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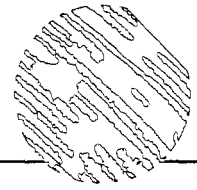

RUDOLPH
Technologies, Inc.

2002 Annual Report

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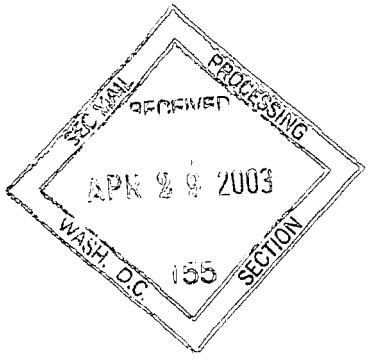


Nasdaq: RTEC
www.rudolphtech.com

Letter to Shareholders

Dear Fellow Shareholders:

2002 was a year of significant achievements for Rudolph Technologies. Our financial performance was solid—particularly given the continued softness in the semiconductor industry. We are especially proud of achieving a sequential increase in revenue and maintaining profitability each quarter throughout 2002, excluding acquisition related charges, despite declining semiconductor equipment markets.

We are also pleased to report that over the past year our development programs accelerated resulting in new product offerings expanding our opportunities for new business. With the insight to continue investing in its future and the resources to follow through with such endeavors, Rudolph continues to position itself for the market demands of tomorrow. We anticipate that we will *all* look back and recall that this has been one of the most difficult, yet most significant, periods in Rudolph's long history.

We successfully penetrated the market further in 2002. Rudolph ended the year with a total of 35 customers purchasing its *Meta*PULSE® tools in order to meet aluminum and copper metrology needs for leading-edge devices. In addition, 44 customers to date have purchased our S-Series metrology tools for leading-edge transparent film applications. Moreover, we continued to work in close collaboration with our customers, specifically those with the resources and the commitment to invest in new technology. Such customers include all of the top ten and 14 of the top 16 largest device manufacturers in the world.

We look to Rudolph's next growth phase with great enthusiasm and confidence based on the solid foundation that we continued to build in 2002. Specifically, in an all cash transaction we acquired the Yield Metrology Group (formerly ISOA) in Richardson, Texas. We also created a new business unit dedicated solely to Integrated Metrology. We now have a balanced portfolio of 4 lines of business—all address our customer's metrology requirements including:

(1) opaque tools through our *Meta*PULSE product line;
(2) transparent tools through our S-*ultra*™ product line;
(3) after develop inspection tools though our WaferView® product line; and
(4) integrated metrology modules through our *i*-MOD™ product line.

Our unparalleled portfolio of metrology products leads chip manufacturers to continue to look to Rudolph for meeting their process control needs.

continues

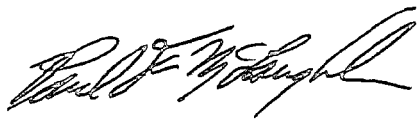
When industry recovery arrives, we believe equipment spending for capacity expansion will be at the .13 and .09 micron technology nodes. Our development efforts have resulted in new products in all 4 of our lines of business that address metrology needs at these technology nodes and beyond. In fact, we believe our MetaPULSE technology is the industry standard for metal film metrology, particularly for copper interconnect measurement at the upcoming .13 and .09 micron technology nodes.

We are confident that we have the right building blocks in place for our business to surpass our record results achieved during the industry's peak in 2000—when we had sales of $88 million while the total available market was approximately $600 million and we achieved $1.49 earnings per diluted share. Based on the opportunities afforded by our expanded portfolio of products, we estimate that the total available market for Rudolph at the next industry peak will be at least 2 times larger than that available to us at the 2000 peak. We are committed to maximizing this increased market opportunity to the benefit of our shareholders.

As recent trends show, our industry's dynamics continue to shift at a rapid pace. Once again, the team at Rudolph has proven itself adept at anticipating such change ahead of the curve, thereby positioning the Company to capitalize on the opportunities afforded by new industry developments. For example, we were quick to recognize the immense promise of foundries as their business model matured and they evolved from trailing-edge technology to leading-edge technology in less than a decade. The result of this foresight is that the three largest foundries in the world are now important Rudolph customers. Having had success with this strategy, particularly in Taiwan in the 90's, we are looking to replicate that success in China. In 2002, we opened our first office in China—the world's fastest growing semiconductor equipment market. We will continue to successfully anticipate and adapt to industry changes in order to shape Rudolph's future and to promote our long-term success.

On behalf of the Board of Directors, I would like to extend sincere appreciation to our dedicated employees worldwide. Your extraordinary commitment and knowledge provide the competitive edge that is the foundation of Rudolph's future success. I also want to thank our customers, shareholders, and suppliers for your support during 2002 and your continued belief in Rudolph in 2003.

Sincerely yours,



Paul F. McLaughlin
Chairman and Chief Executive Officer

March 24, 2003

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 10-K

(MARK ONE)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the Fiscal Year Ended December 31, 2002

OR

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

For the transition period from to

Commission File No. 000-27965

RUDOLPH TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**22-3531208**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification Number)**

One Rudolph Road, Flanders, NJ 07836
(Address of principal executive offices) (Zip Code)
Registrant's telephone number, including area code: (973) 691-1300

SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT:
None

SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:
Common Stock, $0.001 Par Value
(Title of Class)

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 Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Securities Exchange Act of 1934). Yes ☒ No ☐

The aggregate market value of the voting stock held by non-affiliates of the registrant based on the closing price of the registrant's stock price on June 28, 2002 of $24.93 was approximately $256,967,571.

The registrant had 16,331,107 shares of Common Stock outstanding as of January 31, 2003.

DOCUMENTS INCORPORATED BY REFERENCE

The following document is incorporated by reference in Part III of this Annual Report on Form 10-K: portions of registrant's proxy statement for its annual meeting of stockholders to be held on May 21, 2003.

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FORWARD LOOKING STATEMENTS

Certain statements in this Annual Report on Form 10-K are forward-looking statements, including those concerning our expectations of future sales, gross profits, research, development and engineering expenses, selling, general and administrative expenses, product introductions and cash requirements. The statements contained in this Annual Report on Form 10-K that are not purely historical are forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. In addition, we may, from time to time make oral forward-looking statements. These forward-looking statements include but are not limited to those identified in this report with an asterisk (*) symbol. Additional forward looking statements may be identified by the words "anticipate", "believe", "expect", "intend", "will" and similar expressions, as they relate to us or our management.

The forward-looking statements contained herein reflect our current views with respect to future events and are subject to certain risks, uncertainties and assumptions. Actual results may differ materially from those projected in such forward looking statements for a number of reasons including the following: variations in the level of orders which can be affected by general economic conditions and growth rates in the semiconductor manufacturing industry and in the markets served by our customers, the international economic and political climates, difficulties or delays in product functionality or performance, the delivery performance of sole source vendors, the timing of future product releases, failure to respond adequately to either changes in technology or customer preferences, changes in pricing by us or our competitors, ability to manage growth, risk of nonpayment of accounts receivable or changes in budgeted costs. Our stockholders should carefully review the cautionary statements contained in this Form 10K, including "Risk Factors" set forth in Item 1 below.

PART I

Item 1. *Business*

General

Rudolph is a worldwide leader in the design, development and manufacture of high-performance process control metrology systems used by semiconductor device manufacturers. We provide full-fab solutions through a family of proprietary systems for both transparent and opaque thin film measurements, and macro-defect detection. These systems, which have production-worthy automation, are designed specifically for semiconductor manufacturing applications and are backed by worldwide customer support.

We introduced the industry's first production-oriented microprocessor-controlled ellipsometer for thin transparent film measurements in 1977. Since that time, we have consistently provided innovative product developments designed to meet manufacturers' most advanced measurement requirements. Our patented technology uses up to four lasers operating simultaneously at multiple angles and multiple wavelengths, providing powerful analysis and measurement capabilities to handle the most challenging requirements of today's advanced processes and tomorrow's new materials. Unlike spectroscopic ellipsometers, lasers make our metrology tools inherently stable, increase measurement speed and accuracy, and reduce maintenance costs by minimizing the time required to requalify a light source when it is replaced. Our systems also employ a proprietary reflectometer technology that allows the characterization of films and film stacks that cannot be performed using conventional reflectometry or ellipsometry alone. Our latest offering, the S-*ultra*™ delivers the highest accuracy when optimizing critical film deposition processes and superior repeatability when monitoring production of current and future generations of advanced materials including nitrided and high-κ gate materials, low-κ dielectrics, 193 nm ARCs, and SiGe.

