

PDF SOLUTIONS INC  
Form 10-K  
March 17, 2008

**Table of Contents**

**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, 2007
- 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:**

<b>Title of Class</b>	<b>Name of Each Exchange on Which Registered</b>
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  Smaller reporting company   
(Do not check if a 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 \$148,548,482 as of the last business day of the Registrant's most recently completed second quarter, based upon the closing sale price on the Nasdaq National 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 29,132,999 and 27,746,891 shares of the Registrant's Common Stock issued and outstanding, respectively, as of March 7, 2008.

**DOCUMENTS INCORPORATED BY REFERENCE**

Part III incorporates information by reference from the definitive Proxy Statement for our Annual Meeting of Stockholders to be held on May 22, 2008.



## TABLE OF CONTENTS

		<b>Page</b>
<b><u>PART I</u></b>		
<u>Item 1.</u>	<u>Business</u>	1
<u>Item 1A.</u>	<u>Risk Factors</u>	10
<u>Item 1B.</u>	<u>Unresolved Staff Comments</u>	18
<u>Item 2.</u>	<u>Properties</u>	18
<u>Item 3.</u>	<u>Legal Proceedings</u>	18
<u>Item 4.</u>	<u>Submission of Matters to a Vote of Security Holders</u>	18
<b><u>PART II</u></b>		
<u>Item 5.</u>	<u>Market for Registrant's Common Equity and Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	19
<u>Item 6.</u>	<u>Selected Financial Data</u>	22
<u>Item 7.</u>	<u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	23
<u>Item 7A.</u>	<u>Quantitative and Qualitative Disclosures About Market Risk</u>	37
<u>Item 8.</u>	<u>Financial Statements and Supplementary Data</u>	38
<u>Item 9.</u>	<u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	38
<u>Item 9A.</u>	<u>Controls and Procedures</u>	38
<u>Item 9B.</u>	<u>Other Information</u>	40
<b><u>PART III</u></b>		
<u>Item 10.</u>	<u>Directors and Executive Officers of the Registrant</u>	40
<u>Item 11.</u>	<u>Executive Compensation</u>	40
<u>Item 12.</u>	<u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	40
<u>Item 13.</u>	<u>Certain Relationships and Related Transactions</u>	40
<u>Item 14.</u>	<u>Principal Accounting Fees and Services</u>	40
<b><u>PART IV</u></b>		
<u>Item 15.</u>	<u>Exhibits and Financial Statement Schedules</u>	41
<u>Signatures</u>		
<u>Index to Exhibits</u>		
<u>EXHIBIT 10.17</u>		
<u>EXHIBIT 21.01</u>		
<u>EXHIBIT 23.01</u>		
<u>EXHIBIT 31.01</u>		
<u>EXHIBIT 31.02</u>		
<u>EXHIBIT 32.01</u>		
<u>EXHIBIT 32.02</u>		

**Table of Contents****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 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 12 months; and expectations of our future liquidity requirements. 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, c 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 which ends on December 31.*

**Item 1. Business****Business Overview**

We incorporated in 1992 and are a leading provider of infrastructure technologies and services to improve yield and optimize performance of integrated circuits. Our technologies and services enable semiconductor companies to improve profitability across the entire process lifecycle, which is the term we have coined for the time from the design of an integrated circuit (IC) through volume manufacturing of that IC. Our solutions enable this by improving our customer's time-to-market, increasing yield, and reducing total design and manufacturing costs. Our solutions combine proprietary software, physical intellectual property 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 the technology development process, to increase the 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 intellectual property ( 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.

**Table of Contents**

*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 now 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 Lifecycle. To achieve this objective, we intend to:

*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. For example, in May 2007, we completed the acquisition of Fabbrix, Inc. ( Fabbrix ), a company with technology for creating physical IP building blocks for logic designers. This acquisition allows us to expand our Design-for-Manufacturability ( DFM ) offerings by leveraging our proprietary characterization of our customers' processes and providing them with process-optimized physical IP libraries.

*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, through which we will continue to use to generate market-driven improvements that add even more value to our solutions and to our customers. Those customers that choose to adopt the gainshare performance incentives model succeed in improving their yield and performance while reducing costs. We believe that we will generate expanded relationships with these customers and new customer accounts based on these successes.

*Focus on Key IC Product Segments.* 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 high-k dielectrics, SOI, copper, and 300mm wafer fabs, which are all somewhat new and 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.

*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 manufacturing and test equipment vendors, electronic design automation vendors, silicon intellectual property providers, semiconductor foundries, and contract test and assembly houses. We believe that our integrated solution provides significant value because it is a comprehensive solution and



thus, we will continue to pursue strategic relationships that expand the benefits of our CV<sup>®</sup> infrastructure, our Integrated Yield Ramp, and our DFM and process control solutions. We expect these relationships to also serve as sales channels and to increase industry awareness of our solutions.

## **Table of Contents**

### **Industry Background**

Rapid technological innovation, with increasingly shorter product life cycles, now fuels the economic growth of the semiconductor industry. Previously, companies could afford to take months, or years in some cases, to integrate new IC designs with manufacturing processes. With longer product life cycles, 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.

Historically, yield loss resulted primarily from random contamination in the IC manufacturing process, for example from particles falling on the wafer during the manufacturing process. As the semiconductor industry has moved to 90-nanometer process technology and beyond, the primary drivers of yield loss with nanometer-era ICs has shifted from contamination to:

systematic yield loss, or non-functioning ICs resulting from lack of compatibility between design and manufacturing processes; and

performance yield loss, or functioning ICs that do not meet customer speed requirements.

Semiconductor manufacturers have traditionally addressed systematic yield loss and performance yield loss reactively and almost exclusively by implementing inefficient time consuming processes such as trial-and-error adjustments to the manufacturing process during volume production.

Disaggregation of the semiconductor industry has further complicated IC companies' ability to minimize systematic yield loss and performance yield loss. Historically, leading semiconductor companies designed, manufactured, and tested their ICs internally, thus retaining process-design integration knowledge. Today, the industry is more fragmented, comprised of separate organizations, as well as separate companies, that specialize in a particular phase of the IC design and manufacturing process. This has fragmented the knowledge related to the integration of IC design and manufacturing and resulted in great difficulty in making designs compatible with a manufacturing process prior to volume production.

### **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 ( CVi ) 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 CVi 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 dataPOWER®, 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.

**Table of Contents**

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, 2007, we held 34 patents worldwide, including 26 U.S. patents, and we had 67 additional patent applications currently pending worldwide, including 39 pending in the United States. We intend to prepare additional patent applications for submission to the United States Patent and Trademark Office and various foreign patent offices. In the future, we may seek additional patent protection when we feel it is necessary. Characterization Vehicle<sup>®</sup>, Circuit Surfer<sup>®</sup>, CV<sup>®</sup>, dataPOWER<sup>®</sup>, mæstria<sup>®</sup>, Optissimo<sup>®</sup>, pdFasTest<sup>®</sup>, pDfx<sup>®</sup>, PDF Solutions<sup>®</sup>, Proxecco<sup>®</sup>, the PDF Solutions logo, Yield Ramp Simulator<sup>®</sup>, and YRS<sup>®</sup> are our registered trademarks, and Design-to-Silicon-Yield<sup>™</sup>, dP-bitMAP<sup>™</sup>, dP-Defect<sup>™</sup>, dP-Mining<sup>™</sup>, dP-probeMAP<sup>™</sup>, dP-shotMAP<sup>™</sup>, dP-SSA<sup>™</sup>, dP-VUE<sup>™</sup>, pdBRIX<sup>™</sup>, and pdCV<sup>™</sup> are our unregistered trademarks.

**Products and Services**

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

***Services and Solutions***

*Manufacturing Process Solutions.* 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.* 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. Optional software modules allow customers to perform rapid yield signature detection, characterization and diagnosis at all levels of map analysis from memory bits to wafers to final packaged parts with die identification traceability. Our process control software offering enables our customers to monitor and control process signals to detect and diagnose yield loss related to equipment performance.

*Design-for-Manufacturability 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, intellectual property, and services designed to make yield improvements by trading off density or performance, for example, in the logic portions of an

## **Table of Contents**

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 intellectual property 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<sup>tm</sup> Physical IP Solutions:* pdBRIX<sup>tm</sup> 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 solutions incorporate the use of various elements of our software and other technologies depending on the customers' needs. Our software and other technologies include the following:

*Characterization Vehicle<sup>®</sup> 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<sup>®</sup> 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<sup>®</sup> products are inserted directly on customer's product wafers and collect data from product wafers about critical layers.

*pdCV<sup>tm</sup> 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<sup>®</sup> 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<sup>®</sup> (YRS<sup>®</sup>) 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 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<sup>®</sup> 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<sup>®</sup> 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

## **Table of Contents**

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<sup>tm</sup> 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<sup>®</sup> YMS Platform.* Our dataPOWER YMS platform collects yield data, stores it in databases, and allows product engineers to identify and analyze production yield issues using proprietary yield analysis software tools. dataPOWER software contains powerful visualization and reporting tools that 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<sup>tm</sup>*), memory analysis (*dP-bitMAP<sup>tm</sup>*), spatial signature analysis (*dP-SSA<sup>tm</sup>*), data-mining (*dP-Mining<sup>tm</sup>*), optimization of die on the wafer (*dP-shotMAP<sup>tm</sup>*), and probe-head optimization (*dP-probeMAP<sup>tm</sup>*), and web-based access (*dP-VUE<sup>tm</sup>*).

*Mæstria<sup>®</sup> FDC Software.* Our mæstria product provides fault detection and classification capabilities to rapidly identify sources of process variations and manufacturing excursions by monitoring equipment parameters through proprietary data collection and analysis features.

With the exception of dataPOWER, mæstria and pdBRIX, the primary distribution method for our software and technologies is through our manufacturing process solutions ( MPS ) although, we have in the past and may in the future separately license these and other technologies. Though dataPOWER, 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 ( IDM ), 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 and International Business Machines Corporation represented 19% and 16%, respectively, of our total revenue for the year ended December 31, 2007. International Business Machines Corporation and Toshiba Corporation represented 25% and 12% respectively, of our total revenue for the year ended December 31, 2006. Texas Instruments, International Business Machines Corporation, Matsushita Electric Industrial Co., and Toshiba Corporation represented 15%, 13%, 11%, and 10%, respectively, of our total revenue for the year ended December 31, 2005. No other customer accounted for 10% or more of our revenue in years 2007, 2006, and 2005.

## **Sales and Marketing**

Our sales strategy is to pursue targeted accounts through a combination of our direct sales force 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, we use our direct sales team and, for FDC offerings, we use a local distributor, Yamatake Corporation. In Taiwan, we use J.I.T. International Co., Ltd. as a sales representative and in Korea we use a combination of direct sales and local sales representatives and distributors. We expect to continue to



establish strategic alliances with vendors in the electronic design automation software, capital equipment for IC production, silicon intellectual property and mask-making software segments to create and take advantage of co-marketing opportunities. We believe that these relationships will also serve as sales channels for our Design-to-Silicon-Yield solutions and to increase industry awareness of our solutions.

In the year ended December 31, 2007, we derived 55% of total revenue from customers based in Asia compared to 50% and 55%, respectively, in the years ended December 31, 2006 and December 31, 2005. In the year ended December 31, 2007, 31% of our total revenue was derived from customers located in the United States as

## **Table of Contents**

compared to 39% and 35%, respectively, in the years ended December 31, 2006 and December 31, 2005. 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.

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.

## **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 \$36.1 million, \$27.6 million, and \$22.2 million in 2007, 2006, and 2005, 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 IC companies' needs 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.), 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.), Triant Holdings Inc., Straatum Processware Ltd., and MKS. ARM Ltd. and Virage Logic Corporation provide standard cells in the physical IP space, which could compete with our pdBRIX solution. In

addition, Synopsys now appears to offer directly competing DFM, 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.

**Table of Contents****Employees**

As of December 31, 2007, we had 382 employees, including 144 on client service teams, 147 in research and development, 33 in sales and marketing and 58 in general and administrative functions. 180 of these employees are located in San Jose/San Diego, California, 69 are located in France, 39 are located in China, 30 are located in Texas and other parts of the United States, 26 are located in Japan, 18 are located in Italy, 17 are located in Germany, 2 are located in Korea, and 1 employee is located in the Netherlands.

None of our employees is represented by a labor union or is subject to a collective bargaining agreement. We believe our relationship with our employees is good.

**Executive Officers**

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

<b>Name</b>	<b>Age</b>	<b>Position</b>
John K. Kibarian, Ph.D.	43	Chief Executive Officer, President and Director
Keith A. Jones	37	Chief Financial Officer and Vice President, Finance
David A. Joseph	54	Chief Strategy Officer
Rebecca Baybrook, Ph.D.	56	Vice President, Human Resources
Cees Hartgring, Ph.D.	54	Vice President, Client Services and Sales
Andre Hawit	46	Vice President and General Manager, Yield Manufacturing Solutions
James Jensen	55	Vice President, Business Development
P. Steven Melman	53	Vice President, Investor Relations and Strategic Initiatives
Kimon Michaels, Ph.D.	41	Vice President, Design for Manufacturability

*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. Mr. Kibarian has served as a director since December 1992. Mr. 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.

*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, from September 2001 to July 2003, he served as Assistant Controller for Interwoven, Inc., a provider of enterprise content management solutions. From May 2000 to July 2001, he served as Controller for eTime Capital, Inc., a financial software applications company. From July 1994 to April 2000, he 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, from February 1978 to October 1998, 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.

*Rebecca Baybrook, Ph.D.*, has served as Vice President, Human Resources since May 2002. Prior to joining PDF, from September 2001 to April 2002, Ms. Baybrook served as Sr. Director, Human Resources for Vitria Technologies, an integrated software company. From October 1999 to July 2001 she served as Director, Human Resources for 3Com, a telecommunications company. From January 1986 to September 1999, Ms. Baybrook served as Assistant Vice President of Human Resources for Knight Ridder, Inc., a publishing company. Ms. Baybrook received a B.A. degree from Westmont College and a Ph.D. in Organizational Psychology from University of South Florida.

