Manufacturing

Process

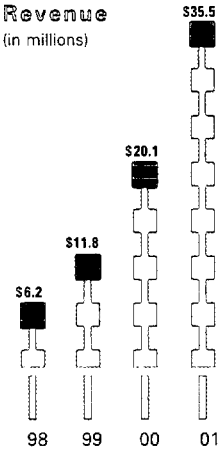
Integrated Circuit

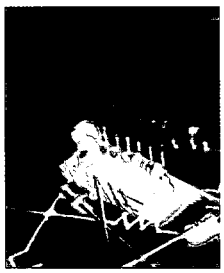
Design

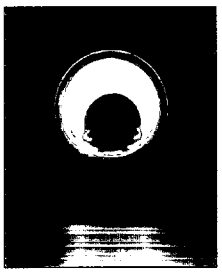
Integration

PDF SOLUTIONS 2001 Annual Report

Annual Revenue
(in millions)

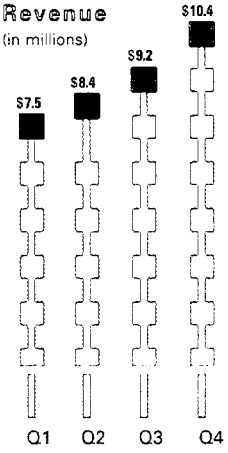






PDF Solutions, Inc. is the leading provider of silicon infrastructure for process-design integration. Our technologies and services help semiconductor companies improve IC yield and performance, expedite time-to-market and time-to-volume, and increase product reliability and profitability. PDF's Design-to-Silicon-Yield™ solutions bridge the gap between IC design and manufacturing and are the only commercially-available, comprehensive process-design integration solution in the market today.

2001 Quarterly Revenue
(in millions)



To Our Stockholders

In 2001, during the worst semiconductor industry decline in history, PDF Solutions strengthened its financial position, widened its lead in the burgeoning process-design integration market and improved its technology.

We grew annual revenue to $35.5 million, an increase of 76% over 2000, and ended 2001 by turning in our 15th consecutive quarter of growth. Our history of fiscal responsibility and predictable financial results made it possible for us to complete our initial public offering of common stock in July, in spite of the difficult climate for new issues. As of December 31, 2001, we had over $70 million in cash, and we had exceeded income statement targets for both of our first two quarters reporting as a public company.

Moreover, we continued to lead in fulfilling the market need for commercial technology that integrates chip designs with their respective manufacturing processes. We successfully expanded our relationships with integrated device manufacturers and were excited to announce, during the fourth quarter, new technology for chip companies that do not have their own fabrication facilities. This technology makes a chip's physical layout more manufacturable. We call this technology our Design-Based Yield Improvement™ solution.

As the industry is increasingly challenged to integrate deep sub-micron IC designs into new manufacturing processes, PDF Solutions offers the only commercially-available, comprehensive infrastructure solution for this process-design integration. Further, our business model aligns our financial reward with the success of our customers, providing the opportunity for growth and long-term value for both our customers and stockholders. We look forward to 2002 and beyond with great expectations.

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

Process-Design Integration

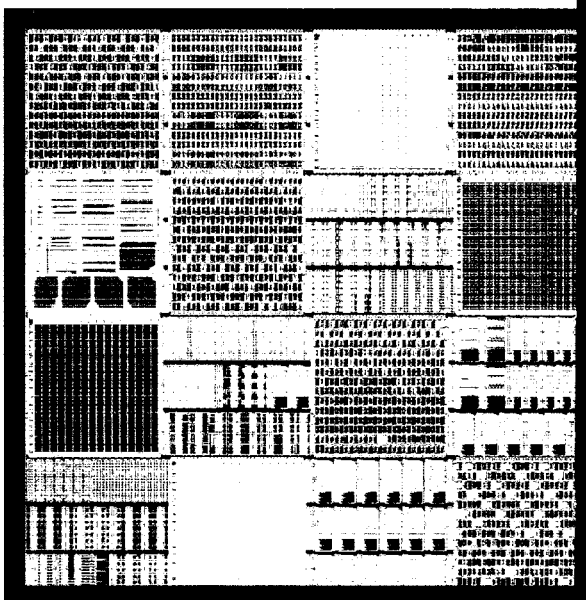
Why it's needed

(See glossary on inside back cover for descriptions of bolded words.)

An Age-Old Challenge. The $140 billion semiconductor industry has long faced the challenge of identifying what causes an IC design to **yield** poorly when run through a fabrication process. In fact, the industry spent $12 billion in 2000 integrating processes and designs, mostly on internal efforts. Achieving high yield – the percentage of manufactured ICs on a **wafer** that meet specifications – is critical for profitable semiconductor manufacturing.

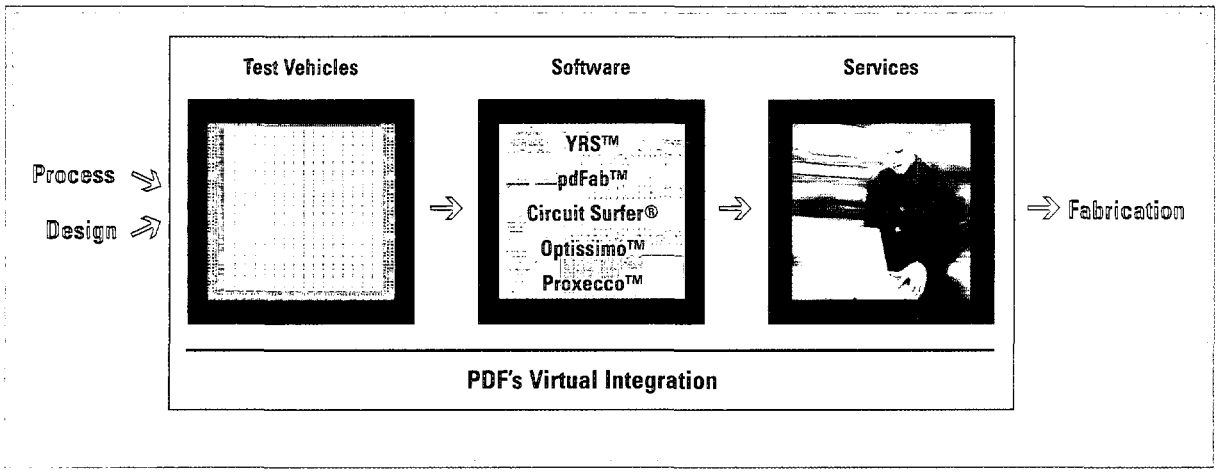
The Old School of Yield Learning. Historically, when yield of an IC design was below expectations, semiconductor companies optimized the manufacturing process on a trial-and-error basis to correct yield loss when ICs were already in **production**. **Vertically-integrated** IC companies performed all functions necessary to produce an IC, and thus had in-depth knowledge of each product's design and each step of their manufacturing process. They could also count on many years experience working with the same **materials** to produce the chips. The trial-and-error approach, which consumed many wafers and much time, was an acceptable practice.

The Demands of Progress. Yield optimization through experience and trial-and-error is no longer a viable solution for three reasons: necessity for faster time-to-volume, increased complexity of designs and processes, and **disaggregation** of the industry. As demand for semiconductors increases dramatically and consumers move quickly to the next winning product, companies have significantly less time to deliver large volumes of end products to market. Even short delays can result in a missed window of opportunity and, as substitute products emerge, prices quickly erode, profit margins shrink and market share diminish. The demand for more powerful, lower-cost and smaller-sized electronic products requires increased complexity of designs, and more frequent changes in **process technologies**. Unique in the **deep sub-micron** era is the requirement for rapid adoption of new materials such as copper interconnects, low-K dielectrics, silicon germanium and silicon-on-insulator wafers. The integration challenges presented by these materials at the 0.13 µm node have created well-publicized yield loss challenges across the industry. Additionally, industry disaggregation into numerous specialized companies has created a situation where most companies no longer have sufficient internal **process-design integration** know-how, or enough time to depend on trial-and-error, to identify and fix ever more prominent **systematic** and **performance yield loss**.



Our Universal Characterization Vehicle™ design layout

How we do it



The New School. After conducting research at Carnegie Mellon University's SEMATECH Center for Rapid Yield Learning, Drs. Tom Cobourn, John Kibarian and Kimon Michaels formed PDF Solutions to commercialize the science of manufacturability into powerful new software for process-design integration. PDF's software simulates the manufacturing of a proposed design rapidly and before production – enabling chip companies to pre-test the design and propose changes in either the manufacturing process or the circuit design layout. This results in higher **initial yields**.

Extra Credit. PDF upgraded its solution in 1998 with its proprietary, patent-pending Characterization Vehicle™ (CV™) test chips and analysis software. PDF's client service teams customize CV test chips with powerful design-of-experiment methods to capture the actual interactions of a particular manufacturing process with particular product design features. PDF's yield simulation software extracts the relevant attributes of chip layouts and process characteristics, rapidly simulates manufacturing, and generates yield analysis, prediction and decision support data. PDF was the first to market a comprehensive Design-to-Silicon-Yield™ solution.

Passing the Test of Time. Our solution has a proven track record. Initially, **IDMs** engaged PDF to solve yield and performance problems for ICs that were already in production, usually re-engaging PDF for other products or processes. It was obvious that greater bottom-line value could be delivered by using PDF's solution to *predict* yield loss and make improvements earlier in each product's lifecycle. PDF has continually strengthened its technologies that *anticipate* the manufacturing issues that will arise during production. During 2001, PDF expanded its proven solution to offer companies, without their own manufacturing facility, technology to optimize the compatibility of their product designs with other companies' manufacturing processes. This technology is called Design-Based Yield Improvement™.

The value we add

Real, Bottom-Line Value. PDF's solution helps its customers leverage their huge investments in designs, process technology and fabrication facilities by maximizing product profits through reduced manufacturing costs and increased revenues. PDF delivers its solution for a high-volume process with the expectation its customers will typically realize in excess of $50 million in cost savings or product profitability over the life of that process.

Aligned Interest. PDF developed a unique business model when it clearly aligned its financial interest with each customer's success. Instead of simply attaching a royalty to every use of PDF's technology, PDF's customers pay a substantial part of their investment with PDF only when they realize manufacturing efficiencies above expectations. PDF achieves this revenue, called Gain Share™, only when it receives its *share* of its customers *gain* in value.

Get Ready, Get Set... PDF's infrastructure has been applied to more deep sub-micron yield ramps than any IC company's technology worldwide. Customers are currently engaging PDF to ramp next-generation products for game systems, digital TV, cell phones and other chips that use deep sub-micron materials and process technologies. This experience with leading-edge process technology and materials is important to existing and prospective customers that are aggressively shrinking chip geometries and adopting new process technologies. Customers know that PDF's CV test chips, systematic yield simulation and analysis software, and advanced methodologies are proven on the technologies they will be using in the future.

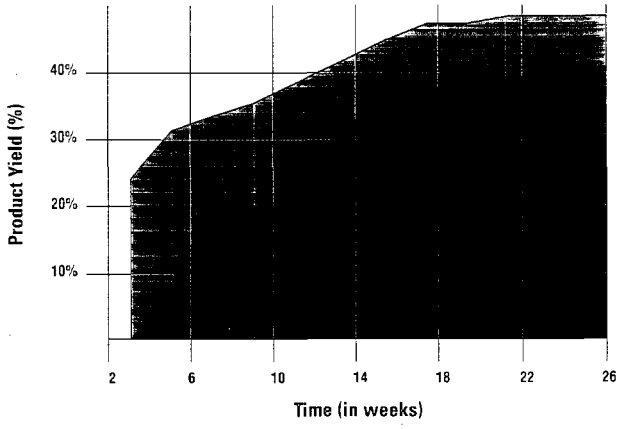
The Race Is Won Before It Begins. Sun Tzu's logic in *The Art of War* applies during preparation for next generation IC products. In fact, historical data about yield learning rates shows that semiconductor companies that start with higher initial yields, learn faster and attain higher **mature yields**. As we like to say, the semiconductor companies that partner with PDF can begin the IC manufacturing race having already won.

Yield Improvement Example

- Before PDF
- With PDF

Start Higher
Achieved initial yield 20% higher than baseline.

End Higher
Achieved mature yield 5% higher than baseline.



SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

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

For the fiscal year ended December 31, 2001

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

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

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

Securities registered pursuant to Section 12(g) of the Act:
Common Stock, $0.00015 par value

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. ☐

The aggregate market value of the voting stock held by non-affiliates of the Registrant was approximately $197,912,074 as of March 25, 2002, 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 5% 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 22,900,051 shares of the Registrant's Common Stock issued and outstanding as of March 25, 2002.

DOCUMENTS INCORPORATED BY REFERENCE

Part III incorporates information by reference from the definitive proxy statement for the Annual Meeting of Stockholders to be held on May 17, 2002.

TABLE OF CONTENTS

PART I

Item 1. *Business.*

Overview

Our comprehensive technologies and services enable semiconductor companies to improve yield and performance of ICs by providing infrastructure to integrate the design and manufacturing processes. We believe that our solutions significantly improve a semiconductor company's time to market, the rate at which yield improves and product profitability. Our solutions combine proprietary manufacturing process simulation software, yield and performance modeling software, comprehensive test chips, proven yield and performance enhancement methodologies, and professional services. The result of implementing our solutions is the creation of value that can be measured based on improvements to our customers' actual yield. We align our financial interests with the demonstrated yield and performance improvement realized by our customers and receive revenue based on this value. To date, we have sold our technologies and services to key semiconductor companies including leading integrated device manufacturers such as Toshiba Corporation, Matsushita Electric Industrial Co., and Sony Corporation.

Industry Background

Integrated circuits, or ICs, are critical components used in an increasingly wide variety of applications, such as computer systems; Internet and communications infrastructure equipment, such as wireless and network devices; and consumer products, such as cellular phones, pagers, personal digital assistants, game consoles and network appliances. As IC performance has increased and size and cost have decreased, the use of ICs in these applications has grown significantly. A large part of this growth is expected to occur in deep submicron ICs having circuit component feature sizes, or geometries, that measure less than 0.20 microns, or millionths of a meter. ICs are manufactured onto silicon disks, commonly referred to as wafers. Rapid technological innovation has shortened product life cycles, which fuels the economic growth of the semiconductor industry.

Customers for electronic products continue to demand new applications with more power, reduced cost and smaller size. As a result, IC companies are adopting new designs, process technologies and materials at an unparalleled rate. For example, silicon germanium processes will be integrated with standard logic processes to provide better performance for radio-frequency components in communication ICs.

In addition, the IC industry faces compression in product lifecycles. Previously, companies could afford to take months, or years in some cases, to integrate new designs with manufacturing processes. With historically longer product life cycles, IC companies ramped production slowly, produced at high volume once the product hit its prime, and slowly reduced production volume when the price and the demand started to decrease near the end of a product's life cycle. More recently, demand — largely driven by consumers in search of the next, more powerful, smaller device — has dramatically reduced the time that semiconductor companies have to successfully bring a product to market in high volumes. Companies now need to sell the most volume when a product is first introduced and has a performance and pricing advantage over its competition, or they will lose the market opportunity and the related high revenue.

