretation of FASB Statement No. 109.*

/s/ DELOITTE & TOUCHE LLP

San Jose, California
March 16, 2009

PART III

Pursuant to Paragraph (3) of the General Instructions to Form 10-K, certain of the information required by Part III of this Form 10-K is incorporated by reference from our Proxy Statement as set forth below. The Proxy Statement is expected to be filed within 120 days of December 31, 2008.

Item 10. *Directors and Executive Officers of the Registrant.*

Information with respect to our directors appears in our Proxy Statement under "Proposal No. 1—Election of Directors—Nominees for the Board of Directors" and is incorporated herein by reference. Information with respect to our executive officers appears in Part I, Item 1—"Executive Officers" of this Form 10-K.

Information with respect to compliance with Section 16(a) of the Exchange Act, appears in our Proxy Statement under "Section 16 Beneficial Ownership Reporting Compliance" and is incorporated herein by reference.

Our Board of Directors has adopted a Code of Ethics ("Code of Ethics") which is applicable to our Chief Executive Officer, our Chief Financial Officer and employees of the Company. Our Code of Ethics is available on our website at www.pdf.com, on the investor relations page. You may also request a copy of our Code of Ethics in writing by sending your request to PDF Solutions, Inc., Attention: Investor Relations, 333 W. San Carlos Street, San Jose, California 95110. If we make any substantive amendments to the Code of Ethics or grant any waiver, including any implicit waiver, from a provision of the Code of Ethics to our Chief Executive Officer or Chief Financial Officer, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K.

Item 11. *Executive Compensation.*

The information required by this item is incorporated herein by reference to the section entitled "Compensation of Executive Officers and Other Matters—Executive Compensation" in our Proxy Statement.

Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.*

The information required by this item is incorporated herein by reference to the section entitled "Security Ownership of Certain Beneficial Owners and Management" in our Proxy Statement.

Item 13. *Certain Relationships and Related Transactions.*

The information required by this item is incorporated herein by reference to the section entitled "Certain Relationships and Related Transactions" in our Proxy Statement.

Item 14. *Principal Accounting Fees and Services.*

Information with respect to Principal Accountant Fees and Services is incorporated by reference from our Proxy Statement.

Non-Audit Services Provided by Independent Registered Public Accounting Firm

During 2008, our independent registered public accounting firm, Deloitte & Touche LLP, performed certain international tax planning and tax compliance services that were approved by the Audit Committee of our Board of Directors.

PART IV

Item 15. ***Exhibits and Financial Statement Schedules.***

(a) The following documents are filed as part of this report:

(1) Consolidated Financial Statements and Report of Independent Registered Public Accounting Firm

See Index to Consolidated Financial Statements.

(2) Schedule II Valuation and Qualifying Accounts

See the Report of Independent Registered Public Accounting Firm and Schedule II.

(3) Exhibits

The exhibits listed in the accompanying Index to Exhibits are filed or incorporated by reference as part of this Annual Report on Form 10-K.

PDF SOLUTIONS, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

	Page
PDF SOLUTIONS, INC	
Report of Independent Registered Public Accounting Firm	50
Consolidated Balance Sheets as of December 31, 2008 and 2007	51
Consolidated Statements of Operations for each of the Three Years in the Period Ended December 31, 2008	52
Consolidated Statements of Stockholders' Equity and Comprehensive Income (Loss) for each of the Three Years in the Period Ended December 31, 2008	53
Consolidated Statements of Cash Flows for each of the Three Years in the Period Ended December 31, 2008	54
Notes to Consolidated Financial Statements	55

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Stockholders of
PDF Solutions, Inc.
San Jose, California

We have audited the accompanying consolidated balance sheets of PDF Solutions, Inc. and subsidiaries (the "Company") as of December 31, 2008 and 2007, and the related consolidated statements of operations, stockholders' equity and comprehensive income (loss), and cash flows for each of the three years in the period ended December 31, 2008. In connection with our audits of the consolidated financial statements, we have also audited the financial statements schedule, as set forth under Item 15(a)(2). These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedule based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards 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. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of PDF Solutions, Inc. and subsidiaries at December 31, 2008 and 2007, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2008, in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, such financial statement schedule, when considered in relation to the basic consolidated financial statements taken as a whole, presents fairly, in all material respects, the information set forth therein.

As discussed in Note 1 to the consolidated financial statements, effective January 1, 2007, the Company changed its method of accounting for its sabbatical program in accordance with guidance provided by Emerging Issues Task Force Issue No. 06-02, *Accounting for Sabbatical Leave and Other Similar Benefits Pursuant to FASB Statement No. 43* and its method of measuring and recognizing tax benefits associated with uncertain tax positions in accordance with Financial Accounting Standards Board Interpretation No. 48 *Accounting for Uncertainty in Income Taxes—an interpretation of FASB Statement No. 109*.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2008, based on the criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 16, 2009, expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP

San Jose, California
March 16, 2009

PDF SOLUTIONS, INC.
CONSOLIDATED BALANCE SHEETS

	December 31, 2008	December 31, 2007
	(In thousands, except par values)	
ASSETS		
Current assets:		
Cash and cash equivalents	$ 31,686	$ 35,315
Short-term investments	9,051	9,949
Accounts receivable, net of allowances of $254 in 2008 and 2007	24,989	38,526
Prepaid expenses, deferred tax assets, and other current assets	5,147	5,030
Total current assets	70,873	88,820
Property and equipment, net	2,675	3,621
Non-current investments	718	—
Goodwill	—	65,170
Intangible assets, net	4,730	12,818
Deferred tax assets and other non-current assets	631	8,922
Total assets	$ 79,627	$179,351
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Current portion of long-term debt	$ 370	$ 421
Accounts payable	1,384	3,469
Accrued compensation and related benefits	6,525	5,950
Taxes payable and other accrued liabilities	3,723	2,812
Deferred revenues	1,792	3,159
Billings in excess of recognized revenue	748	553
Total current liabilities	14,542	16,364
Long-term debt	512	907
Long-term taxes payable	3,356	5,581
Long-term other liabilities	1,447	29
Total liabilities	19,857	22,881
Commitments and contingencies (Notes 7 and 14)		
Stockholders' equity:		
Preferred stock, $0.00015 par value, 5,000 shares authorized, no shares issued and outstanding	—	—
Common stock, $0.00015 par value, 70,000 shares authorized: shares issued 29,339 in 2008 and 29,122 in 2007; shares outstanding 25,923 in 2008 and 27,933 in 2007	4	4
Additional paid-in capital	189,132	181,566
Treasury stock at cost, 3,416 shares in 2008 and 1,190 shares in 2007	(18,402)	(11,524)
Accumulated deficit	(112,620)	(16,892)
Accumulated other comprehensive income	1,656	3,316
Total stockholders' equity	59,770	156,470
Total liabilities and stockholders' equity	$ 79,627	$179,351

See notes to consolidated financial statements.

PDF SOLUTIONS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2008	2007	2006
	(In thousands, except per share amounts)		
Revenues:			
Design-to-silicon-yield solutions:			
Services	$ 50,273	$63,731	$45,382
Software licenses	4,840	6,645	10,774
Gainshare performance incentives	18,924	24,087	20,028
Total revenues	74,037	94,463	76,184
Cost of design-to-silicon-yield solutions:			
Services	28,926	32,279	27,418
Software licenses	185	191	209
Amortization and impairment of acquired technology	6,012	5,148	5,270
Total cost of design-to-silicon-yield solutions	35,123	37,618	32,897
Gross margin	38,914	56,845	43,287
Operating expenses:			
Research and development	33,994	36,074	27,613
Selling, general and administrative	21,778	24,891	19,814
Amortization of other acquired intangible assets	893	3,422	1,459
Restructuring charges	3,401	—	—
Impairment on goodwill and other acquired intangible assets	66,830	—	—
Write-off of in-process research and development	—	—	800
Total operating expenses	126,896	64,387	49,686
Loss from operations	(87,982)	(7,542)	(6,399)
Interest and other income, net	353	1,891	2,827
Loss before taxes	(87,629)	(5,651)	(3,572)
Income tax provision (benefit)	8,099	(2,724)	(3,133)
Net loss	$ (95,728)	$ (2,927)	$ (439)
Net loss per share—basic and diluted	$ (3.48)	$ (0.10)	$ (0.02)
Weighted average common shares—basic and diluted	27,514	28,066	26,885

See notes to consolidated financial statements.

PDF SOLUTIONS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY AND COMPREHENSIVE INCOME (LOSS)

	Common Stock		Additional Paid-In Capital	Deferred Stock-Based Compensation	Treasury Stock		Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total
	Shares	Amount			Shares	Amount			
					(In thousands)				
Balances, January 1, 2006	26,433	$4	$141,720	$(27)	551	$ (5,549)	$ (13,451)	$ (16)	$122,681
Exercise of options	639		6,021						6,021
Issuance of common stock in connection with employee stock purchase plan	177		1,752						1,752
Issuance of common stock in connection with acquisition	699		9,362						9,362
Reversal of deferred stock-based compensation expense			(27)	27					—
Stock-based compensation expense			7,351						7,351
Tax benefit related to stock-based compensation expense			1,144						1,144
Net loss							(439)		
Cumulative translation adjustment								347	
Comprehensive loss									(92)
Balances, December 31, 2006	27,948	4	167,323	—	551	(5,549)	(13,890)	331	148,219
Exercise of options	182		1,442						1,442
Issuance of common stock in connection with employee stock purchase plan	170		1,490						1,490
Issuance of common stock in connection with acquisition	272		2,874						2,874
Purchases of treasury stock	(639)				639	(5,975)			(5,975)
Stock-based compensation expense			8,229						8,229
Tax benefit related to stock-based compensation expense			208						208
Net loss							(2,927)		
Cumulative translation adjustment, net of tax effect								2,982	
Unrealized gain on investments								3	
Comprehensive income									58
Cumulative effect from adoption of FIN No. 48							771		771
Cumulative effect from adoption of EITF No. 06-2, net of tax effect							(846)		(846)
Balances, December 31, 2007	27,933	4	181,566	—	1,190	(11,524)	(16,892)	3,316	156,470
Exercise of options	12		63						63
Issuance of common stock in connection with employee stock purchase plan	152		590						590
Purchases of treasury stock	(2,226)				2,226	(6,878)			(6,878)
Restricted stock grants	52								
Stock-based compensation expense			7,228						7,228
Deferred tax asset write-off upon expiration of certain stock option awards			(315)						(315)
Net loss							(95,728)		
Cumulative translation adjustment								(1,439)	
Unrealized loss on investments								(221)	
Comprehensive loss									(97,388)
Balances, December 31, 2008	25,923	$4	$189,132	$ —	3,416	$(18,402)	$(112,620)	$ 1,656	$ 59,770

See notes to consolidated financial statements.

PDF SOLUTIONS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2008	2007	2006
	(In thousands)		
Operating activities:			
Net loss	$(95,728)	$ (2,927)	$ (439)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Impairment on goodwill and intangible assets	70,250	—	—
Depreciation and amortization	1,858	2,070	2,103
Stock-based compensation expense	7,228	8,229	7,351
Loss on sale of investment security and other	552	—	61
Amortization of acquired intangible assets	3,485	8,637	6,729
Tax benefit related to stock-based compensation expense	—	208	1,144
Excess tax benefit from stock-based compensation expense	—	(44)	(463)
Write-off of in-process research and development	—	—	800
Deferred taxes	2,566	(5,494)	(6,864)
Changes in operating assets and liabilities, net of effect of acquisition:			
Accounts receivable, net of allowances	13,593	(10,951)	(3,648)
Prepaid expenses and other assets	1,254	(510)	(67)
Accounts payable	(2,111)	59	391
Accrued compensation and related benefits	641	1,182	(2,402)
Taxes payable and other accrued liabilities	5,164	999	(1,766)
Deferred revenues	(1,383)	(546)	1,206
Billings in excess of recognized revenue	195	458	(1,509)
Net cash provided by operating activities	7,564	1,370	2,627
Investing activities:			
Purchases of available-for-sale securities	(27,094)	(26,803)	(45,823)
Maturities and sales of available-for-sale securities	26,940	33,818	31,700
Purchases of property and equipment	(1,115)	(2,226)	(2,433)
Businesses acquired in purchase transactions, net of cash acquired	(1,604)	(4,586)	(18,658)
Net cash provided by (used in) investing activities	(2,873)	203	(35,214)
Financing activities:			
Exercise of stock options	63	1,442	6,021
Proceeds from employee stock purchase plan	590	1,490	1,752
Purchases of treasury stock	(6,878)	(5,975)	—
Principal payments on long-term obligations	(409)	(324)	(23)
Principal payments on notes to stockholders	—	(416)	—
Excess tax benefit from stock-based compensation expense	—	44	463
Net cash provided by (used in) financing activities	(6,634)	(3,739)	8,213
Effect of exchange rate changes on cash and cash equivalents	(1,686)	1,030	319
Net decrease in cash and cash equivalents	(3,629)	(1,136)	(24,055)
Cash and cash equivalents, beginning of period	35,315	36,451	60,506
Cash and cash equivalents, end of period	$ 31,686	$ 35,315	$ 36,451
Non-cash investing and financing activities:			
Stock issued for acquisitions	$ —	$ 2,874	$ 9,362
Purchase price adjustments	$ 216	$ 9	$ 923
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Taxes	$ 2,421	$ 634	$ 2,808
Interest	$ 39	$ 48	$ 5

See notes to consolidated financial statements.