**Table of Contents**

*Cees Hartgring, Ph.D.*, has served as Vice President, Client Services and Sales since June 2007. Mr. 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, from May 2000 to August 2001, Mr. Hartgring served as President and Chief Executive Officer of Trimedia Technologies, a Philips Semiconductor spinout. From August 1990 to April 2000, he held various executive positions at Philips Semiconductor, most recently as Vice President and General Manager of the Trimedia business unit. Mr. Hartgring has 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 and General Manager, Yield Manufacturing Solutions since January 2006. Mr. Hawit served 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. From October 1991 through August 2003, he 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, Business Development since June 2007. Mr. Jensen served 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, from July 1996 through February 2002, he served as General Manager of a semiconductor fabrication facility of Texas Instruments, a semiconductor products company. From November 1989 through June 1996, 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, from April 1997 to June 1998, he served as Vice President, Finance and Administration with Animation Science Corporation, an animation company. From April 1995 to April 1997, he 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. Mr. 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. Mr. 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**

Our Internet website address is [www.PDF.com](http://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.

**Table of Contents**

**Item 1A. Risk Factors**

***If semiconductor designers and manufacturers do not continue to adopt our Design-to-Silicon-Yield solutions, we may be unable to increase or maintain our revenue.***

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 could decline. To be successful, we will need to continue to enter into agreements covering a larger number of IC products and processes with existing customers and new customers. We need to develop new customer relationships with companies that are integrated device manufacturers, fabless semiconductor companies, and foundries, as well as system manufacturers so that we can continue to implement our Design-to-Silicon-Yield solutions and experience greater market acceptance of our solutions. Factors that may limit adoption of our Design-to-Silicon-Yield solutions by semiconductor companies include:

our customers' failure to achieve satisfactory yield improvements using our Design-to-Silicon-Yield solutions;

a decrease in demand for semiconductors generally or the slowing of demand for deep submicron semiconductors;

our inability to develop, market, or sell effective solutions that are outside of our traditional MPS logic focus;

our existing and potential customers' delay in their adoption of the next process technology;

the development in the industry of alternative methods to enhance the integration between the semiconductor design and manufacturing processes due to a rapidly evolving market and the emergence of new technologies;

our existing and potential customers' reluctance to understand and accept our innovative gainshare performance incentives fee component; and

our customers' concern about our ability to keep highly competitive information confidential.

***We generate a large percentage of our total revenue from a limited number of customers, so 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, 2007, two customers accounted for 35% of our total net revenue, with Toshiba Corporation representing 19% and International Business Machines Corporation representing 16%. In the year ended December 31, 2006, two customers accounted for 37% of our total net revenue, with International Business Machines Corporation representing 25% and Toshiba Corporation representing 12%. 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 integrated device manufacturers of logic integrated circuits reduce investment in new process technology as a result of a shift to a fabless manufacturing business model, the pool of potential logic customers for our yield ramp solutions will shrink and our results of operations may suffer.***



Historically, the majority of our revenue from integrated yield ramps has been derived from IDM of logic IC. If IDMs decide to discontinue or significantly cut 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, there may be fewer IDMs that are potential customers for our solutions that integrate product designs with in-house manufacturing processes. As a result, the revenue we are able to generate from integrated yield ramps for logic ICs could fall below levels that are currently expected. Also, because our expenses are fixed in the short term and it takes

## **Table of Contents**

a long time for us to replace customers, such a reduction in revenue could cause significant fluctuations in results of operations.

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

We will need to continue to grow in all areas of operation and successfully integrate and support our existing and new employees into our operations, or we may be unable to implement our business strategy in the time frame we anticipate, if at all. 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 will need to expand our intranet to support new data centers to enhance our research and development efforts. Our intranet 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 may need to switch to a new accounting system in the near future, 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.

***If we fail to protect our intellectual property 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. Also, patent protection in foreign countries may be limited or unavailable where we need such protection. Litigation may be necessary from time to time to enforce our intellectual property 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. Many of these companies have the financial and technical capability to develop their own solutions. Also, competitors could establish non-domestic operations with a lower cost structure than our engineering organization, which, unless we also establish lower cost non-domestic operations, 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 (through its acquisition of Yield Dynamics, Inc.), Ponte Solutions, Synticity Inc., TIBCO Software Inc. (through its acquisition of Spotfire Inc.), and Synopsys, and process control software, such as Applied Materials, Inc., Triant Holdings Inc., Straatum Processware

Ltd., and MKS. Further, ARM Ltd. and Virage Logic Corporation provide standard cells in the physical IP space, 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

**Table of Contents**

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 derive a majority of our revenue from international sales, principally from customers based in Asia. Revenue generated from customers in Asia accounted for 55% of total revenue in the year ended December 31, 2007 and 50% in the year ended December 31, 2006. We expect that a significant portion of our total future revenue will continue to be derived from companies based in Asia. In addition, we have expanded our non-U.S. operations recently and plan to continue such expansion by establishing overseas subsidiaries, offices, or contractor relationships in locations, and when, deemed appropriate by our management. The success of our business is subject to risks inherent in doing business internationally. These risks include:

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, 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 protection of our intellectual property, and a wide variety of 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;

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, and the resulting disruption to economic activity and business operations.

In Japan, 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 the Japanese Yen, the cost of our solutions will be more expensive to existing and potential Japanese customers and therefore less competitive.

In the Middle East, we use a third-party service provider, whose operations are not located in a U.S. embargoed country, to provide certain software quality assurance and other services for certain of our software products. The

**Table of Contents**

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.

***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 could decline due to such fluctuations. The following factors may cause significant fluctuations in our future quarterly operating results:

the size and timing of sales volumes achieved by our customers' products;

the loss of any of our large customers or an adverse change in any of our large customers' businesses;

the size of improvements in our customers' yield and the timing of agreement as to those improvements;

our long and variable sales cycle;

changes in the mix of our revenue;

changes in the level of our operating expenses needed to support our projected growth; and

delays in completing solution implementations for our customers.

***Revenue from our gainshare performance incentives is dependent on factors outside of our control, including the volume of integrated circuits 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. We have limited ability to predict the success or failure of our customers' IC products. Further, our customers may 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; a decision which is beyond our control. In addition, we may commit a significant amount of time and resources to a customer who is ultimately unable to sell as many units as we had anticipated when contracting with them or who makes unplanned changes to their processes. 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 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. Further, decreased demand for semiconductor products decreases the volume of products our customers are able to sell, which may adversely affect our gainshare performance incentives revenue.

***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.

**Table of Contents**

***Changes in the structure of our customer contracts, including the mix between fixed and variable revenue and the mix of elements, can adversely affect the size 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 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. 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, which can result in uncertainty and delays in generating additional revenue.***

Because our gainshare performance incentives business model is unique and our Design-to-Silicon-Yield solutions are unfamiliar to some new customers, our sales cycle is lengthy 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.

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

We have experienced losses in the past and in the current fiscal year ended December 31, 2007. We may not achieve and thereafter maintain profitability if our revenue increases more slowly than we expect or not at all. 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 \$16.9 million as of December 31, 2007. 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 of intangibles and stock-based compensation.

As a result, we will need to significantly increase revenue to maintain profitability on a quarterly or annual basis. Any of these factors could cause our stock price to decline.



*We may experience significant fluctuations in operating results due to the cyclical nature of the semiconductor industry.*

Our revenue is highly dependent upon the overall condition of the semiconductor industry, especially in light of our gainshare performance incentives revenue component. The semiconductor industry is highly cyclical and subject to rapid technological change and has been subject to significant economic downturns at various times,

**Table of Contents**

characterized by diminished product demand, accelerated erosion of average selling prices, and production overcapacity. The semiconductor industry also periodically experiences increased demand and production capacity constraints. As a result, we may experience significant fluctuations in operating results due to general semiconductor industry conditions and overall economic conditions.

***We must continually attract and retain highly talented executives, engineers, and research and development personnel or we will be unable to expand our business as planned.***

In order to stay competitive, we will need to continue to hire highly talented executives, engineers, and research and development personnel to support our planned growth. We have experienced, and we expect to continue to experience, delays and limitations in hiring and retaining highly skilled individuals with appropriate qualifications. We intend to continue to hire foreign nationals, particularly as we expand our operations internationally. We have had, and expect to continue to have, difficulty in obtaining visas permitting entry into the United States 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. Competition for executives and qualified engineers can be intense, especially in Silicon Valley where we are principally based.

***If our products, technologies, services, and integrated solutions fail to keep pace with the rapid technological changes in the semiconductor industry, we could lose customers and revenue.***

We must continually devote significant engineering resources to enable us to keep up with the rapidly evolving technologies and equipment used in the semiconductor design and manufacturing processes. These innovations are inherently complex and require long development cycles. Not only do we need the technical expertise to implement the changes necessary to keep our technologies current, we also rely heavily on the judgment of our advisors and management to anticipate future market trends. Our customers expect us to stay ahead of the technology curve and expect that our products, technologies, services, and integrated solutions will support any new design or manufacturing processes or materials as soon as they are deployed. If we are not able to timely predict industry changes, or if we are unable to modify our products, technologies, services, and integrated solutions on a timely basis, our existing solutions will be rendered obsolete and we may lose customers. If we do not keep pace with technology, our existing and potential customers may choose to develop their own solutions internally as an alternative to ours and we could lose market share, which could adversely affect our operating results.

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

In order to establish and maintain strategic relationships with industry leaders at each stage of the IC design and manufacturing processes, we may need to expend significant resources and will need to commit a significant amount of management's time and attention, with no guarantee of success. 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. We may be unable to establish key industry strategic relationships if any of the following occur:

potential industry partners become concerned about our ability to protect their intellectual property;

potential industry partners develop their own solutions to address the need for yield improvement;

our potential competitors establish relationships with industry partners with which we seek to establish a relationship; or

potential industry partners attempt to restrict our ability to enter into relationships with their competitors.

**Table of Contents**

***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.

***Key executive officers are critical to our business and we cannot guarantee that they will remain with us indefinitely.***

Our future success will depend to a significant extent on the continued services of our key executive officers. If we lose the services of any of our key executive officers, it could slow execution of our business plan, hinder our product development processes and impair our sales efforts. Searching for replacements could divert our senior management's time and increase our operating expenses. In addition, our industry partners and customers could become concerned about our future operations, which could injure our reputation and cause our stock price to drop. We do not have long-term employment agreements with our executives and we do not maintain any key person life insurance policies on their lives.

***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 intellectual property 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, 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

**Table of Contents**

by us. If our software, hardware, or proprietary technologies contain errors or defects, it could require us to expend significant resources to alleviate 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 our 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 as 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 expand our business and proprietary technologies if we do not consummate potential acquisitions or investments or successfully integrate them with our business.***

To expand our proprietary technologies, we may acquire or make investments in complementary businesses, technologies, or products if appropriate opportunities arise. We may be unable to identify suitable acquisition or investment candidates at reasonable prices or on reasonable terms, or consummate future acquisitions or investments, each of which could slow our growth strategy. We may have difficulty integrating the acquired products, personnel or technologies of any acquisitions we might make. These difficulties could disrupt our ongoing business, distract our management and employees and increase our expenses.

***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 any necessary funds on terms favorable to us, or at all.

***Recent 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 incorporating into PDF the operations of recently acquired businesses, including Si Automation S.A. ( SiA ), a French company, acquired in October 2006, and Fabbrix, acquired in May 2007, depend upon our ability to successfully integrate those businesses. The integration of acquired businesses is a complex, costly and time-consuming process. The difficulties of combining our existing operations associated with acquired businesses include:

consolidating research and development operations;

retaining key employees;

incorporating 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.

**Table of Contents**

***If we were required to write down all or part of our goodwill, our net earnings and net worth could be materially adversely affected.***

We had \$65.2 million of goodwill recorded on our consolidated balance sheet as of December 31, 2007. Goodwill represents the excess of cost over the fair market value of net assets acquired in business combinations. If our market capitalization drops significantly below the amount of net equity recorded on our balance sheet, it would indicate a decline in the fair value of the Company and would require us to further evaluate whether our goodwill has been impaired. We also perform an annual review, at December 31, of our goodwill to determine if it has become impaired, in which case we would write down the impaired portion of our goodwill. If we were required to write down all or a significant part of our goodwill, our net earnings and net worth could be materially adversely affected.

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

We conduct our business globally, 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 held at December 31, 2007 and we might have to record impairment charges 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. As of December 31, 2007, we held auction-rate securities with a par value of \$4.5 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. Subsequent to December 31, 2007, the Company sold \$3.0 million of auction rate securities at par during auctions. Since then, the liquidity of the remaining 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. In February and March 2008, the remaining \$1.5 million in auction-rate securities we held failed to sell at auction due to an insufficient number of bidders. We will further review the value of these securities impairment. If we determine that these securities have been impaired, this will negatively affect our results from operations. 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 charges.

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

None.

**Item 2. *Properties***

Our principal executive offices are located in San Jose, California where we lease approximately 49,800 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 March 2008. We lease other sales offices and laboratory spaces in Pennsylvania, Texas, and New Hampshire in the United States. In addition, we have offices overseas in France,



Germany, Italy, China, Japan, and Korea with an aggregate of square footage approximately 38,000 square feet under various leases that expire 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 2007.

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

Our common stock has traded on the Nasdaq National Market under the symbol PDFS . As of February 25, 2008 we had approximately 248 stockholders of record and the closing price of our common stock was \$5.25 per share as reported by the Nasdaq National 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 National Market:

<b>2007</b>	<b>High</b>	<b>Low</b>
First Quarter	\$ 14.82	\$ 10.00
Second Quarter	\$ 12.16	\$ 9.87
Third Quarter	\$ 12.49	\$ 9.36
Fourth Quarter	\$ 10.22	\$ 7.21
<b>2006</b>	<b>High</b>	<b>Low</b>
First Quarter	\$ 19.85	\$ 16.50
Second Quarter	\$ 19.36	\$ 11.00
Third Quarter	\$ 13.35	\$ 9.50
Fourth Quarter	\$ 15.70	\$ 10.79

**Table of Contents**

The following graph compares the cumulative total stockholder return data for our stock since December 31, 2002 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, 2002. The graph further assumes that such amount was initially invested in the Common Stock of the Company at a per share price of \$6.93 (closing price on December 31, 2002) and reinvestment of any dividends. 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 12/31/02 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.