For opaque film characterization, we brought patented optical acoustic metal film metrology technology to the semiconductor manufacturing floor with *Meta*PULSE®. *Meta*PULSE allows customers to simultaneously measure the thickness and other proprieties of up to six metal or other opaque film layers in a non-contact manner on product wafers. PULSE Technology™ uses ultra-fast lasers to generate sound waves that pass down through a stack of metal or opaque films such as copper or aluminum, sending back to the surface an echo that indicates film thickness, density, and other process critical parameters. We believe that we currently offer the only systems that can non-destructively measure opaque thin-film stacks with the speed and accuracy semiconductor device manufacturers demand in order to achieve high yields with the latest fabrication processes. The technology is ideal for characterizing copper interconnect structures and over sixty percent of all systems sold have been for copper applications. The *Meta*PULSE-II is our second generation metal metrology system which provides superior performance on today's ultra-thin barriers, narrow lines, and more complex structures, while providing higher throughput, a smaller measurement spot, and better repeatability.

On September 25, 2002, we acquired ISOA, Inc., which we renamed the Yield Metrology Group (YMG). YMG had licensed its technology for use in the semiconductor industry and recently began transitioning to a semiconductor capital equipment supplier. YMG's core technologies are knowledge-based algorithms used in wafer macro-defect detection and classification. The purchase consideration for YMG, including direct acquisition costs, was $25.2 million in cash. The transaction was accounted for using the purchase method of accounting for business combinations.

Our acquisition of YMG marked the introduction of the WaferView® family of metrology systems for macro-defect lithography inspection. These fully automated systems detect and classify lithography defects at production throughputs. The advanced color vision system uses proprietary and patented knowledge-based algorithms to provide higher defect detection rates than can be achieved on gray-scale systems and to accurately classify lithography defects which vary widely in color, shape, and appearance. Results from WaferView's expert system software can be integrated directly into the manufacturer's process control system to provide rapid notification of process problems and to improve root cause analysis of defect sources.

In 2002 we also introduced the first of a series of metrology products specifically designed for integration into process equipment. The *i*-MOD systems will leverage our years of metrology experience by incorporating advanced metrology technologies into small footprint modules that will provide real-time process control information from inside the process equipment.* Integrated systems virtually eliminate the delay between processing and measurement, so feedback and feedforward information is immediately available to control process drift and maintain optimal processing parameters. The *i*-MOD AF uses our ellipsometry technology and has been selected by a major process equipment supplier for integration on advanced thermal processing equipment that, among other things, produces transistor gate-dielectric films.

We were incorporated in New Jersey in 1958 and reincorporated into Delaware in 1999. The Internet website address of Rudolph Technologies, Inc. is http://www.rudolphtech.com. The Company's annual reports on Form 10-K, quarterly reports on Forms 10-Q and current reports on Forms 8-K (and any amendments to those reports) are made available free of charge on or through its Internet website as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission.

Technology

We believe that our expertise in engineering, research, and development enables us to rapidly develop new technologies and products in response to emerging industry trends.* The breadth of our technology enables us to offer our customers a diverse combination of measurement technologies that provide process control for the majority of thin films used in semiconductor manufacturing. Additionally, our new defect detection and classification technology will allow us to provide yield enhancement metrology for critical photolithography processes.*

Optical Acoustics. Optical acoustic metrology involves the use of ultra-fast laser induced sonar for metal and opaque thin film measurement. This technology sends ultrasonic waves into multi-layer opaque films and then analyzes the resulting echoes to simultaneously determine the thickness of each individual layer in complex multi-layer metal film stacks. The echo's amplitude and phase can be used to detect film properties, missing layers and interlayer problems. Since different phenomena affect amplitude and phase uniquely, a variety of process critical interlayer problems can be detected in a single measurement.

The use of optical acoustics to measure multi-layer metal and opaque films was pioneered by scientists at Brown University in collaboration with engineers at Rudolph. The proprietary optical acoustic technology in our *Meta*PULSE systems measures the thickness of single or multi-layer opaque films ranging from less than 40 Angstroms to greater than five microns. It provides these measurements at a rate of 70 wafers per hour with one to two percent accuracy and 0.5% repeatability. This range of thicknesses covers the majority of thick and thin metal films projected by the International Roadmap for Semiconductors to be used in semiconductor manufacturing for the next three processing nodes and through the end of this decade. Our optical acoustic technology also enables our *Meta*PULSE systems to measure film properties in existing product-wafer test sites by using a small measurement spot, only ten microns in diameter, which, in combination with pattern recognition software algorithms allows on-product measurements.

Ellipsometry. Ellipsometry is a non-contact, non-destructive optical technique for transparent thin film measurement. When a surface or interface is struck by polarized light, ellipsometers measure the change in the reflected light's polarization. By measuring at multiple wavelengths, an ellipsometer can determine process significant properties of transparent films. The combination of multiple angles of incidence and multiple wavelength ellipsometry also allows more accurate and reliable measurement across a wider range of thicknesses and a wider variety of films and film stacks than single angle systems.

We have been an industry leader in ellipsometry technology for the last three decades. We hold patents on several ellipsometry technologies developed by our engineers, including our proprietary technique that uses four

lasers for multiple-angle of incidence, multiple wavelength ellipsometry. Laser ellipsometry technology enables our transparent film systems to continue to provide the increasingly higher level of accuracy needed as thinner films and newer materials are introduced for future generations of IC devices.

Reflectometry. For applications requiring broader spectral coverage, some of our ellipsometry tools are also equipped with a reflectometer. Reflectometry uses a white or ultraviolet light source to determine the properties of transparent thin films by analyzing the wavelength and intensity of light reflected from the surface of a wafer. This optical information is processed with software algorithms to determine film thickness and other material properties. By combining data from both the laser ellipsometer and broad spectrum reflectometer it is possible to characterize films and film stacks that cannot be adequately analyzed by either method individually.

Automated Defect Detection and Classification. Automating the defect detection and classification process is best done by a system that can mimic, or even extend, the response of the human eye, but at a much higher speed and more consistently. To do this, our WaferView system captures full-color whole wafer images using simultaneous dark and bright field illumination. The resulting bright and dark field images are compared to those from an "ideal" wafer having no defects. When a difference is detected, its image is broken down into complex vectors that allow rapid and accurate comparison with a library of known classified defects stored in the tool's database. Patented and proprietary enhancements of this approach enable very fast and highly repeatable image classification. The system is pre-programmed with an extensive library of default local, global, and color defects and can also "learn" a virtually unlimited amount of new defect classes. This allows customers to define defects based on their existing defect classification system, provides more reliable automated rework decisions, and more accurate statistical process control data.

Products

We market and sell products to all major logic, memory, and ASIC device manufacturers. We provide our customers with versatile full-fab metrology solutions by offering families of systems that meet their metrology needs. Our systems are designed for high-volume semiconductor manufacturing facilities and offer automated wafer handling and 200 and 300 mm configurations to satisfy our customers' manufacturing needs. Our systems operate at high throughput with ultra-clean operation and high reliability. Our *Meta*PULSE, S-*ultra*, and S products are all built on the production-worthy VANGUARD™ automation platform that provides a common software system, user interface, and hardware base. Our products can be broken down into three main categories: Transparent Thin Films, Opaque Thin Films, and Macro-Defect Inspection.

Transparent Thin Films

S-ultra and S-Series

This S-*ultra* and S-Series families of products incorporate up to four lasers, providing ellipsometry at wavelengths across the spectrum from deep blue to near infrared. Visible and ultraviolet reflectometers are also available. These systems can be user configured by selecting the required lasers and reflectometers for various specific applications including CMP, CVD, diffusion, lithography, and etch. They are available in both 200 and 300 mm configurations and are designed for production applications with high reliability and high throughput, ranging from 80 to 120 wafers per hour. The average selling price ranges from $350,000 to $1 million.

i-MOD AF

The *i*-MOD AF incorporates our ellipsometry technology into a small footprint module designed for integration into process equipment. The average selling price ranges from $150,000 to $300,000.

Focus

The highly successful Focus series was introduced in 1991. Our most current model, the FE VII, provides accurate and repeatable measurements of production wafers with its dual-laser multiple angle ellipsometry for 200 mm or smaller wafers. The average selling price ranges from $300,000 to $600,000.

AutoEL

The AutoEL series was the first microprocessor-based automated ellipsometer and was introduced in 1977. It continues to be sold today and provides a fully automated desktop solution for measuring film thickness and optical constants. It is available in different wavelength configurations and has an average selling price of $30,000 to $100,000.