Increased IC complexity and compressed product lifecycles create significant challenges to achieving competitive initial yields and optimizing performance. Yield is the percentage of ICs produced that meet customers' specifications and initial yield is specifically the percentage of good ICs produced when volume production first commences. For example, it is not uncommon for an initial manufacturing run to yield only 20%, meaning 80% of those wafers were 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

contamination in the IC manufacturing process. The dominant factor of yield loss with deep submicron ICs has shifted from contamination to:

- systematic yield loss, or non-functioning ICs resulting from the lack of compatibility between the design and manufacturing processes; and
- performance yield loss, or functioning ICs that do not meet customer speed requirements.

Manufacturers have historically addressed systematic and performance yield loss reactively and almost exclusively by inefficient and time consuming trial-and-error adjustments to the manufacturing process during volume production.

Disaggregation of the semiconductor industry has further complicated IC companies' ability to maximize initial yields. Historically, leading semiconductor companies designed, manufactured and tested their ICs internally, thus retaining process-design integration know-how. Today, the industry is comprised of separate organizations, as well as separate companies, that specialize in a particular phase of designing and manufacturing ICs. 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.

The combination of increasingly complex ICs and design and manufacturing processes, reduced time to produce new products in high volumes and the loss of information due to disaggregation has left a gap between the design of an IC and its manufacture. We call this gap the Design-to-Silicon-Yield™ gap. This gap creates a number of significant problems for semiconductor companies, including:

- Slow Yield Ramp. Increased process and design complexity extends the time needed to arrive at acceptable yields and increases the time it takes for a semiconductor company to begin producing at high volumes, directly and negatively impacting a company's potential market share and potential revenue.
- Longer Time to Market and Increased Up-front Costs. Yield problems in the initial manufacturing phase result in numerous design and process iterations that delay product introductions and appreciably increase up-front costs, such as non-recurring engineering, mask-set redesigns and excessive sample wafers.
- High Cost of Goods Sold. Processed wafer costs are typically the largest component of an IC company's cost of goods sold and, therefore, yield loss significantly increases costs.
- Difficulties Producing High-Performance ICs. High-performance ICs are particularly sensitive to the lack of compatibility between design and manufacturing. In addition, semiconductor companies typically experience a trade-off between yield and IC performance because it is generally more difficult to produce ICs with more stringent specifications. Semiconductor companies may target high-performance ICs because they typically have higher margins.

Delivering complex ICs quickly and in high volumes requires unique silicon infrastructure solutions to tightly integrate the IC design and manufacturing processes — thus bridging this Design-to-Silicon-Yield gap.

The PDF Solution

We provide comprehensive silicon infrastructure technologies and services to integrate an IC design with its manufacturing processes, thereby bridging the Design-to-Silicon-Yield gap. Our solution combines proprietary manufacturing process simulation software, yield and performance modeling software, comprehensive test chips, proven yield and performance enhancement methodologies and professional services to increase yield, accelerate yield ramp and improve IC performance. We create an analysis of yield loss mechanisms to identify, quantify and correct the issues that cause yield loss, often before an IC design is complete. This drives IC design and manufacturing improvements that enable our customers to have higher initial yields and achieve and exceed targeted IC yield and performance throughout product life cycles. Our solution is designed to increase the initial yield when a design first enters a manufacturing line, increase the rate at which that yield

improves, and allow subsequent product designs to be added to manufacturing lines more quickly and easily. Because our Design-to-Silicon-Yield solutions dramatically and quickly improve a semiconductor company's time to market and yield ramp — and ultimately product profitability — we tie our revenue to these improvements through a unique approach that we call gain share. Gain share is the percentage we receive of our customers' incremental cost savings or incremental revenue associated with improved yields and accelerated ramp, or it may be a specified fee based on production milestones achieved by our customers.

The key benefits of our solution to our customers are:

Faster Time to Market. Our Design-to-Silicon-Yield solutions are designed to significantly accelerate our customers' time to market and increase product profitability. Our solutions, which predict and improve product yield even before IC product design is complete, change the traditional design-to-silicon sequence to primarily a concurrent process, and decrease our customers' time to market. Systematically incorporating knowledge of the integration of the design and manufacturing processes into software modules, enables faster introduction of additional products with consistently high initial yields. Our solutions decrease design and process iterations, reduce our customers' up-front costs and speed time to market, thus providing our customers with early-mover advantages such as increased market share and higher selling prices.

Faster Time to Volume. After achieving higher initial yields and faster time to market, our solutions are designed to enable our customers to isolate and eliminate remaining systematic yield issues to achieve cost efficient manufacturing volume. 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 Design-to-Silicon-Yield solutions enable our customers to quickly reach cost efficient volume, so that they are able to increase revenue, improve their competitive position, and capture higher market share.

Increased Manufacturing Efficiencies. After using our solutions for product introduction and yield ramp, our solutions are designed to allow our customers to achieve a higher final yield and therefore a lower cost of goods sold. In addition, our Design-to-Silicon-Yield solutions are designed to provide our customers with the ability to proactively monitor process health to avoid potential yield problems. By paying us gain share as our customers recognize cost savings from these manufacturing efficiencies, they also benefit from better matching their costs to their revenue.

Increased Semiconductor Performance. Our Design-to-Silicon-Yield solutions are designed to enable our customers to achieve over-all higher level semiconductor performance by modeling the factors that affect speed and simulating possible improvements. Typically, the changes necessary to achieve higher performance result in an overall reduction in yield. Because our solutions also model the factors that affect yield at the same time, our customers can often achieve both higher IC performance and higher yield, thereby generating higher margin revenues.

Our Strategy

Our objective is to provide the industry standard in silicon infrastructure technologies and services for integrating IC designs and manufacturing processes. Key elements of our strategy include:

Leverage Our Innovative Gain Share Business Model. We intend to expand the gain share component of our customer contracts. We believe this innovative approach helps us to form highly collaborative and longer-term relationships. Working closely with our customers on their core technologies with a common focus on their business results provides direct and real-time feedback, which we will continue to use to rapidly generate market-driven improvements that add value to our solutions. We also believe that gain share allows us to increase penetration of our customer accounts because adding new semiconductor products to existing lines is increasingly easy and economical for our customers once our Design-to-Silicon-Yield solutions are implemented. As our gain share customers succeed in improving their yield and performance while reducing costs, we believe that we will generate new customer accounts based on these successes.

Focus on Key IC Product Segments. We intend to focus our solution on key IC product segments such as system-on-a-chip, communications networking, graphics and high-performance central processing units. These are high-volume, high-growth segments and are fueled by the growth of Internet and wireless infrastructure and consumer applications. As a result, we will expand our solution for key technology drivers such as low-k dielectrics, copper, embedded DRAM and silicon germanium, which are all somewhat new and relatively complex manufacturing process 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 with Industry Leaders. We intend to continue to extend and enhance our relationships with leading companies at key stages of the design-to-silicon process, such as manufacturing equipment vendors, silicon intellectual property vendors, semiconductor foundries, and test and assembly equipment providers. We believe that strategic relationships with industry leaders will increase our insight into future industry needs, thus allowing us to further accelerate our learning and enhance the value of our solutions. We expect these relationships to also serve as sales channels for our Design-to-Silicon-Yield solutions and to increase industry awareness of our solutions.

Extend Our Technology Leadership Position. We intend to continue expanding our research and development efforts by leveraging our experienced engineering staff and codifying the knowledge that we continually acquire in our solution implementations. In addition, we intend to selectively acquire complementary businesses and technologies to increase the scope of our solutions. We will continue to make significant investments in the development of proprietary manufacturing process simulation software, yield and performance modeling software, other technologies, and yield and performance enhancement methodologies to accommodate our customers' increasingly complex semiconductor needs.

Expand Worldwide Presence. We intend to establish engineering design and product development centers in key international locations around the world. To date, we have focused on regions specific to our design efforts — the United States, Japan and Europe. We intend to expand geographically to gain access to international engineering talent and to maintain proximity to our expanding customer base. In addition, we believe that these efforts will have collateral sales and marketing benefits as a result of local presence.

Technology

Our Design-to-Silicon-Yield solutions combine proprietary manufacturing process simulation, yield and performance modeling software, comprehensive test chips and proven yield and performance enhancement methodologies. To calculate the likely yield of an IC design, we have designed a proprietary, patent-pending system that uses each of these technologies to:

- identify yield-relevant layout pattern elements by using the knowledge base embedded in our technologies;
- categorize IC layout components into these elements;
- quantify the yield of each of the elements; and
- model the frequency of yield-relevant elements and their yield-loss probabilities.

We continually enhance our technologies through the codification of knowledge that we gain in our solution implementations.

Our software incorporates the following elements:

- efficient modeling algorithms of the interaction between design layout and manufacturing processes, which creates layout pattern-dependent systematic yield models that encompass process technologies such as lithography, etch, interlayer dielectric chemical-mechanical polishing (ILD CMP), copper CMP and shallow trench isolation CMP (STI CMP);
- pattern recognition algorithms, which allow us to categorize the yield-relevant elements of a design as a function of their layout, including the effects of their proximity to other elements;

- a hierarchical representation of the layout, which encompasses layout manufacturing process proximity effects and minimizes the time necessary for computation of systematic yield prediction;
- algorithms that compute an overall yield impact matrix for design as a function of layout elements and manufacturing yield models; statistical simulation of circuit performance as a function of manufacturing process variations, including their impact on transistor performance; and
- statistical process and device simulation.

Our software that is used to predict yields of designs is also used to generate our proprietary Characterization Vehicle™ test chips. These Characterization Vehicle, or CV™, test chips are used to calibrate the yield and to provide manufacturers with early prediction of product yields, often before the IC design is completed. Early prediction generated by the CV test chips is the basis of the yield improvement methodologies for the manufacturing line. Information generated by the CV test chips is also used to improve the IC design.

Our methodologies are a series of guidelines that our implementation teams use to drive our customers' adoption of our software and CV test chips to quantify the yield impact of each module of the process and design block, simulate the impact of changes to the design and manufacturing process, and analyze the outcome of executing such changes.

Products and Services

Our Design-to-Silicon-Yield solutions consist of integration engineering services, proprietary software and other technologies. Our proprietary software and other technologies include proprietary manufacturing process simulation software, yield and performance modeling software, and comprehensive CV test chips.

We tailor our solution to our customers' specific business issues by offering one of the following Design-to-Silicon-Yield solutions:

- Integration and Ramp. This solution enables our customers to ramp the yield of new products when the manufacturing process or fabrication facility is still being completed or is new. Our solution is used to improve the process capability and manufacturability of designs targeted for that process.
- Yield and Performance Ramp. This solution enables our customers to ramp the yield and performance of new products when the manufacturing process is assumed to be mostly correct and complete. In this case, we focus mostly on design oriented issues.
- Design-Based Yield Improvement™. This solution enables our customers to optimize the manufacturability of their IC products by improving the compatibility of their designs with a third party's manufacturing process. In this case, we focus on design oriented issues.

Our Design-to-Silicon-Yield solutions can incorporate various software and other technologies, typically including the following:

- Characterization Vehicle Test Chips and Software. Our integration engineers develop a design of experiments, or DOE, to determine how IC design building blocks interact with the manufacturing process. Our CV software utilizes the DOE, as well as a library of these building blocks that we know have potential yield and performance impact, to generate comprehensive Characterization Vehicle test chips. These CV test chips are run through the manufacturing process with intentional modifications to explore the effects of natural manufacturing process variations. Our CV analysis software is then used to analyze the electrical test results generated by the test chips to model the yield and performance effects of process variations on these design building blocks.
- pdEx™. pdEx analyzes an IC design to compute its systematic and contamination yield loss. pdEx takes as input, a layout that is typically in industry standard format, proprietary yield models generated by running our CV test chips, and other test chip and in-line inspection data. pdEx is designed to estimate the yield loss due to optical proximity effects, etch micro loading, dishing in chemical-mechanical polishing and contamination, as well as a number of other basic process issues.

- Circuit Surfer® Software. Our Circuit Surfer software estimates the performance yield and manufacturability of small blocks in a design, such as analog subsystems or critical paths of digital blocks. Using our Circuit Surfer software, a design engineer is able to estimate how manufacturing process variations will impact circuit performance.

- pdFab® Software. Our pdFab software provides a framework for statistical manufacturing process and transistor simulation that enables our integration engineers to understand the effects of expected or measured manufacturing process variations on transistor performance. pdFab is used to optimize the transistor architecture and associated manufacturing process, and is primarily targeted to provide higher IC performance, although yield improvements may also be generated.

- Optissimo™ Software. Our Optissimo software is used to optimize the layout of a design to minimize the impact of wafer printing variations due to optical proximity effects. Optissimo can be used for model based optical proximity correction technologies.

While the primary distribution method for our software and technologies is through our Design-to-Silicon-Yield solutions, we have in the past and may in the future separately license these and other technologies.

Customers

Our current customers are primarily large integrated device manufacturers, or IDMs. We have established ongoing relationships with key IDMs such as Toshiba Corporation, Matsushita Electric Industrial Co., Sony Corporation, Conexant Systems, Inc., and Philips Semiconductor. Our customers' targeted product segments vary significantly, including microprocessors, graphics, memory, and communications. We believe that the adoption of our solutions by such diverse and technologically advanced companies validates the application of our Design-to-Silicon-Yield solutions to the broader market.

Toshiba and Matsushita represented 34% and 29%, respectively, of our total revenue for the year ended December 31, 2001. Toshiba, Sony, Conexant, and Philips represented 32%, 27%, 15% and 10%, respectively, of our total revenue for the year ended December 31, 2000. Toshiba, Fujitsu Limited and Sony represented 53%, 19% and 15%, respectively, of our total revenue for year ended December 31, 1999. No other customer accounted for 10% or more of our revenue in 2001, 2000, or 1999.

Sales and Marketing

Our sales strategy is to pursue targeted accounts through a combination of our direct sales force and strategic alliances. To date, we have targeted leading IDMs to validate our solutions in leading technology and manufacturing environments and to establish credibility to support future sales and marketing efforts. We have recently extended these efforts to other IDMs and fabless semiconductor companies. 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 as well as Innotech Corporation, a large semiconductor sales and distribution company located in Japan. Innotech has been instrumental in providing introductions to key executives with some of our targeted customers, which has allowed us to establish direct relationships with these key executives. We expect to continue establishing 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.

We strive to provide compelling value in our initial engagement to establish ourselves as a key vendor to our customers and solidify relationships at the executive level. Early in the solution implementation, our engineers establish relationships across the organization and gain a solid 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. We believe that our sales and marketing efforts will facilitate the adoption of our solutions as the industry standard.

Research and Development

Our research and development focuses on rapidly 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. In addition, we have a highly-qualified technical advisory board comprised of professors from Harvard University's Business School, the Massachusetts Institute of Technology, Carnegie Mellon University and the University of California, Berkeley to help us develop and guide our strategic development roadmap.

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 the multidisciplinary expertise of our team of engineers will continue to advance our market and technological leadership. We conduct extensive 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 client needs. Our research and development expenses were approximately $12.2 million in 2001, $6.4 million in 2000 and $3.1 million in 1999.

Competition

The semiconductor industry is highly competitive and characterized by rapidly changing design and process technologies, evolving standards, short product life cycles and decreasing prices. While the market for silicon infrastructure is in its infancy, it is rapidly evolving and we expect competition to develop and continue to increase. We believe a comprehensive solution to quickly close the Design-to-Silicon-Yield gap requires a unified system of yield models, design analysis software, and comprehensive CV test chips. 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, that is not optimized to accelerate their process-design integration. Some providers of yield management software or inspection equipment may seek to broaden their product offerings and compete with us. For example, KLA-Tencor has announced adding the use of test structures to one of their inspection product lines. Additionally, HPL Technologies, through its acquisition of Test Chip Technologies, has indicated its intent to further utilize test chips in its product offering. Companies such as these and those in electronic design automation could expand their offerings to include design and additional elements of the manufacturing processes and become direct competitors to us.