**Table of Contents**

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, 2007:

**ISSUER PURCHASES OF EQUITY SECURITIES**

<b>Period</b>	<b>Total Number of Shares Purchased</b>	<b>Average Price Paid per Share</b>	<b>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs(1)</b>	<b>Maximum Dollar Value of Shares that May Yet Be Purchased Under the Plans or Programs(1)</b>
Month #1 (October 1, 2007 through October 31, 2007)				\$ 10,000,000
Month #2 (November 1, 2007 through November 30, 2007)	201,300	\$ 7.57	201,300	\$ 8,477,152
Month #3 (December 1, 2007 through December 31, 2007)				\$ 8,477,152
<b>Total</b>	<b>201,300</b>	<b>\$ 7.57</b>	<b>201,300</b>	

(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 987,808 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, 2007, 201,300 shares had been repurchased under this program and \$8.5 million remained available for repurchases.

**Dividend Policy**

No cash dividends were declared or paid in 2007 or 2006. 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.

**Table of Contents****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.

	<b>Year Ended December 31,</b>				
	<b>2007(3)</b>	<b>2006(2)</b>	<b>2005</b>	<b>2004</b>	<b>2003(1)</b>
	<b>(In thousands, except per share data)</b>				
<b>Consolidated Statements of Operations Data:</b>					
Revenue:					
Design-to-silicon-yield solutions:					
Services	\$ 63,731	\$ 45,382	\$ 52,719	\$ 49,573	\$ 28,060
Software licenses	6,645	10,774	9,319	4,971	7,569
Gainshare performance incentives	24,087	20,028	11,890	7,802	6,897
<b>Total revenue</b>	<b>94,463</b>	<b>76,184</b>	<b>73,928</b>	<b>62,346</b>	<b>42,526</b>
Cost of design-to-silicon-yield solutions:					
Direct costs of design-to-silicon-yield solutions:					
Services	32,279	27,418	24,319	21,811	14,734
Software licenses	191	209	293	83	23
Amortization of acquired technology	5,148	5,270	5,064	5,209	2,168
<b>Total direct costs of design-to silicon-yield solutions</b>	<b>37,618</b>	<b>32,897</b>	<b>29,676</b>	<b>27,103</b>	<b>16,925</b>
<b>Gross margin</b>	<b>56,845</b>	<b>43,287</b>	<b>44,252</b>	<b>35,243</b>	<b>25,601</b>
Operating expenses:					
Research and development	36,074	27,613	22,204	20,999	19,540
Selling, general and administrative	24,891	19,814	16,146	15,243	12,770
Amortization of other acquired intangible assets	3,422	1,459	940	1,406	547
Write-off of in-process research and development		800			800
<b>Total operating expenses</b>	<b>64,387</b>	<b>49,686</b>	<b>39,290</b>	<b>37,648</b>	<b>33,657</b>
<b>Income (loss) from operations</b>	<b>(7,542)</b>	<b>(6,399)</b>	<b>4,962</b>	<b>(2,405)</b>	<b>(8,056)</b>
Interest and other income, net	1,891	2,827	1,658	675	1,195
<b>Income (loss) before taxes</b>	<b>(5,651)</b>	<b>(3,572)</b>	<b>6,620</b>	<b>(1,730)</b>	<b>(6,861)</b>
Income tax provision (benefit)	(2,724)	(3,133)	96	(1,116)	(2,345)
<b>Net income (loss)</b>	<b>\$ (2,927)</b>	<b>\$ (439)</b>	<b>\$ 6,524</b>	<b>\$ (614)</b>	<b>\$ (4,516)</b>

Edgar Filing: PDF SOLUTIONS INC - Form 10-K

Net income (loss) per share:										
Basic	\$	(0.10)	\$	(0.02)	\$	0.25	\$	(0.02)	\$	(0.19)
Diluted	\$	(0.10)	\$	(0.02)	\$	0.24	\$	(0.02)	\$	(0.19)
Weighted average common shares:										
Basic		28,066		26,885		25,983		25,330		23,278
Diluted		28,066		26,885		27,473		25,330		23,278

**Table of Contents**

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 2003 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 2007.

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

	2007(3)	2006(2)	December 31, 2005	2004	2003(1)
	(In thousands)				
<b>Consolidated Balance Sheets Data:</b>					
Cash and cash equivalents	\$ 35,315	\$ 36,451	\$ 60,506	\$ 45,660	\$ 39,110
Short-term investments	9,949	16,402			
Working capital	72,456	66,586	68,534	51,312	42,613
Total assets	179,351	168,857	139,892	125,407	123,967
Total stockholders' equity	156,470	148,219	122,681	108,798	106,552

- (1) In May 2003, we completed our acquisition of certain assets and liabilities of WaferYield, Inc., which related to wafer shot map optimization technology. The aggregate purchase price was \$4.1 million, which included cash payments of \$2.6 million and the recognition of \$1.5 million in other liabilities associated with future payments that were contingent upon the attainment of certain revenue performance objectives.

In September 2003, we completed our acquisition of all the outstanding stock of IDS which developed and sold yield management software applications and services. The aggregate purchase price was \$51.0 million which included the payment in cash of \$23.0 million, the issuance of 2.0 million shares of PDF common stock valued at \$25.0 million, the assumption of stock options valued at \$1.7 million and acquisition costs of \$1.3 million.

- (2) In October 2006, we completed our acquisition of all the outstanding stock of SiA which developed and licensed fault detection and classification software applications and services. The aggregate purchase price of \$36.6 million included the payment in cash of \$25.5 million, the issuance of 699,298 shares of PDF common stock valued at \$9.4 million and acquisition costs of \$1.7 million.
- (3) In May 2007, we completed our acquisition of all the outstanding stock of Fabbrix which developed DFM software applications. The aggregate purchase price of \$6.2 million included the payment in cash of \$2.7 million, the issuance of 271,531 shares of PDF common stock valued at \$2.9 million and acquisition costs of \$674,000.

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

Our technologies and services enable semiconductor companies to improve profitability across the entire process lifecycle, which is the term we have coined for the time from the IC design through that IC's volume manufacturing. Our solutions improve profitability by improving a semiconductor company's time-to-market, increasing yield and reducing total design and manufacturing costs. Our solutions combine proprietary software, physical IP in the form of

cell libraries for IC designs, test chips, an electrical 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. This drives IC design and manufacturing improvements that enable our customers to optimize the technology development process, increase the initial yield when an IC design first enters a manufacturing line, increase the rate at which yield improves, and 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



## **Table of Contents**

receive revenue based on this value. Our technologies and services have been sold to leading integrated device manufacturers, fabless semiconductor companies and foundries.

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 added intellectual property building blocks for logic design technology to our solution portfolio by acquiring Fabbrix.

### ***Industry Trend***

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 following were our financial highlights for the year ended December 31, 2007.

Total revenue for the year ended December 31, 2007 was \$94.5 million, an increase of 24% compared to the year ended December 31, 2006. Revenue from Design-to-Silicon-Yield solutions for the year ended December 31, 2007 increased to \$70.4 million compared to \$56.2 million for the year ended December 31, 2006. The increase, compared to the year ended December 31, 2006, was primarily the result of increases in services revenue of \$18.3 million, partially offset by a decrease in revenue from software licenses of \$4.1 million. The revenue derived from the gainshare performance incentives component for the year ended December 31, 2007 increased 20%, to \$24.1 million from \$20.0 million for the year ended December 31, 2006. Our gainshare performance incentives revenue may continue to fluctuate from quarter-to-quarter as a result of each customer's individual contractual performance measures for achieving gainshare performance incentives as well as each customer's production volumes in any given period.

Net loss of \$2.9 million was reported for the year ended December 31, 2007, compared to net loss of \$439,000 for the year ended December 31, 2006. The increase in net loss was primarily attributable to increases in operating expenses and amortization of acquired intangible assets, both primarily the result of the acquisitions of SiA in October 2006 and Fabbrix in May 2007. Net loss for the year ended December 31, 2007 included \$16.9 million in stock-based compensation, amortization of acquired intangible assets and the

## **Table of Contents**

write-off of acquired in-process research and development compared to \$14.9 million for the year ended December 31, 2006.

Net loss per basic and diluted share was \$0.10 for the year ended December 31, 2007 compared to net loss per basic and diluted share of \$0.02 for the year ended December 31, 2006.

Cash, cash equivalents and short-term investments decreased \$7.6 million to \$45.3 million during the year ended December 31, 2007. Net cash provided by operating activities for the year ended December 31, 2007 totaled \$1.4 million. Net cash used in investing activities for the year ended December 31, 2007 included \$1.9 million as final payments for our acquisition of SiA, a \$2.7 million payment for our acquisition of Fabbrix, and \$2.2 million to purchase property and equipment. Net cash used in financing activities for the year ended December 31, 2007 totaled \$3.7 million which primarily related to \$6.0 million in purchase of treasury stock, partially offset by the exercise of employee stock options and purchases under the employee stock purchase plan of \$2.9 million.

## ***Acquisitions***

On October 31, 2006, we completed our acquisition of all the outstanding capital stock of SiA, a privately held company based in Montpellier, France. SiA developed and licensed fault detection and classification software applications and provided services dedicated to the semiconductor industry that enable customers to rapidly identify sources of process variations and manufacturing excursions by monitoring equipment parameters through its proprietary data collection and analysis applications. The acquisition of SiA allowed us to provide our customers greater capabilities for managing product yield improvement as a result of these process control solutions and services. At the closing of the acquisition, SiA became our wholly owned subsidiary and its name was changed to PDF Solutions S.A., and then to PDF Solutions S.A.S. in 2007. The aggregate purchase price was \$37.0 million which included the payment in cash of \$25.5 million, the issuance of 699,298 shares of our common stock valued at \$9.4 million, and acquisition costs of \$2.2 million. Included in the acquisition costs above, \$2.7 million in cash and approximately 119,000 shares of common stock were held in escrow as security against certain financial contingencies. The cash and shares held in escrow, less amounts deducted to satisfy contingencies, will be released upon the 18-month anniversary of the acquisition. Any remaining cash and shares held in escrow after satisfying contingencies will be released no later than the 36-month anniversary of the acquisition. In connection with the acquisition, we recorded \$21.0 million in goodwill, including subsequent adjustments related to certain accruals and tax liabilities recognized in the acquisition and excluding the impact of changes in exchange rate. Goodwill reflects the excess of the purchase price paid over the identifiable assets assumed in the acquisition.

On May 24, 2007, we 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, 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 includes \$2.7 million cash, 271,531 shares of our common stock valued at \$2.9 million, and \$674,000 in acquisition costs. Included in the acquisition costs above, approximately \$405,000 in cash and 41,000 shares of common stock were held in escrow as security against certain financial contingencies. The cash and shares held in escrow, less amounts deducted to satisfy contingencies will be released no later than on the 18 month anniversary of the acquisition. The remaining amounts in cash and shares have been paid to the selling stockholders as of December 31, 2007. In connection with the 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. The consolidated financial statements for the year ended December 31, 2007 include the results of Fabbrix since the date of 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.

**Table of Contents*****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, which includes Services and Software Licenses, 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 revenue from fixed-price solution implementation service contracts delivered over a specific period of time. These contracts require accurate estimation of the cost to perform obligations and the overall scope of each engagement. Revenue under contracts for solution implementation services is recognized as the services are performed using the cost-to-cost percentage of completion method of contract accounting. Losses on solution implementation contracts are recognized when determined. 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 the customer over the 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 the 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 term of the agreement. 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

## **Table of Contents**

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 term of the underlying element for which VSOE does not exist.

*Software Licenses* We also license our software products separate from our services. In such cases 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 term of the underlying element for which VSOE does not exist. No revenue has been recognized for software licenses with extended payment terms in excess of amounts due.

*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 Acquired Intangible Assets***

As of December 31, 2007, we had \$65.2 million of goodwill and \$12.8 million of intangible assets. In valuation of our goodwill and intangible assets, we 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, we may be required to record impairment charges for these assets, which would have a material adverse effect on our operating results. We evaluate goodwill for impairment pursuant to the provisions of SFAS No. 142, *Goodwill and Other Intangible Assets*. We have selected December 31 as the date upon which to perform our annual testing for impairment. As of December 31, 2007, we completed our annual testing requirements and determined that the carrying value of goodwill had not been impaired.

We are currently amortizing our 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



**Table of Contents**

estimated useful lives of such assets would cause additional amortization expense or an impairment of such asset in future periods.

***Income Taxes***

Realization of deferred tax assets is dependent on our ability to generate future taxable income and utilize tax planning strategies. We have recorded a deferred tax asset in the amount that is more likely than not to be realized based on current estimations and assumptions. We evaluate the valuation allowance on a quarterly basis. Any resulting changes to the valuation allowance will result in an adjustment to income in the period the 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 9 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 and 2007 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 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 options as operating cash flow in our statement of cash flows. In accordance with SFAS No. 123(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. See Note 7 to the Consolidated Financial Statements for a further discussion on stock-based compensation.



**Table of Contents****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:

	<b>December 31, Years Ended</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
Revenues:			
Design-to-silicon-yield solutions:			
Services	67%	60%	71%
Software licenses	7	14	13
Gainshare performance incentives	26	26	16
Total revenues	100%	100%	100%
Cost of design-to-silicon-yield solutions:			
Direct costs of design-to-silicon-yield solutions:			
Services	34	36	33
Software licenses			
Amortization of acquired technology	6	7	7
Total cost of design-to silicon-yield solutions	40	43	40
Gross margin	60	57	60
Operating expenses:			
Research and development	38	37	30
Selling, general and administrative	26	26	22
Amortization of other acquired intangible assets	4	2	1
Write-off of in-process research and development		1	
Total operating expenses	68	66	53
Income (loss) from operations	(8)	(9)	7
Interest and other income, net	2	4	2
Income (loss) before taxes	(6)	(5)	9
Income tax provision (benefit)	(3)	(4)	
Net income (loss)	(3)%	(1)%	9%



**Table of Contents****Years Ended December 31, 2007 and 2006**

Revenue	2007	2006	\$	%	2007	2006
			Change	Change	% of Revenue	% 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.* 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 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 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. Our services revenue may fluctuate in the future and is dependent on a number of factors including our ability to obtain new customers at emerging technology nodes.

*Software licenses.* The decrease in software licenses revenue of \$4.1 million for the year ended December 31, 2007 compared to the year ended December 31, 2006 was primarily due to weakness in attracting new customers in light of customer capital spending constraints. Software license revenue may fluctuate in the future and is dependent upon a number of factors including the semiconductor industry's acceptance of our products, our ability to attract new customers, further penetration of our current customer base and the degree to which we bundle software with services where there is no established VSOE for the undelivered services.