1. Business and Significant Accounting Policies

PDF Solutions, Inc. (the "Company" or "PDF"), provides infrastructure technologies and services to improve yield and optimize performance of integrated circuits. The Company's approach includes manufacturing simulation and analysis, combined with yield improvement methodologies to increase product yield and performance.

Basis of Presentation—The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries after the elimination of all significant intercompany balances and transactions.

Significant Estimates—The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets, liabilities, revenues and expenses. A significant portion of the Company's revenues requires estimates in regards to total costs which may be incurred and revenues earned. Actual results could differ from these estimates.

Certain Significant Risks and Uncertainties—The Company operates in the dynamic semiconductor and software industries, and accordingly, can be affected by a variety of factors. For example, management of the Company believes that changes in any of the following areas could have a significant negative effect on the Company in terms of its future financial position, results of operations and cash flows: regulatory changes; fundamental changes in the technology underlying software technologies; market acceptance of the Company's solutions; development of sales channels; litigation or other claims against the Company; the hiring, training and retention of key employees; successful and timely completion of development efforts; integration of newly acquired companies; and new product introductions by competitors.

Concentration of Credit Risk—Financial instruments that potentially expose the Company to concentrations of credit risk consist primarily of cash and cash equivalents, investments, and accounts receivable. The Company maintains its cash and cash equivalents and investments with what it considers high credit quality financial institutions.

The Company primarily sells its technologies and services to companies in Japan, Europe and North America within the semiconductor industry, which is currently experiencing a downturn with limited visibility to the extent and timing of the recoverability. As of December 31, 2008, four customers accounted for 52% of the Company's gross accounts receivable and two customers accounted for 34% of the Company's total revenue for 2008. As of December 31, 2007, three customers accounted for 53% of the Company's gross accounts receivable and two customers accounted for 35% of the Company's total revenue for 2007. As of December 31, 2006, four customers accounted for 52% of the Company's gross accounts receivable and two customers accounted for 37% of the Company's total revenue for 2006. The Company does not require collateral or other security to support accounts receivable. To reduce credit risk, management performs ongoing credit evaluations of its customers' financial condition. The Company maintains allowances for potential credit losses. The allowance for doubtful accounts, which was based on management's best estimates, could be adjusted in the near term from current estimates depending on actual experience. Such adjustments could be material to the consolidated financial statements.

Cash, Cash Equivalents and Short-term Investments—The Company considers all highly liquid investments with an original maturity of 90 days or less or investments with a remaining maturity of 90 days

1. Business and Significant Accounting Policies (Continued)

or less at the time of purchase to be cash equivalents. Investments with maturities greater than three months and less than one year are classified as short-term investments.

Accounts Receivable—Accounts receivable includes amounts that are unbilled at the end of the period. Unbilled accounts receivable are determined on an individual contract basis and were approximately $10.5 million and $12.1 million at December 31, 2008 and 2007, respectively.

Property and Equipment—Property and equipment are stated at cost and are depreciated or amortized using the straight-line method over the estimated useful lives of the related asset as follows:

Computer and equipment	3 years
Software	3 years
Furniture, fixtures, and equipment	5-7 years
Leasehold improvements	Shorter of estimated useful life or term of lease
Assets acquired under capital lease	Shorter of estimated useful life or term of lease

Goodwill and Intangible Assets—In accordance with Statement of Financial Accounting Standards ("SFAS") No. 142, *Goodwill and Other Intangible Assets* ("SFAS No. 142"), goodwill is generated when the consideration paid for an acquisition exceeds its fair value of net tangible assets acquired. Acquired intangible assets are amortized over their useful lives unless these lives are determined to be indefinite. The Company assesses impairment on goodwill and acquired intangible assets annually and whenever events or changes in circumstances indicate they may be impaired. In valuation of its goodwill and intangible assets, the Company must make assumptions regarding estimated future cash flows to be derived from the acquired assets. If these estimates or their related assumptions change in the future, the Company may be required to record impairment for these assets. At December 31, 2008, the Company performed its annual goodwill impairment test and recorded an impairment of goodwill of $64.0 million, representing all of the Company's carrying value of goodwill. See Note 5 to the consolidated financial statements for further discussion.

Long-lived Assets—The Company's long-lived assets, excluding goodwill, consist of property and equipment and other acquired intangibles. The Company periodically reviews its long-lived assets for impairment in accordance with SFAS No. 144 *Accounting for the Impairment or Disposal of Long-Lived Assets.* For assets to be held and used, the Company initiates its review whenever events or changes in circumstances indicate that the carrying amount of a long-lived asset group may not be recoverable. Recoverability of an asset group is measured by comparison of its carrying amount to the expected future undiscounted cash flows that the asset group is expected to generate. If it is determined that an asset group is not recoverable, an impairment loss is recorded in the amount by which the carrying amount of the asset group exceeds its fair value. At December 31, 2008, the Company performed a review of long-lived assets at which it was determined that the carrying value of its asset group was not recoverable. Accordingly, the Company recorded an impairment of $6.3 million associated with certain acquired intangible assets. See Note 5 to the consolidated financial statements for further discussion.

Revenue Recognition—The Company derives revenue from two sources: Design-to-Silicon-Yield Solutions, which includes Services and Software Licenses, and Gainshare Performance Incentives. The

1. Business and Significant Accounting Policies (Continued)

Company recognizes revenue in accordance with the provisions of American Institute of Certified Public Accountants Statement of Position ("SOP") No. 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts* and SOP No. 97-2, *Software Revenue Recognition,* as amended.

Design-to-Silicon-Yield Solutions—Revenue that is derived from Design-to-Silicon-Yield solutions comes from services and software licenses. The Company recognizes revenue for each element of Design-to-Silicon-Yield solutions as follows:

Services—The Company generates a significant portion of its Design-to-Silicon-Yield solutions revenue from fixed-price solution implementation service contracts delivered over a specific period of time. These contracts require accurate estimation of cost to perform obligations and overall scope of each engagement. Revenue under contracts for solution implementation services is recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting. Losses on solution implementation contracts are recognized in the period when they become evident. Revisions in profit estimates are reflected in the period in which the conditions that require the revisions become known and can be estimated.

On occasion, the Company has licensed its software products as a component of its fixed-price services contracts. In such instances, the software products are licensed to customers over a specified term of the agreement with support and maintenance to be provided over the license term. Under these arrangements, where vendor-specific objective evidence of fair value ("VSOE") exists for the support and maintenance element, the support and maintenance revenue is recognized separately over the term of the supporting period. The remaining fee is recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting. VSOE for maintenance, in these instances, is generally established based upon a negotiated renewal rate. Under arrangements where software products are licensed as a component of its fixed-price service contract and where VSOE does not exist to allocate a portion of the total fixed-price to the undelivered elements, revenue is recognized for the total fixed-price as the lesser of either the percentage of completion method of contract accounting or ratably over the longer of either the term of the agreement or the supporting period. Costs incurred under these arrangements are deferred and recognized in proportion to revenue recognized under these arrangements.

Revenue from related support and maintenance services is recognized ratably over the term of the support and maintenance contract, generally one year, while revenue from consulting, installation and training services is recognized as the services are performed. When bundled with software licenses in multiple element arrangements, support and maintenance, consulting (other than for its fixed-price solution implementations), installation, and training revenue is allocated to each element of a transaction based upon its fair value as determined by the Company's VSOE. VSOE is generally established for maintenance based upon negotiated renewal rates while VSOE for consulting, installation, and training is established based upon the Company's customary pricing for such services when sold separately. When VSOE does not exist to allocate a portion of the total fee to the undelivered elements, revenue is recognized ratably over the longest period of the undelivered elements.

Software Licenses—The Company also licenses its software products separately from its integrated solution implementations. For software license arrangements that do not require significant

1. Business and Significant Accounting Policies (Continued)

modification or customization of the underlying software, software license revenue is recognized under the residual method when (1) persuasive evidence of an arrangement exists, (2) delivery has occurred, (3) the fee is fixed or determinable, (4) collectibility is probable, and (5) the arrangement does not require services that are essential to the functionality of the software. When arrangements include multiple elements such as support and maintenance, consulting (other than for its fixed price solution implementations), installation, and training, revenue is allocated to each element of a transaction based upon its fair value as determined by the Company's VSOE and such services are recorded as services. VSOE is generally established for maintenance based upon negotiated renewal rates while VSOE for consulting, installation and training services is established based upon the Company's customary pricing for such services when sold separately. When VSOE does not exist to allocate a portion of the total fee to the undelivered elements, revenue is recognized ratably over the longest period of the undelivered elements, and such revenue is recorded as services. Revenue for software licenses with extended payment terms is not recognized in excess of amounts due. For software license arrangements that require significant modification or customization of the underlying software, the software license revenue is recognized as services are performed using the cost-to-cost percentage of completion method of contract accounting, and such revenue is recorded as services. During the year ended December 31, 2006, the Company entered into a barter transaction with another software company. As the fair value of the software licenses exchanged could not be reliably estimated, the Company did not record any revenue nor cost for the transaction.

Gainshare Performance Incentives—When the Company enters into a contract to provide yield improvement services, the contract usually includes two components: (1) a fixed fee for performance by the Company of services delivered over a specific period of time; and (2) a gainshare performance incentives component where the customer may pay a variable fee, usually after the fixed fee period has ended. Revenue derived from gainshare performance incentives represents profit sharing and performance incentives earned based upon the Company's customers reaching certain defined operational levels established in related solution implementation services contracts. Gainshare performance incentives periods are usually subsequent to the delivery of all contractual services and therefore have no cost to the Company. Due to the uncertainties surrounding attainment of such operational levels, the Company recognizes gainshare performance incentives revenue (to the extent of completion of the related solution implementation contract) upon receipt of performance reports or other related information from the customer supporting the determination of amounts and probability of collection.

Software Development Costs—Costs for the development of new software products and substantial enhancements to existing software products are expensed as incurred until technological feasibility has been established, at which time any additional costs would be capitalized in accordance with SFAS No. 86, *Computer Software to be Sold, Leased or Otherwise Marketed.* Because the Company believes its current process for developing software is essentially completed concurrently with the establishment of technological feasibility, no costs have been capitalized to date.

Research and Development—Research and development expenses are charged to operations as incurred.