Opaque Thin Films

MetaPULSE and MetaPULSE-II

Introduced in 1997, the *Meta*PULSE was the first, and we believe remains the market dominant non-contact production metrology system for thin opaque films. The *Meta*PULSE-II is a second generation PULSE system providing a smaller measurement spot size, better repeatability on advanced materials, and higher throughput. Over 140 PULSE systems have been sold to fabs around the world and over half have been deployed in copper interconnect production applications. The systems are available in 200 and 300 mm configurations and are designed for production applications with high reliability and throughput ranging from 60 to 75 wafers per hour. The average selling price ranges from $900,000 to $1.8 million.

Macro-Defect Inspection

WaferView

WaferView systems provide automated macro-defect lithography inspection for 200 and 300 mm wafers. They have been deployed in production fabs in the US, Europe, and Asia. WaferView is available in 200 and 300 mm configurations and is designed for production applications with high-reliability and throughputs ranging from 110 to 120 wafers per hour. The average selling price ranges from $650,000 to $1.4 million.

YieldView

YieldView® is an advanced yield management and process control system. It collects, stores, and analyzes data from multiple WaferView or other lithography inspection systems. In addition, it manages information transfers between the WaferViews and communications with the manufacturing facilities' statistical process control system. This software package enables defect inspection from remote locations, defect indexing and archiving of data obtained from multiple WaferViews, and process control information and alarms to be passed to the facility host. The average selling price ranges from $250,000 to $450,000.

Customers

We sell our products worldwide to over 100 semiconductor device manufacturers, including both independent semiconductor device manufacturers and foundries throughout the world. In addition, we have a diverse customer base in terms of both geographic location and type of semiconductor device manufactured. Our customers are located in 24 different countries.

We depend on a relatively small number of customers and end users for a large percentage of our revenues. In the years 2000, 2001 and 2002 sales to end user customers that individually represented at least five percent of our revenues accounted for 27.8%, 42.5% and 46.8% of our revenues. In 2002, sales to Intel accounted for 46.8% of our revenues and no other individual end user customer accounted for more than 10% of our revenues. We do not have purchase contracts with any of our customers that obligate them to continue to purchase our products.

Research and Development

The thin film transparent, opaque process control and macro-defect inspection metrology market is characterized by continuous technological development and product innovations. We believe that the rapid and

ongoing development of new products and enhancements to existing products is critical to our success. Accordingly, we devote a significant portion of our technical, management and financial resources to research and development programs.

The core competencies of our research and development team include metrology systems for high volume manufacturing, ellipsometry, ultra-fast optics, picosecond acoustic and optical design, advanced metrology application development and algorithm development. We have been granted or hold exclusive licenses to 50 U.S. and foreign patents covering technology in the transparent thin film measurement, altered material characterization, picosecond ultrasonic areas and knowledge-based algorithms used in macro-defect detection and classification. We also have 29 pending regular and provisional applications in the U.S. and in other countries.

To leverage our internal research and development capabilities, we maintain close relationships with leading research institutions in the metrology field including Brown University. Our relationship with Brown University has resulted in the development of the optical acoustic technology underlying our *Meta*PULSE product line. We have been granted exclusive licenses from Brown University Research Foundation, subject to rights returned by Brown and the United States government for their own non-commercial uses for several patents relating to this technology.

Our research and development expenditures in 2000, 2001 and 2002 were $9.0 million, $11.6 million and $11.8 million, respectively. We plan to continue our strong commitment to new product development in the future, and we expect that our level of research and development expenses will increase in absolute dollar terms in future periods.* In addition, the acquisition of YMG resulted in our recording of a one-time expense of $3.5 million in 2002 for the write-off of in-process research and development. This expense related to automated defect inspection technology to be used in stand-alone and integrated metrology equipment.

Sales, Customer Service and Application Support

We maintain an extensive network of direct sales, customer service and application support offices in several locations throughout the world. We maintain sales, service or applications offices in New Jersey, Texas, Germany, Holland, Ireland, Israel, Korea, Singapore, Taiwan and China. In addition, we make use of a leading independent sales organization in Japan. We believe that this organization significantly enhances our sales capabilities in Japan without requiring a significant capital outlay from us.

We provide our customers with comprehensive support before, during and after the delivery of our products. For example, in order to facilitate the smooth integration of our tools into our customers' operations, we often assign dedicated, site-specific field service and applications engineers to provide long-term support at selected customer sites. We also provide comprehensive service and applications training for customers at our training facility in Mt. Arlington, New Jersey and at customer locations. In addition, we maintain a group of highly skilled applications scientists at strategically located facilities throughout the world and at selected customer locations.

Manufacturing

Our principal manufacturing activities include assembly, final test and calibration. These activities are conducted in our manufacturing facility in Ledgewood, New Jersey. Our core manufacturing competencies include electrical, optical and mechanical assembly and testing as well as the management of new product transitions. While we use standard components and subassemblies wherever possible, most mechanical parts, metal fabrications and critical components used in our products are engineered and manufactured to our specifications. We expect to rely increasingly on subcontractors and turnkey suppliers to fabricate components, build assemblies and perform other non-core activities in a cost-effective manner.*

We rely on limited source suppliers for certain parts and subassemblies. This reliance creates a potential inability to obtain an adequate supply of required components, and reduced control over pricing and time of delivery of components. An inability to obtain adequate supplies would require us to seek alternative sources of supply or might require us to redesign our systems to accommodate different components or subassemblies. However, if we were forced to seek alternative sources of supply, manufacture such components or subassemblies internally, or redesign our products, this could prevent us from shipping our products to our customers on a timely basis, which could have a material adverse effect on our operations.

Intellectual Property

We have a policy of seeking patents on inventions governing new products or technologies as part of our ongoing research, development, and manufacturing activities. We have been granted or hold exclusive licenses to 50 U.S. and foreign patents. The patents we own or exclusively license have expiration dates ranging from 2005 to 2023. We also have 29 pending regular and provisional applications in the U.S. and other countries. Our patents and applications principally cover various aspects of the transparent thin film measurement, altered material characterization and macro-defect detection and classification.

We have been granted exclusive licenses from Brown University Research Foundation, subject to rights retained by Brown and the United States government for their own non-commercial uses, for several patents relating to the optical acoustic technology underlying our *Meta*PULSE product family. The terms of these exclusive licenses are equal to the lives of the patents. We pay royalties to Brown based upon a percentage of our revenues from the sale of systems that incorporate technology covered by the Brown patents. We also have the right to support patent activity with respect to new ultra-fast acoustic technology developed by Brown scientists, and to acquire exclusive licenses to this technology. Brown may terminate the licenses if we fail to pay royalties to Brown or if we materially breach our license agreement with Brown.

Our pending patents may never be issued, and even if they are, these patents, our existing patents and the patents we license may not provide sufficiently broad protection to protect our proprietary rights, or they may prove to be unenforceable. To protect our proprietary rights, we also rely on a combination of copyrights, trademarks, trade secret laws, contractual provisions and licenses. There can be no assurance that any patents issued or licensed by us will not be challenged, invalidated or circumvented or that the rights granted thereunder will provide us with a competitive advantage.

The laws of some foreign countries do not protect our proprietary rights to as great an extent as do the laws of the United States, and many U.S. companies have encountered substantial infringement problems in protecting their proprietary rights against infringement in such countries, some of which are countries in which we have sold and continue to sell products. There is a risk that our means of protecting our proprietary rights may not be adequate. For example, our competitors may independently develop similar technology or duplicate our products. If we fail to adequately protect our intellectual property, it would be easier for our competitors to sell competing products.

Competition

The market for semiconductor capital equipment is highly competitive. We face substantial competition from established companies in each of the markets that we serve. We principally compete with KLA-Tencor and Therma-Wave. We compete to a lesser extent with companies such as Dai Nippon Screen, Nanometrics and Sopra. Each of our product lines also competes with products that use different metrology techniques. Some of our competitors have greater financial, engineering, manufacturing and marketing resources, broader product offerings and service capabilities and larger installed customer bases than we do.

Significant competitive factors in the market for metrology systems include system performance, ease of use, reliability, cost of ownership, technical support and customer relationships. We believe that, while price and

delivery are important competitive factors, the customers overriding requirement is for a product that meets their technical capabilities. To remain competitive, we believe we will need to maintain a high level of investment in research and development and sales and marketing. No assurances can be given that we will continue to be competitive in the future.