*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 increased \$4.1 million for the year ended December 31, 2007 compared to the year ended December 31, 2006. The increase in revenue derived from gainshare performance incentives was primarily due to improved yields and volumes at our customers' sites. 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, continued production of 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.

<b>Cost of Design-to-Silicon-Yield Solutions</b>	<b>2007</b>	<b>2006</b>	<b>\$</b>	<b>%</b>	<b>2007</b>	<b>2006</b>
			<b>Change</b>	<b>Change</b>	<b>% of</b>	<b>% of</b>
			<b>(In thousands, except for % s)</b>			
Direct costs of design-to-silicon-yield solutions:						
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
<b>Total</b>	<b>\$ 37,618</b>	<b>\$ 32,897</b>	<b>\$ 4,721</b>	<b>14%</b>	<b>40%</b>	<b>43%</b>

**Table of Contents**

*Direct Costs of Design-to-Silicon-Yield Solutions.* Direct 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 our solution implementations. Costs include purchased materials, employee compensation and benefits, travel and facilities-related costs. Direct 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 to an increase of \$993,000 in costs associated with the deployment of our pdfFasTest products at new engagements signed during the year ended December 31, 2007. 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 direct costs of Design-to-Silicon-Yield solutions software licenses decreased \$18,000 for the year ended December 31, 2007 as compared to the year ended December 31, 2006. 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.

*Amortization of Acquired Technology.* Amortization of acquired technology consists of the amortization of intangibles acquired as a result of certain business combinations. For the year ended December 31, 2007, the amortization of acquired technology expense decreased \$122,000 compared to the year ended December 31, 2006. Certain intangible assets became fully amortized during the fiscal year 2007 which resulted in a decrease of \$1.9 million in amortization. The decrease was 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. We anticipate amortization of acquired technology to be \$2.5 million in 2008, \$2.5 million in 2009, \$2.3 million in 2010, \$1.3 million in 2011, and \$536,000 in 2012.

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

*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. The increase in research and development expenses of \$8.5 million for the year ended December 31, 2007 compared to the year ended December 31, 2006 was 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. We anticipate our expenses in research and development will increase in absolute dollars as we continue to commit considerable resources in this area in the future.

			\$	%	2007 % of	2006 % of
<b>Selling, General and Administrative</b>	<b>2007</b>	<b>2006</b>	<b>Change</b>	<b>Change</b>	<b>Revenue</b>	<b>Revenue</b>
			<b>(In thousands, except for % s)</b>			
Selling, general and administrative	\$ 24,891	\$ 19,814	\$ 5,077	26%	26%	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. The increase in selling, general and administrative expenses of \$5.1 million for the year ended December 31, 2007 compared to the year ended December 31, 2006 was primarily due to increased



**Table of Contents**

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 of 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. We expect that selling, general and administrative expenses will increase in absolute dollars to support increased selling and administrative efforts in the future.

<b>Amortization of Other Acquired Intangible Assets</b>	<b>2007</b>	<b>2006</b>	<b>\$</b>	<b>%</b>	<b>2007</b>	<b>2006</b>
					<b>% of</b>	<b>% of</b>
<b>(In thousands, except for % s)</b>						
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 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, 2007 increased \$2.0 million compared to the year ended December 31, 2006 as a result of the acquisition of SiA in October 2006. We anticipate amortization of these other acquired intangible assets to decrease in future periods as certain intangible assets became fully amortized during the fiscal year 2007. We anticipate amortization of other acquired intangible assets to be \$776,000 in 2008, \$776,000 in 2009, \$713,000 in 2010, \$575,000 in 2011, and \$795,000 in 2012 and thereafter.

<b>Write-off of In-Process Research and Development</b>	<b>2007</b>	<b>2006</b>	<b>\$</b>	<b>%</b>	<b>2007</b>	<b>2006</b>
					<b>% of</b>	<b>% of</b>
<b>(In thousands, except for % s)</b>						
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.

<b>Interest and Other Income, Net</b>	<b>2007</b>	<b>2006</b>	<b>\$</b>	<b>%</b>	<b>2007</b>	<b>2006</b>
					<b>% of</b>	<b>% of</b>
<b>(In thousands, except for % s)</b>						
Interest and other income, net	\$ 1,891	\$ 2,827	\$ (936)	(33)%	2%	4%

*Interest and Other Income, Net.* The decrease in interest and other income, net of \$936,000 for the year ended December 31, 2007 compared to the year ended December 31, 2006 was 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. We anticipate interest and other income will fluctuate in future periods as a result of our projected use of cash.

<b>Income Tax Provision (Benefit)</b>	<b>2007</b>	<b>2006</b>	<b>\$</b>	<b>%</b>	<b>2007</b>	<b>2006</b>
			<b>Change</b>	<b>Change</b>	<b>% of</b>	<b>% of</b>
			<b>(In thousands, except for % s)</b>			
Income tax provision (benefit)	\$ (2,724)	\$ (3,133)	\$ 409	(13)%	(3)%	(4)%

*Income Tax Provision (Benefit).* The decrease in the income tax benefit of \$409,000 for the year ended December 31, 2007 compared to the year ended December 31, 2006 was 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

**Table of Contents**

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.

**Years Ended December 31, 2006 and 2005**

Revenue	2006	2005	\$ Change (In thousands, except for % s)	% Change	2006	2005
					% of Revenue	% of Revenue
Design-to-silicon-yield solutions:						
Services	\$ 45,382	\$ 52,719	\$ (7,337)	(14)%	60%	71%
Software licenses	10,774	9,319	1,455	16	14	13
Gainshare performance incentives	20,028	11,890	8,138	68	26	16
Total	\$ 76,184	\$ 73,928	\$ 2,256	3%	100%	100%

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

*Services.* The decrease in services revenue of \$7.3 million for the year ended December 31, 2006 compared to the year ended December 31, 2005 was primarily attributable to decreases in fixed fee services revenue which was partially offset by an increase in software related services revenue. Fixed fee service revenue decreased \$10.6 million due to a slower booking rate for new integrated solution engagements in late 2005, which would have contributed to revenue in 2006, and in the first half of 2006, and to the late timing of new contracts signed in the second half of 2006. Software related services revenue increased \$3.3 million due to greater adoption of our software applications by new and existing customers.

*Software licenses.* The increase in software licenses revenue of \$1.5 million for the year ended December 31, 2006 compared to the year ended December 31, 2005 was due to greater adoption of our software applications by new and existing customers and the addition of new software offerings as a result of the acquisition of SiA in October 2006.

*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 increased approximately \$8.1 million for the year ended December 31, 2006 compared to the year ended December 31, 2005. The increase in revenue derived from gainshare performance incentives experienced for the year ended December 31, 2006 was primarily due to a greater number of wafer starts at our customers' sites, as well as a greater number of engagements contributing to gainshare performance incentives at newer technology nodes.

Cost of Design-to-Silicon-Yield Solutions	2006	2005	\$ Change (In thousands, except for % s)	% Change	2006	2005
					% of Revenue	% of Revenue

## Direct costs of design-to-silicon-yield solutions:

Services	\$ 27,418	\$ 24,319	\$ 3,099	13%	36%	33%
Software licenses	209	293	(84)	(29)		
Amortization of acquired technology	5,270	5,064	206	4	7	7
Total	\$ 32,897	\$ 29,676	\$ 3,221	11%	43%	40%

*Direct Costs of Design-to-Silicon-Yield Solutions.* Direct 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.* The increase in direct costs of Design-to-Silicon-Yield services of \$3.1 million for the year ended December 31, 2006 compared to the year ended December 31, 2005 was primarily attributable to the

**Table of Contents**

increase of \$2.1 million in stock-based compensation expense under SFAS No. 123(R), and the increase of \$974,000 in the distribution of expanded pdfAsTest products. Our labor costs remained relatively unchanged for the year ended December 31, 2006 as compared to the year ended December 31, 2005, despite the decrease in revenues, primarily a result of a decrease in the utilization rate of our labor resources.

*Software Licenses.* The decrease in direct costs of Design-to-Silicon-Yield solutions software licenses of \$84,000 for the year ended December 31, 2006 compared to the year ended December 31, 2005 was primarily attributable to a decrease in license fees and royalties incurred associated with third party software licenses sold in conjunction with our software.

*Amortization of Acquired Technology.* The increase in the amortization of acquired technology expense of \$206,000 for the year ended December 31, 2006 compared to the year ended December 31, 2005 was primarily attributable to the amortization of technology acquired from our acquisition of SiA in October 2006.

<b>Research and Development</b>	<b>2006</b>	<b>2005</b>	<b>\$</b>	<b>%</b>	<b>2006</b>	<b>2005</b>
			<b>Change</b>	<b>Change</b>	<b>% of</b>	<b>% of</b>
			<b>(In thousands, except for % s)</b>			
Research and development	\$ 27,613	\$ 22,204	\$ 5,409	24%	37%	30%

*Research and Development.* The increase in research and development expenses of \$5.4 million for the year ended December 31, 2006 compared to the year ended December 31, 2005 was primarily due to the increase of \$2.1 million in stock-based compensation expense recognized since the adoption of SFAS No. 123(R), the increase of \$1.3 million in personnel-related expenses, and additional operating costs of \$908,000 associated with the acquisition of SiA in October 2006.

<b>Selling, General and Administrative</b>	<b>2006</b>	<b>2005</b>	<b>\$</b>	<b>%</b>	<b>2006</b>	<b>2005</b>
			<b>Change</b>	<b>Change</b>	<b>% of</b>	<b>% of</b>
			<b>(In thousands, except for % s)</b>			
Selling, general and administrative	\$ 19,814	\$ 16,146	\$ 3,668	23%	26%	22%

*Selling, General and Administrative.* The increase in selling, general and administrative expenses of \$3.7 million for the year ended December 31, 2006 compared to the year ended December 31, 2005 was primarily due to the increase of \$3.0 million in stock-based compensation expense recognized since the adoption of SFAS No. 123(R).

<b>Amortization of Other Acquired Intangible Assets</b>	<b>2006</b>	<b>2005</b>	<b>\$</b>	<b>%</b>	<b>2006</b>	<b>2005</b>
			<b>Change</b>	<b>Change</b>	<b>% of</b>	<b>% of</b>
			<b>(In thousands, except for % s)</b>			
Amortization of other acquired intangible assets	\$ 1,459	\$ 940	\$ 519	55%	2%	1%

*Amortization of Other Acquired Intangible Assets.* Amortization of other acquired intangible assets increased \$519,000 for the year ended December 31, 2006 compared to the year ended December 31, 2005, as a result of the acquisition of SiA in October 2006.

<b>Write-off of In-Process Research and Development</b>	<b>2006</b>	<b>2005</b>	<b>\$</b>	<b>%</b>	<b>2006</b>	<b>2005</b>
			<b>Change</b>	<b>Change</b>	<b>% of</b>	<b>% of</b>
<b>(In thousands, except for % s)</b>						
Write-off of in-process research and development	\$ 800	\$	\$ 800	N/A	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

**Table of Contents**

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 2005.

	2006	2005	\$ Change	% Change	2006 % of Revenue	2005 % of Revenue
<b>Interest and Other Income, Net</b>						
					(In thousands, except for % s)	
Interest and other income, net	\$ 2,827	\$ 1,658	\$ 1,169	71%	4%	2%

*Interest and Other Income, Net.* The increase in interest and other income, net of \$1.2 million for the year ended December 31, 2006 compared to the year ended December 31, 2005 was primarily the result of investing in marketable securities that earned higher interest rates whereas there were no such investments in year 2005.

	2006	2005	\$ Change	% Change	2006 % of Revenue	2005 % of Revenue
<b>Income Tax Provision (Benefit)</b>						
					(In thousands, except for % s)	
Income tax provision (benefit)	\$ (3,133)	\$ 96	\$ (3,229)	(3,364)%	(4)%	

*Income Tax Provision (Benefit).* The decrease in the income tax provision of \$3.2 million for the year ended December 31, 2006 compared to the year ended December 31, 2005 was primarily due to the benefit of increased research and development tax credits claimed for the current and certain prior years as a result of a study performed during the period and to the decrease in operating income for the year ended December 31, 2006.

**Liquidity and Capital Resources****Operating Activities**

Operating cash flows consist of net loss adjusted for certain non-cash items and changes in assets and liabilities. Net cash provided by operating activities was \$1.4 million for fiscal year 2007 compared to \$2.6 million for the fiscal year 2006. The decrease in operating cash flows is primarily due to a higher net loss, an increase in accounts receivable and a decrease in deferred revenue, which was partially offset by changes in accrued compensation and related benefits and tax payable. Amortization of acquired intangible assets increased \$1.9 million for fiscal year 2007 compared to fiscal year 2006.

The increase in accounts receivable was due to increased revenue 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. The decrease in deferred revenue was primarily due to the timing of bundled software and services deals that were recognized ratably over their service period, primarily during 2007. The increase in accrued compensation and related benefits was primarily due to the increase in discretionary compensation. The increase in taxes payable was primarily due to the increase of FIN No. 48 liabilities.

**Investing Activities**

Investing cash flows consist of proceeds from investment maturities and sales, offset by payments for investments acquired, payments for businesses acquired, and capital expenditures. Net cash provided by investing activities was \$203,000 for the year ended December 31, 2007 compared to \$35.2 million cash used in investing activities for the year ended December 31, 2006. In fiscal year 2007, our investing activities included net proceeds of \$7.0 million from short-term investments, payments of \$4.6 million associated with the acquisitions, and payments of \$2.2 million to purchase property and equipment. In fiscal year 2006, our investing activities included net purchases of short-term investments of \$14.1 million, the purchase of SiA of \$18.7 million net of cash acquired, and the purchase of property and equipment of \$2.4 million. As of December 31, 2007, we had not invested in derivative securities.

***Financing Activities***

Financing cash flows consist primarily of payments for purchase of treasury stock and proceeds from sales of shares through employee equity incentive plans. Net cash used in financing activities was \$3.7 million for fiscal



## **Table of Contents**

year 2007 compared to \$8.2 million cash provided by financing activities for 2006. We repurchased 638,587 shares of common stock for \$6.0 million in fiscal year 2007. We did not repurchase any of our common stock in fiscal year 2006. Proceeds from exercise of stock options and employee stock purchase plan were \$2.9 million in fiscal year 2007 compared to \$7.8 million in fiscal year 2006. We also paid off \$416,000 in promissory notes assumed with the acquisition of Fabbrix in May 2007.