Stock-Based Compensation—Effective January 1, 2006, the Company adopted the provisions of SFAS No. 123 (revised 2004), *Share-Based Payment* ("SFAS No. 123(R)"). The statement eliminates the ability to account for share-based compensation transactions using Accounting Principles Board ("APB") Opinion

1. Business and Significant Accounting Policies (Continued)

No. 25, *Accounting for Stock Issued to Employees* ("APB No. 25") and requires that the cost of share-based payment transactions (including those with employees and non-employees) be recognized in the financial statements based on estimated fair values. SFAS No. 123(R) applies to all share-based payment transactions in which the Company acquires goods or services by issuing its shares, share options, or other equity instruments or by incurring liabilities based on the price of the Company's shares or that require settlement by the issuance of equity instruments. The Company elected to use the modified prospective transition method upon adopting this statement and accordingly prior periods have not been restated to reflect the impact of SFAS No. 123(R). Under this transition method, stock-based compensation expense for the year ended December 31, 2006, 2007, and 2008, includes compensation expense for all stock-based compensation awards granted prior to, but not yet vested as of January 1, 2006, based on the grant date fair value estimated in accordance with the original provision of SFAS No. 123. Stock-based compensation expense during fiscal 2006 also includes expense for all stock-based compensation awards granted after January 1, 2006 based on the grant-date fair value estimated in accordance with the provisions of SFAS No. 123(R). The Company recognizes the compensation costs of stock purchase rights and stock options granted after January 1, 2006 on a straight-line basis over the vesting periods of the applicable stock purchase rights and stock options, generally four years. Prior to the adoption of SFAS No. 123(R), the Company accounted for stock-based compensation in accordance with APB No. 25, and complied with the disclosure provisions of SFAS No. 123 as amended by SFAS No. 148, *"Accounting for Stock-Based Compensation—Transition and Disclosures"*. Deferred compensation recognized under APB No. 25 was amortized to expense using the graded vesting method. Prior to adoption of SFAS No. 123(R), the Company presented all tax benefits resulting from stock purchase rights and stock options as operating cash flows in its statement of cash flows. In accordance with SFAS No. l23(R), the cash flows resulting from excess tax benefits for awards accounted under SFAS No. 123(R) are classified as financing cash flows.

In March 2005, the Securities and Exchange Commission (the "SEC") issued Staff Accounting Bulletin No. 107 ("SAB 107") regarding the SEC's interpretation of SFAS No. 123(R) and the valuation of share-based payments for public companies. The Company has applied the provisions of SAB 107 in its adoption of SFAS No. 123(R). In December 2007, the SEC issued Staff Accounting Bulletin No. 110 ("SAB 110") to amend the SEC's views discussed in SAB 107 regarding the use of the simplified method in developing an estimate of expected life of share options in accordance with SFAS No. 123(R). SAB 110 is effective for the Company beginning in the first quarter of fiscal year 2008. In the fourth quarter of fiscal 2007, the Company had enough historical data to determine its expected life. See Note 8 to the Consolidated Financial Statements for a further discussion on stock-based compensation.

Restructuring Charges—The Company accounts for restructuring charges in accordance with SEC Staff Accounting Bulletin No. 100, *Restructuring and Impairment Charges*, as amended. The Company accounted for (1) the leased facilities portions of its restructurings in accordance with SFAS No. 146, *Accounting for Costs Associated with Exit or Disposal Activities*; (2) the asset-related portions of its restructurings in accordance with SFAS No. 144; and (3) the severance and benefits charges in accordance with SFAS No. 112, *Employers' Accounting for Postemployment Benefits—An Amendment of FASB Statements No. 5 and 43.*

In connection with these restructuring plans, the Company has made a number of estimates and assumptions related to losses on excess facilities vacated, particularly the timing of subleases and sublease terms. Closure and space reduction costs included in the restructuring charges include payments required

1. Business and Significant Accounting Policies (Continued)

under leases less any applicable estimated sublease income after the facilities are abandoned, lease buyout costs and certain contractual costs to maintain facilities during the period after abandonment.

In addition, the Company has recorded estimated provisions for termination benefits and other restructuring costs. The Company regularly evaluates the adequacy of its restructuring accrual, and adjusts the balance based on changes in estimates and assumptions. The Company may incur future charges for new restructuring plans as well as for changes in estimates to amounts previously recorded.

Income Taxes—The Company provides for the effect of income taxes in its consolidated financial statements in accordance with SFAS No. 109, *Accounting for Income Taxes,* ("SFAS No. 109"), and Financial Interpretation No. 48, *Accounting for Uncertainty in Income Taxes—An Interpretation of FASB Statement No. 109*, ("FIN No. 48"). The Company must make significant judgments to apply the principles of SFAS No. 109 and FIN No. 48.

In accordance with SFAS No. 109, the Company is required to estimate its income taxes in each of the jurisdictions in which it operates. This process involves estimating actual current tax liabilities together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The Company then records a valuation allowance to reduce the deferred tax assets to the amount that the Company believes it is more likely than not to realize based on its judgment of all available positive and negative factors. Deferred tax assets are realized by an enterprise by having sufficient taxable income to allow the related tax benefits to reduce taxes otherwise payable. Accordingly, the taxable income must be both of an appropriate character (e.g., capital versus ordinary) and within the carry-back and carry-forward periods permitted by law. In making such assessments, the Company must make significant judgments about the possible sources of taxable income and the evidence available about each possible sources of taxable income on a jurisdiction by jurisdiction basis. As required under SFAS No. 109, the weight given to the potential effect of negative and positive evidence is commensurate with the extent to which the strength of the evidence can be objectively verified. For the year ended December 31, 2008, the Company concluded that a valuation allowance was required based on its evaluation and weighting of the positive and negative evidence. If, in the future, the Company determines that these deferred tax assets are more likely than not to be realized, a release of all or part, of the related valuation allowance could result in a material income tax benefit in the period such determination is made. See Note 10 to the consolidated financial statements for further discussion.

Effective January 1, 2007, the Company adopted the provisions of FIN No. 48, which provides a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns. Unrecognized tax benefits represent tax positions for which reserves have been established. As a result of the implementation of FIN No. 48, the Company recognized a $771,000 decrease in net liabilities for unrecognized tax benefits. This was accounted for as an adjustment to the beginning balance of the accumulated deficit on the balance sheet. As the Company does not anticipate recognizing these tax benefits over the next twelve months, it has reclassified these liabilities as long-term. Prior to the adoption of FIN No. 48, the Company recorded its tax exposure as current liabilities.

1. Business and Significant Accounting Policies (Continued)

Foreign Currency Translation—The functional currency of the Company's foreign subsidiaries is the local currency for the respective subsidiary. The assets and liabilities are translated at the period-end exchange rate, and statements of operations are translated at the average exchange rate during the year. Gains and losses resulting from foreign currency translations are included as a component of other comprehensive income (loss). Gains and losses resulting from foreign currency transactions are included in the consolidated statement of operations.

Comprehensive Income (Loss)—SFAS No. 130, *Reporting Comprehensive Income,* requires that an enterprise report, by major components and as a single total, the change in its net assets during the period from nonowner sources. Comprehensive income (loss) is presented within the statement of stockholders' equity. Accumulated other comprehensive income as of December 31, 2008 and 2007 is comprised of (in thousands):

	Balance at December 31,	
	2008	2007
Unrealized gain (loss) on investments	$ (218)	$ 3
Foreign currency translation adjustments	1,874	3,313
Accumulated other comprehensive income	$1,656	$3,316

Recent Accounting Pronouncements—In December 2007, the Financial Accounting Standards Board ("FASB") issued SFAS No. 141 (revised 2007), *Business Combinations,* ("SFAS No. 141R"). SFAS No. 141R establishes principles and requirements for how an acquirer of a business recognizes and measures in its financial statements the identifiable assets acquired, the liabilities assumed, any noncontrolling interest in the acquiree, and the goodwill acquired. SFAS No. 141R also establishes disclosure requirements to enable the evaluation of the nature and financial effects of the business combination. SFAS No. 141R is effective as of the beginning of an entity's fiscal year that begins after December 15, 2008, and will be adopted by the Company in the first quarter of fiscal 2009. The Company is currently evaluating the potential impact, if any, of the adoption of SFAS No. 141R on its financial statements.

In March 2008, FASB, issued SFAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities—an amendment of FASB Statement No. 133*, ("SFAS No. 161"). SFAS No. 161 enhances the disclosure about the Company's derivative and hedging activities. This Statement requires qualitative disclosures about objectives and strategies for using derivatives, quantitative disclosures about fair value amounts of and gains and losses on derivative instruments, and disclosures about credit-risk-related contingent features in derivative agreements. SFAS No. 161 does not change the accounting treatment for derivative instruments. SFAS No. 161 is effective for the Company beginning in the first quarter of fiscal year 2009. The adoption of SFAS No. 161 is not expected to have a significant impact on the Company's results of operations, cash flow or financial position.

Accounting Changes—Effective January 1, 2007, the Company adopted the provisions of the FASB's Emerging Issues Task Force ("EITF") No. 06-2, *Accounting for Sabbatical Leave and Other Similar Benefits Pursuant to FASB Statement No. 43* ("EITF No. 06-2"). Prior to the issuance of EITF No. 06-2 the Company accounted for sabbatical expense under SFAS No. 43, by expensing the cost of compensated

1. Business and Significant Accounting Policies (Continued)

absences for sabbatical programs as incurred. EITF No. 06-2 requires companies to accrue the cost of such compensated absences over the requisite service period. The Task Force allowed the use of one of two specified methodologies for adopting the change in accounting principle: i) a cumulative-effect adjustment to retained earnings at the beginning of the year of adoption; or ii) retrospective application to all prior periods. The Company elected to use the cumulative-effect adjustment to the beginning balance of retained earnings resulting in an additional liability of $1.4 million, an additional deferred tax asset of $587,000, and an increase in the accumulated deficit of $846,000. Under this transition method, prior periods were not restated and accrued expenses as of December 31, 2008 include accrued sabbatical expense for all employees who are eligible for sabbatical leave.

Effective January 1, 2008, the Company adopted the provisions of the FASB's SFAS No. 157, *Fair Value Measurement,* or SFAS No. 157, for financial assets and liabilities. SFAS No. 157 establishes a framework for measuring fair value and expands disclosures about fair value measurements. Additionally, the statement provides guidance on definition, measurement, methodology and use of assumptions and inputs in determining fair value. The Company applied the provisions of SFAS No. 157 to its financial assets which included its investments accounted for under SFAS No. 115, *Accounting for Certain Investments in Debt and Equity Securities*. See Note 13 "Fair Value" below. In February 2008, the FASB issued FASB Staff Position, or FSP, 157-1, *Application of FASB Statement No. 157 to FASB Statement No. 13 and Other Accounting Pronouncements That Address Fair Value Measurements for Purposes of Lease Classification or Measurement under Statement 13,* or FSP 157-1, and FSP 157-2, *Effective Date of FASB Statement No. 157*, or FSP 157-2. FSP 157-1 removes certain leasing transactions from the scope of SFAS No. 157. FSP 157-2 delays the effective date of SFAS No. 157 for all nonfinancial assets and nonfinancial liabilities, except for items that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually) to fiscal years beginning after November 15, 2008. The Company is currently evaluating the potential impact, if any, of the adoption of SFAS No. 157 with respect to nonfinancial assets and liabilities on its financial statements. Nonfinancial assets and liabilities for which the Company has not applied the provisions of SFAS No. 157 include those measured at fair value in impairment testing and those initially measured at fair value in a business combination. In October 2008, the FASB issued FSP 157-3, *Determining the Fair Value of a Financial Asset When the Market for That Asset Is Not Active,* or FSP 157-3. FSP 157-3 provides guidance for the valuation of financial assets in an inactive market, the use of internal assumptions when relevant observable data does not exist, the use of observable market information when the market is not active, and the use of market quotes when assessing the relevance of observable and unobservable data. FSP 157-3 is effective for all periods presented in accordance with SFAS No. 157. The adoption of FAS 157-3 did not have a material impact on the Company's financial results and position.

Effective January 1, 2008, the Company adopted the provisions of the FASB's SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities—Including an amendment of FASB Statement No. 115*, or SFAS No. 159. SFAS No. 159 permits companies to choose to measure at fair value many financial instruments and certain other items that are not currently required to be measured at fair value. Entities choosing the fair value option would be required to recognize subsequent changes in the fair value of those instruments and other items directly in earnings. This standard also establishes presentation and disclosure requirements designed to facilitate comparisons between companies that choose different measurement attributes for similar types of assets and liabilities. The adoption of SFAS No. 159 did not have an effect on the Company's financial statements as the Company did not elect this fair value option,

1. Business and Significant Accounting Policies (Continued)

nor is it expected to have a material impact on future periods as the election of this option for the Company's financial instruments is expected to be limited.