We believe that the principal factors affecting competition in our market are:

- demonstrated results and reputation;
- strength of core technology;
- ability to implement solutions for new technology and product generations;
- time to market; and
- strategic relationships.

Although we believe that our solutions compete favorably with respect to these factors, our market is relatively new and is evolving rapidly. We may not be able to maintain our competitive position against current and potential competitors, especially those with significantly greater resources.

Intellectual Property

Our future success and competitive position are dependent upon our continued ability to develop and protect proprietary software and other technologies. We rely primarily on a combination of contractual provisions, confidentiality procedures, trade secrets, and patent, copyright and trademark laws to protect our proprietary technologies and prevent competitors from using our technologies in their products. As of December 31, 2001 we have been issued one German patent and have eleven patent applications currently pending in the United States. We intend to prepare additional patent applications for submission to the United States Patent and Trademark Office. In the future, we may seek additional patent protection when we feel it is necessary.

We license our products and technologies pursuant to non-exclusive license agreements which impose restrictions on customer 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. Despite this protection, unauthorized parties may copy aspects of our current or future software and other technologies or obtain and use information that we regard as proprietary.

The semiconductor industry is characterized by vigorous protection and pursuit of intellectual property rights or positions. There are also numerous patents in the semiconductor industry and new patents are being issued at a rapid rate. It is also possible that third parties will claim that we have infringed their patents and current or future products. Any claims, with or without merit, could be time-consuming, result in costly litigation, cause delays, or require us to enter into royalty or licensing agreements, any of which could harm our business. Patent litigation in particular has complex technical issues and inherent uncertainties. In the event an infringement claim against us was successful and we could not obtain a license on acceptable terms or license a substitute technology or redesign to avoid infringement, our business would be harmed.

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Employees

As of December 31, 2001, we had 197 employees, including 71 in client service teams, 88 in products and methods, 15 in sales and marketing and 23 in general and administrative functions. 138 of these employees are located in San Jose/San Diego, California, 18 are located in Texas and Virginia, 27 are located in Germany, 8 employees are located in Japan and 6 employees are located in Italy. Of our 197 total employees, 163 are engineers, 133 of which have advanced degrees including 79 with Ph.Ds.

None of our employees are represented by a labor union or are 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 executive officers as of December 31, 2001:

Name	Age	Position
John K. Kibarian, Ph.D.	37	Chief Executive Officer, President and Director
Thomas F. Cobourn, Ph.D.	41	Vice President, Yield Analysis
Bruce J. Hansen	64	Vice President, Products and Methods
David A. Joseph	48	Executive Vice President, Sales, Marketing, and Business Development
P. Steven Melman	47	Chief Financial Officer and Vice President, Finance and Administration
Kimon Michaels, Ph.D.	35	Vice President, Integration Practice and Director
P.K. Mozumder, Ph.D.	39	Vice President, Integration Practice
W. Steven Rowe	52	Vice President, Human Resources
David Tarpley	56	Vice President, Worldwide Sales

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, a M.S. E.C.E. and a Ph.D. E.C.E. from Carnegie Mellon University.

Thomas F. Cobourn, Ph.D., one of our founders, has served in Vice Presidential capacities since June 1992 including currently as Vice President, Yield Analysis. Mr. Cobourn received a B.S., Computer Science and Engineering from the University of Pennsylvania and a M.S. E.C.E. and Ph.D. E.C.E. from Carnegie Mellon University.

Bruce J. Hansen, has served as Vice President, Products and Methods, since July 2001. From 1988 to 2001, Mr. Hansen served as a consultant at high technology consulting organizations including PRTM (1999 to 2000) and Thomas Group (1988-1996, 2001), where he was a senior partner. From 1996 to 1999, Mr. Hansen led product development as Director of Technology Management at National Semiconductor. He also held vice president positions at Triad Systems and Motorola Corporation. Mr. Hansen received a B.S. in Electrical Engineering from the University of California, Berkeley and a M.S. in Electrical Engineering from the University of California, Irvine.

David A. Joseph has served as Executive Vice President, Sales, Marketing, and Business Development since August 2001. He served as Vice President, Products and Methods from July 1999 through August 2001 and as Vice President, Business Development from November 1998 through June 1999. From February 1978 to October 1998, Mr. Joseph served KLA/Tencor, a semiconductor manufacturing company, in various positions, including as Japan Business Manager, VP Customer Satisfaction and GM Yield Analysis Software. Mr. Joseph received a B.S. in Mathematical Science from Stanford University.

P. Steven Melman has served as Chief Financial Officer and Vice President, Finance and Administration since July 1998. From April 1997 to June 1998, Mr. Melman 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. Mr. Melman is a Certified Public Accountant.

Kimon Michaels, Ph.D., one of our founders, has served in Vice Presidential capacities since March 1993 including currently as Vice President, Integration Practice, and as a director since November 1995. He also served as Chief Financial Officer from November 1995 to July 1998. Mr. Michaels received a B.S. in Electrical Engineering, a M.S. E.C.E. and a Ph.D. E.C.E. from Carnegie Mellon University.

P.K. Mozumder, Ph.D. has served as Vice President, Integration Practice since May 1998. From June 1994 to May 1998, Mr. Mozumder served as a Branch Manager with Texas Instruments, Inc., a consumer

electronics and semiconductor company. Mr. Mozumder received a B. Tech in Electrical Engineering from the Indian Institute of Technology in Bombay, India, and a M.S. E.C.E. and a Ph.D. E.C.E. from Carnegie Mellon University.

W. Steven Rowe has served as Vice President, Human Resources since February 2000. From June 1995 to February 2000, Mr. Rowe served as Vice President, Human Resources at Trident Microsystems, a multimedia semiconductor company. From May 1994 to June 1995, he served as Vice President, Human Resources at OPTi Inc., a semiconductor company. Mr. Rowe received a M.A. in Education Administration from San Jose State University, a M.A. in Speech Pathology from Chico State University and a J.D. from Lincoln University. Mr. Rowe has resigned from his position effective March 15, 2002.

David Tarpley has served as Vice President, Worldwide Sales since November 1996. From 1995 through September of 1996, Mr. Tarpley served as Vice President, International Sales for Anagram, Inc., an Electronic Design Automation company. From 1993 to 1995, Mr. Tarpley served as Vice President, Worldwide Sales with HLD, Inc., an electronic design automation company. Mr. Tarpley received a B.S. in Business Administration from The University of California, Berkeley and an M.B.A. from The California State University Fullerton.

Item 2. ***Properties.***

Our principal executive offices are located in San Jose, California where we lease approximately 18,000 square feet under a lease that expires in October 2004 and have leased an additional 18,000 square feet under a lease that will expire in May 2003. We lease 5,418 square feet in Dallas, Texas under a lease that expires in July 2002. In addition, we lease 4,200 square feet in Munich, Germany, 1,600 square feet in Tokyo, Japan and 1,665 square feet in DesEnzano, Italy under leases that expire in June 2002, April 2002 and September 2006. We believe that our current facilities in San Jose are adequate to meet our needs through May 2003, at which time we will need to obtain additional space in the San Jose area, which we expect to be able to obtain when necessary. In addition we believe that we will be able to replace all space coming off lease in 2002.

Item 3. *Legal Proceedings.*

We are not currently party to any material legal proceedings. In May 2001, we were named as a defendant in a lawsuit claiming, among other things, that we misappropriated trade secrets in connection with hiring an employee. We are defending ourselves against the claims, which we believe to be without merit. We do not believe that this litigation, or resolution of this litigation, will have a material negative impact on our business.

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

No matters were submitted to a vote of our stockholders during the fourth quarter of fiscal 2001.

PART II

Item 5. ***Market for Registrant's Common Equity and Related Stockholder Matters.***

Our common stock has traded on The Nasdaq National Market under the symbol "PDFS" since our initial public offering on July 26, 2001. As of March 25, 2002 we had approximately 258 stockholders of record and the closing price of our common stock was $16.62 per share as reported by The Nasdaq National Market.

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:

Fiscal 2001	High	Low
Third Quarter	$16.62	$ 9.90
Fourth Quarter	$21.35	$10.00

No cash dividends were declared or paid in fiscal 2001. We currently intend to retain all available funds to finance future internal growth and product development and do not anticipate paying any cash dividends on our common stock for the foreseeable future.

Use of Proceeds

Our Registration Statement on Form S-1 (File No. 333-43192) related to our initial public offering was declared effective by the SEC on July 26, 2001. The public offering commenced on July 27, 2001. All 4,500,000 shares of common stock offered in the final prospectus, as well as an additional 675,000 shares of common stock subject to the underwriters' over-allotment option, were sold at the closing on August 1, 2001 at a price to the public of $12.00 per share (before deducting underwriting discounts and commissions) through a syndicate of underwriters managed by Credit Suisse First Boston Corporation, Robertson Stephens, Inc. and Dain Rauscher Incorporated. The aggregate gross proceeds of the shares offered and sold was $62.1 million, out of which we paid an aggregate of $4.3 million in underwriting discounts and commissions to the underwriters. In addition, as of December 31, 2001, we had incurred additional expenses of approximately $1.3 million in connection with the offering, which when added to the underwriting discounts and commissions paid by us, amounts to total estimated expenses of $5.6 million. We estimate there are no remaining outstanding invoices.

We incurred legal expenses payable to Orrick, Herrington & Sutcliffe LLP in connection with the initial public offering of our common stock. Peter Cohn, our Secretary, is a partner in that law firm. Other than such payments, none of the net proceeds were paid, and none of the initial public offering expenses related to any payments, directly or indirectly, to directors, officers or general partners of PDF or its associates, persons owning 10% or more of any class of securities of PDF, or affiliates of PDF.

We have used and intend to continue to use the net proceeds of the public offering primarily for general corporate purposes, including working capital and capital expenditures. The amounts and timing of these expenditures will vary depending on a number of factors, including the amount of cash generated or used by our operations, competitive and technological developments and the rate of growth, if any, of our business. We may also use a portion of the net proceeds to acquire businesses, services, products or technologies or invest in businesses that we believe will complement our current or future business. However, we have no specific plans, agreements or commitments and are not currently engaged in any negotiations for any material acquisition or investment. As a result, we will retain broad discretion in the allocation of the proceeds of the public offering. Pending the uses described above, we will invest the net proceeds of the public offering in cash, cash equivalents, money market funds or short-term interest-bearing, investment-grade securities to the extent consistent with applicable regulations. We cannot predict whether the proceeds will be invested to yield a favorable return.

Recent Sales of Unregistered Securities

None.

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

The following selected consolidated balance sheets data as of December 31, 2001, 2000, 1999 and 1998 and the selected consolidated statements of operations data for each year in the five years ended December 31, 2001 have been derived from the audited consolidated financial statements. The selected balance sheet data as of December 31, 1997 has been derived from unaudited financial statements. The information set forth below is not necessarily indicative of results of future operations and should be read in conjunction with "Management's Discussion and Analysis of Financial Conditions and Results of Operations" and the

consolidated financial statements and notes to those statements included herein and in Part II of this Form 10-K.

	Year Ended December 31,				
	2001	2000	1999	1998	1997
	(In thousands, except per share data)				
Consolidated Statements of Operations Data:					
Revenue:					
Design-to-silicon-yield solutions	$26,739	$15,538	$10,567	$6,227	$2,621
Gain share	8,733	4,597	1,257	—	—
Total revenue	35,472	20,135	11,824	6,227	2,621
Costs and expenses:					
Cost of design-to-silicon-yield solutions	11,843	6,915	4,091	1,533	596
Research and development	12,196	6,418	3,087	1,864	1,005
Selling, general and administrative	11,006	7,332	4,295	2,959	1,404
Offering costs	—	1,258	—	—	—
Stock-based compensation amortization*	7,371	7,293	68	61	14
Total costs and expenses	42,416	29,216	11,541	6,417	3,019
Income (loss) from operations	(6,944)	(9,081)	283	(190)	(398)
Interest and other income, net	1,232	347	105	128	139
Income (loss) before taxes	(5,712)	(8,734)	388	(62)	(259)
Tax provision (benefit)	(1,840)	363	533	342	9
Net loss	(3,872)	(9,097)	(145)	(404)	(268)
Preferred dividend	(1,619)	—	—	—	—
Loss attributable to common stockholders	$(5,491)	$(9,097)	$ (145)	$ (404)	$ (268)
Net loss per share — basic and diluted	$ (0.38)	$ (1.24)	$ (0.02)	$(0.08)	$(0.07)
Shares used in computing basic and diluted net loss per share	14,425	7,356	6,086	4,944	4,101
***Stock-Based Compensation Amortization:**					
Cost of design-to-silicon yield solutions	$ 1,996	$ 1,715	$ 20	$ 18	$ 4
Research and development	3,227	4,016	48	43	10
Selling, general and administrative	2,148	1,562	—	—	—
	$ 7,371	$ 7,293	$ 68	$ 61	$ 14
Consolidated Balance Sheets Data:					
Cash and cash equivalents	$70,835	$ 7,626	$ 1,933	$2,155	$2,208
Working capital	69,994	3,708	2,153	2,501	2,854
Total assets	83,316	15,514	5,644	4,837	5,351
Long-term debt, less current portion	31	56	72	—	—
Convertible preferred stock	—	8,457	3,497	3,497	3,497
Total stockholders' equity (deficiency)	72,884	(2,026)	(512)	(480)	(155)

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

Forward-Looking Statements

You should read the following discussion in conjunction with our consolidated financial statements and notes to consolidated financial statements. The results described below are not necessarily indicative of the results to be expected in any future period. Certain statements in this discussion and analysis, including statements regarding our strategy, financial performance and revenue sources, are forward-looking statements

based on current expectations and entail various risks and uncertainties that could cause actual results to differ materially from those expressed in the forward-looking statements, including those described in "Risk Factors" and elsewhere in this Form 10-K.

Overview

Our comprehensive technologies and services enable semiconductor companies to improve yield and performance of integrated circuits by providing infrastructure to integrate the design and manufacturing processes. Our solutions combine proprietary manufacturing process simulation software, yield and performance modeling software, comprehensive test chips, proven yield and performance enhancement methodologies, and professional services.

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, as complete 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 Applied Integrated Systems and Software GmbH, or AISS, now operating as PDF Solutions, GmbH, 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.

Results of Operations

We have historically experienced fluctuations from period to period. We expect these fluctuations to continue, therefore, historical results are not indicative of future results.

Years Ended December 31, 2001 and 2000

Revenue

Total revenue for the year ended December 31, 2001 was $35.5 million, compared with $20.1 million for the year ended December 31, 2000, an increase of 76%.

Design-to-Silicon-Yield Solutions. Design-to-Silicon-Yield solutions revenue for the year ended December 31, 2001 was $26.7 million, compared with $15.5 million for the year ended December 31, 2000, an increase of 72%. The increase for the year ended December 31, 2001 was primarily attributable to a greater number and increased size of solution implementations during 2001 as compared to 2000.

Gain Share. Gain share revenue for the year ended December 31, 2001 was $8.7 million, compared with $4.6 million for the year ended December 31, 2000, an increase of 90%. The increase for the year ended December 31, 2001 was the result of attaining increased levels of gain share from new and existing customers.