### ***Liquidity***

As of December 31, 2007, our working capital was \$72.5 million, compared with \$66.6 million as of December 31, 2006. Cash and cash equivalents, and short-term investments as of December 31, 2007 were \$45.3 million compared to \$52.9 million as of December 31, 2006, a decrease of \$7.6 million. Decreases in cash and short-term investments were primarily attributable to the stock repurchases, payments associated with acquisitions, purchase of property and equipment, and partially offset by proceeds from the exercise of stock options and issuance of common stock under our equity plan and by cash provided by operating activities. We expect to experience growth in our overall expenses, in order to execute our business plan. As a result, 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, 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 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.

The credit markets have been volatile and have experienced a shortage on overall liquidity. We believe we have sufficient liquidity under cash provided by operations. If the global credit market continue to deteriorate, our investment portfolio may be impacted and we could determine that some of our investments are impaired which could adversely impact our financial results.

At December 31, 2007, our short-term investments included \$4.5 million in auction-rate securities, 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 have not entered into any derivative contracts and 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, 2007, 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.

**Table of Contents****Contractual Obligations**

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

Contractual Obligations	2008	2009-2010	Payments Due by Period		Other	Total
			2011-2012	Thereafter		
Debt principal(1)	\$ 307	\$ 759	\$ 117	\$	\$	\$ 1,183
Debt interest	27	32	5			64
Capital lease obligations (including interest)	107	50	2			159
Operating lease obligations	1,719	4,607	4,240	1,523		12,089
Unrecognized tax benefits(2)					5,581	5,581
<b>Total</b>	<b>\$ 2,160</b>	<b>\$ 5,448</b>	<b>\$ 4,364</b>	<b>\$ 1,523</b>	<b>\$ 5,581</b>	<b>\$ 19,076</b>

(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 \$14,000 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, 2007, we had cash and cash equivalents and short term investments of \$45.3 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, 2007 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.

At December 31, 2007, our short-term investments included \$4.5 million in auction-rate securities, which are variable rate debt instruments whose interest rates are reset through a dutch auction process at regular intervals, typically every 28 days. Approximately \$3.3 million of auction-rate securities were backed by pools of student loans guaranteed by governmental agencies and private entities, and all were rated AAA/Aaa as of December 31, 2007. Subsequent to December 31, 2007, we successfully reset \$1.5 million and sold \$3.0 million of auction rate securities at par during auctions. Since then, the liquidity and fair value of the remaining 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. In February and March 2008, the remaining auction-rate securities, with a fair value of \$1.5 million as of December 31, 2007, failed to sell at auction, and as a result, their interest rate was reset to the maximum LIBOR + 150 basis points. We do not believe that the liquidity crisis currently affecting

## **Table of Contents**

auction-rate securities will materially affect our overall liquidity. We believe that our current balance of cash, cash equivalents, and short-term investments (excluding auction-rate securities) and cash flows generated by our operations is sufficient to meet our operating needs. We will review the investment in these securities further to determine whether they were other-than-temporarily impaired during the three months ending March 31, 2008. If we deem the securities to be impaired, an impairment charge will be recorded.

*Foreign Currency and Exchange Risk.* Certain of our sales contracts with our German subsidiary and our French subsidiary are denominated in US Dollars. Therefore, a portion of our revenue is subject to foreign currency risks. For example, the effect of an immediate 10% adverse change in exchange rates on foreign denominated receivables as of December 31, 2007 would result in a loss of approximately \$77,000. To date, we have not entered into any hedging contracts, although we may do so 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, 2007.

The effectiveness of our internal control over financial reporting as of December 31, 2007 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 2007 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**Table of Contents**

**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 (collectively, the Company ) as of December 31, 2007, 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, 2007, 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, 2007, of the Company and our report dated March 17, 2008, expressed an unqualified opinion on those

financial statements and financial statement schedule and included an explanatory paragraph regarding the adoption of Financial Accounting Standards Board Interpretation No. 48 *Accounting for Uncertainty in Income Taxes – an interpretation of FASB Statement No. 109*, Statement of Financial Accounting Standards No. 123(R), *Share-Based Payment*, and Emerging Issues Task Force Issue No. 06-02, *Accounting for Sabbatical Leave and Other Similar Benefits Pursuant to FASB Statement No. 43*.

/s/ DELOITTE & TOUCHE LLP

San Jose, California  
March 17, 2008

**Table of Contents**

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

None.

**PART III**

Pursuant to Paragraph (3) of the General Instructions to Form 10-K, the information required by Part III of this Form 10-K is incorporated by reference from our Proxy Statement. The Proxy Statement is expected to be filed within 120 days of December 31, 2007.

**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](http://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 2007, our independent registered public accounting firm, Deloitte & Touche LLP, performed certain services that were approved by the Audit Committee of our Board of Directors as follows:

International tax planning and tax compliance services.

**Table of Contents**

**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 Account

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**

	<b>Page</b>
PDF SOLUTIONS, INC	
<u>Report of Independent Registered Public Accounting Firm</u>	F-2
<u>Consolidated Balance Sheets as of December 31, 2007 and 2006</u>	F-3
<u>Consolidated Statements of Operations for each of the Three Years in the Period Ended December 31, 2007</u>	F-4
<u>Consolidated Statements of Stockholders' Equity and Comprehensive Income (Loss) for each of the Three Years in the Period Ended December 31, 2007</u>	F-5
<u>Consolidated Statements of Cash Flows for each of the Three Years in the Period Ended December 31, 2007</u>	F-6
<u>Notes to Consolidated Financial Statements</u>	F-7

**Table of Contents**

**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 (collectively, the Company ) as of December 31, 2007 and 2006, 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, 2007. Our audits also included the financial statement schedule listed in Item 15(a)(2). These financial statements and the financial statement schedule are the responsibility of the Company s management. Our responsibility is to express an opinion on the 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 the Company at December 31, 2007 and 2006, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2007, 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 (1) effective January 1, 2006, the Company changed its method of accounting for stock-based compensation in accordance with guidance provided in Statement of Financial Accounting Standards No. 123 (revised 2004), *Share-Based Payments*, (2) 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 (3) effective January 1, 2007, the Company changed 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, 2007, 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 17, 2008, expressed an unqualified opinion on the Company s internal control over financial reporting.

/s/ DELOITTE & TOUCHE LLP

San Jose, California  
March 17, 2008

F-2

---

**Table of Contents**

**PDF SOLUTIONS, INC.**  
**CONSOLIDATED BALANCE SHEETS**

**December 31,**  
**2007                      2006**  
**(In thousands,**  
**except par values)**

**ASSETS**

Current assets:		
Cash and cash equivalents	\$ 35,315	\$ 36,451
Short-term investments	9,949	16,402
Accounts receivable, net of allowances of \$254 in 2007 and \$294 in 2006	38,526	27,575
Prepaid expenses and other current assets	3,354	2,796
Deferred tax assets	1,676	2,581
Total current assets	88,820	85,805
Property and equipment, net	3,621	3,916
Goodwill	65,170	60,034
Intangible assets, net	12,818	13,605
Deferred tax assets and other assets	8,922	5,497
Total assets	\$ 179,351	\$ 168,857

**LIABILITIES AND STOCKHOLDERS EQUITY**

Current liabilities:		
Current portion of long-term debt	\$ 421	\$ 302
Accounts payable	3,469	3,182
Accrued compensation and related benefits	5,950	3,325
Other accrued liabilities	2,604	3,843
Taxes payable	208	4,767
Deferred revenues	3,159	3,705
Billings in excess of recognized revenue	553	95
Total current liabilities	16,364	19,219
Long-term debt	907	1,198
Long-term taxes payable	5,581	
Other liabilities	29	221
Total liabilities	22,881	20,638
Commitments and contingencies (Notes 6 and 11)		
Stockholders' equity:		
Preferred stock, \$0.00015 par value, 5,000 shares authorized, no shares issued and outstanding		
	4	4

Edgar Filing: PDF SOLUTIONS INC - Form 10-K

Common stock, \$0.00015 par value, 70,000 shares authorized: shares issued 29,122 in 2007 and 28,498 in 2006; shares outstanding 27,933 in 2007 and 27,948 in 2006		
Additional paid-in capital	181,566	167,323
Treasury stock at cost, 1,190 shares in 2007 and 551 shares in 2006	(11,524)	(5,549)
Accumulated deficit	(16,892)	(13,890)
Accumulated other comprehensive income	3,316	331
Total stockholders' equity	156,470	148,219
Total liabilities and stockholders' equity	\$ 179,351	\$ 168,857

See notes to consolidated financial statements.

F-3

---

**Table of Contents****PDF SOLUTIONS, INC.****CONSOLIDATED STATEMENTS OF OPERATIONS**

	<b>Year Ended December 31,</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
	<b>(In thousands, except per share amounts)</b>		
Revenues:			
Design-to-silicon-yield solutions:			
Services	\$ 63,731	\$ 45,382	\$ 52,719
Software licenses	6,645	10,774	9,319
Gainshare performance incentives	24,087	20,028	11,890
Total revenues	94,463	76,184	73,928
Cost of design-to-silicon-yield solutions:			
Direct costs of design-to-silicon-yield solutions:			
Services	32,279(1)	27,418(1)	24,319
Software licenses	191	209	293
Amortization of acquired technology	5,148	5,270	5,064
Total cost of design-to-silicon-yield solutions	37,618	32,897	29,676
Gross margin	56,845	43,287	44,252
Operating expenses:			
Research and development	36,074(1)	27,613(1)	22,204
Selling, general and administrative	24,891(1)	19,814(1)	16,146
Amortization of other acquired intangible assets	3,422	1,459	940
Write-off of in-process research and development		800	
Total operating expenses	64,387	49,686	39,290
Income (loss) from operations	(7,542)	(6,399)	4,962
Interest and other income, net	1,891	2,827	1,658
Income (loss) before taxes	(5,651)	(3,572)	6,620
Income tax provision (benefit)	(2,724)(2)	(3,133)(2)	96
Net income (loss)	\$ (2,927)	\$ (439)	\$ 6,524
Net income (loss) per share:			
Basic	\$ (0.10)	\$ (0.02)	\$ 0.25
Diluted	\$ (0.10)	\$ (0.02)	\$ 0.24
Weighted average common shares:			



Edgar Filing: PDF SOLUTIONS INC - Form 10-K

Basic	28,066	26,885	25,983
Diluted	28,066	26,885	27,473

See notes to consolidated financial statements.

(1) Costs and expenses for the year ended December 31, 2007 and December 31, 2006 include SFAS No. 123(R) stock-based compensation expense. See Notes 1 and 7 to the consolidated financial statements for additional information.

(2) Tax benefit includes income tax benefit from stock-based compensation.

F-4

---

**Table of Contents****PDF SOLUTIONS, INC.****CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY  
AND COMPREHENSIVE INCOME (LOSS)**

	<b>Common Stock</b>		<b>Additional Paid-In Capital</b>	<b>Deferred Stock-Based Compensation</b>	<b>Treasury Stock</b>		<b>Notes Receivable from Stockholders</b>	<b>Accumulated Deficit</b>	<b>Accumulated Other Comprehensive Income (Loss)</b>	<b>Total</b>
	<b>Shares</b>	<b>Amount</b>	<b>Capital</b>	<b>Compensation</b>	<b>Shares</b>	<b>Amount</b>	<b>Stockholders</b>	<b>Deficit</b>	<b>(Loss)</b>	
	<b>(In thousands)</b>									
Balances, January 1, 2005	25,645	\$ 4	\$ 134,191	\$ (148)	506	\$ (4,806)	\$ (550)	\$ (19,975)	\$ 82	\$ 108,799
Exercise of options	669		5,952							5,952
Issuance of common stock in connection with employee stock purchase plan	164		1,592							1,592
Stock-based compensation expense				114						114
Reversal of stock-based compensation for terminated employees			(23)	7						(16)
Acceleration of employee stock options			8							8
Acquisition of treasury stock in exchange for stockholder note receivable	(45)				45	(743)	550			(193)
Net income								6,524		6,524
Translation of cumulative investment									(98)	(98)
Comprehensive loss										(98)
Balances, December 31, 2005	26,433	4	141,720	(27)	551	(5,549)		(13,451)	(16)	122,688
Exercise of options	639		6,021							6,021
Issuance of common stock in connection with employee stock	177		1,752							1,752

urchase plan									
uance of common									
ck in connection									
th acquisition	699		9,362						9,362
versal of deferred									
ck-based									
mpensation									
ense			(27)	27					
ck-based									
mpensation									
ense			7,351						7,351
x benefit related									
stock-based									
mpensation									
ense			1,144						1,144
t loss						(439)			
mulative									
nslation									
ustment								347	
mprehensive loss									(9)
ances,									
ember 31, 2006	27,948	4	167,323	551	(5,549)	(13,890)	331		148,211
ercise of options	182		1,442						1,442
uance of common									
ck in connection									
th employee stock									
urchase plan	170		1,490						1,490
uance of common									
ck in connection									
th acquisition	272		2,874						2,874
urchases of									
asury stock	(639)			639	(5,975)				(5,975)
ck-based									
mpensation									
ense			8,229						8,229
x benefit related									
stock-based									
mpensation									
ense			208						208
t loss						(2,927)			
mulative									
nslation									
ustment, net of									
effect								2,982	
realized gain on									
estments								3	
mprehensive loss									5
mulative effect									
m adoption of									
N No. 48								771	771

cumulative effect  
from adoption of  
SF No. 06-2, net  
tax effect

(846)

(84

balances,  
December 31, 2007

27,933

\$ 4

\$ 181,566

\$

1,190

\$ (11,524)

\$

\$ (16,892)

\$ 3,316

\$ 156,47

See notes to consolidated financial statements.