2. Acquisitions

Triant Holdings, Inc. ("Triant")

On October 7, 2008, the Company completed the acquisition of substantially all of the assets of Triant's fault detection and classification ("FDC") business, excluding certain receivables, but including certain customer contracts and technologies. Triant developed and licensed FDC software applications and services dedicated to the semiconductor industry to enable customers to rapidly identify sources of process variations and manufacturing excursions. This acquisition creates additional opportunities for the Company's FDC business by expanding the existing installed customer base, including leading semiconductor, flat panel display, and wafer manufacturers. Total cost for the acquisition was $1.9 million, which included $1.6 million in cash and $312,000 in acquisition costs. Pursuant to the terms of the acquisition, $374,000 in cash was held in escrow as security against certain financial and other contingencies. The cash held in escrow, less amounts deducted to satisfy contingencies, was required to be released following the statutory notice to creditors associated with Triant's liquidation and wind up process. The escrow was released to Triant in February 2009. In connection with the acquisition, the Company recorded $1.7 million of identifiable intangible assets with a weighted average life of 3.4 years and $147,000 of goodwill. The acquisition was accounted for using the purchase method of accounting in accordance with SFAS No. 141, *Business Combinations* ("SFAS No. 141"), and accordingly the Company's consolidated financial statements from October 7, 2008 include the impact of the acquisition.

The allocation of the purchase price for this acquisition, as of the date of the acquisition, is as follows (in thousands, except amortization period):

Allocation of Purchase Price	Amortization Period (Years)	Amount
Fair value of tangible assets		$ 135
Fair value of intangible assets:		
Developed / Core technology	2	420
Customer relationships and backlog	0.25-4	1,230
Goodwill	N/A	147
Total assets acquired		1,932
Deferred revenue		(16)
Total liabilities assumed		(16)
Total consideration		$1,916

The acquisition was accounted for as a purchase transaction, and accordingly, the assets and liabilities of Triant were recorded at their estimated fair values at the date of the acquisition. With the exception of the goodwill, the identifiable intangible assets are amortized on a straight-line basis over their estimated useful lives, which vary from 0.25 to 4 years, with a weighted average life of 3.4 years. The Company

2. Acquisitions (Continued)

performed an impairment assessment on goodwill in the fourth fiscal quarter of 2008 and the entirety of goodwill was impaired, including the carrying value of goodwill in connection with the Triant acquisition.

Subsequent to the acquisition of Triant, the Company completed its annual goodwill impairment test as prescribed under SFAS No. 142. In addition, due to the continued decline within the semiconductor industry brought on by the deteriorating global economic environment, the Company anticipated further declines in its future operational results. As a result, the Company determined these factors, among others, to be impairment indicators which triggered the necessity of an impairment analysis under SFAS No. 144 for the Company's long-lived assets. These tests also included the goodwill and certain intangible assets recognized as part of the acquisition of Triant. This determination relating to the Company's Triant acquisition was in part made after several public announcements were issued by a key customer of Triant's, regarding its own financial outlook and anticipated capital expenditure spending levels; which in turn caused the Company to revise its projected revenue from what had been expected at the date of the acquisition.

Fabbrix, Inc. ("Fabbrix")

On May 24, 2007, the Company completed the acquisition of Fabbrix, a provider of silicon intellectual property designed to create highly manufacturable and area-efficient designs targeted for advanced technology nodes. With this acquisition, the Company has enhanced its strength in silicon characterization to enable co-optimization of the manufacturing fabric and the logic elements. Total cost for the acquisition was $6.2 million, which included $2.7 million cash, 272,000 shares of the Company's common stock valued at $2.9 million, and $607,000 in acquisition costs. Pursuant to the terms of the acquisition, $405,000 in cash and approximately 41,000 shares of the Company's common stock were held in escrow as security against certain financial and other contingencies. The escrow, less amounts deducted to satisfy contingencies, was required to be released no later than on the 18 month anniversary of the acquisition and was released to the selling stockholders in November 2008. The fair value of the Company's common stock was determined based on the average closing price per share of the Company's common stock over a 5-day period beginning two trading days before and ending two trading days after the terms were announced (May 23, 2007). The acquisition was accounted for using the purchase method of accounting in accordance with SFAS No. 141, and accordingly the Company's consolidated financial statements from May 24, 2007 include the impact of the acquisition.

In addition to the initial cash and stock consideration, up to $14.0 million in earnout consideration would be paid to the selling stockholders if qualifying orders, received during the first twelve months following the closing date, were recognized as revenue during the forty-eight months following the closing date. Earnout consideration would consist of a combination of fifty percent of such amount as a cash payment and fifty percent of such amount as shares of PDF's common stock. As of December 31, 2008, the estimable qualifying revenue did not meet the threshold and no additional consideration was paid in connection with the acquisition.

2. Acquisitions (Continued)

The allocation of the purchase price for this acquisition, as of the date of the acquisition, is as follows (in thousands, except amortization period):

Allocation of Purchase Price	Amortization Period (Years)	Amount
Fair value of tangible assets (including cash of $62,000)		$ 406
Fair value of intangible assets:		
Developed technology	5	6,430
Patent and applications	7	1,400
Goodwill	N/A	2,155
Total assets acquired		10,391
Deferred tax liability		(3,210)
Notes to stockholders		(416)
Accrued liabilities		(364)
Accounts payable		(219)
Total liabilities assumed		(4,209)
Total consideration, net		$ 6,182

The acquisition was accounted for as a purchase transaction, and accordingly, the assets and liabilities of Fabbrix were recorded at their estimated fair values at the date of the acquisition. With the exception of the goodwill, the identifiable intangible assets are amortized on a straight-line basis over their estimated useful lives, which vary from 5 to 7 years, with a weighted average life of 5.4 years.

The acquisition of Fabbrix was structured as a tax-free reorganization. Therefore, the difference between the recognized fair values of the acquired net assets and their historical tax basis are not deductible for tax purposes. A deferred tax liability has been recognized for the difference between the assigned fair values of intangible assets for book purposes and the tax basis of such assets.

The following unaudited pro forma consolidated financial data represents the combined results of operations as if Fabbrix and Triant had been combined with the Company at the beginning of the respective periods. This pro forma financial data includes the straight line amortization of intangibles over their respective estimated useful lives (in thousands, except per share data):

	Year Ended December 31,	
	2008	2007
Revenue	$ 76,029	$97,897
Net loss	$(96,734)	$(6,110)
Pro forma net loss per share—basic and diluted	$ (3.52)	$ (0.22)
Number of shares used to compute pro forma net loss per share—basic and diluted	27,514	28,179

2. Acquisitions (Continued)

These results do not purport to be indicative of what would have occurred had the acquisition been made as of the beginning of the respective periods or the results of operations which may occur in future periods.

3. Investments

The following tables summarize the Company's investments (in thousands):

	December 31, 2008			
	Amortized Cost	Unrealized Holding Gains	Unrealized Holding Losses	Market Value
Commercial paper	$2,043	$ 4	$ —	$2,047
Agency obligations	6,544	68	—	6,612
Auction rate securities	1,000	—	(282)	718
Corporate securities	400	—	(8)	392
	$9,987	$72	$(290)	$9,769
Included in short-term investments				$9,051
Included in non-current investments				718
Total				$9,769

	December 31, 2007			
	Amortized Cost	Unrealized Holding Gains	Unrealized Holding Losses	Market Value
Commercial paper	$12,500	$ 3	$—	$12,503
Auction rate securities	4,450	—	—	4,450
Agency discount notes	1,543	—	—	1,543
	$18,493	$ 3	$—	$18,496
Included in cash and cash equivalents				$ 8,547
Included in short-term investments				9,949
Total				$18,496

As of December 31, 2008 and 2007, all short-term investments had a maturity of one year or less. The primary objective of the Company's cash equivalent and investment activities is to preserve capital and maintain liquidity while generating appropriate returns. The Company's investment policy allows for only high-credit-quality securities. The value and liquidity of these securities are affected by market interest rates generally, as well as the ability of the issuer to make principal and interest payments when due and the normal functioning of the markets in which these securities are traded.

The Company records net unrealized gains or losses on available-for-sale securities in other comprehensive income (loss), which is a component of stockholders' equity. As of December 31, 2008, all individual securities were in an unrealized loss position for less than twelve months. Refer to Note 13 "Fair Value" for further discussion on the Company's investments.

4. Property and Equipment

Property and equipment consist of (in thousands):

	December 31,	
	2008	2007
Computer equipment	$ 12,641	$ 11,890
Software	3,388	3,299
Furniture, fixtures, and equipment	1,438	1,437
Vehicles	40	36
Leasehold improvements	829	558
	18,336	17,220
Accumulated depreciation and amortization	(15,661)	(13,599)
	$ 2,675	$ 3,621

The Company leases office equipment, computer hardware, vehicles and computer software under capital leases as defined in *SFAS No. 13, Accounting for Leases.* The following is an analysis of the leased property (included in table above) under capital leases by major classes (in thousands):

	December 31, 2008	December 31, 2007
Computer and office equipment	$ 177	$ 205
Vehicles	40	36
Software	49	44
	266	285
Accumulated depreciation and amortization	(232)	(172)
	$ 34	$ 113

5. Goodwill and Intangible Assets

The following table provides information relating to the intangible assets and goodwill contained within the Company's consolidated balance sheets as of December 31, 2008 and December 31, 2007 (in thousands):

	Amortization Period (Years)	December 31, 2007 Net Carrying Amount	Acquisitions	Purchase Price Adjustments	Amortization	Foreign Currency Translation	Impairment	December 31 2008 Net Carrying Amount
Goodwill	N/A	$65,170	$ 147	$(216)	$ —	$(1,102)	$(63,999)	$ —
Acquired identifiable intangibles:								
Acquired technology	4-5	$ 9,184	$ 420	$ —	$(2,576)	$ —	$ (3,420)	$3,608
Brand name	4	361	—	—	(128)	—	(104)	129
Customer relationships and backlog	1-6	1,812	1,230	—	(509)	—	(2,044)	489
Patents and applications	7	1,283	—	—	(200)	—	(683)	400
Other acquired intangibles	4	178	—	—	(72)	(2)	—	104
Total		$12,818	$1,650	$ —	$(3,485)	$ (2)	$ (6,251)	$4,730

	Amortization Period (Years)	December 31, 2006 Net Carrying Amount	Acquisitions	Purchase Price Adjustments	Amortization	Foreign Currency Translation	December 31 2007 Net Carrying Amount
Goodwill	N/A	$60,034	$2,155	$ 6	$ —	$2,975	$65,170
Acquired identifiable intangibles:							
Acquired technology	4-5	$ 7,901	$6,430	$—	$(5,147)	$ —	$ 9,184
Brand name	4	822	—	—	(461)	—	361
Customer relationships and backlog	1-6	4,362	—	—	(2,550)	—	1,812
Patents and applications	7	—	1,400	—	(117)	—	1,283
Other acquired intangibles	4	520	—	—	(362)	20	178
Total		$13,605	$7,830	$—	$(8,637)	$ 20	$12,818

In 2007, the Company recorded an additional $2.2 million of goodwill and $7.8 million of intangible assets in connection with the acquisition of Fabbrix. The Company also recorded an adjustment of $3.0 million related to the effect of changes in exchange rates associated with recorded goodwill. In 2008, the Company recorded an additional $147,000 of goodwill and $1.7 million of intangible assets in connection with the acquisition of Triant's FDC business. The Company also recorded an adjustment of $1.1 million related to the effect of changes in exchange rates associated with recorded goodwill.

During the fourth quarter of fiscal 2008, the Company observed impairment indicators relating to their long-lived assets, including the trading of common stock below its book value, the anticipated future decline in its operational results, and a further deterioration in the semiconductor industry in which the Company operates, which triggered the necessity of impairment test as of December 31, 2008. As such, in accordance with SFAS No. 144, the Company assessed the recoverability of its long-lived assets by comparing the carrying value of those intangible assets to the undiscounted cash flows of the asset group. The analysis indicated that the carrying value of those assets exceeded the undiscounted cash flows. As such, the Company determined that certain of the acquired intangible assets were impaired. The Company

5. Goodwill and Intangible Assets (Continued)

measured the amount of impairment by calculating the amount by which the carrying value of the assets exceeded their estimated fair values, which were based on projected discounted future net cash flows. As a result of this impairment analysis, the Company recorded an impairment charge of $6.3 million during the fourth fiscal quarter of 2008.