Costs and Expenses

Cost of Design-to-Silicon-Yield Solutions. Cost of Design-to-Silicon-Yield solutions for the year ended December 31, 2001 was $11.8 million, compared with $6.9 million for the year ended December 31, 2000, an increase of 71%. This absolute dollar increase in cost of design-to-silicon yield solutions in the year ended December 31, 2001 was primarily due to a greater number and increased average size of solution implementations. As a percentage of Design-to-Silicon-Yield solutions revenue, cost of Design-to-Silicon-Yield solutions was 44% for the year ended December 31, 2001, compared with 45% for the year ended December 31, 2000. The percentage decrease was primarily the result of an increase in higher margin Design-to-Silicon-Yield solutions contracts, partially offset by the cost of increasing capacity.

Research and Development. Research and development expenses for the year ended December 31, 2001 were $12.2 million, compared with $6.4 million for the year ended December 31, 2000, an increase of 90%.

The absolute dollar increase in the year ended December 31, 2001 was primarily due to the addition of personnel and the increase in personnel related costs for development of existing and new technologies, partially as a result of our acquisition of AISS. As a percentage of total revenue, research and development expenses were 34% for the year ended December 31, 2001, compared to 32% for the year ended December 31, 2000. We anticipate that we will continue to commit considerable resources to research and development in the future and that these expenses will continue to increase significantly in absolute dollars.

Selling, General and Administrative. Selling, general and administrative expenses for the year ended December 31, 2001 were $11.0 million, compared with $7.3 million for the year ended December 31, 2000, an increase of 50%. This increase was due to increased spending in personnel and related costs and legal and other professional services in connection with building the necessary administrative infrastructure to support the growth of our operations. As a percentage of total revenue, selling, general and administrative expenses were 31% for the year ended December 31, 2001, compared to 36% for the year ended December 31, 2000. We expect that selling, general and administrative expenses will increase in absolute dollars to support increased selling and administrative efforts.

Stock-Based Compensation Amortization. Stock-based compensation amortization expense for the year ended December 31, 2001 was $7.4 million, compared with $7.3 million for the year ended December 31, 2000, an increase of 1%. This increase was attributable primarily to accelerated options under a separation agreement.

Interest and Other Income

Interest and other income for the year ended December 31, 2001 was $1.2 million, compared with $347,000 for the year ended December 31, 2000, an increase of 255%. This increase was due to higher average cash and cash equivalents balances primarily resulting from our initial public offering and concurrent private placement.

Provision for Taxes

Provision for taxes, a benefit for the year ended December 31, 2001, was $1.8 million, compared with a tax provision of $363,000 for the year ended December 31, 2000, a decrease of 607%. During the fourth quarter of 2001, it was determined that a valuation allowance reported against our deferred tax assets was no longer necessary based on our evaluation of current evidence and its effect on our estimate of future earnings. Accordingly, we reversed our deferred tax valuation allowance of $2.1 million in the fourth quarter.

Years Ended December 31, 2000 and 1999

Revenue

Total revenue for the year ended December 31, 2000 was $20.1 million, compared with $11.8 million for the year ended December 31, 1999, an increase of 70%.

Design-to-Silicon-Yield Solutions. Design-to-Silicon-Yield solutions revenue for the year ended December 31, 2000 was $15.5 million, compared with $10.6 million for the year ended December 31, 1999, an increase of 47%. This increase was primarily attributable to a greater number of solution implementations during the year ended December 31, 2000 compared to the prior year.

Gain Share. Gain share revenue for the year ended December 31, 2000 was $4.6 million, compared with $1.3 million for the year ended December 31, 1999, an increase of 266%. This increase was due to the attainment of gain share yield targets for two new and one existing customer.

Costs and Expenses

Cost of Design-to-Silicon-Yield Solutions. Cost of Design-to-Silicon-Yield solutions for the year ended December 31, 2000 was $6.9 million, compared with $4.1 million for the year ended December 31, 1999, an

increase of 69%. This increase was due to a greater number and increased average size of solution implementations, as well as the execution of our business strategy to aggressively increase capacity ahead of revenue, resulting in the hiring of additional personnel. As a percentage of Design-to-Silicon-Yield solutions revenue, cost of Design-to-Silicon-Yield solutions was 45% for the year ended December 31, 2000, compared with 39% for the year ended December 31, 1999. This percentage increase was primarily the result of increasing capacity in anticipation of expanding our customer base and being awarded new Design-to-Silicon-Yield solutions contracts.

Research and Development. Research and development expenses for the year ended December 31, 2000 were $6.4 million, compared with $3.1 million for the year ended December 31, 1999, an increase of 108%. This increase was due to our expanding research and development efforts in software and technologies. As a percentage of total revenue, research and development expenses were 32% for the year ended December 31, 2000, compared to 26% for the year ended December 31, 1999. A significant portion of this increase was due to the addition of personnel and the increase in personnel-related costs for development of existing and new technologies, including as a result of our acquisition of AISS.

Selling, General and Administrative. Selling, general and administrative expenses for the year ended December 31, 2000 were $7.3 million, compared with $4.3 million for the year ended December 31, 1999, an increase of 71%. This increase was due to increased spending in personnel and related costs and legal and other professional services in connection with building the necessary infrastructure to support the growth of our operations. As a percentage of total revenue, selling, general and administrative expenses remained consistent at 36% for the year ended December 31, 2000 and 1999.

Stock-Based Compensation Amortization. Stock-based compensation amortization expense for the year ended December 31, 2000 was $7.3 million, compared with $68,000 for the year ended December 31, 1999. This increase was attributable primarily to options granted to employees at exercise prices below the deemed fair value of our common stock.

Interest and Other Income

Interest and other income for the year ended December 31, 2000 was $347,000, compared with $105,000 for the year ended December 31, 1999, an increase of 230%. This increase was due to higher average cash and cash equivalents balances.

Provision for Taxes

Provision for taxes for the year ended December 31, 2000 was $363,000, compared with $533,000 for the year ended December 31, 1999 a decrease of 32%. This decrease in provision for taxes primarily resulted from a decrease in foreign withholding taxes partially offset by an increase in taxable income from U.S. operations.

Liquidity and Capital Resources

As of December 31, 2001, working capital was $70.0 million compared with $3.7 million as of December 31, 2000. Cash and cash equivalents as of December 31, 2001 was $70.8 million compared to $7.6 million as of December 31, 2000, an increase of $63.2 million.

Net cash provided by operating activities was $2.8 million for the twelve months ended December 31, 2001 compared to net cash provided by operating activities of $1.9 million for the twelve months ended December 31, 2000. Net cash provided by operating activities in 2001 resulted from net income of $4.9 million after adjustment for depreciation and amortization, including amortization of deferred stock compensation costs of $7.4 million, and increases in accounts payable of $224,000, accrued compensation and related benefits of $1.9 million, deferred revenue of $903,000 and other accrued liabilities and taxes payable of $261,000 offset by increases in accounts receivable of $1.6 million, prepaid expenses and other assets of $2.9 million and billings in excess of revenue recognized of $879,000. Net cash provided by operating activities in 2000 resulted from a net loss of $971,000 after adjustment for depreciation and amortization, including amortization of deferred stock compensation costs of $7.3 million and increases in accounts payable of

$224,000 and accrued compensation and related benefits of $1.1 million, other accrued liabilities and taxes payable of $321,000, deferred revenues of $1.5 million and billings in excess of revenue recognized of $1.1 million partially offset by increases in accounts receivable of $815,000 and prepaid expenses and other assets of $540,000. The increases in accounts receivable in both years were attributable to performance under an increased number of contracts. The increases in accrued compensation and related benefits, in both years, were primarily the result of increases in accrued performance bonuses and accrued vacation benefits.

Net cash used in investing activities was $1.5 million for the twelve months ended December 31, 2001, compared to $1.4 million for the twelve months ended December 31, 2000. Net cash used in investing activities in 2001 resulted from the purchases of property and equipment. Net cash used in investing activities in 2000 resulted from the purchases of property and equipment of $1.2 million and the acquisition of AISS for $995,000 in promissory notes and $255,000 in cash.

Net cash provided by financing activities was $62.0 million for the twelve months ended December 31, 2001 compared to $5.2 million for the twelve months ended December 31, 2000. Net cash provided by financing activities in 2001 was primarily the result of net proceeds of $56.5 million from our initial public offering and $5.9 million from the concurrent private placement of common stock, offset by the repayment of notes payable of $995,000 issued in conjunction with the acquisition of AISS. Net cash provided by financing activities in 2000 was primarily the result of the issuance of Series B convertible preferred stock in the amount of $5.0 million and the exercise of stock options of $289,000.

We expect to experience significant growth in our operating expenses, particularly for research and development and additions to our workforce in order to execute our business plan. As a result, we anticipate that our operating expenses, as well as planned capital expenditures, will constitute a material use of our cash resources. In addition, we may use cash resources to 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 for at least the next twelve months. In the event additional financing is required, we may not be able to raise it on acceptable terms or at all.

Euro-Currency

The Single European Currency, or Euro, was introduced on January 1, 1999 and we began doing business denominated in the Euro on January 1, 2002. We have assessed the situation and believe this adoption will not have a material effect on our business.

Critical Accounting Policies

Financial Reporting Release No. 60, which was recently released by the Securities and Exchange Commission ("SEC"), requires all companies to include a discussion of critical accounting policies or methods used in the preparation of financial statements. Note 1 of the notes to the consolidated financial statements includes a summary of the significant accounting policies and methods used in the preparation of our consolidated financial statements. The following is a brief discussion of the more significant accounting policies and methods that we use.

General

Our discussion and analysis of our financial condition and result 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, impairment of goodwill and the realization of deferred tax assets and allowance for doubtful accounts. Actual amounts may differ from such estimates under different assumptions or conditions. The following summarizes our critical accounting policies and significant estimates used in preparing our consolidated financial statements:

Revenue Recognition

We derive revenue from two sources: Design-to-Silicon-Yield solutions and gain share. We recognize revenue in accordance with the provisions of American Institute of Certified Public Accountants Statement of Position ("SOP") 97-2, Software Revenue Recognition, as amended, and SOP 81-1, Accounting for Performance of Construction-Type and Certain Production-Type Contracts.

Design-to-Silicon-Yield Solutions — Design-to-Silicon-Yield solutions revenue is derived from solution implementations, software licenses and software support and maintenance. Revenue recognition for each element of design-to-silicon yield solutions is as follows:

Solution Implementation — Our solution implementations generate a significant portion of revenue from fixed-price contracts delivered over a specific period of time. These contracts require the 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 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.

Software Licenses — We have entered into a few multi-year time based licenses, with a contractual term of generally three years. Revenue under arrangements which require us to provide support and maintenance over a period of time, where vendor-specific objective evidence of fair value does not exist to allocate a portion of the total fee to the undelivered elements, are recognized ratably over the term of the agreement. No revenue under arrangements with extended payment terms has been recognized in excess of amounts due.

Other license fees are recognized on the residual value method: (i) when an agreement has been signed, the software has been delivered, the license fee is fixed or determinable and collection of the fee is probable or (ii) as a component of a related solution implementation contract.

Software Support and Maintenance — Amounts allocated to undelivered support and maintenance are based on vendor specific objective evidence, generally negotiated renewal rates. Revenue from allocated support and maintenance and renewals is recognized ratably over the term of the support and maintenance contract, generally one year.

Gain Share — Gain share revenue represents profit sharing and performance incentives earned based upon our customers reaching certain defined operational levels. Upon achieving such operational levels, we receive either a fixed fee and/or royalties based on the units sold by the customer. Due to the uncertainties surrounding attainment of such operational levels, we recognize gain share revenue (to the extent of completion of the related solution implementation contract) upon receipt of performance reports or other related information from the customer supporting the determination of amounts and probability of collection. Our continued receipt of gain share revenue is dependent on many factors which are outside our control, including among others, continued production of the related IC's by our customers, sustained yield improvements by our customers and our ability to enter into new Design-to-Silicon-Yield solutions contracts containing gain share provisions.

Impairment of Intangible Assets — As of December 31, 2001, we had $1.2 million of intangible assets.

In assessing the recoverability of the our goodwill, we must make assumptions regarding estimated future cash flows and other factors to determine the fair value of the respective assets. If these estimates or their related assumptions change in the future, we may be required to record impairment charges for this asset. On January 1, 2002 we adopted Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets," and will be required to analyze our goodwill for impairment issues during the first six months of fiscal 2002, and then on a periodic basis thereafter. During the year ended December 31, 2001, we did not record any impairment losses related to goodwill.

Realization of Deferred Tax Assets — As of December 31, 2001, we had net deferred tax assets of $1.8 million. 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 to 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 would result in an adjustment to income in the period the determination is made. In 2001, we reversed our deferred tax asset valuation allowance of $2.1 million due to our evaluation of current evidence and its effect on our estimate of future earnings.

Recent Accounting Pronouncements

In June 1998, the Financial Accounting Standards Board (FASB) issued SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*. This statement requires companies to record derivatives on the balance sheet as assets or liabilities measured at fair value. Gains or losses resulting from changes in the values of those derivatives would be accounted for depending on the use of the derivative and whether it qualifies for hedge accounting. We adopted SFAS No. 133, as amended, on January 1, 2001. The adoption of this statement did not have an effect on our financial position, results of operations or cash flows as we had no stand-alone or embedded derivatives at December 31, 2000 and have not entered into any derivative transactions to hedge currency or other exposures.

In June 2001, the FASB issued SFAS No. 141, *Business Combinations* and SFAS No. 142, *Goodwill and Other Intangible Assets*. SFAS No. 141 requires that all business combinations initiated after June 30, 2001 be accounted for under the purchase method and addresses the initial recognition and measurement of goodwill and other intangible assets acquired in a business combination. SFAS No. 142 addresses the initial recognition and measurement of intangible assets acquired outside of a business combination and the accounting for goodwill and other intangible assets subsequent to their acquisition. SFAS No. 142 provides that intangible assets with finite useful lives be amortized and that goodwill and intangible assets with indefinite lives not be amortized, but will rather be tested at least annually for impairment. We will adopt SFAS No. 142 for our fiscal year beginning January 1, 2002. Upon adoption of SFAS No. 142, we will stop the amortization of goodwill with a net carrying value of approximately $784,000 at the date of adoption and annual amortization of approximately $336,000 that resulted from a business combination completed prior to the adoption of SFAS No. 141.

In June 2001, the FASB issued SFAS No. 143, Accounting for Asset Retirement Obligations. SFAS No. 143 addresses the financial and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. This statement is effective for fiscal years beginning after June 15, 2002, however early application is permitted. We will adopt SFAS No. 143 on January 1, 2003. We are currently in the process of evaluating the impact of this statement on our financial position and operating results.

In October 2001, the FASB issued SFAS No. 144, Accounting for Impairment or Disposal of Long-Lived Assets." SFAS No. 144 supersedes SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of," and addresses financial accounting and reporting for the impairment or disposal of long-lived assets. PDF Solutions will adopt SFAS No. 144 on January 1, 2002. We do not expect the adoption of this statement to have a material effect on our financial position and operating results.