Backlog

We schedule production of our systems based upon order backlog and informal customer forecasts. We include in backlog only those orders to which a purchase order number has been assigned by the customer and for which delivery has been specified within 12 months. Because shipment dates may be changed and customers may cancel or delay orders with little or no penalty, our backlog as of any particular date may not be a reliable indicator of actual sales for any succeeding period. At December 31, 2002, we had a backlog of approximately $19.8 million compared with a backlog of approximately $11.2 million at December 31, 2001.

Employees

As of December 31, 2002, we had 333 employees. Our employees are not represented by any collective bargaining agreements, and we have never experienced a work stoppage. We believe our employee relations are good.

Risk Factors

Cyclicality in the semiconductor device industry has led to substantial decreases in demand for our systems and may from time to time continue to do so

Our operating results are subject to significant variation due to the cyclical nature of the semiconductor device industry, which is currently experiencing a downturn. While we are not able to predict the duration or severity of this downturn or the effect it may have on our operating results, past downturns have often resulted in substantial decreases in the semiconductor device industry's demand for capital equipment, including its thin film metrology equipment, and have seriously harmed our operating results. Our business depends upon the capital expenditures of semiconductor device manufacturers, which, in turn, depend upon the current and anticipated market demand for semiconductors and products using semiconductors. There is typically a nine to twelve month lag between a change in the economic condition of the semiconductor device industry and the resulting change in the level of capital expenditures by semiconductor device manufacturers. In most cases, the resulting decrease in capital expenditures has been more pronounced than the precipitating downturn in semiconductor device industry revenues. The current semiconductor device industry downturn may continue for the next several quarters. The current downturn and any future downturn in the semiconductor device industry, or any reduction by that industry in capital expenditures, may seriously harm our business, financial condition and results of operations.

We obtain some of the components and subassemblies included in our systems from a limited group of suppliers, and the partial or complete loss of one of these suppliers could cause production delays and a substantial loss of revenues

We obtain some of the components and subassemblies included in our systems from a limited group of suppliers and do not have long-term contracts with many of our suppliers. Our dependence on limited source suppliers of components and our lack of long-term contracts with many of our suppliers exposes us to several risks, including a potential inability to obtain an adequate supply of components, price increases, late deliveries and poor component quality. Disruption or termination of the supply of these components could delay shipments of our systems, damage our customer relationships and reduce our sales. From time to time in the past, we have experienced temporary difficulties in receiving shipments from our suppliers. The lead time required for shipments of some of our components can be as long as four months. In addition, the lead time required to

qualify new suppliers for lasers could be as long as a year, and the lead time required to qualify new suppliers of other components could be as long as nine months. If we are unable to accurately predict our component needs, or if our component supply is disrupted, we may miss market opportunities by not being able to meet the demand for our systems. Further, a significant increase in the price of one or more of these components or subassemblies included in our systems could seriously harm our results of operations.

Our largest customers account for a significant portion of our revenues, and our revenues would significantly decline if one or more of these customers were to purchase significantly fewer of our systems or they delayed or cancelled a large order

In 2000, 2001, 2002, sales to end user customers that individually represented at least five percent of our revenues accounted for 27.8%, 42.5% and 46.8% of our revenues. In 2000, 2001 and 2002, sales to Intel, a key customer, accounted for 19.4%, 33.4% and 46.8% of our revenues. We operate in the highly concentrated, capital intensive semiconductor device manufacturing industry. Historically, a significant portion of our revenues in each quarter and year has been derived from sales to relatively few customers, and we expect this trend to continue. If any of our key customers were to purchase significantly fewer of our systems in the future, or if a large order were delayed or cancelled, our revenues would significantly decline. We expect that we will continue to depend on a small number of large customers for a significant portion of our revenues for at least the next several years. In addition, as large semiconductor device manufacturers seek to establish closer relationships with their suppliers, we expect that our customer base will become even more concentrated.

Our operating results have in the past varied and probably will in the future continue to vary significantly from quarter to quarter, causing volatility in our stock price

Our quarterly operating results have varied significantly in the past and may continue to do so in the future, which could cause our stock price to decline. Some of the factors that may influence our operating results and subject our stock to extreme price and volume fluctuations include:

- changes in customer demand for our systems, which is influenced by economic conditions in the semiconductor device industry, demand for products that use semiconductors, market acceptance of our systems and those of our customers and changes in our product offerings;
- seasonal variations in customer demand, including the tendency of European sales to slow significantly in the third quarter of each year;
- the timing, cancellation or delay of customer orders and shipments;
- product development costs, including increased research, development, engineering and marketing expenses associated with our introduction of new products and product enhancements; and
- the levels of our fixed expenses, including research and development costs associated with product development, relative to our revenue levels.

In light of these factors and the cyclical nature of the semiconductor industry, we expect to continue to experience significant fluctuations in quarterly and annual operating results. Moreover, many of our expenses are fixed in the short-term which, together with the need for continued investment in research and development, marketing and customer support, limits our ability to reduce expenses quickly. As a result, declines in net sales could harm our business and the price of our common stock could substantially decline.

Our revenue may vary significantly each quarter due to relatively small fluctuations in our unit sales

During any quarter, a significant portion of our revenue may be derived from the sale of a relatively small number of systems. Our transparent film measurement systems range in price from approximately $30,000 to $1.0 million per system, our opaque film measurement systems range in price from approximately $900,000 to $1.8 million per system and our macro-defect detection systems range in price from approximately $650,000

to $1.4 million per system. Accordingly, a small change in the number of systems we sell may also cause significant changes in our operating results. This, in turn, could cause fluctuations in the market price of our common stock.

Variations in the amount of time it takes for us to sell our systems may cause fluctuations in our operating results, which could cause our stock price to decline

Variations in the length of our sales cycles could cause our revenues, and thus our business, financial condition and operating results, to fluctuate widely from period to period. This variation could cause our stock price to decline. Our customers generally take a long time to evaluate our film metrology systems and many people are involved in the evaluation process. We expend significant resources educating and providing information to our prospective customers regarding the uses and benefits of our systems in the semiconductor fabrication process. The length of time it takes for us to make a sale depends upon many factors, including:

- the efforts of our sales force and our independent distributor;
- the complexity of the customer's fabrication processes;
- the internal technical capabilities and sophistication of the customer;
- the customer's budgetary constraints; and
- the quality and sophistication of the customer's current metrology equipment.

Because of the number of factors influencing the sales process, the period between our initial contact with a customer and the time when we recognize revenue from that customer, if ever, varies widely in length. Our sales cycles, including the time it takes for us to build a product to customer specifications after receiving an order, typically range from six to 15 months. Sometimes our sales cycles can be much longer, particularly with customers in Japan. During these cycles, we commit substantial resources to our sales efforts in advance of receiving any revenue, and we may never receive any revenue from a customer despite our sales efforts.

If we do make a sale, our customers often purchase only one of our systems, and then evaluate its performance for a lengthy period before purchasing any more of our systems. The number of additional products a customer purchases, if any, depends on many factors, including a customer's capacity requirements. The period between a customer's initial purchase and any subsequent purchases can vary from six months to a year or longer, and variations in the length of this period could cause further fluctuations in our operating results and possibly in our stock price.

If we are not successful in developing new and enhanced products for the semiconductor device manufacturing industry we will lose market share to our competitors

We operate in an industry that is subject to evolving industry standards, rapid technological changes, rapid changes in consumer demands and the rapid introduction of new, higher performance systems with shorter product life cycles. To be competitive in our demanding market, we must continually design, develop and introduce in a timely manner new film metrology systems that meet the performance and price demands of semiconductor device manufacturers. We must also continue to refine our current systems so that they remain competitive. We may experience difficulties or delays in our development efforts with respect to new systems, and we may not ultimately be successful in developing them. Any significant delay in releasing new systems could adversely affect our reputation, give a competitor a first-to-market advantage or cause a competitor to achieve greater market share.

Even if we are able to successfully develop new products, if these products do not gain general market acceptance we will not be able to generate revenues and recover our research and development costs

Metrology product development is inherently risky because it is difficult to foresee developments in semiconductor device manufacturing technology, coordinate technical personnel, and identify and eliminate

metrology system design flaws. Any new systems we introduce may not achieve a significant degree of market acceptance or, once accepted, may fail to sell well for a sustained period.