F-5

---

**Table of Contents****PDF SOLUTIONS, INC.****CONSOLIDATED STATEMENTS OF CASH FLOWS**

	<b>Year Ended December 31,</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
	<b>(In thousands)</b>		
Operating activities:			
Net income (loss)	\$ (2,927)	\$ (439)	\$ 6,524
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	2,070	2,103	2,235
Stock-based compensation expense	8,229	7,351	106
Loss on disposal of property, plant and equipment		61	
Amortization of acquired intangible assets	8,637	6,729	6,004
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	(5,494)	(6,864)	(1,900)
Changes in operating assets and liabilities, net of effect of acquisition:			
Accounts receivable, net of allowances	(10,951)	(3,648)	(6,104)
Prepaid expenses and other assets	(510)	(67)	475
Accounts payable	59	391	783
Accrued compensation and related benefits	1,182	(2,402)	1,713
Other accrued liabilities	(794)	(1,582)	(1,124)
Taxes payable	1,793	(184)	1,664
Deferred revenues	(546)	1,206	(624)
Billings in excess of recognized revenue	458	(1,509)	23
Net cash provided by operating activities	1,370	2,627	9,775
Investing activities:			
Purchases of available-for-sale securities	(26,803)	(45,823)	
Maturities and sales of available-for-sale securities	33,818	31,700	
Purchases of property and equipment	(2,226)	(2,433)	(2,320)
Business acquired in purchase transactions, net of cash acquired	(4,586)	(18,658)	
Net cash provided by (used in) investing activities	203	(35,214)	(2,320)
Financing activities:			
Exercise of stock options	1,442	6,021	5,952
Proceeds from employee stock purchase plan	1,490	1,752	1,592
Purchases of treasury stock	(5,975)		
Principal payments on long-term obligations	(324)	(23)	(55)
Principal payments on notes to stockholders	(416)		
Excess tax benefit from stock-based compensation expense	44	463	

Edgar Filing: PDF SOLUTIONS INC - Form 10-K

Net cash provided by (used in) financing activities	(3,739)	8,213	7,489
Effect of exchange rate changes on cash and cash equivalents	1,030	319	(98)
Net increase (decrease) in cash and cash equivalents	(1,136)	(24,055)	14,846
Cash and cash equivalents, beginning of period	36,451	60,506	45,660
Cash and cash equivalents, end of period	\$ 35,315	\$ 36,451	\$ 60,506
Non-cash investing and financing activities:			
Repurchase of common stock through cancellation of notes receivable	\$	\$	\$ 743
Purchase price adjustments	\$ 9	\$ 923	\$
Reversal of deferred stock compensation	\$	\$ 27	\$
Purchase of property and equipment on account	\$ 38	\$ 28	\$ 22
Stock issued for acquisitions	\$ 2,874	\$ 9,362	\$
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Taxes	\$ 634	\$ 2,808	\$ 241
Interest	\$ 48	\$ 5	\$ 4

See notes to consolidated financial statements.

F-6

---

**Table of Contents**

**PDF SOLUTIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Years Ended December 31, 2007, 2006, and 2005**

**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.

The Company has chosen to replace the term Integrated Solutions , under the caption Design-to-Silicon Solutions in its consolidated statements of operations, with the term Services , and replace the term Gain Share with Gainshare Performance Incentives , to better describe the arrangements provided to its customers.

*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 and accounts receivable. The Company maintains its cash and cash equivalents 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. If the financial condition or operations of the Company's customers deteriorate the risks of collection could increase substantially. 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. As of December 31, 2005, two customers accounted for 43% of the Company's gross accounts receivable and four customers accounted for 49% of the Company's total revenue for 2005. 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.

*Cash Equivalents* The Company considers all highly liquid investments with an original maturity of 90 days or fewer or remaining maturity of 90 days or fewer when acquired to be cash equivalents.

*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 \$12.1 million and \$7.8 million at December 31, 2007 and 2006, respectively.



Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

*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 following table provides information relating to the intangible assets and goodwill contained within the Company's consolidated balance sheets as of December 31, 2007 and December 31, 2006 (in thousands):

		December 31, 2006		Purchase			Foreign	December 31, 2007
	Amortization Period (Years)	Net Carrying Amount	Acquisition	Adjustment	Amortization	Translation	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	
Patent 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	

December 31,  
2005

Purchase

Foreign  
December 31,  
2006

	Amortization Period (Years)	Net Carrying Amount	Acquisitions	Price Adjustments	Amortization	Currency Translation	Net Carrying Amount
Goodwill	N/A	\$ 39,886	\$ 21,071	\$ (923)	\$	\$	\$ 60,034
Acquired identifiable intangibles:							
Acquired technology	4	\$ 8,221	\$ 4,950	\$	\$ (5,270)		\$ 7,901
Brand name	4	833	510		(521)		822
Customer relationships and backlog	1-6		4,860		(498)		4,362
Other acquired intangibles	4	733	255		(477)	9	520
Total		\$ 9,787	\$ 10,575	\$	\$ (6,766)	\$ 9	\$ 13,605

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 completed its annual testing requirements for 2007 and determined that the carrying value of goodwill had not been impaired.

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

In 2006, the Company recorded a non-cash adjustment of \$923,000 relating to the reduction of a valuation allowance established for deferred tax assets that were assumed in connection with the Company's acquisition of IDS Software Inc. in 2003. Such adjustment resulted in a decrease in goodwill.

In 2007, the Company recorded adjustments to goodwill of \$6,000 due to additional transaction costs incurred, partially offset by the revision in fair value of certain deferred tax assets and the billing of a pre-acquisition license sale in connection with the acquisitions of Si Automation S.A. ( SiA ) and Fabbrix, Inc. ( Fabbrix ). The Company also recorded an adjustment of \$3.0 million related to the effect of changes in exchange rates associated with recorded goodwill.

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

<b>Year Ending December 31,</b>	<b>Amount</b>
2008	3,299
2009	3,299
2010	3,030
2011	1,861
2012	1,048
Thereafter	281
<b>Total</b>	<b>\$ 12,818</b>

*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 (without interest charges) 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.

The Company concluded in 2007 and 2006 that there were no events or changes in circumstances that would indicate that the carrying amounts of long-lived assets were impaired.

*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 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 revenue from fixed-price solution implementation service contracts delivered over a specific period of time. These contracts require accurate estimation of the cost to perform obligations and the overall scope of each engagement. Revenue under contracts for solution implementation services is recognized as the services are performed using the cost-to-cost percentage of completion method of contract accounting. Losses on solution implementation contracts are recognized when determined. Revisions in profit estimates are reflected in the period in which the conditions that require the revisions become known and can be estimated.

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

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 the customer over the 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 the 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 term of the agreement. 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 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 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 term of the underlying element for which VSOE does not exist.

*Software Licenses* The Company also licenses its software products separately from its integrated solution implementations. In such cases 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 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 term of the underlying element for which VSOE does not exist, and such revenue is recorded as services. No revenue has been recognized for software licenses with extended payment terms in excess of amounts due. 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

F-10

---

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

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 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 during fiscal 2006 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 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 options as operating cash flow in its statement of cash flows. In accordance with SFAS No. 123(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 7 to the Consolidated Financial Statements for a further discussion on stock-based compensation.

*Income Taxes* The Company accounts for income taxes in accordance with SFAS No. 109, *Accounting for Income Taxes*, ( SFAS No. 109 ). In determining taxable income for financial statement reporting purposes, certain estimates and judgments must be made. These estimates and judgments are applied in the calculation of certain tax liabilities and in the determination of the recoverability of deferred tax assets, which arise from temporary differences between the recognition of assets and liabilities for tax and financial statement reporting purposes. The

F-11

---



Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

realization of deferred tax assets is dependent on the Company's ability to generate future taxable income and utilize tax planning strategies. The deferred tax asset amount recorded is more likely than not to be realized based on current estimations and assumptions. The valuation allowance is evaluated on a quarterly basis. Any resulting changes to the valuation allowance will result in an adjustment to income in the period the 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. The Company adopted the provisions of FIN No. 48 on January 1, 2007. See Note 9 to the consolidated financial statements for a further discussion on the income taxes.

*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 (loss) at December 31, 2007 and 2006 is comprised of (in thousands):

	<b>Balance at December 31,</b>	
	<b>2007</b>	<b>2006</b>
Unrealized gain on short-term investments	\$ 3	\$
Foreign currency translation adjustments	3,313	331
Accumulated other comprehensive income	\$ 3,316	\$ 331

*Fair Value of Financial Instruments* The carrying amounts of the Company's financial instruments, including cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities, approximate fair value because of their short maturities. The carrying amount of debt approximates fair value because of the immaterial difference between the effective and actual interest rates.

*Recent Accounting Pronouncements* In September 2006, the FASB issued SFAS No. 157, *Fair Value Measurement*, ( SFAS No. 157 ), which establishes a framework for measuring fair value and expands disclosures about fair value measurements. Additionally, the pronouncement provides guidance on definition, measurement, methodology and use of assumptions and inputs in determining fair value. In February 2008, the FASB issued FASB Staff Position ( 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* ( FSP 157-1 ) and FSP 157-2, *Effective Date of FASB Statement No. 157* ( 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. SFAS No. 157 for financial assets and financial liabilities is effective for financial statements issued for fiscal years beginning after November 15, 2007, and interim periods within those fiscal years. The Company is currently evaluating the impact of the adoption of SFAS No. 157 on its financial statements.

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities Including an amendment of FASB Statement No. 115*, ( 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. SFAS No. 159 is effective for fiscal years beginning after November 15, 2007. The Company is currently evaluating the potential impact, if any, of the adoption of SFAS No. 159 on its financial statements.

In December 2007, the FASB issued SFAS No. 141 (revised 2007), *Business Combinations* ( SFAS No. 141R ). SFAS No. 141R establishes principles and requirements for how an acquirer 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.

*Other 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 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 allows 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, 2007 include accrued sabbatical expense for all employees who are eligible for sabbatical leave.

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.

**2. Acquisitions*****Fabbrix, Inc.***

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 a true co-optimization of the manufacturing fabric and the logic elements. Total cost for the acquisition was \$6.2 million, which includes \$2.7 million cash, 271,531 shares of the Company's common stock valued at \$2.9 million, and \$607,000 in acquisition costs. Included in the acquisition costs above, \$405,000 in cash and approximately 41,000 shares of common stock were held in escrow as security against certain financial contingencies. The cash

F-13

---

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

and shares held in escrow, less amounts deducted to satisfy contingencies will be released no later than on the 18 month anniversary of the acquisition. 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, *Business Combinations* ( 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 will be paid to the selling stockholders if qualifying orders, received during the first twelve months following the closing date, are recognized as revenue during the forty-eight months following the closing date. Earnout consideration will 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 the contingent consideration is based on future earnings, and was not determinable nor estimable at the date of acquisition, the additional consideration would be recorded only when it becomes determinable. Since the acquisition, the estimable qualifying revenue has not met the threshold, and no additional consideration has been recorded as of December 31, 2007.

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

<b>Allocation of Purchase Price</b>	<b>Amortization Period (Years)</b>	<b>Amount</b>
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. As of December 31, 2007, the Company recorded an adjustment of \$70,000, primarily related to actual transaction costs, resulting in an increase to goodwill.

The acquisition of Fabbrix was structured as a tax-free acquisition. Therefore, the difference between the recognized fair values of the acquired net assets and their historical tax base 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.

As of December 31, 2007, the Company has repaid \$416,000 of promissory notes due to Fabbrix stockholders and has made payments of \$2.7 million that were previously accrued as part of the acquisition of Fabbrix.

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)*****Si Automation S.A.***

On October 31, 2006, the Company completed its acquisition of all the outstanding capital stock of SiA, a privately held company based in Montpellier, France. SiA developed and licensed fault detection and classification software applications and services dedicated to the semiconductor industry that enables customers to rapidly identify sources of process variations and manufacturing excursions by monitoring equipment parameters through its proprietary data collection and analysis applications. The acquisition of SiA will allow the Company's customers greater capabilities for managing product yield improvement as a result of these process control solutions and services. At the closing of the acquisition, SiA became the Company's wholly owned subsidiary and its name was changed to PDF Solutions S.A., and then to PDF Solutions S.A.S. in 2007. The aggregate purchase price was \$36.6 million which included the payment in cash of \$25.5 million, the issuance of 699,298 shares of our common stock valued at \$9.4 million, and acquisition costs of \$1.7 million. Included in the acquisition costs above, \$2.7 million in cash and approximately 119,000 shares of common stock were held in escrow as security against certain financial contingencies. The cash and shares held in escrow, less amounts deducted to satisfy contingencies, will be released upon the 18-month anniversary of the acquisition. Any remaining cash and shares held in escrow after satisfying contingencies will be released no later than the 36-month anniversary of the acquisition. 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 (October 25, 2006). 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 October 31, 2006 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):

<b>Allocation of Purchase Price</b>	<b>Amortization Period (Years)</b>	<b>Amount</b>
Fair value of tangible assets		\$ 11,496
Fair value of intangible assets:		
Brand name	4	510
Contract backlog	1	2,610
Customer relationships	6	2,250
Core technology	4	4,950
Other	4	255
In-process research and development	N/A	800
Goodwill	N/A	21,071
 Total assets acquired		 43,942
Deferred tax liability		(3,440)
Bank debt and capital leases		(1,486)
Accrued liabilities		(1,104)
Accounts payable		(1,058)

Deferred revenue under maintenance obligations	(218)
Total liabilities assumed	(7,306)
Total consideration, net	\$ 36,636

The acquisition was accounted for as a purchase transaction, and accordingly, the assets and liabilities of SiA were recorded at their estimated fair values at the date of the acquisition. With the exception of the goodwill and

F-15

---



Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

acquired in-process research and development ( IPR&D ), the identifiable intangible assets are amortized on a straight-line basis over their estimated useful lives, which vary from 1 to 6 years, with a weighted average life of 3.7 years. The acquired IPR&D technology was immediately expensed because technological feasibility had not been established and no future alternative use exists. In assessing SiA's IPR&D projects, the key characteristics of the products under development were considered as well as future prospects, the rate at which technology changes, product life cycles, and the projects' stages of development. The IPR&D technology write-off is included as a component of operating expenses in the consolidated statement of operations. The fair value of IPR&D, as well as the fair value of the identifiable intangible assets, was determined, in part, using established valuation techniques.

The acquisition of SiA was structured as a taxable acquisition. Therefore, the difference between the recognized fair values of the acquired net assets and their historical tax base are deductible for tax purposes. A deferred tax liability has been recognized for the difference between the assigned fair values of intangible assets (other than goodwill) for book purposes and the tax basis of such assets.