In accordance with SFAS No. 142, goodwill is measured and tested for impairment on an annual basis and more frequently in certain circumstances. Accordingly, the Company has selected December 31 as the date to perform the annual testing requirements. The Company performs a two-step testing on goodwill impairment. The first step requires that the Company compare the estimated fair value of its single reporting unit to the carrying value of the reporting unit's net assets, including goodwill. If the fair value of the reporting unit is greater than the carrying value of its net assets, goodwill is not considered to be impaired and no further testing is required. If the fair value of the reporting unit is less than the carrying value of its net assets, the Company is required to complete the second step of impairment test to determine the fair value of goodwill. An impairment is recorded if the carrying value of the goodwill exceeds its fair value.

As discussed in Note 12, Customer and Geographic Information, the Company considers itself to be in one operating segment. In addition, the Company has determined that its operating segment is also its reporting unit as the operating segment comprises only a single component. To determine the reporting unit's fair value, the Company used the income valuation approach. In determining its overall conclusion of reporting unit's fair value, the Company also considers the estimated value derived from the market valuation approach as compared to the valuation under the income approach as one measure that the estimated fair value is reasonable.

The income approach provides an estimate of fair value based on discounted expected future cash flows. Estimates and assumptions with respect to the determination of the fair value of the Company's reporting unit using the income approach include the Company's operating forecasts, revenue growth rates, and risk-commensurate discount rates and costs of capital. The Company's estimates of revenues and costs are based on historical data, various internal estimates and a variety of external sources, and are developed as part of the Company's routine long-range planning process.

The market approach provides an estimate of the fair value of the Company's reporting unit using various prices or market multiples applied to the reporting unit's operating results and then applying an appropriate control premium, which is determined by considering control premiums offered as part of acquisitions in both the Company's market segment and comparable market segments.

The Company completed its annual impairment analysis of goodwill as of December 31, 2008, including the second step prescribed by SFAS No. 142. As part of the second step of its goodwill impairment test, the Company determined the fair value of its goodwill by allocating the estimated fair value of its reporting unit to its assets and liabilities, including the estimated fair value of its unrecorded intangible assets, on a fair value basis. After allocating its assets and liabilities on a fair value basis, the Company recorded an impairment of all of its goodwill of $64.0 million.

Allocating assets and liabilities on a fair value basis and determining the fair value of unrecorded intangible assets required that the Company make assumptions and estimates about the fair value of assets and liabilities where the fair values of those assets and liabilities were not readily available or observable. In addition, the Company made estimates regarding its forecasted revenue, expenses and cash flows, its

5. Goodwill and Intangible Assets (Continued)

research and development activities, its customer turnover rates, applicable discount rates and costs of capital and the marketability of its current and future technology.

The Company expects that annual amortization of acquired identifiable intangible assets to be as follows (in thousands):

Year Ending December 31,	Amount
2009	$1,782
2010	1,578
2011	830
2012	435
2013	74
Thereafter	31
Total	$4,730

6. Taxes Payable and Other Accrued Liabilities

Taxes Payable and Other accrued liabilities consist of (in thousands):

	December 31,	
	2008	2007
Current portion of accrued restructuring	$1,473	$ —
Taxes payable and other accrued expenses	2,250	2,812
Total taxes payable and other accrued liabilities	$3,723	$2,812

7. Commitments and Contingencies

Leases—The Company leases administrative and sales offices and certain equipment under noncancelable operating leases which contain various renewal options and require payment of common area costs, taxes and utilities, when applicable. These operating leases expire at various times through 2013. Rent expense was $3.2 million, $3.1 million, and $2.8 million in 2008, 2007, and 2006, respectively.

Future minimum lease payments under noncancelable operating leases at December 31, 2008 are as follows (in thousands):

Year Ended December 31,	
2009	$ 2,939
2010	2,641
2011	2,538
2012	2,306
2013	1,678
Total future minimum lease payments	$12,102

7. Commitments and Contingencies (Continued)

Future minimum lease payments under capital leases are as follows as of December 31, 2008 (in thousands):

Year Ended December 31,	
2009	$38
2010	10
2011	2
Net minimum lease payments	50
Less: amount representing interest	(3)
Present value of future minimum lease payments	$47

Debt—During 2004 and 2005, the former SiA entered into two separate debt agreements with a government-backed agency in France. Such obligations were assumed by the Company at the time of acquisition. In 2004 SiA obtained a €550,000 loan to cover research and development expenses. The loan does not carry interest and its repayment is conditioned on meeting certain revenue targets. The Company met those targets both in 2007 and 2008, and as such, will reimburse the entire loan in four payments through 2010. SiA also entered into a long-term debt agreement in 2005 for a total amount of €400,000. The debt carries a variable interest rate based on the three month average EURIBOR plus 160 basis points. As of December 31, 2008, such rate was 6.73%. The debt is reimbursable in 20 equal principal quarterly installments from January 2007 through October 2011. Neither debt agreements carry any financial covenant.

Future minimum debt payments under the current debt agreements are as follows (in thousands):

Year Ended December 31,	Principal	Interest
2009	$334	$20
2010	390	12
2011	111	5
Total future minimum debt payments	$835	$37

Indemnifications—The Company generally provides a warranty to its customers that its software will perform substantially in accordance with documented specifications typically for a period of 90 days following delivery of its products. The Company also indemnifies certain customers from third-party claims of intellectual property infringement relating to the use of its products. Historically, costs related to these guarantees have not been significant. The Company is unable to estimate the maximum potential impact of these guarantees on its future results of operations.

Indemnification of Officers and Directors—As permitted by the Delaware general corporation law, the Company has included a provision in its certificate of incorporation to eliminate the personal liability of its officers and directors for monetary damages for breach or alleged breach of their fiduciary duties as officers or directors, other than in cases of fraud or other willful misconduct.

In addition, the Bylaws of the Company provide that the Company is required to indemnify its officers and directors even when indemnification would otherwise be discretionary, and the Company is required

7. Commitments and Contingencies (Continued)

to advance expenses to its officers and directors as incurred in connection with proceedings against them for which they may be indemnified. The Company has entered into indemnification agreements with its officers and directors containing provisions that are in some respects broader than the specific indemnification provisions contained in the Delaware general corporation law. The indemnification agreements require the Company to indemnify its officers and directors against liabilities that may arise by reason of their status or service as officers and directors other than for liabilities arising from willful misconduct of a culpable nature, to advance their expenses incurred as a result of any proceeding against them as to which they could be indemnified, and to obtain directors' and officers' insurance if available on reasonable terms. The Company has obtained directors' and officers' liability insurance in amounts comparable to other companies of the Company's size and in the Company's industry. Since a maximum obligation of the Company is not explicitly stated in the Company's Bylaws or in its indemnification agreements and will depend on the facts and circumstances that arise out of any future claims, the overall maximum amount of the obligations cannot be reasonably estimated. Historically, the Company has not made payments related to these obligations, and the estimated fair value for these obligations was zero on the consolidated balance sheets as of December 31, 2008 and 2007.

8. Stockholders' Equity

Effective January 1, 2006 the Company adopted SFAS No. 123(R). Stock-based compensation expenses before taxes related to the Company's employee stock purchase plan and stock plans were allocated as follows (in thousands):

	Year Ended December 31, 2008	Year Ended December 31, 2007	Year Ended December 31, 2006
Cost of design-to-silicon yield solutions	$1,879	$2,170	$2,115
Research and development	2,395	2,619	2,229
Selling, general and administrative	2,954	3,440	3,007
Stock based compensation expense	$7,228	$8,229	$7,351

Upon its adoption of the fair value recognition provisions of SFAS No. 123(R), the Company elected to use the modified prospective transition method, and accordingly, prior periods have not been restated to reflect the impact of SFAS No. 123(R). Stock-based compensation expense recognized during the period is based on the value of the portion of share-based payment awards that is ultimately expected to vest during the period. Under the modified prospective transition method, stock-based compensation expense recognized in the Company's consolidated statement of operations for the years ended December 31, 2006, 2007, and 2008 included compensation expense for share-based payment awards granted prior to, but not yet vested as of January 1, 2006 based on the grant date fair value estimated in accordance with the pro forma provisions of SFAS No. 123, and compensation expense for the share-based payment awards granted subsequent to January 1, 2006 based on the grant date fair value estimated in accordance with the provisions of SFAS No. 123(R). In conjunction with the adoption of SFAS No. 123(R), the Company changed its method of attributing the value of stock-based compensation to expense from the graded vesting method to the straight-line method. Compensation expense for all share-based payment awards granted on or prior to January 1, 2006 will continue to be recognized using the graded vesting method

8. Stockholders' Equity (Continued)

while compensation expense for all share-based payment awards granted subsequent to January 1, 2006 is recognized using the straight-line method. As stock-based compensation expense recognized in the consolidated statements of operations for the years ended December 31, 2008, 2007, and 2006 is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. SFAS No. 123(R) requires forfeitures to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates.

The Company has elected to use the Black-Scholes-Merton option-pricing model, which incorporates various assumptions including volatility, expected life and interest rates. The expected volatility is based on the historical volatility of the Company's common stock over the most recent period commensurate with the estimated expected life of the Company's stock options. The expected life of an award is based on historical experience and on the terms and conditions of the stock awards granted to employees. The interest rate assumption is based upon observed Treasury yield curve rates appropriate for the expected life of the Company's stock options.

The fair value of options granted was estimated on the date of grant with the following weighted average assumptions:

	Stock Plans			Employee Stock Purchase Plan		
	2008	2007	2006	2008	2007	2006
Expected life (in years)	5.7	5.9	5.7	1.29	0.74	0.95
Volatility	58.9%	57.9%	60.4%	64.5%	55.5%	50.3%
Risk-free interest rate	3.22%	4.21%	4.60%	2.64%	5.11%	4.08%
Expected dividend	—	—	—	—	—	—

On December 31, 2008, the Company has in effect the following stock-based compensation plans:

Stock Plans—In 2001, the Company terminated the 1996 and 1997 Stock Plans with respect to future option grants, and adopted the 2001 Stock Plan. Under the 2001 Stock Plan, on January 1 of each year starting with year 2002, the number of shares in the reserve will increase by the lesser of (1) 3,000,000 shares, (2) 5% of the outstanding common stock on the last day of the immediately preceding year, or (3) the number of shares determined by the board of directors. Under the 2001 Stock Plan, the Company may grant stock purchase rights and stock options to purchase shares of common stock to employees, directors and consultants. The exercise price for stock options must generally be at prices not less than the fair market value at the date of grant for incentive stock options. Stock options generally expire ten years from the date of grant and become vested and exercisable ratably over a four-year period.

As of December 31, 2008 the Company has authorized 11.6 million shares of common stock for issuance and exercise of options, of which 4.7 million shares are available for grant. As of December 31, 2008 there were no outstanding options that had been granted outside of the Plans.

8. Stockholders' Equity (Continued)

Additional information with respect to options under the Plans, including options granted outside the Plans, is as follows:

	Outstanding Options			
	Number of Options (in thousands)	Weighted Average Exercise Price per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding, January 1, 2006	5,674	$11.13		
Granted (weighted average fair value of $8.35 per share)	1,947	14.25		
Exercised	(638)	9.43		
Canceled	(300)	13.33		
Expired	(19)	11.44		
Outstanding, December 31, 2006	6,664	12.11		
Granted (weighted average fair value of $5.47 per share)	2,078	9.50		
Exercised	(182)	7.92		
Canceled	(256)	14.15		
Expired	(289)	13.23		
Outstanding, December 31, 2007	8,015	11.42		
Granted (weighted average fair value of $3.06 per share)	748	5.47		
Exercised	(12)	5.21		
Canceled	(1,451)	12.80		
Expired	(2,888)	13.05		
Outstanding, December 31, 2008	4,412	8.91	7.18	$8,511
Vested and expected to vest	4,070	9.01	7.02	$8,511
Options exercisable at:				
December 31, 2006	3,419	$10.64		
December 31, 2007	4,241	$11.28		
December 31, 2008	2,512	$ 9.52	5.86	$8,511

The aggregate intrinsic value in the table above represents the total intrinsic value based on the Company's closing stock price of $1.44 as of December 31, 2008, which would have been received by the option holders had all option holders exercised their options as of that date. The total intrinsic value of options exercised during the year ended December 31, 2008 was $27,000.