We expect to spend a significant amount of time and resources developing new systems and refining our existing systems.* In light of the long product development cycles inherent in our industry, these expenditures will be made well in advance of the prospect of deriving revenue from the sale of those systems. Our ability to commercially introduce and successfully market new systems is subject to a wide variety of challenges during the development cycle, including start-up bugs, design defects, and other matters that could delay introduction of these systems. In addition, since our customers are not obligated by long-term contracts to purchase our systems, our anticipated product orders may not materialize, or orders that do materialize may be cancelled. As a result, if we do not achieve market acceptance of new products, we may not be able to realize sufficient sales to recoup research and development expenditures.

Even if we are able to develop new products that gain market acceptance, sales of new products could impair our ability to sell existing product lines

Competition from our new S-*ultra* systems could have a negative effect on sales of our other transparent thin film metrology systems and the prices we could charge for these systems. We may also divert sales and marketing resources from our current systems in order to successfully launch and promote our S-*ultra*, WaferView or next generation systems. This diversion of resources could have a further negative effect on sales of our current systems. Similarly, competition from our new *Meta*PULSE-II system could have a negative impact on *Meta*PULSE systems.

Additionally, the new line of *i*-MOD products will incorporate some of our advanced metrologies into small footprint modules that are designed to be integrated into process tool equipment. These integrated metrology systems are unlikely to replace our existing stand-alone systems because of their relative lack of accessibility and because the range of applications will be limited. However, there could be a negative effect on stand-alone systems that use the same technology.

If our relationships with our large customers deteriorate, our product development activities could be jeopardized

The success of our product development efforts depends on our ability to anticipate market trends and the price, performance and functionality requirements of semiconductor device manufacturers. In order to anticipate these trends and ensure that critical development projects proceed in a coordinated manner, we must continue to collaborate closely with our largest customers. Our relationships with these and other customers provide us with access to valuable information regarding trends in the semiconductor device industry, which enables us to better plan our product development activities. If our current relationships with our large customers are impaired, or if we are unable to develop similar collaborative relationships with important customers in the future, our long-term ability to produce commercially successful systems will be impaired.

Our ability to reduce costs is limited by our ongoing need to invest in research and development

Our industry is characterized by the need for continual investment in research and development as well as customer service and support. As a result of our need to maintain our spending levels in these areas, our operating results could be materially harmed if our revenues fall below expectations. In addition, because of our emphasis on research and development and technological innovation, our operating costs may increase further in the future.

We may fail to adequately protect our intellectual property and, therefore, lose our competitive advantage

Our future success and competitive position depend in part upon our ability to obtain and maintain proprietary technology for our principal product families, and we rely, in part, on patent, trade secret and

trademark law to protect that technology. If we fail to adequately protect our intellectual property, it will be easier for our competitors to sell competing products. We own or have licensed a number of patents relating to our transparent and opaque thin film metrology and macro-defect inspection systems, and have filed applications for additional patents. Any of our pending patent applications may be rejected, and we may not in the future be able to develop additional proprietary technology that is patentable. In addition, the patents we do own or that have been issued or licensed to us may not provide us with competitive advantages and may be challenged by third parties. Third parties may also design around these patents.

In addition to patent protection, we rely upon trade secret protection for our confidential and proprietary information and technology. We routinely enter into confidentiality agreements with our employees. However, in the event that these agreements may be breached, we may not have adequate remedies. Our confidential and proprietary information and technology might also be independently developed by or become otherwise known to third parties.

Successful infringement claims by third parties could result in substantial damages, lost product sales and the loss of important intellectual property rights by us

Our commercial success depends in part on our ability to avoid infringing or misappropriating patents or other proprietary rights owned by third parties. From time to time we may receive communications from third parties asserting that our products or systems infringe, or may infringe, the proprietary rights of these third parties. These claims of infringement may lead to protracted and costly litigation which could require us to pay substantial damages or have the sale of our products or systems stopped by an injunction. Infringement claims could also cause product or system delays or require us to redesign our products or systems, and these delays could result in the loss of substantial revenues. We may also be required to obtain a license from the third party or cease activities utilizing the third party's proprietary rights. We may not be able to enter into such a license or such license may not be available on commercially reasonable terms. The loss of important intellectual property rights could therefore prevent our ability to sell our systems, or make the sale of such systems more expensive for us.

Protection of our intellectual property rights, or the efforts of third parties to enforce their own intellectual property rights against us, has in the past resulted and may in the future result in costly and time-consuming litigation

We may be required to initiate litigation in order to enforce any patents issued to or licensed by us, or to determine the scope or validity of a third party's patent or other proprietary rights. In addition, we may be subject to lawsuits by third parties seeking to enforce their own intellectual property rights. Any such litigation, regardless of outcome, could be expensive and time consuming, and could subject us to significant liabilities or require us to re-engineer our product or obtain expensive licenses from third parties.

Our efforts to protect our intellectual property may be less effective in some foreign countries where intellectual property rights are not as well protected as in the United States

In 2002, 40.6% of our revenue was derived from sales in foreign countries, including certain countries in Asia such as Taiwan, Korea, Singapore and Japan. The laws of some foreign countries do not protect our proprietary rights to as great an extent as do the laws of the United States, and many U.S. companies have encountered substantial problems in protecting their proprietary rights against infringement in such countries, some of which are countries in which we have sold and continue to sell systems. For example, Taiwan is not a signatory of the Patent Cooperation Treaty, which is designed to specify rules and methods for defending intellectual property internationally. The publication of a patent in Taiwan prior to the filing of a patent in Taiwan would invalidate the ability of a company to obtain a patent in Taiwan. Similarly, in contrast to the United States where the contents of patents remain confidential during the patent prosecution process, the contents of a patent are published upon filing which provides competitors an advance view of the contents of a

patent application prior to the establishment of patent rights. There is a risk that our means of protecting our proprietary rights may not be adequate in these countries. For example, our competitors in these countries may independently develop similar technology or duplicate our systems. If we fail to adequately protect our intellectual property in these countries, it would be easier for our competitors to sell competing products in those countries.

Our current and potential competitors have significantly greater resources than we do, and increased competition could impair sales of our products or cause us to reduce our prices

The market for semiconductor capital equipment is highly competitive. We face substantial competition from established companies in each of the markets we serve. We principally compete with KLA-Tencor and Therma-Wave. We compete to a lesser extent with companies such as Dai Nippon Screen, Nanometrics and Sopra. Each of our product lines also competes with products that use different metrology techniques. Some of our competitors have greater financial, engineering, manufacturing and marketing resources, broader product offerings and service capabilities and larger installed customer bases than we do. As a result, our competitors may be able to respond more quickly to new or emerging technologies or market developments by devoting greater resources to the development, promotion and sale of products, which could impair sales of our products. Moreover, there may be significant merger and acquisition activity among our competitors and potential competitors. These transactions by our competitors and potential competitors may provide them with a competitive advantage over us by enabling them to rapidly expand their product offerings and service capabilities to meet a broader range of customer needs. Many of our customers and potential customers in the semiconductor device manufacturing industry are large companies that require global support and service for their semiconductor capital equipment. While we believe that our global support and service infrastructure is sufficient to meet the needs of our customers and potential customers, our larger competitors have more extensive infrastructures than we do, which could place us at a disadvantage when competing for the business of global semiconductor device manufacturers.

Many of our competitors are investing heavily in the development of new systems that will compete directly with ours. We have from time to time selectively reduced prices on our systems in order to protect our market share, and competitive pressures may necessitate further price reductions. We expect our competitors in each product area to continue to improve the design and performance of their products and to introduce new products with competitive prices and performance characteristics. Such product introductions by our competitors would likely cause us to decrease the prices of our systems and increase the level of discounts we grant our customers.

Because of the high cost of switching equipment vendors in our markets, it is sometimes difficult for us to win customers from our competitors even if our systems are superior to theirs

We believe that once a semiconductor device manufacturer has selected one vendor's capital equipment for a production-line application, the manufacturer generally relies upon that capital equipment and, to the extent possible, subsequent generations of the same vendor's equipment, for the life of the application. Once a vendor's equipment has been installed in a production line application, a semiconductor device manufacturer must often make substantial technical modifications and may experience production-line downtime in order to switch to another vendor's equipment. Accordingly, unless our systems offer performance or cost advantages that outweigh a customer's expense of switching to our systems, it will be difficult for us to achieve significant sales to that customer once it has selected another vendor's capital equipment for an application.