In November 2001, the FASB issued a Staff Announcement Topic D-103 (Topic D-103), "Income Statement Characterization of Reimbursements Received for Out-of-Pocket Expenses Incurred." Topic

D-103 establishes that reimbursements received for out-of-pocket expenses should be reported as revenue in the statement of operations. Currently, we classify reimbursed out-of-pocket expenses as a reduction of costs of Design-to-Silicon-Yield solutions revenue. We are required to adopt this guidance effective in the first quarter of fiscal 2002. Our adoption of Topic D-103 will result in increased Design-to-Silicon-Yield solutions revenue and increased costs of Design-to-Silicon-Yield solutions revenue of $1.4 million, $1.1 million and $552,000 for the years ended December 31, 2001, 2000 and 1999, respectively. Our adoption of Topic D-103 will not affect our net income or loss in any past periods.

Factors Which May Affect Future Results

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

If semiconductor designers and manufacturers do not adopt our Design-to-Silicon-Yield solutions, our revenue could decline. To date, we have worked with a limited number of semiconductor companies on a limited number of IC products and processes. To be successful, we will need to enter into agreements covering a larger number of IC products and processes with existing customers and new customers. Our existing customers are primarily large integrated device manufacturers, or IDMs. We will need to target as new customers additional IDMs, fabless semiconductor companies and foundries, as well as system manufacturers. 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 demand for deep submicron semiconductors failing to grow as rapidly as expected;
- the industry may develop alternative methods to enhance the integration between the semiconductor design and manufacturing processes due to a rapidly evolving market and the likely emergence of new technologies;
- our existing and potential customers' reluctance to understand and accept our innovative gain share fee component; and
- our customers' concern about our ability to keep highly competitive information confidential.

Our 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.

Our recent adoption of a novel and unproven business model makes it difficult to evaluate our future prospects.

Since we recently adopted our current business model, we do not have a long history of operating results on which you can base your evaluation of our business. In 1998, we began selling software, services and other technologies together as a Design-to-Silicon-Yield solution for the first time. Because we have not demonstrated our ability to generate significant revenue, our business model is unproven, especially with respect to gain share fees, which we expect will constitute a significant portion of our revenue for the foreseeable future. In the past, we generally earned fixed fees for the separate sale of our software, services and other technologies. Under our current business model, we are selling these items together as a package and charging both a fixed fee and a variable fee based on demonstrated improvements in our customers' yields, which we call gain share. Our existing and potential customers may resist this approach and may seek to limit or restrict our gain share fees. As a result, it will be difficult for financial markets analysts and investors to evaluate our future prospects.

Our gain share revenue is largely dependent on the volume of ICs our customers are able to sell to their customers, which is outside of our control.

Our gain share revenue for a particular product is largely determined by the volume of that product 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. 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. Since we currently work on a small number of large projects, any product that does not achieve commercial viability 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 any of our related gain share, in the other product. Further, decreased demand for semiconductor products decreases the volume of products our customers are able to sell, which may adversely impact our gain share revenue.

Gain share measurement requires data collection and is subject to customer agreement, which can result in uncertainty and cause quarterly results to fluctuate.

We can only recognize gain share revenue 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 gain share 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 gain share as a significant component of our total revenue, any delay could significantly harm our quarterly results.

Changes in the structure of our customer contracts, particularly the mix between fixed and variable revenue, can adversely affect the size and timing of our total revenue.

Our success is largely dependent upon our ability to structure our future customer contracts to include a larger gain share component relative to the fixed fee component. If we are successful in increasing the gain share 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, which we typically recognize earlier than gain share fees. In addition, by increasing the gain share component, we increase the variability 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.

We generate virtually all 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 and we expect this to continue in the near term. In the twelve months ended December 31, 2001, two customers accounted for 63% of our total net

revenue, with Toshiba representing 34% and Matsushita representing 29%. The loss of either 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 due to our expenses being fixed in the short term, the fact that it takes us a long time to replace customers and because any offsetting gain share revenue from new customers would not begin to be recognized until much later. Due to current economic conditions, some of our customers have recently announced employee layoffs, which may indicate decreased demand for certain of their products. There can be no assurances that such decrease in demand will not ultimately have an impact on our revenues.

It typically takes us a long time to sell our novel solutions to new customers, which can result in uncertainty and delays in generating additional revenue.

Because our gain share business model is novel and our Design-to-Silicon-Yield solutions are unfamiliar, 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. We typically send one or more of our senior executives and several engineers to meet with a prospective customer. Even after initial acceptance, due to the complexity of structuring the gain share component, the negotiation and documentation processes can be lengthy. It can take six 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 expect to incur losses in the future and we may be unable to achieve or subsequently maintain profitability.

We may not achieve or subsequently 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 $15.4 million as of December 31, 2001. We expect to continue to incur significant expenses in connection with:

- increased 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 deferred stock compensation.

As a result, we will need to significantly increase revenue to achieve profitability. If we do achieve profitability, we may be unable to sustain or increase profitability on a quarterly or annual basis. Any of these factors could cause our stock price to decline.

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.

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. In addition, we have a number of openings for key executive positions, including a Vice President of Client Services, that we will need to fill in order to successfully execute our business strategy. We may have difficulty recruiting these executives or integrating them into our existing management team. 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 Design-to-Silicon-Yield 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 Design-to-Silicon-Yield 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 Design-to-Silicon-Yield 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 to competitors 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 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 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.

We face operational and financial risks associated with international operations.

We derive a majority of our revenue from international sales, principally from customers based in Japan. Revenue generated from customers in Japan accounted for 77% of total revenue in the year ended December 31, 2001, 66% of total revenue in the year ended December 31, 2000 and 90% of total revenue in the year ended December 31, 1999. We expect that a significant portion of our total future revenue will continue to be derived from companies based in Japan. We are subject to risks inherent in doing business in international markets. These risks include:

- some of our key engineers and other personnel who are foreign nationals may have difficulty gaining access to the United States and other countries in which our customers or our offices may be located;
- 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;
- compliance with, and unexpected changes in, a wide variety of foreign laws and regulatory environments with which we are not familiar;

- currency risk due to the fact that expenses for our international offices are denominated in the local currency, while virtually all of our revenue is denominated in U.S. dollars; and
- economic or political instability.

In Japan, in particular, we face the following additional risks:

- any recurrence of the recent overall downturn in Asian economies could limit our ability to retain existing customers and attract new ones in Asia;
- 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; and
- if any of these risks materialize, we may be unable to continue to market our design-to-silicon yield solutions successfully in international markets.

Competition in the market for solutions that address yield improvement and integration between IC design and manufacturing may intensify in the future, which could slow 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. 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. Currently, we are not aware of any other provider of comprehensive commercial solutions for systematic IC yield and performance enhancement. We face indirect competition from the internal groups at IC companies that use an incomplete set of components that is not optimized to accelerate their process-design integration. Some providers of yield management software or inspection equipment may seek to broaden their product offerings and compete with us. For example, KLA-Tencor has announced adding the use of test structures to one of their inspection product lines. Additionally, HPL Technologies, through its acquisition of Test Chip Technologies, has indicated its intent to further utilize test chips in its product offering. 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. If these potential competitors 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 Design-to-Silicon-Yield solutions as a result of the increase in competition.

We must effectively manage and support our recent and planned growth in order for our business strategy to succeed.

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 will also need to switch to a new accounting system in the near future, which could disrupt our business operations and distract management. 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. 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 technical support personnel, to adequately, and accurately, respond to and support our customers. If we fail to do this, it could lead to dissatisfaction among our customers, which could slow our growth.

Our 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. Given the time pressures involved in bringing IC products to market, targeted customers may proceed without us if we are not able to commence their solution implementation on time. Due to our lengthy sales cycle, we may be unable to replace these targeted implementations in a timely manner, which could cause fluctuations in our operating results.

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.

Our chief executive officer and our executive vice president of sales, marketing and business development 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 John Kibarian, our President and Chief Executive Officer, and David Joseph, our Executive Vice President, Sales, Marketing and Business Development. If we lose the services of either of these key executives, it could slow execution of our business plan, hinder our product development processes and impair our sales efforts. Searching for their replacements could divert our other 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. We do not have long-term employment agreements with these 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.

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 copyright, trademark and trade secret protection. Whether or not patents are granted to us, litigation may be necessary 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. In the future, we intend to rely primarily on a combination of patents, copyrights, trademarks and trade secrets to protect our proprietary rights and prevent competitors from using our proprietary technologies in their products. These laws and procedures provide only limited 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.

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. For example, in May 2001, we were named as a defendant in a lawsuit claiming, among other things, that we misappropriated trade secrets in connection with hiring an employee. We are defending ourselves against the claims, which we believe to be without merit. We do not believe that this litigation, or resolution of this litigation, will have a material negative impact on our business. In general, however, 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 and software tools could decrease our revenue and our competitive market share.

If the software 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 Design-to-Silicon-Yield solutions. Any actual or perceived defects with our software 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 or proprietary technologies or enhancements to existing software or proprietary technologies. Our software or proprietary technologies may contain errors not discovered until after customer implementation of the silicon design and manufacturing process recommended by us. If our software or proprietary technologies contain errors or defects, it could require us to expend significant resources to alleviate these problems, which could result in the diversion of technical and other resources from our other development efforts.

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

We currently anticipate that our available cash resources will be sufficient to meet our presently anticipated working capital and capital expenditure requirements for at least the next 12 months. However, we may need to raise additional funds in order to:

- support more rapid expansion;
- develop or enhance Design-to-Silicon-Yield solutions;
- respond to competitive pressures; or
- acquire complementary businesses or technologies.

These factors will impact our future capital requirements and the adequacy of our available funds. We may need to raise additional funds through public or private financings, strategic relationships or other arrangements. We cannot guarantee that we will be able to raise any necessary funds on terms favorable to us, or at all.

General economic conditions may reduce our revenues and harm our business.

As our business has grown, we have become increasingly subject to the risks arising from adverse changes in domestic and global economic conditions and in particular, the possible disruption in commercial activities occasioned by terrorist activity and armed conflict. Because of recent events and the worldwide economic slowdown, and in the United States in particular, many industries are delaying or reducing technology purchases. The impact of these events and this slowdown on us is difficult to predict, but it may result in reductions in purchases of our technologies and services by our customers, longer sales cycles and increased price competition. As a result, if terrorist-related events or the current economic slowdown continues or

worsens, we may fall short of our revenue expectations for any given quarter in fiscal 2002 or for the entire year. These conditions would negatively affect our business and results of operations.

We may not be able to expand our 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 the German company we acquired or of any additional acquisitions we might make. These difficulties could disrupt our ongoing business, distract our management and employees and increase our expenses.

The semiconductor industry is cyclical in nature.

Our revenue is highly dependent upon the overall condition of the semiconductor industry, especially in light of our gain share 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, characterized by diminished product demand, accelerated erosion of average selling prices and production overcapacity. One such downturn commenced during the third quarter of calendar 2000 and is continuing currently. For example, during this downturn one of our largest customers, Toshiba, announced layoffs of some of its employees, which could be indicative of decreased demand for some of its products. 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.

Semiconductor companies are subject to risk of natural disasters.

Semiconductor companies have in the past experienced major reductions in foundry capacity due to earthquakes in Taiwan, Japan and California. In light of our gain share revenue component, our results of operations can be significantly decreased if one of our customers must shut down IC production due to a natural disaster such as earthquake, fire, tornado or flood. Moreover, since semiconductor product life cycles have become relatively short, a significant delay in the production of a product could result in lost revenue, not merely delayed revenue.

Management will have broad discretion as to the use of proceeds from our initial public offering and, as a result, we may not use the proceeds to the satisfaction of our stockholders.

On August 1, 2001, we closed our initial public offering. Our board of directors and management have broad discretion in allocating the net proceeds therefrom. They may choose to allocate such proceeds in ways that do not produce a favorable return or are not supported by our stockholders. We have designated only limited specific uses for the net proceeds from our initial public offering.

The concentration of our capital stock ownership with insiders will likely limit your ability to influence corporate matters.

The concentration of ownership of our outstanding capital stock with our directors and executive officers may limit your ability to influence corporate matters. Our directors, executive officers and their affiliates, beneficially own a significant portion of our outstanding capital stock. As a result, these stockholders, if acting together, will have the ability to control all matters submitted to our stockholders for approval, including the election and removal of directors and the approval of any corporate transactions.

We have anti-takeover defenses that could delay or prevent an acquisition of our company.

Provisions of our certificate of incorporation and bylaws and Delaware law could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our stockholders.

Our stock price is likely to be extremely volatile as the market for technology companies' stock has recently experienced extreme price and volume fluctuations.

Volatility in the market price of our common stock could result in securities class action litigation. Any litigation would likely result in substantial costs and a diversion of management's attention and resources. Despite the strong pattern of operating losses of technology companies, the market demand, valuation and trading prices of these companies have been high. At the same time, the share prices of these companies' stocks have been highly volatile and have recorded lows well below their historical highs. As a result, investors in these companies often buy the stock at very high prices only to see the price drop substantially a short time later, resulting in an extreme drop in value in the stock holdings of these investors. Our stock may not trade at the same levels as other technology stocks. In addition, technology stocks in general may not sustain current market prices.

A large number of shares becoming eligible for sale could cause our stock price to decline.

Sales of a substantial number of shares of our common stock could cause our stock price to fall. Our current stockholders hold a substantial number of shares, which they are able to sell, from time-to-time, in the public market.

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, 2001, we had cash and cash equivalents of $70.8 million, consisting of cash and highly liquid money market instruments with maturities of less than 90 days. Because of the short maturities of these 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. Changes in market interest rates will affect the fair market value of these notes. A hypothetical increase in market interest rates of 10% from the market rates in effect at December 31, 2001 would cause the fair value of these investments to decrease by an immaterial amount and 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 increased interest expense.

Foreign Currency and Exchange Risk. Virtually all of our revenue is denominated in U.S. dollars, although such revenue is derived substantially from foreign customers. Some foreign sales to date, generated by our German subsidiary since the date of the AISS acquisition, have been invoiced in local currencies, creating receivables denominated in currencies other than the U.S. dollar. The risk due to foreign currency fluctuations associated with these receivables is partially reduced by local payables denominated in the same currencies, and presently we do not consider it necessary to hedge these exposures. We intend to monitor our foreign currency exposure, and may use financial instruments to limit this exposure. There can be no assurance that exchange rate fluctuations will not have a materially 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 14(a)(1) and begin at page 31 of this Annual Report on Form 10-K.

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

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 the Registrant's Proxy Statement to be filed with the Securities and Exchange Commission in connection with the 2002 Annual Meeting of Stockholders (the Proxy Statement"). The Proxy Statement will be filed within 120 days after the end of our fiscal year ended December 31, 2001.

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

(a) Information with respect to the directors of the Registrant appears in the Registrant's Proxy Statement under "Proposal No. 1 — Election of Directors — Nominees for the Board of Directors." This portion of our Proxy Statement 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.

(b) Information with respect to compliance with Section 16(a) of the Exchange Act of 1934, as amended, appears in the Registrant's Proxy Statement under "Section 16 Beneficial Ownership Reporting Compliance." This portion of our Proxy Statement is incorporated herein by reference.

Item 11. ***Executive Compensation.***

The information required by this item is incorporated herein by reference to the sections entitled "Compensation of Executive Officers and Other Matters — Executive Compensation."

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

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

PART IV

Item 14. ***Exhibits, Financial Statement Schedules and Reports on Form 8-K.***

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

(1) Financial Statements and Report of Deloitte & Touche LLP

See Index to Consolidated Financial Statements on page 31 hereof.

(2) Valuation and Qualifying Account

(3) Exhibits

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

(b) Reports on Form 8-K

None.

PDF SOLUTIONS, INC.

INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

INDEPENDENT AUDITORS' REPORT

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

We have audited the accompanying consolidated balance sheets of PDF Solutions, Inc. and subsidiaries (collectively, the "Company") as of December 31, 2001 and 2000 and the related consolidated statements of operations, stockholders' equity (deficiency), and cash flows for each of the three years in the period ended December 31, 2001. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated 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, 2001 and 2000 and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2001, in conformity with accounting principles generally accepted in the United States of America.

/s/ DELOITTE & TOUCHE LLP

San Jose, California
January 18, 2002

PDF SOLUTIONS, INC.

CONSOLIDATED BALANCE SHEETS
(In thousands, except per share amounts)

	December 31, 2001	December 31, 2000
ASSETS		
Current assets:		
Cash and cash equivalents	$ 70,835	$ 7,626
Accounts receivable, net of allowances of $292 in 2001, and $192 in 2000	5,546	3,950
Prepaid expenses and other current assets	3,439	576
Total current assets	79,820	12,152
Property and equipment, net	2,179	1,561
Intangible assets, net	1,169	1,670
Other assets	148	131
Total assets	$ 83,316	$ 15,514
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIENCY)		
Current liabilities:		
Accounts payable	$ 738	$ 514
Accrued compensation and related benefits	4,061	2,203
Other accrued liabilities	1,826	1,772
Taxes payable	230	15
Deferred revenues	2,773	1,870
Billings in excess of recognized revenue	174	1,053
Notes payable	—	995
Current portion of long-term debt	24	22
Total current liabilities	9,826	8,444
Long-term debt	31	56
Deferred tax liability	505	532
Deferred rent	70	51
Series A convertible preferred stock, $0.00015 par value, 5,833 shares authorized, issued and outstanding in 2000; no shares authorized, issued and outstanding in 2001	—	3,497
Series B convertible preferred stock, $0.00015 par value, 367 shares authorized and 351 shares issued and outstanding in 2000; no shares authorized, issued and outstanding in 2001	—	4,960
Commitments and contingencies (Note 5)		
Stockholders' equity (deficiency):		
Preferred stock, $0.00015 par value, 5,000 shares authorized, no shares issued and outstanding in 2001	—	—
Common stock, $0.00015 par value, 75,000 shares authorized: shares issued and outstanding 22,980 in 2001 and 10,903 in 2000	3	2
Additional paid-in capital	98,651	25,386
Deferred stock-based compensation	(4,326)	(11,882)
Notes receivable from stockholders	(6,052)	(5,646)
Accumulated deficit	(15,369)	(9,878)
Accumulated other comprehensive loss	(23)	(8)
Total stockholders' equity (deficiency)	72,884	(2,026)
Total liabilities and stockholders' equity (deficiency)	$ 83,316	$ 15,514

See notes to consolidated financial statements.

PDF SOLUTIONS, INC.

CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share amounts)

	Years Ended December 31,		
	2001	2000	1999
	(In thousands, except per share amounts)		
Revenue:			
Design-to-silicon-yield solutions	$26,739	$15,538	$10,567
Gain share	8,733	4,597	1,257
Total revenue	35,472	20,135	11,824
Costs and expenses:			
Cost of design-to-silicon-yield solutions	11,843	6,915	4,091
Research and development	12,196	6,418	3,087
Selling, general and administrative	11,006	7,332	4,295
Offering costs	—	1,258	—
Stock-based compensation amortization*	7,371	7,293	68
Total costs and expenses	42,416	29,216	11,541
Income (loss) from operations	(6,944)	(9,081)	283
Interest and other income, net	1,232	347	105
Income (loss) before taxes	(5,712)	(8,734)	388
Tax provision (benefit)	(1,840)	363	533
Net loss	(3,872)	(9,097)	(145)
Preferred dividends	(1,619)	—	—
Net loss attributable to common stockholders	$(5,491)	$(9,097)	$ (145)
Net loss per share — basic and diluted	$ (0.38)	$ (1.24)	$ (0.02)
Shares used in computing basic and diluted net loss per share	14,425	7,356	6,086
*Stock-based compensation amortization:			
Cost of design-to-silicon yield solutions	$ 1,996	$ 1,715	$ 20
Research and development	3,227	4,016	48
Selling, general and administrative	2,148	1,562	—
	$ 7,371	$ 7,293	$ 68

See notes to consolidated financial statements.

PDF SOLUTIONS, INC.

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIENCY)
(In thousands)

	Common Stock		Additional Paid-In Capital	Deferred Stock-Based Compensation	Notes Receivable From Stockholders	Accumulated Deficit	Accumulated Other Comprehensive Loss	Total
	Shares	Amount						
Balances, January 1, 1999	7,101	$1	$ 468	$ (75)	$ (238)	$ (636)	$ —	$ (480)
Collection of notes receivable from stockholders					7			7
Repurchase of common stock through cancellation of note receivable	(121)		(18)		18			—
Exercise of options	347		50		(12)			38
Compensatory stock arrangements for non-employees primarily remeasurement			37	(37)				—
Amortization of non-employee stock-based compensation				68				68
Net loss						(145)		(145)
Balances, December 31, 1999	7,327	1	537	(44)	(225)	(781)	—	(512)
Collection of notes receivable from stockholders					9			9
Exercise of options	3,440	1	5,757		(5,479)			279
Repurchase of common stock through cancellation of note receivable	(30)		(49)		49			—
Compensatory stock arrangements for non-employees			377	(377)				—
Remeasurement of compensatory stock arrangements for non-employees			539	(539)				—
Cancellation of unvested non-employee options			(302)	302				—
Compensatory stock arrangements for employees			18,662	(18,662)				—
Reversal of employee stock-based compensation for cancelled shares			(145)	145				—
Issuance of common stock upon exercise of warrants	166		10					10
Amortization of employee stock-based compensation				6,642				6,642
Amortization of non-employee stock-based compensation				651				651
Net loss						(9,097)		
Cumulative translation adjustment							(8)	
Comprehensive loss								(9,105)
Balances, December 31, 2000	10,903	2	25,386	(11,882)	(5,646)	(9,878)	(8)	(2,026)
Collection of notes receivable from stockholders					46			46
Repurchase of common stock through cancellation of notes receivable	(68)		(535)	437	98			—
Issuance of common stock in connection with IPO, net of issuance costs of $5.6 million	5,175	1	56,465					56,466
Sale of common stock to Applied Materials net of issuance costs of $120	500		5,880					5,880
Conversion of preferred stock to common	6,333		8,456					8,456
Exercise of options	81		560		(550)			10
Stock-based compensation expense			252					252
Issuance of common stock in connection with employee stock purchase plan	56		568					568
Amortization of employee stock-based compensation				7,113				7,113
Amortization of non-employee stock-based compensation				6				6
Net loss						(3,872)		
Cumulative translation adjustment							(15)	
Comprehensive loss								(3,887)
Preferred dividends			1,619			(1,619)		
Balances, December 31, 2001	22,980	$3	$98,651	$ (4,326)	$(6,052)	$(15,369)	$(23)	$72,884

See notes to consolidated financial statements.

PDF SOLUTIONS, INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,		
	2001	2000	1999
	(In thousands)		
Operating activities:			
Net loss	$(3,872)	$(9,097)	$ (145)
Adjustments to reconcile net loss to net cash provided by operating activities:			
Depreciation and amortization	1,406	833	304
Stock-based compensation expense	7,371	7,293	68
Loss (gain) on the sale of property and equipment	16	15	(1)
Deferred revenues	903	1,514	(132)
Deferred tax asset	(2,397)	—	—
Changes in assets and liabilities, net of effect of acquisition:			
Accounts receivable	(1,596)	(815)	(699)
Prepaid expenses and other assets	(483)	(540)	(7)
Accounts payable	224	224	144
Accrued compensation and related benefits	1,858	1,100	757
Billings in excess of recognized revenue	(879)	1,053	(3)
Other accrued liabilities and taxes payable	261	321	(14)
Net cash provided by operating activities	2,812	1,901	272
Investing activities:			
Purchases of property and equipment	(1,547)	(1,203)	(549)
Proceeds from sale of equipment	7	—	13
Acquisition of AISS, net of cash acquired	—	(225)	—
Net cash used in investing activities	(1,540)	(1,428)	(536)
Financing activities:			
Net cash proceeds from initial public offering	56,466	—	—
Net cash proceeds from sale of common stock to Applied Materials	5,880	—	—
Exercise of stock options and warrants	10	289	38
Proceeds from the sale of preferred stock	—	4,960	—
Proceeds from employee stock purchase plan	568	—	—
Repayment of notes payable	(995)	—	—
Collection of notes receivable from stockholders	46	9	7
Principal payments on long-term debt	(23)	(30)	(3)
Net cash provided by financing activities	61,952	5,228	42
Effect of exchange rate changes on cash	(15)	(8)	—
Net increase (decrease) in cash and cash equivalents	63,209	5,693	(222)
Cash and cash equivalents, beginning of period	7,626	1,933	2,155
Cash and cash equivalents, end of period	$70,835	$ 7,626	$1,933
Noncash investing and financing activities:			
Preferred stock dividend	$ 1,619	$ —	$ —
Conversion of preferred stock into common stock	$ 8,456	$ —	$ —
Common stock issued for notes receivable	$ 550	$ 5,479	$ 12
Property acquired under capital lease	$ —	$ —	$ 90
Notes payable issued to acquire AISS	$ —	$ 995	$
Repurchase of common stock through repayment of notes receivable	$ 98	$ 49	$ 18
Supplemental disclosure of cash flow information —			
Cash paid during the year for:			
Taxes	$ 555	$ 582	$ 403
Interest	$ 7	$ 5	$ 1

See notes to consolidated financial statements.

1. Business and Significant Accounting Policies

PDF Solutions, Inc. (the "Company"), provides comprehensive 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. Certain amounts from prior years have been reclassified to conform to current-year presentation. These reclassifications did not change previously reported total assets, liabilities, stockholders' equity or net loss.

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 require estimates in regards to total costs which may be incurred and revenues earned. Other significant management estimates include an allowance for doubtful accounts receivable and realization of deferred income taxes. Actual results could differ from these estimates.

Certain Significant Risks and Uncertainties — The Company operates in the dynamic semiconductor and software industry, 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; and new product introductions by competitors. Due to protracted delays in the Company's initial public offering, the Company expensed offering costs of $1.3 million in the quarter ended December 31, 2000.

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 high credit quality financial institutions.

The Company primarily sells its products to companies in Japan 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, 2001 and 2000, two customers accounted for 60% and 49% of the Company's gross accounts receivable, respectively. For the years ended December 31, 2001, 2000 and 1999, two customers accounted for 63%, 59% and 72% of the Company's total revenue, respectively. 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 less to be cash equivalents.

Accounts Receivable — Accounts receivable include amounts that are unbilled at the end of the period. Unbilled accounts receivable are determined on an individual contract basis and were approximately $1.9 million and $365,000 at December 31, 2001 and 2000, respectively.

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

Computer and equipment	3 years
Software	3 years
Furniture, fixtures, and equipment	5-7 years

Intangible Assets — Intangible assets are related to the business acquisition discussed in Note 2. Amortization is recorded on a straight-line basis over a period of four years.

Impairment of Long-Lived Assets — In accordance with Statement of Financial Accounting Standards (SFAS) No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of*, the Company evaluates its long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. When the sum of the undiscounted future net cash flows expected to result from the use of the asset and its eventual disposition is less than its carrying amount, an impairment loss would be measured based on future cash flows, discounted at the Company's incremental borrowing rate, compared to the carrying amount. No impairment charge has been recorded in any of the periods presented.

Notes Receivable from Stockholders — The notes receivable from stockholders are full recourse notes issued in exchange for common stock. Notes outstanding at December 31, 2001 and 2000, bear interest at rates ranging from 4.46% to 7.75% per annum. The notes are generally payable over periods of two to four years.

Revenue Recognition — The Company derives revenue from two sources: design-to-silicon yield solutions and gain share. The Company recognizes revenues in accordance with the provisions of American Institute of Certified Public Accountants Statement of Position ("SOP") 97-2, *Software Revenue Recognition*, as amended, and SOP 81-1, *Accounting for Performance of Construction-Type and Certain Production-Type Contracts.*

Design-to-Silicon Yield Solutions — Design-to-silicon yield solutions revenue is derived from solution implementations, software licenses and software support and maintenance. Revenue recognition for each element of design-to-silicon yield solutions is summarized as follows:

Solution Implementations — 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 revision become known and can be estimated.

Software Licenses — The Company has entered into a few multi-year time based licenses, generally three years. Revenue under arrangements which require the Company to provide support and maintenance over a period of time, where vendor-specific objective evidence of fair value does not exist to allocate a portion of the total fee to the undelivered elements, are recognized ratably over the term of the agreement. No revenue under arrangements with extended payment terms has been recognized in excess of amounts due.

Other license fees are recognized on the residual value method: (i) when an agreement has been signed, the software has been delivered, the license fee is fixed or determinable and collection of the fee is probable or (ii) as a component of a related solution implementation contract.

Software Support and Maintenance — Amounts allocated to undelivered support and maintenance are based on vendor specific objective evidence, generally negotiated renewal rates. Revenue

from allocated support and maintenance and renewals is recognized ratably over the term of the support and maintenance contract, generally one year.

Gain Share — Gain share revenue represents profit sharing and performance incentives earned based upon its customer reaching certain defined operational levels. Upon achieving such operational levels, the Company receives either a fixed fee and/or royalties based on the units sold by the customer. Due to the uncertainties surrounding attainment of such operational levels, the Company recognizes gain share revenue (to the extent of completion of the related solution implementation contract) upon receipt of performance reports or other related information from the customer supporting the determination of amounts and probability of collection.

Software Development Costs — Costs for the development of new software products and substantial enhancements to existing software products are expensed as incurred until technological feasibility has been established, at which time any additional costs would be capitalized in accordance with Statement of Financial Accounting Standards (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 — The Company accounts for stock-based compensation in accordance with the provisions of Accounting Principles Board Opinion No. 25 ("APB No. 25"), *Accounting for Stock Issued to Employees*, and complies with the disclosure provisions of Statement of Financial Accounting Standards No. 123 ("SFAS No. 123"). Deferred compensation recognized under APB No. 25 is amortized to expense using the graded vesting method. The Company accounts for stock options and warrants issued to non-employees in accordance with the provisions of SFAS No. 123 and Emerging Issues Task Force No. 96-18 under the fair value based method.

Net Loss per Share — Basic net loss per share excludes dilution and is computed by dividing net loss attributable to common stockholders by the weighted average number of common shares outstanding for the period (excluding shares subject to repurchase). Diluted net loss per share was the same as basic net loss per share for all periods presented since the effect of any potentially dilutive securities is excluded as they are anti-dilutive because of the Company's net losses.

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.

Comprehensive Loss — Statement of Financial Accounting Standards (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 loss is presented within the statement of stockholders' equity (deficiency). Accumulated other comprehensive loss at December 31, 2001 and 2000 is comprised entirely of cumulative translation adjustments.

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 amounts of the Company's capital lease obligations approximate the fair value of such instruments based upon management's best estimate of interest rates that would be available to the Company for similar debt obligations at December 31, 2001.

Recently Issued Accounting Standards — In June 1998, the Financial Accounting Standards Board (FASB) issued SFAS No. 133, *Accounting for Derivative Instruments and Hedging Activities*. This statement requires companies to record derivatives on the balance sheet as assets or liabilities measured at fair value.