As of December 31, 2008, there was $6.8 million of total unrecognized compensation cost net of forfeitures related to nonvested stock options. That cost is expected to be recognized over a weighted average period of 2.7 years. The total fair value of shares vested during the year ended December 31, 2008

8. Stockholders' Equity (Continued)

was $7.8 million. Additional information regarding options outstanding as of December 31, 2008 is as follows:

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding (in thousands)	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price per Share	Number Vested and Exercisable (in thousands)	Weighted Average Exercise Price per Share
$0.53 - $0.53	—	0.9	$ 0.53	—	$ 0.53
$1.13 - $1.13	26	2.9	1.13	26	1.13
$1.88 - $1.88	17	1.4	1.88	17	1.88
$2.98 - $3.78	36	6.3	3.43	21	3.78
$4.70 - $7.00	1,217	6.7	5.61	609	6.14
$7.50 - $11.22	2,350	7.4	9.22	1,208	9.31
$14.46 - $16.87	766	7.0	13.91	631	13.94
$0.53 - $16.87	4,412	7.1	8.91	2,512	9.52

On June 10, 2008, the Company filed a tender offer on Form SC TO-I, or the Offer, with the SEC under which holders of options with exercise prices equal to or greater than $10.00 per share could tender their options in exchange for restricted stock rights granted under the 2001 Stock Plan based upon a 4.2 option shares to 1.0 restricted stock right exchange ratio. Restricted stock rights received in exchange for eligible options are subject to new vesting schedules, ranging from 15 months to 51 months, depending on when stock options exchanged were granted.

The Company completed the Offer on August 18, 2008. As a result, the Company accepted for exchange options to purchase an aggregate of 3.3 million shares of the Company's common stock from 210 eligible participants, representing 73% of the shares subject to options that were eligible to be exchanged in the Offer as of August 18, 2008. Upon the terms and subject to the conditions set forth in the Offer, the Company issued restricted stock rights covering an aggregate of 793,000 shares of the Company's common stock in exchange for the options surrendered pursuant to the Offer.

The fair value of the restricted stock rights awarded was measured as the total of the unrecognized compensation cost of the original options tendered and the incremental compensation cost of the restricted stock rights awarded on August 18, 2008, the date of cancellation. The incremental compensation cost was measured as the excess of the fair value of the restricted stock rights awards over the fair value of the options immediately before cancellation based on the share price and other pertinent factors at that date. The incremental cost of the 793,000 restricted stock rights awarded was $984,000. The unrecognized compensation costs of the tendered options cancelled were $5.9 million. The total fair value of the restricted stock right awarded on August 18, 2008 was $6.8 million and these costs will be amortized over the service period of the restricted stock rights.

8. Stockholders' Equity (Continued)

Nonvested shares (restricted stock units) as of December 31, 2008 and changes during the twelve months ended December 31, 2008 were as follows:

	Shares (in thousands)	Weighted-Average Grant-Date Fair Value
Nonvested, January 1, 2008	133	$10.73
Granted	793	8.54
Vested	(52)	10.73
Forfeited	(22)	12.91
Nonvested, December 31, 2008	852	$ 8.64

As of December 31, 2008, there was $4.6 million of total unrecognized compensation cost related to restricted stock rights. That cost is expected to be recognized over a weighted average period of 3.5 years. The total compensation expense related to shares expected to vest during year ended December 31, 2008 was $630,000.

Employee Stock Purchase Plan—In July 2001, the Company adopted an Employee Stock Purchase Plan, ("Purchase Plan") under which eligible employees can contribute up to 10% of their compensation, as defined in the Purchase Plan, towards the purchase of shares of PDF common stock at a price of 85% of the lower of the fair market value at the beginning of the offering period or the end of each six-month offering period. Under the Purchase Plan, on January 1 of each year, starting with 2002, the number of shares reserved for issuance will automatically increase by the lesser of (1) 675,000 shares, (2) 2% of the Company's outstanding common stock on the last day of the immediately preceding year, or (3) the number of shares determined by the board of directors. As of December 31, 2008, 2.8 million shares of the Company's common stock have been reserved for issuance under the Purchase Plan. During years 2008, 2007, and 2006, 152,000, 170,000, and 176,000 were issued at a weighted average price of $3.87, $8.75, and $9.95 per share, respectively and as of December 31, 2008, 1.5 million shares were available for future issuance under the Purchase Plan. The weighted average estimated fair value of shares granted under the Purchase Plan during 2008, 2007, and 2006 was $2.84, $4.09, and $4.10, respectively.

Stock Repurchase Program—On March 26, 2003, the Company's Board of Directors approved a share repurchase program to purchase up to $10.0 million of its outstanding common stock. The program was completed in August 2007 with 988,000 shares repurchased at the average price of $10.12. On October 29, 2007, the Board of Directors approved a new program to repurchase up to an additional $10.0 million of the Company's common stock on the open market. The right of repurchase stock under this program will expire on October 29, 2010. As of December 31, 2008, 2.4 million shares have been repurchased at the average price of $3.46 under this program and $1.6 million remained available for repurchase.

8. Stockholders' Equity (Continued)

The stock repurchase activity for the year ended December 31, 2008 is summarized as follows (in thousands, except per share amounts):

	Shares Repurchased	Weighted-Average Price per Share	Amount Repurchased
Cumulative balance at January 1, 2008	201	$7.57	$1,523
Repurchase of common stock	2,226	3.09	6,878
Cumulative balance at December 31, 2008	2,427	3.46	$8,401

9. Restructuring

During the year ended December 31, 2008, the Company recorded restructuring charges of $3.4 million, related to expenses incurred as the result of restructuring plans the Company announced on April 29, 2008 and October 28, 2008, in an effort to better allocate its resources to improve its operational results in light of the current market conditions.

For the plan announced on April 29, 2008, the Company recorded restructuring charges of $1.5 million during the three months ended June 30, 2008, which primarily consisted of employee severance costs of $1.4 million. For the plan announced on October 28, 2008, the Company recorded restructuring charges of $1.9 million during the three months ended December 31, 2008, which primarily consisted of facility exit costs of $985,000 and employee severance costs of $909,000. The following table summarizes the activities of these restructuring liabilities (in thousands):

Restructuring Announced on April 29, 2008	Severance	Professional and Other Fees
Balance at January 1, 2008	$ —	$ —
Restructuring charges	1,350	121
Payments	(1,290)	(121)
Balance at December 31, 2008	$ 60	$ —

As of December 31, 2008, the remaining accrual of $60,000 for severance was included in other accrued liabilities and is expected to be paid out in the first fiscal quarter of 2009.

Restructuring Announced on October 28, 2008	Severance	Facility Exit	Professional and Other Fees
Balance at January 1, 2008	$ —	$ —	$—
Restructuring charges	909	1,251	36
Adjustment of deferred rent	—	(266)	—
Non-cash adjustment	36	266	—
Payments	(85)	(143)	(5)
Balance at December 31, 2008	$860	$1,108	$31

As of December 31, 2008, of the remaining accrual of $2.1 million, $1.5 million was included in taxes payable and other accrued liabilities and $587,000 was included in long-term other liabilities. Accrued

9. Restructuring (Continued)

severance of $860,000 and accrued professional and other fees are expected to be paid out in the first fiscal quarter of 2009. Accrued facility exit will be paid in accordance with the payment schedule through 2013.

10. Income Taxes

	Year Ended December 31,		
	2008	2007	2006
	(In thousands)		
U.S.			
Current	$4,031	$(1,470)	$ 631
Deferred	2,566	(1,744)	(4,050)
Foreign			
Current	172	260	204
Withholding	1,330	758	335
Deferred	—	(528)	(253)
Total provision (benefit)	$8,099	$(2,724)	$(3,133)

During the year ended December 31, 2008, 2007, and 2006, income (loss) before taxes from U.S. operations was ($88.1) million, ($14.2) million, and ($3.2) million, respectively, and income (loss) before taxes from foreign operations was $471,000, $8.6 million, and ($393,000), respectively. The income (loss) before taxes from U.S. operations for year 2007 included $6.4 million intercompany sale of intangibles by a foreign subsidiary to PDF Solutions, Inc.

The income tax provision (benefit) differs from the amount estimated by applying the statutory federal income tax rate (35%) for the following reasons (in thousands):

	Year Ended December 31,		
	2008	2007	2006
Federal statutory tax benefit	$(30,670)	$(1,978)	$(1,250)
State tax expense (benefit)	(5,467)	(615)	(632)
Stock compensation expense	(210)	1,537	1,697
Write-off of in-process research and development	—	—	280
Impairment on goodwill and intangible assets	16,202	—	—
Tax credits	(162)	(1,512)	(3,633)
Foreign tax, net	3,942	22	477
Valuation allowance	24,428	—	—
Other	36	(178)	(72)
Total	$ 8,099	$(2,724)	$(3,133)

The Company has state net operating loss carry-forwards ("NOLs") of approximately $12.3 million. State NOL restrictions vary by state. The California portion of state loss is suspended for 2008 and 2009. The California loss can be carried forward 20 years for tax years beginning on or after January 1, 2008 and will expire in 2029.

10. Income Taxes (Continued)

In addition, as of December 31, 2008, the Company had federal and state research and experimental and other tax credit carry-forwards of approximately $7.9 million and $8.0 million, respectively. The federal credits begin to expire in 2025, while the state credits have no expiration. The extent to which the federal and state credit carry forwards can be used to offset future tax liabilities, respectively, may be limited, depending on the extent of ownership changes within any three-year period as provided in the Tax Reform Act of 1986 and the California Conformity Act of 1987.

Based on the available objective evidence, both positive and negative, including the recent history of losses, forecasted U.S. pre tax income (loss), and the net operating losses that can be carried back to prior taxable years, management concluded as of December 31, 2008, that it is more likely than not that the Company's net deferred tax assets would not be fully realizable. Accordingly, the Company established a valuation allowance covering substantially all its net deferred tax assets.

The components of the net deferred tax assets (liability) are comprised of (in thousands):

	Year Ended December 31,	
	2008	2007
Net operating loss carry forward	$ 936	$ 251
Research and development and other credit carry forward	10,453	8,824
Accruals deductible in different periods	3,437	3,223
Intangible assets	5,003	—
Stock-based compensation	5,066	2,186
Valuation allowance	(24,428)	—
Deferred tax assets	467	14,484
Deferred tax liabilities—intangible assets	—	(4,350)
Total	$ 467	$10,134

The Company adopted the provisions of FIN No. 48 at the beginning of fiscal 2007. FIN No. 48 provides a comprehensive model for the financial statement recognition, measurement, presentation and disclosure of uncertain tax positions taken or expected to be taken in income tax returns.

Unrecognized tax benefits represent tax positions for which reserves have been established. The cumulative effect of adopting FIN No. 48 on January 1, 2007 is recognized as a change in accounting principle, recorded as an adjustment to the opening balance of accumulated deficit on the adoption date. As a result of the implementation of FIN No. 48, the Company recognized a decrease of $771,000 in accumulated deficit.

Upon adoption of FIN No. 48, the Company has reclassified these liabilities as long-term. Prior to the adoption of FIN No. 48, the Company recorded its tax exposure as current liabilities. The Company includes interest and penalties related to unrecognized tax benefits within the Company's income tax provision (benefit). As of December 31, 2008 and 2007, the Company had $562,000 and $566,000, respectively, accrued for payment of interest and penalties related to unrecognized tax benefits. The Company derecognized $4,000 of interest and penalties related to unrecognized tax benefits in its income tax provision for the year ended December 31, 2008.