During the year ended December 31, 2007, the Company recorded an adjustment of \$126,000 related to the final billing of a license sale that occurred prior to acquisition, and an adjustment of \$332,000 related to a revision in the fair value of acquired deferred tax assets, both resulting in a reduction of goodwill. The Company also recorded an adjustment of \$393,000 related to additional transaction costs, which resulted in an increase in goodwill.

As of December 31, 2007, the Company has made final net payments of \$1.9 million that were previously accrued as part of the acquisitions of SiA.

The following unaudited pro forma consolidated financial data represents the combined results of operations as if SiA and Fabbrix 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 and excludes the write-off of IPR&D (in thousands, except per share data):

	<b>Year Ended December 31,</b>	
	<b>2007</b>	<b>2006</b>
Revenue	\$ 94,463	\$ 81,462
Net loss	\$ (4,077)	\$ (5,422)
Pro forma net loss per share basic and diluted	\$ (0.14)	\$ (0.20)
Number of shares used to compute pro forma net loss per share basic and diluted	28,179	27,740

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.

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)****3. Investments**

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

	<b>December 31, 2007</b>			<b>Market Value</b>
	<b>Amortized Cost</b>	<b>Unrealized Holding Gains</b>	<b>Unrealized Holding Losses</b>	
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

	<b>December 31, 2006</b>			<b>Market Value</b>
	<b>Amortized Cost</b>	<b>Unrealized Holding Gains</b>	<b>Unrealized Holding Losses</b>	
Commercial paper	\$ 13,307	\$ 1	\$	\$ 13,308
Auction rate securities	5,050			5,050
Corporate bonds and notes	1,984		(1)	1,983
	\$ 20,341	\$ 1	\$ (1)	\$ 20,341
Included in cash and cash equivalents				\$ 3,939
Included in short-term investments				16,402
Total				\$ 20,341

As of December 31, 2007 and 2006 all securities held by the Company had a maturity of one year or less.

The primary objective of the Company's cash equivalent and short-term 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. There were no material impairments of short-term investments or cash equivalents in the periods presented.

At December 31, 2007, the Company's short-term investments included \$4.5 million in auction-rate securities, which are variable rate debt instruments whose interest rates are reset through a dutch auction process at regular intervals, typically every 28 days. Approximately \$3.3 million of auction-rate securities were backed by pools of student loans guaranteed by governmental agencies and private entities, and all were rated AAA/Aaa as of December 31, 2007. Subsequent to December 31, 2007, the Company successfully reset \$1.5 million and sold \$3.0 million of auction rate securities at par during auctions. Since then, the liquidity and fair value of the remaining 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. In February and March 2008, the remaining auction-rate securities, with a fair value of \$1.5 million as of December 31, 2007, failed to sell at auction, and as a result, their interest rate was reset to the maximum LIBOR + 150 basis points. The Company does not believe that the liquidity crisis currently affecting auction-rate securities will materially affect its overall liquidity. The Company believes

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

that its current balance of cash, cash equivalents, and short-term investments (excluding auction-rate securities) and cash flows generated by its operations is sufficient to meet its operating needs. The Company will review the investment in these securities further to determine whether they were other-than-temporarily impaired during the three months ending March 31, 2008. If the Company deems the securities to be impaired, an impairment charge will be recorded.

**4. Property and Equipment**

Property and equipment consist of (in thousands):

	<b>December 31,</b>	
	<b>2007</b>	<b>2006</b>
Computer equipment	\$ 11,890	\$ 10,714
Software	3,299	3,133
Furniture, fixtures, and equipment	1,437	1,254
Vehicles	36	60
Leasehold improvements	558	523
	17,220	15,684
Accumulated depreciation and amortization	(13,599)	(11,768)
	\$ 3,621	\$ 3,916

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):

	<b>December 31,</b>	<b>December 31,</b>
	<b>2007</b>	<b>2006</b>
Computer and office equipment	\$ 205	\$ 424
Vehicles	36	60
Software	44	47
	285	531
Accumulated depreciation and amortization	(172)	(287)
	\$ 113	\$ 244

**5. Other Accrued Liabilities**

Other accrued liabilities consist of (in thousands):

	<b>December 31,</b>	
	<b>2007</b>	<b>2006</b>
Amounts due to SiA shareholders	\$	\$ 1,879
Other accrued expenses	2,604	1,964
Total other accrued expenses	\$ 2,604	\$ 3,843

**6. 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

F-18

---

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

utilities, when applicable. These operating leases expire at various times through 2013. Rent expense was \$3.1 million, \$2.8 million, and \$2.6 million in 2007, 2006, and 2005, respectively.

Future minimum lease payments under noncancelable operating leases at December 31, 2007 are as follows (in thousands):

**Year Ended December 31,**

2008	\$ 1,719
2009	2,430
2010	2,177
2011	2,196
2012	2,045
Thereafter	1,522
Total future minimum lease payments	\$ 12,089

Future minimum lease payments under capital leases are as follows as of December 31, 2007 (in thousands):

**Year Ended December 31,**

2008	\$ 107
2009	40
2010	10
2011	2
2012	
Net minimum lease payments	159
Less: amount representing interest	(14)
Present value of future minimum lease payments	\$ 145

*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 2006 and 2007, 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, 2007, such rate was 6.46%. 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):

<b>Year Ended December 31,</b>	<b>Principal</b>	<b>Interest</b>
2008	\$ 307	\$ 27
2009	350	20
2010	409	12
2011	117	5
Total future minimum debt payments	\$ 1,183	\$ 64

*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

Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

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 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 is zero on the consolidated balance sheet as of December 31, 2007.

**7. 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-option plans were allocated as follows (in thousands):

	<b>Year Ended December 31, 2007(1)</b>	<b>Year Ended December 31, 2006(1)</b>	<b>Year Ended December 31, 2005(2)</b>
Cost of design-to-silicon yield solutions	\$ 2,170	\$ 2,115	\$
Research and development	2,619	2,229	98
Selling, general and administrative	3,440	3,007	8
Stock based compensation expense before income taxes	\$ 8,229	\$ 7,351	\$ 106



- (1) Stock-based compensation expense computed under SFAS No. 123(R)
- (2) Stock-based compensation expense computed under APB No. 25

Prior to January 1, 2006, the Company accounted for stock-based compensation in accordance with the provisions of APB No. 25 and complied with the disclosure only provisions of SFAS No. 123 as amended by SFAS No. 148, and accordingly, no expense computed under SFAS No. 123 had been recognized for options granted to employees under the various stock plans. Deferred compensation recognized under APB No. 25 was amortized to expense over the vesting period, usually four years, using the graded vesting method. For SFAS No. 123 as amended by SFAS No. 148 disclosure purposes, the Company amortized deferred stock-based compensation on

Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

the graded vesting method over the vesting periods of the applicable stock purchase rights and stock options, generally four years. The graded vesting method provided for vesting of portions of the overall awards at interim dates and resulted in greater vesting in earlier years than the straight-line method. Had compensation expense been determined for employee awards based on the fair value at the grant date for the awards, consistent with the provisions of SFAS No. 123, the Company's pro forma net loss per share for the year ended December 31, 2005 would have been as follows (in thousands, except per share data):

	<b>Year Ended December 31, 2005</b>
Net income as reported:	\$ 6,524
Add: stock-based employee compensation expense included in reported net income under APB No. 25	106
Deduct: total stock based employee compensation determined under fair value based method for all awards, net of related tax effects	(7,153)
Pro forma net loss	\$ (523)
Basic net income (loss) per share:	
As reported	\$ 0.25
Pro forma	\$ (0.02)
Diluted net income (loss) per share:	
As reported	\$ 0.24
Pro forma	\$ (0.02)

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 and December 31, 2007 included compensation expense for share-based payment awards granted prior to, but not yet vested as of December 31, 2005 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 December 31, 2005 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 December 31, 2005 will continue to be recognized using the graded vesting method while compensation expense for all share-based payment awards granted subsequent to December 31, 2005 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, 2006 and December 31, 2007 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. In the Company's pro forma information required under SFAS No. 123 for the periods prior to fiscal 2006, the Company accounted for forfeitures as they occurred. The Company estimated the forfeiture rate based on its employee turnover history over the last two fiscal years.

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

Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

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		
	2007	2006	2005	2007	2006	2005
Expected life (in years)	5.9	5.7	5.5	0.74	0.95	0.79
Volatility	57.9%	60.4%	55.3%	55.5%	50.3%	39%
Risk-free interest rate	4.21%	4.60%	4.15%	5.11%	4.08%	2.66%
Expected dividend						

On December 31, 2007, the Company has in effect the following stock-based compensation plans:

*Stock Plans* During 2001, the Company terminated the 1996 and 1997 Stock Plans as 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 options to purchase shares of common stock to employees, directors and consultants at prices not less than the fair market value at the date of grant for incentive stock options and not less than 85% of fair market value for nonstatutory stock options. These options generally expire ten years from the date of grant and become vested and exercisable ratably over a four-year period. Certain option grants under the 1996 and 1997 Stock Plans provide for the immediate exercise by the optionee with the resulting shares issued subject to a right of repurchase by the Company which lapses based on the original vesting provisions.

As of December 31, 2007 the Company has authorized 10,218,539 shares of common stock for issuance and exercise of options, of which 638,629 shares are available for grant.

At December 31, 2007 there were no outstanding options that had been granted outside of the Plans.

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

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

	<b>Outstanding Options</b>		<b>Weighted</b>	
	<b>Number of</b>		<b>Average</b>	<b>Aggregate</b>
	<b>Options</b>		<b>Exercise</b>	<b>Intrinsic</b>
		<b>Price</b>	<b>Remaining</b>	<b>Value</b>
		<b>per Share</b>	<b>Contractual</b>	<b>Value</b>
			<b>Term</b>	<b>(in 000 s)</b>
			<b>(years)</b>	
Outstanding, January 1, 2005 (2,368,598 shares vested and exercisable at a weighted average exercise price of \$10.00 per share)	4,952,282	\$ 9.72		
Granted (weighted average fair value of \$7.75 per share)	1,625,205	14.39		
Exercised	(669,175)	8.89		
Canceled	(215,888)	9.83		
Expired	(18,379)	14.33		
 Outstanding, December 31, 2005 (2,877,674 shares vested and exercisable at a weighted average exercise price of \$10.15 per share)	 5,674,045	 11.13		
Granted (weighted average fair value of \$8.35 per share)	1,947,400	14.25		
Exercised	(638,610)	9.43		
Canceled	(300,034)	13.33		
Expired	(18,707)	11.44		
 Outstanding, December 31, 2006 (3,419,259 shares vested and exercisable at a weighted average exercise price of \$10.64 per share)	 6,664,094	 12.11		
Granted (weighted average fair value of \$5.47 per share)	2,077,878	9.50		
Exercised	(182,090)	7.92		
Canceled	(256,234)	14.15		
Expired	(288,728)	13.23		
 Outstanding, December 31, 2007	 8,014,920	 11.42	 7.41	 2,661
Vested and expected to vest	7,414,409	11.45	7.26	2,628

Edgar Filing: PDF SOLUTIONS INC - Form 10-K

Exercisable, December 31, 2007	4,240,561	\$	11.28	5.96	\$	2,487
--------------------------------	-----------	----	-------	------	----	-------

The aggregate intrinsic value in the table above represents the total pretax intrinsic value based on the Company's closing stock price of \$9.01 as of December 31, 2007, 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 twelve months ended December 31, 2007 was \$672,000, determined as of the date of option exercise.

F-23

---

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

As of December 31, 2007, there was \$17.9 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 3.0 years. The total fair value of shares vested during the year ended December 31, 2007 was \$9.6 million. Additional information regarding options outstanding as of December 31, 2007 is as follows:

Range of Exercise Prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price per Share	Number Vested and Exercisable	Weighted Average Exercise Price per Share
\$0.15 - \$0.15	3,332	0.5	\$ 0.15	3,332	\$ 0.15
\$0.53 - \$0.53	333	2.0	0.53	333	0.53
\$1.13 - \$1.13	26,836	4.2	1.13	26,836	1.13
\$1.88 - \$1.88	16,666	2.4	1.88	16,666	1.88
\$3.78 - \$5.40	197,895	4.6	5.16	197,895	5.16
\$6.00 - \$9.00	2,073,402	8.3	8.27	678,037	7.00
\$9.01 - \$13.35	2,707,202	6.4	11.05	1,885,873	11.11
\$13.60 - \$19.00	2,989,254	7.8	14.52	1,431,589	14.70
\$0.15 - \$19.00	8,014,920	7.4	11.42	4,240,561	11.28

Nonvested shares (restricted stock units) as of December 31, 2007 and changes during the twelve months ended December 31, 2007 were as follows:

	Shares	Weighted Average Measurement Date Fair Value
Nonvested, January 1, 2007		\$
Granted	133,000	9.01
Vested		
Forfeited		
Nonvested, December 31, 2007	133,000	\$ 9.01

As of December 31, 2007, there was \$1.0 million of total unrecognized compensation cost related to restricted stock. That cost is expected to be recognized over a weighted average period of 6.4 years. The total compensation expense related to shares expected to vest during year ended December 31, 2007 was \$181,000.

*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, 2007, 2,288,059 shares of the Company s common stock have been reserved for issuance under the Purchase Plan. During years 2007, 2006, and 2005, 170,189, 175,977 and 163,823 were issued at a weighted average price of \$8.75, \$9.95, and \$9.72 per share, respectively and at December 31, 2007, 1,079,684 shares were available for future issuance under the Purchase Plan. The weighted average estimated fair value of shares granted under the Purchase Plan during 2007, 2006, and 2005 was \$4.09, \$4.10, and \$3.15, respectively.



Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

*Common Stock Options* During 2003, in connection with stock options granted and assumed through the Company's acquisition of IDS, it recorded deferred stock-based compensation of \$920,000, which reflects the intrinsic value of the unvested stock options assumed as of the acquisition date. Deferred compensation associated with such options was amortized over the remaining vesting periods of the applicable options and the remaining balance of \$27,000 was reversed upon the adoption of SFAF No. 123(R).

Amortization of employee and non-employee stock-based compensation totaled \$106,000 in 2005.