Gains or losses resulting from changes in the values of those derivatives would be accounted for depending on the use of the derivative and whether it qualifies for hedge accounting. The Company adopted SFAS No. 133, as amended, on January 1, 2001. The adoption of this statement did not have an effect on the Company's financial position, results of operations or cash flows as it had no stand-alone or embedded derivatives at December 31, 2000 and has not entered into any derivative transactions to hedge currency or other exposures.

As a matter of policy, the Company does not currently enter into transactions involving derivative financial instruments. In the event the Company does enter into such transactions in the future, such items will be accounted for in accordance with SFAS No. 133, in which case the Company will formally document all relationships between hedging instruments and hedged items, as well as its risk-management objective and strategy for undertaking such hedge transactions.

In June 2001, the FASB issued SFAS No. 141, *Business Combinations* and SFAS No. 142, *Goodwill and Other Intangible Assets.* SFAS No. 141 requires that all business combinations initiated after June 30, 2001 be accounted for under the purchase method and addresses the initial recognition and measurement of goodwill and other intangible assets acquired in a business combination. SFAS No. 142 addresses the initial recognition and measurement of intangible assets acquired outside of a business combination and the accounting for goodwill and other intangible assets subsequent to their acquisition. SFAS No. 142 provides that intangible assets with finite useful lives be amortized and that goodwill and intangible assets with indefinite lives not be amortized, but will rather be tested at least annually for impairment. The Company will adopt SFAS No. 142 for its fiscal year beginning January 1, 2002. Upon adoption of SFAS No. 142, the Company will stop the amortization of goodwill with a net carrying value of approximately $784,000 at the date of adoption and annual amortization of approximately $336,000 that resulted from a business combination completed prior to the adoption of SFAS No. 141.

In June 2001, the FASB issued SFAS No. 143, Accounting for Asset Retirement Obligations. SFAF No. 143 addresses the financial and reporting for obligations associated with the retirement of tangible long-lived assets and the associated asset retirement costs. This statement is effective for fiscal years beginning after June 15, 2002, however early application is permitted. The Company will adopt SFAF No. 143 on January 1, 2003. The Company is currently in the process of evaluating the impact of this statement on its financial position and operating results.

In October 2001, the FASB issued SFAS No. 144, "Accounting for Impairment or Disposal of Long-Lived Assets." SFAS No. 144 supersedes SFAS No. 121, "Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed Of," and addresses financial accounting and reporting for the impairment or disposal of long-lived assets. PDF Solutions will adopt SFAS No. 144 on January 1, 2002. The Company does not expect the adoption of this statement to have a material effect on its financial position and operating results.

In November 2001, the FASB issued a Staff Announcement Topic D-103 (Topic D-103), "Income Statement Characterization of Reimbursements Received for Out-of-Pocket Expenses Incurred." Topic D-103 establishes that reimbursements received for out-of-pocket expenses should be reported as revenue in the statement of operations. Currently, the Company classifies reimbursed out-of-pocket expenses as a reduction of cost of Design-to-Silicon-Yield solutions revenue. The Company is required to adopt this guidance effective in the first quarter of fiscal 2002. The Company's adoption of Topic D-103 will result in increased Design-to-Silicon-Yield solutions revenue and increased costs of Design-to-Silicon-Yield solutions revenue of $1.4 million, $1.1 million and $552,000 for the years ended December 31, 2001, 2000 and 1999, respectively. The Company's adoption of Topic D-103 will not affect its net income or loss in any past periods.

2. Business Combination

On April 27, 2000, the Company acquired all of the outstanding common stock of AISS, a German company, for $1.25 million, consisting of $995,000, in notes payable which bore interest at 7% per annum and $255,000 in cash. AISS develops software and provides yield management services to the semiconductor industry. The note was paid off in fiscal 2001.

The acquisition was accounted for using the purchase method and the operating results of AISS have been included in the consolidated statements of operations since the date of acquisition. The excess purchase price (including costs of acquisition) over the fair value of the tangible assets and liabilities assumed, totaled $2.0 million and represents acquired technology, employee workforce and goodwill which is being amortized on a straight line basis over a period of four years. Amortization expense totaled $501,000 and $338,000 for the years ended December 31, 2001 and 2000, respectively. Upon adoption of SFAS 142 on January 1, 2002, the Company will no longer amortize the carrying value of goodwill of $784,000 at December 31, 2001, resulting in a reduction in annual amortization expense of $336,000.

The fair value of the assets acquired and liabilities assumed were as follows (in thousands):

Cash	$ 30
Accounts receivable	386
Other assets	27
Property and equipment	46
Acquired technology	662
Employee workforce	540
Goodwill	807
Accrued acquisition cost	(113)
Less liabilities assumed	(509)
Deferred tax liability	(626)
	$1,250

Had the acquisition taken place at the beginning of fiscal 2000 and 1999 respectively, the unaudited pro forma results of operations would have been as follows for the years ended December 31, 2000 and 1999 (in thousands, except per share data):

	2000	1999
	(Unaudited)	
Net revenues	$20,457	$12,836
Net loss	(9,131)	(386)
Net loss per share — basic and diluted	(1.24)	(0.06)

The pro forma results of operations give effect to certain adjustments, including amortization of purchased intangibles and goodwill, interest charges on the note issued in connection with the acquisition, and the elimination of sales between the Company and AISS.

The pro forma amounts are based on certain assumptions and estimates and do not necessarily represent results which would have occurred if the acquisition had taken place on the basis assumed above, nor are they indicative of results of future combined operations.

3. Property and Equipment

Property and equipment consist of:

	December 31,	
	2001	2000
	(In Thousands)	
Computer equipment	$ 2,557	$ 1,810
Software	1,254	507
Furniture, fixtures, and equipment	515	428
Construction in progress	—	81
	4,326	2,826
Accumulated depreciation	(2,147)	(1,265)
	$ 2,179	$ 1,561

4. Other Accrued Liabilities

Other accrued liabilities consist of:

	2001	2000
	(In Thousands)	
Accrued commissions	$ 724	$ 788
Other accrued expenses	1,102	984
Total other accrued expenses	$1,826	$1,772

5. Lease Commitments

Equipment with a net book value of $53,000 and $71,000, at December 31, 2001 and 2000, respectively (net of accumulated amortization of $40,000 and $21,000), has been leased under capital leases which expire in 2004. The Company leases administrative and sales offices and other equipment under noncancelable operating leases which contain various renewal options and require payment of common area costs, taxes and utilities, when applicable. These operating leases expire from 2002 to 2006.

Future minimum lease payments under capital and noncancelable operating leases at December 31, 2001 are as follows:

Year Ending December 31,	Capital Leases	Operating Leases
	(In Thousands)	
2002	$ 19	$2,246
2003	19	1,505
2004	15	1,014
2005	—	355
2006	—	350
Thereafter	—	—
Total future minimum lease payments	53	$5,470
Less amount representing interest (ranging from 7.32% to 9.25%)	(6)	
Present value of future minimum lease payments	47	
Less current portion	(16)	
Long-term portion	$ 31	

Rent expense was $1.8 million, $906,000, $379,000 in 2001, 2000 and 1999, respectively.

6. Borrowing Arrangements

Line of Credit

The Company's German subsidiary has a secured line of credit with a bank of approximately $65,000. Borrowings under the line of credit are for working capital requirements and other general corporate purposes and bear interest at 9.5%. At December 31, 2001 and December 31, 2000 no amounts were outstanding under the agreement.

Long-term Debt

Long-term debt consists of:

	December 31, 2001	December 31, 2000
	(In Thousands)	
Term debt (interest at 6.4%)	$ 8	$ 16
Capital leases (see Note 5)	47	62
Total	55	78
Current portion	(24)	(22)
Long-term portion	$ 31	$ 56

Future payment requirements of the term debt at December 31, 2001 were $7,200 and $1,300 for the years ending December 2002 and 2003, respectively.

7. Stockholders Equity

Stock Split — On July 6, 2001 the Company amended and restated its articles of incorporation to effect a two-for-three reverse stock split of the Company's common and preferred stock. All share and per share

amounts reflected in the consolidated financial statements have been restated to give effect to the two-for-three reverse stock split.

Initial Public Offering and Concurrent Private Placement — On July 6, 2001 the Company amended and restated its articles of incorporation to provide for the automatic conversion of all outstanding Series A and Series B convertible preferred stock upon consummation of a public offering in which the Company receives proceeds equal to or greater than $7,500,000; provided that in the event the public offering price was less than $14.25 per share, the Series B preferred stock would be converted into an aggregate of 499,987 shares of common stock.

On July 26, 2001 the Company completed its initial public offering in which it sold 5,175,000 shares of its common stock. The net proceeds from the offering totaled $56.5 million. Concurrent with this offering, the Company completed the private placement of 500,000 shares of its common stock to Applied Materials, Inc. Net proceeds of this concurrent private placement totaled $5.9 million. Based on the initial public offering price of $12 per share the Company's then outstanding Series A and Series B Convertible Preferred Stock were automatically converted into an aggregate of 6,333,318 shares of common stock and the company recorded a one-time dividend charge of $1.6 million in the third quarter of 2001, representing the fair value of additional shares issued to the Series B convertible preferred stockholders in excess of the shares issuable pursuant to the original terms of the Series B convertible preferred stock.

Common Stock — Common stock issued to the founders and certain other employees are subject to repurchase agreements whereby the Company has the option to repurchase the unvested shares upon termination of employment at the original issue price. The Company's repurchase right generally lapses over four years. At December 31, 2001, 1,547,929 shares of common stock were subject to repurchase by the Company.

As of December 31, 2001 the Company has reserved 4,132,799 shares of common stock for issuance and exercise of options.

Stock Plans — During fiscal 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 automatically increase by the lesser of (i) 3,000,000 shares, (ii) 5% of the outstanding common stock on the last day of the immediately preceding fiscal year, or (iii) the number of shares determined by the board of directors. The Company may grant up to 3,000,000 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. As of December 31, 2001 2,621,796 shares were available for grant. 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.

At December 31, 2001 and 2000 there were no outstanding options which had been granted outside of the Plans. At December 31, 1999 there were 67,660 shares which had been granted outside of the Plans.

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

	Number of Options	Weighted Average Exercise Price Per Share
Balance, January 1, 1999	1,358,435	$ 0.12
Granted (weighted average fair value of $0.11 per share)	497,656	0.38
Exercised	(347,426)	0.15
Canceled	(107,986)	0.15
Outstanding, December 31, 1999 (558,272 shares vested and exercisable at a weighted average exercise price of $0.13 per share)	1,400,679	0.20
Granted (weighted average fair value of $7.16 per share)	2,647,019	2.73
Exercised	(3,440,070)	1.68
Canceled	(236,552)	0.39
Outstanding, December 31, 2000 (24,971 shares vested and exercisable at a weighted average exercise price of $0.22 per share)	371,076	4.43
Granted (weighted average fair value of $4.35 per share)	1,277,568	11.89
Exercised	(81,348)	6.88
Canceled	(56,293)	2.44
Outstanding, December 31, 2001 (157,234 shares vested and exercisable at a weighted average exercise price of $6.56 per share)	1,511,003	$10.68

Additional information regarding options outstanding as of December 31, 2001 is as follows:

	Options Outstanding			Options Exercisable	
Exercise Prices	Number Outstanding	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price Per Share	Number Vested And Exercisable	Weighted Average Exercise Price Per Share
$ 0.06 - $ 1.90	89,356	8.1	$ 1.48	43,700	$ 1.26
$ 1.91 - $ 3.80	16,666	8.5	$ 3.00	6,249	$ 3.00
$ 3.81 - $ 9.50	140,997	8.6	$ 6.25	48,741	$ 6.24
$ 9.51 - $11.40	945,567	9.6	$10.90	48,589	$10.98
$11.40 - $13.30	29,333	8.7	$12.00	9,165	$12.00
$13.31 - $15.20	202,834	9.7	$14.55	790	$13.72
$15.21 - $17.10	56,250	9.9	$15.93	—	—
$17.11 - $19.00	30,000	10.0	$19.00	—	—
	1,511,003	9.4	$10.68	157,234	$ 6.56

Employee Stock Purchase Plan — In July 2001, the Company adopted an Employee Stock Purchase Plan, or Purchase Plan, under which eligible employees can contribute up to 10% of their compensation, as defined in the 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 year 2002, the number of shares reserved for issuance will automatically increase by the lesser of (i) 675,000 shares, (ii) 2% of the Company's outstanding common stock on the last day of the immediately preceding fiscal year, or (iii) the number of shares determined by the board of directors. As of December 31, 2001 300,000 shares of the Company's common stock have been reserved for issuance under the employee stock purchase plan. During fiscal year 2001, 55,702 shares were issued at a weighted average price of $10.20 per share and at December 31, 2001, 244,298 shares are available for future issuance under this plan. The weighted average estimated fair value of shares granted under the employee stock purchase plan during fiscal year 2001 was $3.66 per share.

Statement of Financial Accounting Standards No. 123 ("SFAS 123"), *Accounting for Stock-Based Compensation*, requires the disclosure of pro forma net loss as if the Company had adopted the fair value method. Under SFAS 123, the fair value of stock-based awards to employees is calculated through the use of option pricing models, even though such models were developed to estimate the fair value of freely tradable, fully transferable options without vesting restrictions, which significantly differ from the Company's stock option awards. These models also require subjective assumptions, including expected time to exercise, which affect the calculated values.

The weighted average fair value of the Company's stock-based awards to employees under the above plans was estimated using the minimum value method through July 26, 2001 and from then forward using the Black-Scholes option pricing model with the following weighted average assumptions as of December 31:

	Stock Plans			Employee Stock Purchase Plan
	2001	2000	1999	2001
Estimated life (in years)	5.5	5.5	5.5	.5
Volatility	66.6%	—	—	66.6%
Risk-free interest rate	4.7%	6.7%	6.0%	3.5%
Expected dividend	—	—	—	—

For pro forma purposes, the estimated fair value of the Company's stock-based awards to employees is amortized using the accelerated method over the options' vesting period. The Company's pro forma results are as follows (in thousands):

	December 31,		
	2001	2000	1999
Net loss:			
As reported	$(5,491)	$(9,097)	$ (145)
Pro forma	(7,046)	(9,839)	(198)
Basic and diluted net loss per share:			
As reported	$ (0.38)	$ (1.24)	$(0.02)
Pro forma	(0.49)	(1.34)	(0.03)

Stock-Based Compensation

Through December 31, 1999, non-employee options and warrants were valued or revalued, respectively, using the Black-Scholes option pricing model with the following weighted average assumptions; contractual life of 10 years; risk free interest rates ranging from 4.6% to 6%; volatility of 40% or 50%; and no dividends during the expected term. Non-employee options and warrants during the year ended December 31, 2000 were valued or revalued, respectively, using the Black-Scholes option pricing model with the following weighted

average assumptions: contractual life of 10 years; risk free interest rates of 6.7%; volatility of 70%; and no dividends during the expected term. During fiscal year 2001 all deferred stock-based compensation related to non-employee options was expensed.

Common Stock Options

During the years ended December 31, 2000 and 1999 the Company granted nonstatutory options to consultants and advisory board members ("non-employees") to purchase 41,533 and 5,000 shares of common stock. These options had weighted average exercise prices of $1.50 and $0.39 per share, respectively, and vesting periods, which approximated the period of service, of immediately to one year. These options were originally valued at $377,000 and $2,000, respectively. The values attributable to these options have been amortized over the service period on a graded vesting method and the vested portion of these options were remeasured at each vesting date. During fiscal 2001, no options were issued to non-employees. No options related to non-employees were cancelled for the periods ended December 31, 2001 and 1999. For the year ended December 31, 2000, 117,293 non-employee options were cancelled.