10. Income Taxes (Continued)

The Company's total amount of unrecognized tax benefits as of December 31, 2008 was $8.2 million, as compared to $7.9 million as of December 31, 2007, of which $2.8 million, if recognized, would affect the Company's effective tax rate. As of December 31, 2008, the Company has recognized a net amount of $3.4 million as long-term taxes payable for unrecognized tax benefits in its consolidated balance sheets. The Company does not expect the change in unrecognized tax benefits over the next twelve months to materially impact its results of operations and financial position.

The Company conducts business globally and, as a result, files numerous consolidated and separate income tax returns in the U.S. federal, various state and foreign jurisdictions. Because the Company used some of the tax attributes carried forward from previous years to tax years that are still open, statutes of limitation remain open for all tax years to the extent of the attributes carried forward into tax year 2001 for federal tax purposes and tax year 2002 for California tax purposes. With few exceptions, the Company is no longer subject to income tax examinations in its major foreign subsidiaries' jurisdictions for years before 2004. During the second fiscal quarter of 2008, the Company received the final German tax authority audit report for the years 2002 through 2004. The Company reviewed the results of the audit, noting no material adjustments to the prior years' tax returns.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	December 31, 2008
Gross unrecognized tax benefits at January 1, 2008	$7,860
Decreases in tax positions for prior years	(212)
Increases in tax positions for prior years	131
Increases in tax positions for current year	943
Lapse in statute of limitations	(507)
Gross unrecognized tax benefits at December 31, 2008	$8,215

11. Net Loss Per Share

Basic and diluted net loss per share are computed by dividing net loss by weighted average common shares outstanding for the period (excluding outstanding stock options and shares subject to repurchase). The following is a reconciliation of the numerators and denominators used in computing basic and diluted net loss per share (in thousands except per share amount):

	Year Ended December 31,		
	2008	2007	2006
Net loss	$(95,728)	$(2,927)	$ (439)
Denominator for basic and diluted calculation:			
Weighted average common shares outstanding	27,514	28,066	26,885
Net loss per share—basic and diluted	$ (3.48)	$ (0.10)	$ (0.02)

12. Customer and Geographic Information

The Company has adopted the disclosure requirements of SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information,* which establishes standards for reporting information about operating segments. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker, or group, in deciding how to allocate resources and in assessing performance.

The Company's chief operating decision maker, the chief executive officer, reviews discrete financial information presented on a consolidated basis for purposes of making operating decisions and assessing financial performance. Accordingly the Company considers itself to be in one operating segment, specifically the licensing and implementation of yield improvement solutions for integrated circuit manufacturers.

The Company had revenues from individual customers in excess of 10% of total revenues as follows:

	Year Ended December 31,		
Customer	2008	2007	2006
A	18%	19%	12%
B	16%	16%	25%

The Company had accounts receivable from individual customers in excess of 10% of gross accounts receivable as follows:

	December 31,	
Customer	2008	2007
A	12%	27%
B	17%	15%
C	11%	11%
D	12%	—%

Revenue from customers by geographic area is as follows (in thousands):

	Year Ended December 31,					
	2008		2007		2006	
	Revenues	Percentage of Revenues	Revenues	Percentage of Revenues	Revenues	Percentage of Revenues
Asia	$40,592	55%	$51,466	55%	$38,129	50%
United States	19,808	27	29,682	31	29,850	39
Europe	13,637	18	13,315	14	8,205	11
Total	$74,037	100%	$94,463	100%	$76,184	100%

As of December 31, 2008 and 2007, long-lived assets related to PDF SAS (formerly SiA), located in France, totaled $336,000 and $446,000, respectively. The majority of the Company's remaining long-lived assets are in the United States.

13. Fair Value

Effective January 1, 2008, the Company adopted SFAS No. 157 (as impacted by FSP 157-1, FSP 157-2, and FSP 157-3) with respect to fair value measurements of (1) nonfinancial assets and liabilities that are recognized or disclosed at fair value in the Company's consolidated financial statements on a recurring basis (at least annually) and (2) all financial assets and liabilities. The adoption was limited to financial assets, which primarily relate to cash, cash equivalent, and available-for-sale securities and did not have material impact on the Company's financial condition, results of operations or cash flows.

Under SFAS No. 157, fair value is defined as the exit price, or the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants as of the measurement date. SFAS No. 157 refers to the multiple assumptions used to value financial instruments as inputs, and establishes hierarchy for inputs used in measuring fair value that maximizes the use of observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs reflect assumptions market participants would use in pricing an asset or liability based on market data obtained from independent sources while unobservable inputs reflect a reporting entity's pricing based upon its own market assumptions. These inputs are ranked according to a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value into three broad levels.

Level 1—Inputs are quoted prices in active markets for identical assets or liabilities.

Level 2—Inputs are quoted prices for similar assets or liabilities in an active market, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable and market-corroborated inputs which are derived principally from or corroborated by observable market data.

Level 3—Inputs are derived from valuation techniques in which one or more significant inputs or value drivers are unobservable.

The following table represents the Company's assets measured at fair value on a recurring basis as of December 31, 2008 and the basis for that measurement (in thousands):

Assets	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Money market mutual funds	$11,829	$11,829	$ —	$ —
Commercial paper	2,047	—	2,047	—
Agency obligations	6,612	—	6,612	—
Auction-rate securities	718	—	—	718
Corporate securities	392	—	392	—
Total	$21,598	$11,829	$9,051	$718

The Company holds investments in auction-rate securities, or ARS, which are variable rate debt instruments whose interest rates are reset through a "dutch" auction process at regular intervals, typically every 28 days. All ARS are backed by pools of student loans guaranteed by governmental agencies and private entities, and were rated AAA/Aaa at the date of acquisition. The liquidity and fair value of these securities has been reduced by the uncertainty in the credit markets and the exposure of these securities to

13. Fair Value (Continued)

the financial condition of bond insurance companies, as evidenced by the rating downgrade of MBIA (bond insurer on one of the Company's ARS) from Aaa to A2, by Moody's Investor Services on June 19, 2008. All ARS have failed to sell at auction since February 2008, and as a result, their interest rates were reset to the maximum LIBOR + 150 basis points. The only activity since February 2008 was the repurchase of $500,000 of ARS at par by issuers. As a result of these auction failures, there was limited active market with observable prices for these securities as of December 31, 2008, and therefore the Company computed the fair value of these securities based on a discounted cash flow model, using significant Level 3 inputs, to take into account the lack of liquidity. The Company does not believe that the student loans backing these securities, the principal of these assets, is at risk. Furthermore, the Company is able to hold these securities until the credit markets recover and these securities resume pricing at or near par. As a result, the Company recorded a temporary impairment to other comprehensive income and classified these securities as non-current investments. The valuation may be revised in future periods as market conditions evolve.

The following represents the reconciliation of the beginning and ending balance of assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the year ended December 31, 2008 (in thousands):

	Available-For-Sale Securities
Beginning balance at January 1, 2008	$ —
Total gains and losses (realized / unrealized):	
Included in earnings	—
Included in other comprehensive income	(282)
Purchases, issuances, and settlements	(500)
Transfers, in Level 3	1,500
Ending balance at December 31, 2008	$ 718
The amount of total gains or losses for the period included in earnings attributable to the change in unrealized gains or losses relating to assets still held at December 31, 2008	$ —

14. Litigation

The Company is not currently party to any material legal proceedings.

15. Employee Benefit Plan

During 1999, the Company established a 401(k) tax-deferred savings plan, whereby eligible employees may contribute up to 15% of their eligible compensation with a maximum amount subject to IRS guidelines in any calendar year. Company contributions to this plan are discretionary; no such Company contributions have been made since the inception of this plan.

16. Related Party Transactions

Immediately prior to the merger with Fabbrix (the "Merger"), Mr. Lucio L. Lanza, a director and Chairman of the Board of the Company, served as President, Chief Executive Officer and Chairman of the

16. Related Party Transactions (Continued)

Board of Fabbrix. Mr. Lanza also held shares of capital stock of Fabbrix, both individually and through his venture capital firm, Lanza techVentures. In connection with the Merger, Mr. Lanza received $353,000 in cash and 36,000 shares of the Company's common stock in exchange for his Fabbrix shares. Lanza techVentures received $1.2 million in cash and 122,000 shares of the Company's common stock at the closing of the Fabbrix acquisition (the "Closing") in exchange for its Fabbrix shares. In addition, out of the merger consideration, Lanza techVentures received $416,000 in cash as repayment of certain bridge loans previously made to Fabbrix. To consider a transaction with Fabbrix, the Company's Board established a special committee consisting exclusively of independent directors (the "Special Committee"). The Special Committee reviewed, evaluated and directed the negotiation of the transaction and the Merger Agreement and recommended to the Company's Board that the Company enter into the Merger Agreement. Mr. Lanza did not participate on behalf of the Company in any actions with respect to the transaction and the Merger Agreement, and did not participate in any deliberations or other activities of the Special Committee.

In view of the NASDAQ independent director rules and other applicable requirements, the Company's Board determined that Mr. Lanza was no longer independent under those rules and therefore, Mr. Lanza resigned from the Audit, Compensation, and Nominating and Corporate Governance Committees of the Company's Board effective at the Closing. Mr. Lanza continues to serve as Chairman of the Company's Board of Directors. The Company replaced Mr. Lanza with other independent Board Members to fill the vacancies on the Company's Audit, Compensation, and Nominating and Corporate Governance Committees. The Company's Board also appointed a Lead Independent Director. With the resignation of Sue Billat from the Company's Board in August 2008, however, the Company became non-compliant with NASDAQ continued listing requirements regarding Board and Audit Committee composition.

Mr. Andrzej Strojwas, the Company's Chief Technologist was a stockholder of Fabbrix immediately prior to the Merger. In connection with the Merger, Mr. Strojwas received $53,000 in cash and 5,000 shares of the Company's common stock.

At the end of first anniversary following the closing date, the estimable qualifying revenue did not meet the threshold for earnout consideration, no additional consideration was paid or will be paid to Mr. Lanza, Mr. Strojwas, and Lanza techVentures.

17. Subsequent Events

As a result of the continued economic downturn, the Company announced an additional restructuring plan to better align its resources in light of the related market outlook. The details of such plan have not been finalized but is expected to be completed during the three months ended March 31, 2009 and will effect all functional areas and geographies.

18. Selected Quarterly Financial Data (Unaudited)

	Year Ended December 31, 2008			
	Q1	Q2	Q3	Q4
	(In thousands, except for per share amounts)			
Total revenue	$20,347	$21,114	$ 18,765	$ 13,811
Gross margin	$11,950	$13,216	$ 10,982	$ 2,766(2)
Total operating expenses	$15,569	$16,446	$ 13,430	$ 81,451(3)
Net loss	$(2,513)	$(1,940)	$(12,224)(1)	$(79,051)
Net loss per basic and diluted share	$ (0.09)	$ (0.07)	$ (0.44)	$ (2.92)

	Year Ended December 31, 2007			
	Q1	Q2	Q3	Q4
	(In thousands, except for per share amounts)			
Total revenue	$22,142	$23,698	$24,068	$24,555
Gross margin	$12,800	$14,979	$14,637	$14,429
Total operating expenses	$15,227	$16,473	$15,782	$16,905
Net income (loss)	$(2,355)	$ (701)	$ (939)	$ 1,068
Net income (loss) per share:				
Basic	$ (0.08)	$ (0.02)	$ (0.03)	$ 0.04
Diluted	$ (0.08)	$ (0.02)	$ (0.03)	$ 0.04

(1) During the third fiscal quarter of 2008, the Company recorded a valuation allowance of $7.5 million to reduce its net deferred tax assets as management determined that it is more likely than not that the Company's net deferred tax assets would not be fully realizable. See Note 10 Income Taxes to the consolidated financial statements.

(2) During the fourth fiscal quarter of 2008, the Company recorded an impairment of $3.4 million on its acquired technology as a result of the impairment assessment performed in the fourth fiscal quarter of 2008. See Note 5 Goodwill and Intangible Assets to the consolidated financial statements.

(3) During the fourth fiscal quarter of 2008, the Company recorded an impairment of $66.8 million on goodwill and other acquired intangible assets as a result of the impairment assessment performed in the fourth fiscal quarter of 2008. See Note 5 Goodwill and Intangible Assets to the consolidated financial statements.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

PDF SOLUTIONS, INC.