We must attract and retain key personnel with knowledge of semiconductor device manufacturing and metrology equipment to help support our future growth, and competition for such personnel in our industry is high

Our success depends to a significant degree upon the continued contributions of our key management, engineering, sales and marketing, customer support, finance and manufacturing personnel. The loss of any of

these key personnel, who would be extremely difficult to replace, could harm our business and operating results. During downturns in our industry, we have often experienced significant employee attrition, and we may experience further attrition in the event of a future downturn. Although we have employment and noncompetition agreements with key members of our senior management team, including Messrs. McLaughlin, Loiterman and Roth, these individuals or other key employees may nevertheless leave our company. We do not have key person life insurance on any of our executives. In addition, to support our future growth, we will need to attract and retain additional qualified employees. Competition for such personnel in our industry is intense, and we may not be successful in attracting and retaining qualified employees.

We manufacture all of our systems at a single facility, and any prolonged disruption in the operations of that facility could have a material adverse effect on our revenues

We produce all of our systems in our manufacturing facility located in Ledgewood, New Jersey. Our manufacturing processes are highly complex and require sophisticated and costly equipment and a specially designed facility. As a result, any prolonged disruption in the operations of our manufacturing facility, whether due to technical or labor difficulties, destruction of or damage as a result of a fire or any other reason, could seriously harm our ability to satisfy our customer order deadlines. If we cannot timely deliver our systems, our revenues could be adversely affected.

We rely upon an independent distributor for a significant portion of our sales, and a disruption in our relationship could have a negative impact on our sales in Japan

Historically, a portion of our sales in Japan has been made through our sole independent distributor, Tokyo Electron Limited (TEL). In 2000, 2001 and 2002 sales to TEL accounted for 21.9%, 14.8% and 6.8% of our revenues. We expect that sales through TEL will represent a portion of our sales for the next several years.* TEL also provides field service to our customers. The activities of TEL are not within our control. A reduction in the sales or service efforts or financial viability of TEL, or a termination of our relationship with them, could harm our sales, our financial results and our ability to support our customers. Although we believe that we maintain good relations with TEL, such relationship may nevertheless deteriorate in the future.

Because we derive a significant portion of our revenues from sales in Asia, our sales and results of operations could be adversely affected by the instability of Asian economies

Our sales to customers in Asian markets represented approximately 39.5%, 36.6% and 30.1% of our revenues in 2000, 2001 and 2002. Countries in the Asia Pacific region, including Japan, Korea, China, Singapore and Taiwan, each of which accounted for a significant portion of our business in that region, have experienced currency, banking and equity market weaknesses in the past. We expect that turbulence in the Asian markets could adversely affect our sales in future periods.

Due to our significant level of international sales, we are subject to operational, financial and political risks such as unexpected changes in regulatory requirements, tariffs, political and economic instability, outbreaks of hostilities, adverse tax consequences and difficulties in managing foreign sales representatives and foreign branch operations

International sales accounted for approximately 54.7%, 53.7% and 40.6% of our revenues in 2000, 2001 and 2002. We anticipate that international sales will account for a significant portion of our revenue for at least the next five years.* Due to the significant level of our international sales, we are subject to material risks which include:

Unexpected changes in regulatory requirements including tariffs and other market barriers. The semiconductor device industry is a high-visibility industry in many of the European and Asian countries in which we sell our products. Because the governments of these countries have provided extensive financial support to

our semiconductor device manufacturing customers in these countries, we believe that our customers could be disproportionately affected by any trade embargoes, excise taxes or other restrictions imposed by their governments on trade with United States companies such as ourselves. Any such restrictions could lead to a reduction in our sales to customers in these countries.

Political and economic instability. We are subject to various global risks related to political and economic instabilities in countries in which we derive sales. If terrorist activities, armed conflict, civil or military unrest or political instability occurs outside of the U.S., such events may result in reduced demand for our products. There is considerable political instability in Taiwan related to its disputes with China and in South Korea related to its disputes with North Korea. In addition, several Asian countries, particularly Japan, have experienced significant economic instability. An outbreak of hostilities or other political upheaval in Taiwan or South Korea, or an economic downturn in Japan, would likely harm the operations of our customers in these countries, causing our sales to suffer. The effect of such events on our revenues could be material because we derive substantial revenues from sales to semiconductor device foundries in Taiwan such as TSMC and UMC, from memory chip manufacturers in South Korea such as Hynix and Samsung, and from semiconductor device manufacturers in Japan such as NEC and Toshiba.

Difficulties in staffing and managing foreign branch operations. During periods of tension between the governments of the United States and other countries, it is often difficult for United States companies such as ourselves to staff and manage operations in such countries.

Since a substantial portion of our revenues are derived from sales in other countries yet are denominated in U.S. dollars, we could experience a significant decline in sales or experience collection problems in the event the dollar becomes more expensive relative to local currencies

A substantial portion of our international sales are denominated in U.S. dollars. As a result, if the dollar rises in value in relation to foreign currencies, our systems will become more expensive to customers outside the United States and less competitive with systems produced by competitors outside the United States. Such conditions could negatively impact our international sales. Foreign sales also expose us to collection risk in the event it becomes more expensive for our foreign customers to convert their local currencies into U.S. dollars.

Terrorist attacks and terrorist threats may negatively impact all aspects of our operations, revenues, costs and stock price

The terrorist attacks in September 2001 in the United States and the U.S. response to these attacks and the resulting decline in consumer confidence has had a substantial adverse impact on the economy. If consumer confidence does not recover, our revenues and profitability may be adversely impacted in 2003 and beyond. In addition, any similar future events may disrupt our operations or those of our customers and suppliers.

In addition, these events have had and may continue to have an adverse impact on the U.S. and world economy in general and consumer confidence and spending in particular, which could harm our sales. Any of these events could increase volatility in the U.S. and world financial markets, which could harm our stock price and may limit the capital resources available to us and our customers or suppliers. This could have a significant impact on our operating results, revenues and costs and may result in increased volatility in the market price of our common stock.

We may choose to acquire new and complementary businesses, products or technologies instead of developing them ourselves, and may be unable to complete these acquisitions or may not be able to successfully integrate an acquired business, including YMG, in a cost-effective and non-disruptive manner

Our success depends on our ability to continually enhance and broaden our product offerings in response to changing technologies, customer demands and competitive pressures. To this end, we may choose to acquire new

and complementary businesses, products, or technologies instead of developing them ourselves. We may, however, face competition for acquisition targets from larger and more established companies with greater financial resources, making it more difficult for us to complete acquisitions. We do not know if we will be able to complete any acquisitions, or whether we will be able to successfully integrate any acquired business, operate it profitably or retain its key employees. Integrating any business, product or technology we acquire could be expensive and time-consuming, could disrupt our ongoing business and could distract our management. In addition, in order to finance any acquisitions, we might need to raise additional funds through public or private equity or debt financings. In that event, we could be forced to obtain financing on terms that are not favorable to us and, in the case of equity financing, that result in dilution to our stockholders. If we are unable to integrate any acquired entities, products or technologies effectively, our business, financial condition and operating results will suffer. In addition, any amortization of intangible assets or other assets or charges resulting from the costs of acquisitions could harm our business and operating results.

In September 2002, we completed our acquisition of YMG, a semiconductor capital equipment supplier, and we are in the process of integrating YMG into our company. We may not successfully address the integration challenges in a timely manner, or at all, and we may not realize the anticipated benefits or synergies of the YMG transaction or of any other transaction to the extent, or in the timeframe, anticipated. Moreover, the timeframe for achieving benefits may be dependent partially upon the actions of employees, suppliers or other third parties. Even if the YMG acquisition is successfully integrated, we may not receive the expected benefits of the transaction. Managing acquisitions requires varying levels of management resources, which may divert our attention from other business operations. These transactions also have resulted and may in the future result in significant costs and expenses and charges to earnings. In the case of the YMG acquisition, these costs and expenses include those related to in-process research and development charges and legal, accounting and financial advisory fees.

If we deliver systems with defects, our credibility will be harmed and the sales and market acceptance of our systems will decrease

Our systems are complex and sometimes have contained errors, defects and bugs when introduced. If we deliver systems with errors, defects or bugs, our credibility and the market acceptance and sales of our systems could be harmed. Further, if our systems contain errors, defects or bugs, we may be required to expend significant capital and resources to alleviate such problems. Defects could also lead to product liability as a result of product liability lawsuits against us or against our customers. We have agreed to indemnify our customers in some circumstances against liability arising from defects in our systems. Our product liability policy currently provides only $2.0 million of coverage per claim with an overall umbrella limit of $4.0 million. In the event of a successful product liability claim, we could be obligated to pay damages significantly in excess of our product liability insurance limits.