During 1998, the Company sold 266,666 shares of common stock to a consultant at $0.15 per share. The Company retained the right to repurchase the shares at the original issue price in the event of termination of service. Such repurchase right lapsed over a period of four years. The Company recorded additional stock-based compensation expense over the service period for the difference between the purchase price and the fair value of the Company's common stock on the date the repurchase right lapsed. During 1999, the Company terminated its remaining repurchase rights and recorded non-employee stock-based compensation of $57,500 with respect to such shares.

During the year ended December 31, 2000, the Company issued 2,605,486 common stock options to employees at a weighted average exercise price of $2.73 per share. The weighted average exercise price was below the weighted average deemed fair value of $9.89 per share. The cumulative deferred stock-based compensation with respect to these grants totaled $18.7 million and is being amortized to expense on a graded vesting method over the four year vesting period of the options through September 2004. During the year ended December 31, 2000, the cancellation of 17,333 of these common stock options resulted in the reversal of $145,000 of employee stock-based compensation. During the year ended December 31, 2001, the Company repurchased 68,073 shares of common stock through cancellation of notes receivable which resulted in a reversal of $437,000 of employee stock-based compensation.

During 2001, the Company accelerated the vesting on options to purchase 15,226 shares of common stock under a separation agreement with an original strike price of $0.15 per share. This action resulted in a modification to the award resulting in a stock compensation charge of $252,000.

Common Stock Warrants

During 1996, the Company issued warrants to purchase 200,000 shares of the Company's common stock at $0.06 per share to acquire software from AISS. The warrants were originally valued at $8,000. The value attributable to these warrants has been amortized over the vesting period of four years, which approximated the useful life of the software, and the vested portion of this warrant was remeasured at each vesting date. In connection with the acquisition of AISS on April 27, 2000, warrants to purchase 33,334 shares were cancelled. No warrants were outstanding at December 31, 2001.

Amortization of employee and non-employee stock-based compensation totaled $7.4 million, $7.3 million and $68,000 in 2001, 2000, and 1999, respectively.

Unvested non-employee options and warrants are as follows as of:

	Unvested Non-employee Options and Warrants	
	Number	Weighted Average Exercise Price Per Share
December 31, 2001	0	$0.00
December 31, 2000	4,861	$0.06
December 31, 1999	169,382	$0.06

8. Net Loss Per Share

The following is a reconciliation of the numerators and denominators used in computing basic and diluted net loss per share (in thousands except per share data):

	Years Ended December 31,		
	2001	2000	1999
Net loss	$(3,872)	$(9,097)	$ (145)
Preferred dividends	(1,619)	—	—
Net loss attributable to common stockholders (numerator), basic and diluted	$(5,491)	$(9,097)	$ (145)
Shares (denominator):			
Weighted average common shares outstanding	16,624	9,445	7,229
Weighted average common shares outstanding subject to repurchase	(2,199)	(2,089)	(1,143)
Shares used in computation — basic and diluted	14,425	7,356	6,086
Net loss per share — basic and diluted	$ (0.38)	$ (1.24)	$ (0.02)

For the above mentioned periods, the Company had securities outstanding which could potentially dilute basic earnings per share in the future, but were excluded in the computation of diluted net loss per share in the periods presented, as their effect would have been anti-dilutive. Such outstanding securities consist of the following (in thousands):

	Years Ended December 31,		
	2001	2000	1999
Convertible preferred stock	—	5,977	5,833
Shares of common stock subject to repurchase	2,199	2,089	1,143
Outstanding options	800	457	1,433
Warrants	—	64	200

9. Tax Provision

	Year Ended December 31,		
	2001	2000	1999
	(In thousands)		
U.S.			
Current	$ 280	$ 313	$ 1
Deferred	(2,280)	—	
Foreign			
Current	177	55	532
Withholding	100	100	
Deferred	(117)	(105)	
Total provision (benefit)	$(1,840)	$ 363	$533

During fiscal 2001 and 2000, respectively, income (loss) before taxes was ($6.2 million) and ($8.8 million) from U.S. operations and income from foreign operations was $451,000 and $38,000, respectively. During fiscal 1999 all income (loss) before taxes was derived from U.S. operations.

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 carryforwards.

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

	December 31,		
	2001	2000	1999
Net operating loss carryforward	$ —	$ —	$ 38
Research and development credit carryforward	759	63	—
Foreign tax credit carryforward	82	544	765
Accruals deductible in different periods	1,201	1,078	(129)
Stock-based compensation	328	324	—
Valuation allowance	—	(2,009)	(674)
Deferred tax assets	2,370	—	—
Intangible assets	(505)	(532)	—
	$1,865	$ (532)	$ —

The Company had established a valuation allowance against certain deferred tax assets due to the uncertainty surrounding the realization of such assets. Annually, management evaluates the recoverability of the deferred tax assets and the level of the valuation allowance. During the fourth quarter of 2001, it was determined that a deferred tax asset valuation allowance was no longer necessary based on evaluation of current evidence and their effect on our estimate of future earnings. Accordingly, the Company reversed its deferred tax valuation allowance of $2.1 million in the fourth quarter.

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

	December 31,		
	2001	2000	1999
Federal statutory tax benefit	$(1,989)	$(3,057)	$136
State tax expense	1	1	3
Stock compensation expense	2,578	2,316	—
Offering costs		440	—
Meals and entertainment	6	4	2
Tax credits	(531)	(751)	—
Foreign tax, net	177	83	130
Valuation allowances	(2,050)	1,335	254
Other	(32)	(8)	8
Total	$(1,840)	$ 363	$533

At December 31, 2001 and 2000, the Company had foreign tax credit carryforwards of approximately $82,000 and $544,000, respectively, available to offset future federal income taxes which begin to expire in 2006. The extent to which the credit carryforwards can be used to offset future taxable income and 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.

10. Customer and Geographic Information

The Company operates in one segment. The Company had net revenues from individual customers in excess of 10% of total revenue as follows:

	Years Ended December 31,		
Customer	2001	2000	1999
A	34%	32%	53%
B	—	—	19%
C	9%	27%	15%
D	4%	15%	—
E	3%	10%	—
F	29%	6%	—

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

	December 31,	
Customer	2001	2000
A	37%	25%
C	5%	13%
D	—	24%
E	—	13%
F	23%	—
G	11%	—

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

	Years Ended December 31,		
	2001	2000	1999
Japan	27,295	13,209	10,684
United States	4,997	6,235	1,140
Europe	3,180	691	—

As of December 31, 2001 and 2000 long-lived assets related to AISS, located in Germany, totaled $1.4 million and $1.8 million, respectively, of which $1.2 million and $1.7 million relates to acquired intangibles (see Note 2). The majority of the Company's remaining long-lived assets are in the United States.

11. 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 are discretionary; no such Company contributions have been made since inception of this plan.

12. Selected Quarterly Financial Data (Unaudited)

	Year Ended December 31, 2001			
	Q1	Q2	Q3	Q4
Total revenue	$ 7,534	$ 8,346	$ 9,226	$10,366
Total costs and expenses	$10,224	$10,548	$10,661	$10,983
Net income (loss)	$(2,743)	$(2,152)	$ (838)	$ 1,861
Preferred dividend	$ —	$ —	$(1,619)	$ —
Net income (loss) applicable to common stockholders	$(2,743)	$(2,152)	$(2,457)	$ 1,861(1)
Net income (loss) per share:				
Basic	$ (0.34)	$ (0.25)	$ (0.12)	$ 0.09
Diluted	$ (0.34)	$ (0.25)	$ (0.12)	$ 0.08

	Year Ended December 31, 2000			
	Q1	Q2	Q3	Q4
Total revenue	$ 3,694	$ 4,582	$ 5,338	$ 6,521
Total costs and expenses	$ 4,102	$ 5,763	$ 8,839	$10,512
Net loss	$ (498)	$(1,323)	$(3,626)	$(3,650)
Net loss applicable to common stockholders	$ (498)	$(1,323)	$(3,626)	$(3,650)
Net loss per share, basic and diluted	$ (0.07)	$ (0.19)	$ (0.46)	$ (0.41)

(1) During the fourth quarter of 2001, it was determined that a deferred tax asset valuation allowance was no longer necessary based on evaluation of current evidence and its effect on the Company's estimate of future earnings. Accordingly, the Company reversed its deferred tax valuation allowance of $2.1 million in the fourth quarter.

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/ P. STEVEN MELMAN
P. Steven Melman
Chief Financial Officer and Vice President, Finance and Administration

Date: April 1, 2002

POWER OF ATTORNEY

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

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

Signature	Title
/s/ JOHN K. KIBARIAN John K. Kibarian	Director, President and Chief Executive Officer (Principal Executive Officer)
/s/ P. STEVEN MELMAN P. Steven Melman	Chief Financial Officer and Vice President, Finance and Administration (Principal Financial and Accounting Officer)
/s/ B.J. CASSIN B.J. Cassin	Director
/s/ LUCIO L. LANZA Lucio L. Lanza	Director
/s/ DONALD L. LUCAS Donald L. Lucas	Director
/s/ KIMON MICHAELS Kimon Michaels	Director

INDEPENDENT AUDITORS' REPORT

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

We have audited the consolidated financial statements of PDF Solutions, Inc. and subsidiaries (collectively, the "Company") as of December 31, 2001 and 2000, and for each of the three years in the period ended December 31, 2001, and have issued our report thereon dated January 18, 2002 included elsewhere in this Annual Report on Form 10-K. Our audits also included the consolidated financial statement schedule listed in Item 14(a) of this Annual Report on Form 10-K. This consolidated financial statement schedule is the responsibility of the Company's management. Our responsibility is to express an opinion based on our audits. In our opinion, such consolidated 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.

/s/ DELOITTE & TOUCHE LLP

San Jose, California
January 18, 2002

Schedule II

PDF SOLUTIONS, INC.

Valuation and Qualifying Account
(In Thousands)

	Balance at Beginning of Period	Charged to Costs and Expenses	Deductions/ Write-offs of Accounts	Balance at End of Period
Allowance for doubtful accounts				
December 31, 2001	$192	$100	$—	$292
December 31, 2000	$144	$ 48	$—	$192
December 31, 1999	$ 93	$ 51	$—	$144

INDEX TO EXHIBITS

Exhibit Number	Description
3.1	Third Amended and Restated Certificate of Incorporation of PDF Solutions, Inc. **
3.2	Amended and Restated Bylaws of PDF Solutions, Inc. **
4.1	Specimen Stock Certificate.**
4.2	Second Amended and Restated Rights Agreement dated July 6, 2001.*
10.6	Technology Cooperation Agreement between PDF Solutions, Inc. and Toshiba Corporation.*†
10.7	Form of Indemnification Agreement between PDF Solutions, Inc. and each of its Officers and Directors.*†
10.8	1996 Stock Option Plan and related agreements. *
10.9	1997 Stock Plan and related agreements.*
10.10	2001 Stock Plan and related agreements.*
10.11	2001 Employee Stock Purchase Plan.*
10.12	Lease Agreement between PDF Solutions, Inc. and Metropolitan Life Insurance Company dated April 1, 1996.*
10.13	Credit Agreements between PDF Solutions, Inc. and Imperial Bank dated July 6, 1999 and August 12, 1999.*
10.14	Offer letter to P. Steven Melman dated July 9, 1998.*
10.15	Integration Technology Agreement between PDF Solutions, Inc. and Matsushita Electronics Corporation.*†
10.16	Software OEM License Agreement between PDF Solutions, Inc. and Cadence Design Systems, Inc.*†
10.17	Yield Improvement Agreement between PDF Solutions, Inc. and Toshiba Corporation.*†
10.18	Software Site License between PDF Solutions, Inc. and Toshiba Corporation.*†
23.1	Independent Auditors' Consent.

* Incorporated by reference to PDF's Registration Statement on Form S-1, as amended (File No. 333-43192).

** Incorporated by reference to PDF's Report on Form 10-Q filed September 6, 2001 (File No. 000-31311).

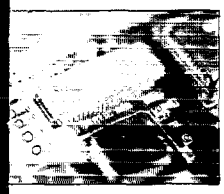
† Portions of this Exhibit have been omitted pursuant to a request for confidential treatment.

Glossary of Terms

Deep Sub-Micron — Describes highly advanced ICs or technologies based on their component feature sizes, or geometries measuring less than 0.20 microns, or millionths of a meter.

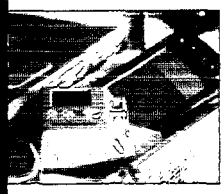
Disaggregation — The split of the semiconductor industry into organizations as well as separate companies that specialize in a particular phase of designing and manufacturing ICs.

Initial Yield — The percentage of manufactured ICs on a wafer that meet specifications on the first run of silicon through a manufacturing process. See also, yield.



Integrated Circuits (ICs) — Technology that combines critical components of a circuit onto a wafer, which are used in an increasingly wide variety of applications, e.g., computer systems, communications infrastructure equipment and consumer products (such as cellular phones, personal digital assistants and game consoles).

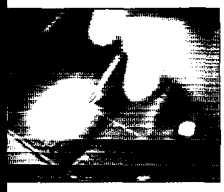
Integrated Device Manufacturer (IDM) — Semiconductor company that designs and makes IC products with its own manufacturing facility.



Materials and Process Technologies — New materials and technologies introduced in the manufacturing process to compensate for the difficulties in continually shrinking the size of the chips, e.g., silicon germanium (SiGe) and copper (Cu) interconnects.

Mature Yield — The percentage of manufactured ICs on a wafer that meet specifications after yield learning is completed. See also, yield.

Performance Yield Loss — Loss of manufactured ICs due to the ICs not meeting specifications, even though they may function.



Process-Design Integration — Achieving critical compatibility between the designing of ICs and the manufacturing process.

Production — An IC manufacturing phase, where the high numbers of wafers are run through a manufacturing facilities in order to produce very large numbers of ICs during mature yield.

Systematic Yield Loss — Loss of manufactured ICs due to the ICs not functioning, typically caused by incompatibility between the manufacturing process and a chip's design elements, e.g., the interconnects are very close together or an interconnect has many bends.

Vertically Integrated — Before disaggregation, a single semiconductor company did everything from designing an integrated circuit (IC), to making the masks and manufacturing the IC products, to testing them internally.

Wafers — Silicon disks onto which ICs are manufactured.

Yield — Generally, the percentage of manufactured ICs on a wafer that meet specifications. For PDF, yield during production consists of two distinct parts: initial yield and mature yield.

Note: Some of the statements in this annual report are forward looking, including the statements regarding PDF's ability to minimize time-to-market, production costs of IC products and necessary design iterations, and PDF's ability to enhance or increase product yield and performance. Actual results could differ materially from those expressed in any forward-looking statements. Risks and uncertainties that could cause results to differ materially include the risks set forth in PDF's filings with the SEC, including any unforeseen industry changes, difficulties in modifying PDF's solutions on a timely basis, and changes in the marketplace for process-design integration solutions, including the introduction of products or services competitive with those of PDF. The forward-looking statements contained in this annual report are made as of the date hereof, and PDF does not assume any obligation to update such statements nor the reasons why actual results could differ materially from those projected in such statements.

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