By: /s/ JOHN K. KIBARIAN

John K. Kibarian
President and Chief Executive Officer

By: /s/ KEITH A. JONES

Keith A. Jones
Chief Financial Officer and Vice President, Finance

Date: March 16, 2009

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints John K. Kibarian and Keith A. Jones, jointly and severally, his or her attorneys-in-fact, each with the power of substitution, for him or her in any and all capacities, to sign any amendments to this Report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith with the Securities and Exchange Commission, hereby ratifying and confirming all that each of said attorneys-in-fact, or his or her substitute or substitutes may do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title
/s/ JOHN K. KIBARIAN John K. Kibarian	Director, President and Chief Executive Officer (Principal Executive Officer)
/s/ KEITH A. JONES Keith A. Jones	Chief Financial Officer and Vice President, Finance (Principal Financial and Accounting Officer)
/s/ KIMON MICHAELS Kimon Michaels	Director, Vice President, Design for Manufacturability
/s/ LUCIO L. LANZA Lucio L. Lanza	Chairman of the Board of Directors
/s/ R. STEPHEN HEINRICHS R. Stephen Heinrichs	Director, Lead Independent Director
/s/ TOM CAULFIELD Tom Caulfield	Director
/s/ ALBERT Y. C. YU Albert Y. C. Yu	Director

SCHEDULE II

PDF SOLUTIONS, INC.

VALUATION AND QUALIFYING ACCOUNTS

Years Ended December 31, 2008, 2007, and 2006

(In thousands)

	Balance at Beginning of Period	Charged to Costs and Expenses	Balance Assumed in Acquisition	Deductions/ Write-offs of Accounts	Balance at End of Period
Allowance for doubtful accounts					
2008	$254	$ —	$—	$ —	$ 254
2007	$294	$ —	$—	$(40)	$ 254
2006	$254	$ —	$40	$ —	$ 294
Valuation allowance for deferred tax assets					
2008	$ —	$24,428	$—	$ —	$24,428

INDEX TO EXHIBITS

Exhibit Number	Description
2.01	Amended and Restated Agreement and Plan of Reorganization, dated September 2, 2003, by and among PDF Solutions, Inc., IDS Software Acquisition Corp., PDF Solutions, LLC and IDS Software Systems Inc (incorporated by reference to registrant's Current Report on Form 8-K filed September 25, 2003.)
2.02	Agreement and Plan of Reorganization, dated May 23, 2007, among PDF Solutions, Inc., Fabbrix, Inc. and PDF Acquisition Corp. (incorporated herein by reference to registrant's Current Report on Form 8-K filed May 24, 2007.)
3.01	Third Amended and Restated Certificate of Incorporation of PDF Solutions, Inc. (incorporated herein by reference to registrant's Registration Statement on Form S-1/A filed July 9, 2001.)
3.02	Amended and Restated Bylaws of PDF Solutions, Inc. (incorporated herein by reference to registrant's Quarterly Report on Form 10-Q filed August 9, 2005.)
4.01	Specimen Stock Certificate (incorporated herein by reference to registrant's Quarterly Report on Form 10-Q filed September 6, 2001.)
4.02	Second Amended and Restated Rights Agreement dated July 6, 2001 (incorporated herein by reference to registrant's Registration Statement on Form S-1/A filed July 9, 2001.)
10.01	Form of Indemnification Agreement between PDF Solutions, Inc. and certain of its executive officers and directors (incorporated herein by reference to registrant's Registration Statement on Form S-1 filed August 7, 2000.)
10.02	PDF Solutions, Inc. 1996 Stock Option Plan and related agreements (incorporated herein by reference to registrant's Registration Statement on Form S-1 filed August 7, 2000.)*
10.03	PDF Solutions, Inc. 1997 Stock Plan and related agreements (incorporated herein by reference to registrant's Registration Statement on Form S-1 filed August 7, 2000.)*
10.04	PDF Solutions, Inc. 2001 Stock Plan (incorporated herein by reference to registrant's Quarterly Report on Form 10-Q filed May 10, 2007) and related agreements (incorporated herein by reference to registrant's Registration Statement on Form S-1/A filed on July 9, 2001.)*
10.05	PDF Solutions, Inc. 2001 Employee Stock Purchase Plan (incorporated herein by reference to registrant's Registration Statement on Form S-8 filed January 14, 2003.)*
10.06	IDS Software, Inc. 2001 Stock Option/Stock Issuance Plan and related agreements (incorporated herein by reference to registrant's Registration Statement on Form S-8 filed October 17, 2003.)*
10.07	Offer letter to P. Steven Melman from PDF Solutions, Inc. dated July 9, 1998 (incorporated herein by reference to registrant's Registration Statement on Form S-1 filed August 7, 2000.)*
10.08	Offer letter to Cornelius D. Hartgring from PDF Solutions, Inc. dated August 29, 2002 (incorporated herein by reference to registrant's Annual Report on Form 10-K filed March 26, 2003.)*

Exhibit Number	Description
10.09	Fourth Amendment to Office Lease and Second Amendment to Lease between PDF Solutions, Inc. and Metropolitan Life Insurance Company dated as of March 19, 2003 (incorporated herein by reference to registrant's Quarterly Report on Form 10-Q filed May 14, 2003.)
10.10	Carmel Corporate Plaza Office Lease between PDF Solutions, Inc. and 15015 Avenue of Science Associates LLC dated as of April 1, 2003 (incorporated by reference to registrant's Quarterly Report on Form 10-Q filed May 14, 2003.)
10.11	Andre Hawit Employment Offer letter agreement dated September 24, 2003 by and between PDF Solutions Inc. and Andre Hawit (incorporated herein by reference to registrant's Quarterly Report on Form 10-Q filed November 14, 2003.)*
10.12	Offer letter to Keith A. Jones from PDF Solutions, Inc. dated October 10, 2005 (incorporated herein by reference to registrant's Current Report on Form 8-K filed December 19, 2005.)*
10.13	Riverpark Tower Office Lease between PDF Solutions, Inc. and Legacy Partners I Riverpark I, LLC, dated June 29, 2007 (incorporated herein by reference to registrant's Annual Report on Form 10-K filed March 17, 2008.)
10.14	Offer letter to Joy Leo from PDF Solutions, Inc. dated July 14, 2008 (incorporated herein by reference to registrant's Quarterly Report on Form 10-Q filed August 11, 2008.)
10.15	Asset Purchase Agreement entered into August 27, 2008 by and among Triant Holdings, Inc., Triant Technologies (2005) Inc., and PDF Solutions, Inc. (incorporated herein by reference to registrant's Current Report on Form 8-K filed September 2, 2008.)
10.16	Amendment to Offer Letter, between Keith A. Jones and PDF Solutions, Inc., dated December 29, 2008.*
10.17	Form of Indemnification Agreement between PDF Solutions, Inc. and certain of its senior executive officers and directors.*
21.01	Subsidiaries of Registrant.
23.01	Consent of Independent Registered Public Accounting Firm.
24.01	Power of Attorney (see Signature Page).
31.01	Certifications of Chief Executive Officer and Chief Financial Officer Pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.02	Certifications of Chief Executive Officer and Chief Financial Officer Pursuant to Exchange Act Rules 13a-14(a) and 15d-14(a), as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.01	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.†
32.02	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.†

* Indicates management contract or compensatory plan or arrangement.

† Furnished herewith.

EXHIBIT 21.01

SUBSIDIARIES OF REGISTRANT

Name of Entity	Jurisdiction of Incorporation or Organization
PDF Solutions GmbH	Germany
PDF Solutions KK	Japan
PDF Solutions S.A.S.	France
PDF Solutions Semiconductor Technology (Shanghai) Co. Ltd.	China
PDF Solutions Semiconductor Technology (Korea) Limited	Korea
PDF Solutions International Services, Inc.	Delaware
PDF Solutions Asia Services, Inc.	Delaware
PDF Solutions Semiconductor Technology Taiwan Ltd.	Taiwan
PDF Solutions Pacific Services, Inc.	Delaware
PDF Solutions Semiconductor Technology (Singapore) Pte. Ltd.	Singapore

Exhibit 23.01

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-66758, 333-102509, 333-109809, 333-112728, 333-133332, 333-141660, and 333-149281 on Form S-8 and Registration Statement Nos. 333-140268 and 333-143989 on Form S-3 of our reports dated March 16, 2009, relating to the consolidated financial statements and financial statement schedule of PDF Solutions, Inc. and subsidiaries (the "Company") (which report expresses an unqualified opinion and includes an explanatory paragraph regarding the adoption of Emerging Issues Task Force Issue No. 06-02, *Accounting for Sabbatical Leave and Other Similar Benefits Pursuant to FASB Statement No. 43* and Financial Accounting Standards Board Interpretation No. 48, *Accounting for Uncertainty in Income Taxes—an interpretation of FASB Statement No. 109*), and the effectiveness of the Company's internal control over financial reporting, appearing in this Annual Report on Form 10-K of the Company for the year ended December 31, 2008.

/s/ DELOITTE & TOUCHE LLP

San Jose, California
March 16, 2009

EXHIBIT 31.01

CERTIFICATIONS

I, John K. Kibarian, certify that:

1. I have reviewed this annual report on Form 10-K of PDF Solutions, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the period presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ JOHN K. KIBARIAN

John K. Kibarian
President and Chief Executive Officer
(Principal Executive Officer)

Date: March 16, 2009

EXHIBIT 31.02

CERTIFICATIONS

I, Keith A. Jones, certify that:

1. I have reviewed this annual report on Form 10-K of PDF Solutions, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ KEITH A. JONES

Keith A. Jones
Chief Financial Officer and Vice President, Finance
(Principal Financial Officer)

Date: March 16, 2009

EXHIBIT 32.01

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of PDF Solutions, Inc. (the "Company") on Form 10-K for the year ended December 31, 2008 as filed with the Securities and Exchange Commission on March 16, 2009 (the "Report"), I, John K. Kibarian, President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ JOHN K. KIBARIAN

John K. Kibarian
President and Chief Executive Officer
(Principal Executive Officer)

Date: March 16, 2009

EXHIBIT 32.02

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report of PDF Solutions, Inc. (the "Company") on Form 10-K for the year ended December 31, 2008 as filed with the Securities and Exchange Commission on March 16, 2009 (the "Report"), I, Keith A. Jones, Chief Financial Officer and Vice President, Finance of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to my knowledge:

(1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ KEITH A. JONES

Keith A. Jones
Chief Financial Officer and Vice President, Finance
(Principal Financial Officer)

Date: March 16, 2009

CORPORATE INFORMATION

EXECUTIVE MANAGEMENT

John K. Kibarian, Ph.D.
Chief Executive Officer,
President and Co-Founder

Joy E. Leo
EVP & Chief Administration Officer

Keith Jones
Chief Financial Officer and
Vice President, Finance

David Joseph
Chief Strategy Officer

Andrzej Strojwas, Ph.D.
Chief Technologist

Kimon Michaels, Ph.D.
Vice President, Design for
Manufacturability and Co-Founder

Cees Hartgring, Ph.D.
Vice President, Client Services & Sales

Jim Jensen
Vice President,
Volume Manufacturing Solutions

P. Steven Melman
Vice President, Investor Relations
and Strategic Initiatives

BOARD OF DIRECTORS

Lucio L. Lanza
Chairman, PDF Solutions, Inc.;
Managing Director, Lanza techVentures;
Director of ARM Holdings plc and
several private companies

Albert Y.C. Yu, Ph.D.
Chairman, OneAngstrom LLC;
Director of several public and private
companies; Former SVP, Intel Corp.

R. Stephen Heinrichs
Private Investor; Director of
Avistar Communications;
Managing Director of an early
stage venture capital fund

Thomas Caulfield, Ph.D.
Executive Vice President
Sales, Marketing and Customer
Satisfaction, Novellus Systems Inc.

John K. Kibarian, Ph.D.
Chief Executive Officer,
President and Co-Founder

Kimon Michaels, Ph.D.
Vice President, Design for
Manufacturability and Co-Founder

ANNUAL MEETING OF STOCKHOLDERS

Wednesday, October 7, 2009
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Nasdaq Stock Market: PDFS

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