Provisions of our charter documents and Delaware law could discourage potential acquisition proposals and could delay, deter or prevent a change in control of our company

Provisions of our certificate of incorporation and bylaws may inhibit changes in control of our company not approved by our board of directors. These provisions also limit the circumstances in which a premium can be paid for the common stock, and in which a proxy contest for control of our board may be initiated. These provisions provide for:

- a prohibition on stockholder actions through written consent;
- a requirement that special meetings of stockholders be called only by our chief executive officer or board of directors;
- advance notice requirements for stockholder proposals and director nominations by stockholders;
- limitations on the ability of stockholders to amend, alter or repeal our by-laws; and

- the authority of our board to issue, without stockholder approval, preferred stock with such terms as the board may determine.

We will also be afforded the protections of Section 203 of the Delaware General Corporation Law, which could have similar effects.

Item 2. *Properties*

Our principal executive office building is located at One Flanders Road in Flanders, New Jersey. We own and lease facilities in the United States and 5 other countries for engineering, sales and service related purposes. The following table indicates the general location, the general purpose and the square footage of these facilities. The expiration years of the leases covering the leased facilities are also indicated.

Location	Facility Purpose	Approximate Square Footage	Lease Expiration Year, Unless Owned
Flanders, New Jersey	Executive Office	20,000	Owned
Ledgewood, New Jersey	Manufacturing	31,000	2009
Mt. Arlington, New Jersey	Engineering and Service	23,000	2005
Richardson, Texas	Yield Metrology Group	21,000	Owned
Houston, Texas	Engineering	3,000	2004
Austin, Texas	Sales	1,000	2003
Chandler, Arizona	Service	1,000	2003
Shanghai, China	Service	3,000	2004
Scotland, United Kingdom	Service	1,000	2003
Seoul, Korea	Service	2,000	2007
Hsin-Chu, Taiwan	Service	6,000	2004
Tainan, Taiwan	Service	2,000	2003
Singapore	Service	2,000	2003

We believe that our existing facilities and capital equipment are adequate to meet our current requirements, and that suitable additional or substitute space is available on commercially reasonable terms if needed.

Item 3. *Legal Proceedings*

From time to time the Company is subject to legal proceedings and claims in the ordinary course of business. The Company is not involved in any material legal proceedings.

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

None.

PART II

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

Our common stock is traded on the Nasdaq National Market under the symbol "RTEC." The following table sets forth, for the periods indicated, the high and low sale prices per share of our common stock as reported on the Nasdaq National Market.

	Price Range of Common Stock	
	High	Low
Year Ended December 31, 2001		
First Quarter	$53.69	$26.75
Second Quarter	$54.50	$27.25
Third Quarter	$46.26	$22.30
Fourth Quarter	$41.85	$15.52
Year Ended December 31, 2002		
First Quarter	$46.85	$31.85
Second Quarter	$43.13	$20.41
Third Quarter	$26.00	$ 9.32
Fourth Quarter	$21.41	$ 9.38

As of January 29, 2003, there were 57 stockholders of record of our common stock.

We have never declared or paid a cash dividend on our Common Stock and do not anticipate paying any cash dividends in the foreseeable future.* We currently intend to retain our earnings, if any, for the development of our business. The declaration of any future dividends by us is within the discretion of our Board of Directors and will be dependent on our earnings, financial condition and capital requirements as well as any other factors deemed relevant by our Board of Directors.

Certain Equity Compensation Plan Information included in Item 12 of Part III, here of, is hereby incorporated into this Item 5 of Part II.

Item 6. *Selected Financial Data*

The following selected financial data should be read in conjunction with our Consolidated Financial Statements and the related Notes thereto appearing elsewhere in this Form 10-K, and "Management's Discussion and Analysis of Financial Condition and Results of Operations." The balance sheet data as of December 31, 2001 and 2002 and the statement of income data for the years ended December 31, 2000, 2001 and 2002 set forth below were derived from audited consolidated financial statements included elsewhere in this Form 10-K. The balance sheet data as of December 31, 1998, 1999 and 2000, and the statement of income data for the years ended December 31, 1998 and 1999 were derived from audited financial statements not included herein.

	Year Ended December 31,				
	1998	1999	2000	2001	2002(3)
	(In thousands, except share and per share data)				
Statement of Income (Loss) Data:					
Revenues(1)	$ 20,106	$ 38,095	$ 88,107	$ 79,398	$ 57,445
Cost of revenues	13,179	18,301	41,854	39,798	33,576
Gross profit	6,927	19,794	46,253	39,600	23,869
Operating expenses:					
Research and development	5,096	5,003	9,022	11,625	11,828
In-process research and development	—	—	—	—	3,500
Selling, general and administrative	7,077	9,588	14,463	12,171	11,025
Amortization(4)	4,208	436	339	339	412
Total operating expenses	16,381	15,027	23,824	24,135	26,765
Operating income (loss)	(9,454)	4,767	22,429	15,465	(2,896)
Interest expense (income) and other, net	4,011	3,680	(2,174)	(2,774)	(2,050)
Income (loss) before provision (benefit) for income taxes,extraordinary item and cumulative effect of a change in accounting principle	(13,465)	1,087	24,603	18,239	(846)
Provision (benefit) for income taxes	613	(2,179)	(431)	6,499	585
Income (loss) before extraordinary item and cumulative effect of a change in accounting principle	(14,078)	3,266	25,034	11,740	(1,431)
Extraordinary item (net of tax of $5)(2)	—	427	—	—	—
Cumulative effect of a change in accounting principle (net of tax of $924)	—	—	1,458	—	—
Net income (loss)	(14,078)	2,839	23,576	11,740	(1,431)
Preferred stock dividends	507	508	—	—	—
Net income (loss) available to common stockholders	$ (14,585)	$ 2,331	$ 23,576	$ 11,740	$ (1,431)
Net income (loss) per share available to common stockholders from continuing operations:					
Basic:					
Income (loss) before extraordinary item and cumulative effect of a change in accounting principle	$ (3.13)	$ 0.41	$ 1.69	$ 0.74	$ (0.09)
Extraordinary item	—	(0.05)	—	—	—
Cumulative effect of a change in accounting principle	—	—	(0.09)	—	—
Preferred stock dividends	(0.11)	(0.06)	—	—	—
Net income (loss) available to common stockholders	$ (3.24)	$ 0.30	$ 1.60	$ 0.74	$ (0.09)
Diluted:					
Income (loss) before extraordinary item and cumulative effect of a change in accounting principle	$ (3.13)	$ 0.31	$ 1.58	$ 0.71	$ (0.09)
Extraordinary item	—	(0.04)	—	—	—
Cumulative effect of a change in accounting principle	—	—	(0.09)	—	—
Preferred stock dividends	(0.11)	(0.05)	—	—	—
Net income (loss) available to common stockholders	$ (3.24)	$ 0.22	$ 1.49	$ 0.71	$ (0.09)
Pro forma amounts assuming the accounting change is applied retroactively (See Note 2B of the Notes to the Consolidated Financial Statements):					
Income (loss) before extraordinary item	$ (13,610)	$ 2,485	$ 25,034	$ 11,740	$ (1,431)
Per share amounts:					
Basic	$ (3.02)	$ 0.32	$ 1.69	$ 0.74	$ (0.09)
Diluted	$ (3.02)	$ 0.24	$ 1.58	$ 0.71	$ (0.09)
Income (loss) available to common stockholders	$ (14,117)	$ 1,550	$ 25,034	$ 11,740	$ (1,431)
Per share amounts:					
Basic	$ (3.13)	$ 0.20	$ 1.69	$ 0.74	$ (0.09)
Diluted	$ (3.13)	$ 0.15	$ 1.58	$ 0.71	$ (0.09)
Weighted average common shares outstanding:					
Basic	4,503,396	7,880,622	14,773,295	15,899,933	16,215,237
Diluted	4,503,396	10,431,477	15,805,188	16,531,461	16,215,237

	December 31,				
	1998	1999	2000	2001	2002
Balance Sheet Data:					
Cash and cash equivalents	$ 431	$ 35,076	$ 29,736	$ 94,642	$ 42,047
Short-term investments	—	—	—	—	31,223
Working capital (deficit)	(1,052)	49,217	70,122	128,647	106,051
Total assets	21,121	64,947	98,554	147,798	161,963
Long-term debt, less current portion	25,370	—	—	—	—
Redeemable preferred stock	6,614	—	—	—	—
Retained earnings (accumulated deficit)	(30,032)	(27,193)	(3,617)	8,123	6,692
Total stockholders' equity (deficit)	(26,759)	57,610	83,508	142,150	144,081

(1) Our cost of revenues for 1998 includes a $1.4 million expense for the write-down of inventory to net realizable value.
(2) In 1999, an extraordinary loss was recorded for the early extinguishment of debt.
(3) Statement of income (loss) data for 2002 reflects results of operations of YMG since September 25, 2002.
(4) Effective January 1, 2002 we adopted the provisions prescribed by the Financial Accounting Standards Board (FASB) in Statement of Financial Accounting Standards (SFAS) No. 142, "Goodwill and Intangible Assets." Consequently, we ceased amortizing goodwill as of such date. Amortization expense relating to goodwill is immaterial in periods prior to 2002.