*Stock Repurchase Program* In February 2003, the Board of Directors approved a program to repurchase up to \$10.0 million of the Company's common stock in the open market. During the year ended December 31, 2005, the Company repurchased 44,942 shares of common stock from a Director of the Company at the closing price on the date of repurchase, which was \$16.52 per share, in exchange for the repayment of a stockholder note receivable in the amount of approximately \$743,000 consisting of the principal amount of the note and accrued interest. During the year ended December 31, 2006 the Company did not repurchase any shares of the Company's common stock. During the year ended December 31, 2007 the Company repurchased 638,587 shares of common stock at a weighted average price of \$9.36 per share for a total cost of \$6.0 million. As of December 31, 2007, the Company has repurchased an aggregate of 1,189,108 shares at a weighted average price of \$9.69 per share for a total cost of \$11.5 million since the inception of the program. Under this authorization, the Company may continue to make additional stock repurchases from time to time, depending on market conditions, stock price and other factors. At December 31, 2007, \$8.5 million remained available under the program to repurchase additional shares.

**8. Net Income (Loss) Per Share**

Basic net income (loss) per share excludes dilution and is computed by dividing net income (loss) attributable to common stockholders by the weighted average common shares outstanding for the period (excluding shares subject to repurchase). Diluted net income (loss) per share reflects the weighted average common shares outstanding plus the potential effect of dilutive securities which are convertible into common shares (using the treasury stock method), except in cases in which the effect would be anti-dilutive. The following is a reconciliation of the numerators and denominators used in computing basic and diluted net income (loss) per share (in thousands except per share data):

	<b>Year Ended December 31,</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
Net income (loss)	\$ (2,927)	\$ (439)	\$ 6,524
Denominator:			
Weighted average common shares outstanding	28,066	26,885	25,986
Weighted average common shares outstanding subject to repurchase			(3)
Denominator for basic calculation, weighted average shares	28,066	26,885	25,983
Dilutive common equivalent shares:			
Weighted average common shares outstanding subject to repurchase			3

Edgar Filing: PDF SOLUTIONS INC - Form 10-K

Effect of dilutive securities				1,487
Denominator for diluted calculation, weighted average shares	28,066	26,885		27,473
Net income (loss) per share basic	\$ (0.10)	\$ (0.02)	\$	0.25
Net income (loss) per share diluted	\$ (0.10)	\$ (0.02)	\$	0.24

F-25

---

Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Note: potential shares of common stock, that would be antidilutive during periods in which the Company reported a net loss, are excluded from the calculation of diluted earnings per share.

The following table sets forth potential shares of common stock that are not included in the diluted net income (loss) per share calculation above because to do so would be anti-dilutive for the periods indicated (in thousands):

	<b>Year Ended December 31,</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
Outstanding options	8,015	6,664	451

**9. Income Taxes**

	<b>Year Ended December 31,</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
	<b>(In thousands)</b>		
U.S.			
Current	\$ (1,470)	\$ 631	\$ 1,678
Deferred	(1,744)	(4,050)	(1,882)
Foreign			
Current	260	204	168
Withholding	758	335	150
Deferred	(528)	(253)	(18)
Total provision (benefit)	\$ (2,724)	\$ (3,133)	\$ 96

During 2007, 2006 and 2005, respectively, income (loss) before taxes from U.S. operations was (\$14.2) million, (\$3.2) million and \$6.2 million, respectively, and income (loss) before taxes from foreign operations was \$8.6 million, (\$393,000) and \$405,000, respectively. The amounts of income (loss) before taxes for year 2007 included \$6.4 million intercompany sale of intangibles by a foreign subsidiary to PDF Solutions, Inc.

The amount of income tax recorded differs from the amount using the statutory federal income tax rate (35%) for the following reasons (in thousands):

	<b>Year Ended December 31,</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
Federal statutory tax provision (benefit)	\$ (1,978)	\$ (1,250)	\$ 2,317

Edgar Filing: PDF SOLUTIONS INC - Form 10-K

State tax expense	(615)	(632)	(151)
Stock compensation expense	1,537	1,697	(1,322)
Write-off of in-process research and development		280	
Meals and entertainment	57	18	22
Tax credits	(1,512)	(3,633)	(701)
Foreign tax, net	22	477	101
Other	(235)	(90)	(170)
Total	\$ (2,724)	\$ (3,133)	\$ 96

In addition, as of December 31, 2007, the Company had federal and state research and experimental and other tax credit carry forwards of \$4.5 million and \$6.8 million, respectively. The federal credits begin to expire in 2022, 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.

**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Undistributed earnings of the Company's foreign subsidiaries of \$9.6 million are considered to be indefinitely reinvested, except for those of the Company's French subsidiary since May 1, 2007 and accordingly, no provision for federal and state income taxes has been provided thereon.

Deferred income taxes reflect the tax effects of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, as well as net operating loss and tax credit carry forwards.

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

	<b>Year Ended December 31,</b>	
	<b>2007</b>	<b>2006</b>
Net operating loss carry forward	\$ 251	\$ 1,162
Research and development and other credit carry forward	8,824	7,559
Accruals deductible in different periods	3,223	1,917
Stock-based compensation	2,186	717
Deferred tax assets	14,484	11,355
Deferred tax liabilities - intangible assets	(4,350)	(3,780)
Total	\$ 10,134	\$ 7,575

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. The decrease of \$771,000 in accumulated deficit reflects an increase of \$468,000 from the amount previously disclosed in the Company's quarterly financial statements to correct an error in the original computation of the cumulative effect of the adoption of FIN No. 48.

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. However, the Company's historical policy of including interest and penalties related to unrecognized tax benefits within the Company's income tax provision (benefit) remained unchanged. As of December 31, 2007, the Company had \$566,000 accrued for payment of interest and penalties related to unrecognized tax benefits (\$348,000 as of the adoption date of FIN No. 48). The Company recognized \$218,000 of interest and penalties related to unrecognized tax benefits in its provision for income taxes for the year ended December 31, 2007.

The Company's total amounts of unrecognized tax benefits as of January 1, 2007 (adoption date) was \$6.3 million, of which \$3.4 million, if recognized, would affect the Company's effective tax rate. As of December 31, 2007, the Company's total amount of unrecognized tax benefits was \$7.9 million, of which \$4.1 million, if recognized, would affect the Company's effective tax rate. The Company has recognized a net amount of \$5.6 million in long-term tax 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. The Company is currently under audit by the German tax authority for the years 2002 through 2004, however, the audit has not been completed as of

F-27

---

Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

December 31, 2007. 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 2003.

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

	<b>December 31, 2007</b>
Gross unrecognized tax benefits at January 1, 2007	\$ 6,259
Increases in tax positions for prior years	58
Increases in tax positions for current year	1,613
Lapse in statute of limitations	(70)
Gross unrecognized tax benefits at December 31, 2007	7,860

**10. 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:

<b>Customer</b>	<b>Year Ended December 31,</b>		
	<b>2007</b>	<b>2006</b>	<b>2005</b>
A	19%	12%	10%
B	16%	25%	13%
C	4%	4%	11%
D	%	1%	15%

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

Customer	December 31,	
	2007	2006
A	27%	12%
B	15%	18%
E	11%	10%
F	6%	12%

F-28

---



**Table of Contents****PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

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

	Year Ended December 31,					
	2007		2006		2005	
	Revenues	Percentage of Revenues	Revenues	Percentage of Revenues	Revenues	Percentage of Revenues
Asia	\$ 51,466	55%	\$ 38,129	50%	\$ 40,982	55%
United States	29,682	31	29,850	39	25,610	35
Europe	13,315	14	8,205	11	7,336	10
Total	\$ 94,463	100%	\$ 76,184	100%	\$ 73,928	100%

As of December 31, 2007 and 2006, long-lived assets related to PDF SAS (formerly SiA), located in France, totaled \$446,000 and \$583,000, respectively. As of December 31, 2007 and 2006, long-lived assets related to PDF Solutions GmbH (formerly AISS), located in Germany, totaled \$92,000 and \$216,000, respectively. The majority of the Company's remaining long-lived assets are in the United States.

**11. Litigation**

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

**12. 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.

**13. 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 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 35,722 shares of the Company's common stock in exchange for his Fabbrix shares, and will be eligible to receive up to an additional \$2.1 million worth of earnout consideration. Lanza techVentures received \$1.2 million in cash and 121,720 shares of the Company's common stock at the closing of the Fabbrix acquisition (the Closing) in exchange for its Fabbrix shares, and will be eligible to receive up to an additional \$5.4 million worth of earnout consideration. 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 has determined that Mr. Lanza is no longer independent under those rules and therefore, Mr. Lanza has 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. The Company has replaced Mr. Lanza with other independent Board Members to fill the vacancies on the Company s Audit, Compensation, and Nominating and Corporate Governance. The Company s Board has also appointed a Lead Independent Director.

Table of Contents**PDF SOLUTIONS, INC.****NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

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 5,402 shares of the Company's common stock, and will be eligible to receive up to an additional \$311,000 worth of earnout consideration.

**14. Selected Quarterly Financial Data (Unaudited)**

	<b>Year Ended December 31, 2007</b>			
	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
	<b>(In thousands, except for per share amounts)</b>			
Total revenue	\$ 22,142	\$ 23,698	\$ 24,068	\$ 24,555
Gross profit	\$ 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

	<b>Year Ended December 31, 2006</b>			
	<b>Q1</b>	<b>Q2</b>	<b>Q3</b>	<b>Q4</b>
	<b>(In thousands, except for per share amounts)</b>			
Total revenue	\$ 19,857	\$ 18,010	\$ 19,364	\$ 18,953
Gross profit	\$ 12,151	\$ 10,070	\$ 11,306	\$ 9,760
Total operating expenses	\$ 11,447	\$ 11,972	\$ 11,679	\$ 14,588
Net income	\$ 268	\$ (847)	\$ 570	\$ (430)
Net income (loss) per share:				
Basic	\$ 0.01	\$ (0.03)	\$ 0.02	\$ (0.02)
Diluted	\$ 0.01	\$ (0.03)	\$ 0.02	\$ (0.02)

**Table of Contents**

**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 17, 2008

**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.

<b>Signature</b>	<b>Title</b>
/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	Chairman of the Board of Directors

Lucio L. Lanza

/s/ R. STEPHEN HEINRICHS

Director, Lead Independent Director

R. Stephen Heinrichs

/s/ SUSAN BILLAT

Director

Susan Billat

/s/ TOM CAULFIELD

Director

Tom Caulfield

/s/ ALBERT Y. C. YU

Director

Albert Y. C. Yu

---

Table of Contents

## SCHEDULE II

## PDF SOLUTIONS, INC.

VALUATION AND QUALIFYING ACCOUNT  
Years Ended December 31, 2007, 2006, and 2005

	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					
2007	\$ 294	\$	\$	\$ 40	\$ 254
2006	\$ 254	\$	\$ 40	\$	\$ 294
2005	\$ 254	\$	\$	\$	\$ 254

---

**Table of Contents****INDEX TO EXHIBITS**

<b>Exhibit Number</b>	<b>Description</b>
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.(5)
3.01	Third Amended and Restated Certificate of Incorporation of PDF Solutions, Inc.(1)
3.02	Amended and Restated Bylaws of PDF Solutions, Inc.(9)
4.01	Specimen Stock Certificate.(2)
4.02	Second Amended and Restated Rights Agreement dated July 6, 2001.(1)
10.01	Form of Indemnification Agreement between PDF Solutions, Inc. and each of its Officers and Directors.(1)(H)
10.02	1996 Stock Option Plan and related agreements.(1)*
10.03	1997 Stock Plan and related agreements.(1)*
10.04	2001 Stock Plan and related agreements.(8)*
10.05	2001 Employee Stock Purchase Plan.(1)*
10.06	2001 Stock Option/Stock Issuance Plan.(7)*
10.07	Lease Agreement between PDF Solutions, Inc. and Metropolitan Life Insurance Company dated April 1, 1996.(1)
10.08	Offer letter to P. Steven Melman dated July 9, 1998.(1)*
10.09	Offer letter to Cornelius D. Hartgring dated August 29, 2002.(3)*
10.10	Amendment to Lease Agreement between PDF Solutions, Inc. and Metropolitan Life Insurance Company dated as of March 19, 2003.(4)
10.11	Office Lease between PDF Solutions, Inc. and 15015 Avenue of Science Associates LLC dated as of April 1, 2003.(4)
10.12	Andre Hawit Employment Offer letter agreement dated September 24, 2003 by and between PDF Solutions Inc. and Andre Hawit.(6)*
10.13	Indemnity Agreement with Kevin MacLean, incorporated by reference to the Registrant's standard form of Indemnification Agreement.(9)
10.14	Indemnity Agreement with Albert Y. C. Yu, incorporated by reference to the Registrant's standard form of Indemnification Agreement.(9)
10.15	Indemnity Agreement with R. Stephen Heinrichs, incorporated by reference to the Registrant's standard form of Indemnification Agreement.(9)
10.16	Offer letter to Keith A. Jones dated October 10, 2005.(10)*
10.17	Lease Agreement between PDF Solutions, Inc. and Legacy Partners I Riverpark I, LLC, dated June 29, 2007.
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	

Edgar Filing: PDF SOLUTIONS INC - Form 10-K

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.

---



**Table of Contents**

- (1) Incorporated by reference to PDF s Registration Statement on Form S-1, as amended (File No. 333-43192).
  - (2) Incorporated by reference to PDF s Report on Form 10-Q filed September 6, 2001 (File No. 000-31311).
  - (3) Incorporated by reference to PDF s Report on Form 10-K filed March 26, 2003 (File No. 000-31311).
  - (4) Incorporated by reference to PDF s Report Form 10-Q filed May 14, 2003 (File No. 000-31311).
  - (5) Incorporated by reference to Exhibit 2.1 to PDF s Current Report on Form 8-K filed on September 25, 2003.
  - (6) Incorporated by reference to PDF s report on Form 10-Q filed November 14, 2003 (File No. 000-31311).
  - (7) Incorporated by reference to PDF s Registration Statement on Form S-8 (File No. 333-109809).
  - (8) Incorporated by reference to PDF s Definitive Proxy Statement filed April 15, 2004 (File No. 000-31311).
  - (9) Incorporated by reference to PDF s Report on Form 10-Q filed August 9, 2005 (File No. 000-31311).
  - (10) Incorporated by reference to Exhibit 10.1 to PDF s Current Report on Form 8-K filed on December 19, 2005.
  - (H) Portions of this Exhibit have been omitted pursuant to a request for confidential treatment.
- \* Indicates management contract or compensatory plan or arrangement.