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

Overview

We are a worldwide leader in the design, development, manufacture and support of process control metrology systems used in semiconductor device manufacturing. Our thin film measurement proprietary systems measure the thickness and other properties of thin films applied during various steps in the manufacture of integrated circuits, enabling semiconductor device manufacturers to improve yields and reduce overall production costs. Our macro-defect inspection proprietary systems detect and classify defects in semiconductor wafers. We provide our customers with a flexible full-fab metrology solution by offering families of systems that meet their transparent and opaque thin film measurement and macro-defect inspection needs in various applications across the fabrication process. Our three primary families of metrology solutions offer leading-edge metrology technology, flexible systems cost-effectively designed for specific manufacturing applications and a common production-worthy automation platform, all backed by worldwide support.

Historically, a significant portion of our revenues in each quarter and year has been derived from sales to relatively few end user customers, and we expect this trend to continue. In 2000, 2001 and 2002 sales to end user customers that individually represented at least five percent of our revenues accounted for 27.8%, 42.5% and 46.8% of our revenues. In 2000, 2001 and 2002 sales to Intel accounted for 19.4%, 33.4% and 46.8% of our revenues.

In addition, a significant portion of our revenues in each quarter and year has been derived from sales to Tokyo Electron Limited (TEL), our sole distributor. TEL purchases our products for ultimate distribution to customers in Japan. In 2000, 2001 and 2002 sales to TEL accounted for 21.9%, 14.8% and 6.8% of our revenues. We expect that sales to TEL will continue to represent a portion of our revenues for at least the next several years.*

We do not have purchase contracts with any of our customers or distributors that obligate them to continue to purchase our products, and they could cease purchasing products from us at any time. A delay in purchase or cancellation by any of our large customers could cause quarterly revenues to vary significantly. In addition, during a given quarter, a significant portion of our revenues may be derived from the sale of a relatively small number of systems. Our transparent film measurement systems range in price from approximately $30,000 to $1.0 million per system, our opaque film measurement systems range in price from approximately $900,000 to $1.8 million per system and our macro-defect inspection systems range in price from approximately $650,000 to $1.4 million per system. Accordingly, a small change in the number of systems we sell may also cause significant changes in our operating results. Because fluctuations in the timing of orders from our major customers or distributors or in the number of our individual systems we sell could cause our revenues to fluctuate significantly in any given quarter or year, we do not believe that period-to-period comparisons of our financial results are necessarily meaningful, and they should not be relied upon as an indication of our future performance.

A significant portion of our revenues has been derived from customers outside of the United States, and we expect this trend to continue.* In 2000, approximately 54.7% of our revenues were derived from customers outside of the United States, of which 39.5% were derived from customers in Asia and 12.1% were derived from

customers in Europe. In 2001, approximately 53.7% of our revenues were derived from customers outside of the United States, of which 36.6% were derived from customers in Asia and 14.5% were derived from customers in Europe. In 2002, approximately 40.6% of our revenues were derived from customers outside of the United States, of which 30.1% were derived from customers in Asia and 10.4% were derived from customers in Europe. Substantially all of our revenues to date have been denominated in United States dollars.

The sales cycle for our systems typically ranges from six to 15 months, and can be longer when our customers are evaluating new technology. Due to the length of these cycles, we invest significantly in research and development and sales and marketing in advance of generating revenues related to these investments. Additionally, the rate and timing of customer orders may vary significantly from month to month. Accordingly, if sales of our products do not occur when we expect, and we are unable to adjust our estimates on a timely basis, our expenses and inventory levels may increase relative to revenues and total assets.

On September 25, 2002, we acquired ISOA, Inc., which we renamed the Yield Metrology Group (YMG). YMG had licensed its technology for use in the semiconductor industry and recently began transitioning to a semiconductor capital equipment supplier. YMG's core technologies are knowledge-based algorithms used in wafer macro-defect detection and classification. The purchase consideration for YMG, including direct acquisition costs, was $25.2 million in cash. The transaction was accounted for using the purchase method of accounting for business combinations. Results of operations of YMG have been included since September 25, 2002 and will affect comparisons from year to year.

Results of Operations

The following table sets forth, for the periods indicated, our statements of income data as percentages of our revenues. Our results of operations are reported as one reportable business segment.

	Year Ended December 31,		
	2000	2001	2002
Revenues	100.0%	100.0%	100.0%
Cost of revenues	47.5	50.1	58.4
Gross profit	52.5	49.9	41.6
Operating expenses:			
Research and development	10.2	14.7	20.6
In-process research and development	—	—	6.1
Selling, general and administrative	16.4	15.3	19.2
Amortization	0.4	0.4	0.7
Total operating expenses	27.0	30.4	46.6
Operating income (loss)	25.5	19.5	(5.0)
Interest expense (income) and other, net	(2.5)	(3.5)	(3.6)
Income (loss) before provision (benefit) for income taxes and cumulative effect of a change in accounting principle	28.0	23.0	(1.5)
Provision (benefit) for income taxes	(0.5)	8.2	1.0
Income (loss) before cumulative effect of a change in accounting principle	28.5	14.8	(2.5)
Cumulative effect of a change in accounting principle	1.7	—	—
Net income (loss)	26.8%	14.8%	(2.5%)

Results of Operations 2000, 2001 and 2002

Revenues. Our revenues are derived from the sale of our metrology systems, services and spare parts. Our revenues were $88.1 million, $79.4 million and $57.4 million in the years 2000, 2001 and 2002. These changes represent a decrease of 9.9% from 2000 to 2001 and a decrease of 27.7% from 2001 to 2002. The decreases in revenues from 2000 through 2002 were primarily due to an industry-wide slowdown in demand for semiconductor devices and equipment, which resulted in a decrease in orders for our products as well as postponements and cancellations of existing orders. Revenues from customers outside of the United States represented 54.7%, 53.7% and 40.6% of our revenues in 2000, 2001 and 2002. Revenues from customers outside of the United States decreased as a percentage of revenues from 2000 through 2002 as a result of decreased sales to existing customers in Europe and Asia. We expect that revenues generated from customers outside of the United States will continue to account for a significant percentage of our revenues.*

Our business continues to be impacted by the slowdown in economies worldwide. We have been further affected by the cyclical nature of the semiconductor industry with recurring periods of oversupply and overcapacity. These factors have resulted in a downturn in demand for our products. We currently do not have visibility as to the length or severity of the downturn. We do expect demand for our products to improve once customers adjust to the period of oversupply and overcapacity and historical levels of capital expenditures resume.* There has been no current evidence, however, that customer buying patterns will significantly increase in the near term. There is a risk that the slowdown may be prolonged further. Certain of our customers, including Intel, have announced anticipated declines in overall capital expenditures for 2003.

Cost of Revenues and Gross Profit. Cost of revenues consists of the labor, material and overhead costs of manufacturing our systems, royalties, spare parts cost and the cost associated with our worldwide service support infrastructure. Our gross profit was $46.3 million, $39.6 million and $23.9 million in 2000, 2001 and 2002. These changes represent decreases of 14.4% from 2000 to 2001 and 39.7% from 2001 to 2002. Our gross profit represented 52.5%, 49.9% and 41.6% of our revenues in 2000, 2001 and 2002. The decreases in gross profit from 2000 through 2002 were primarily due to a decrease in business volume, which resulted in customer support and fixed manufacturing costs being a higher component of a lower revenue base.

Research and Development. The thin film transparent and opaque process control metrology market is characterized by continuous technological development and product innovations. We believe that the rapid and ongoing development of new products and enhancements to existing products, including the transition to copper and low-κ dielectrics, the progression to 300 mm wafers, the continuous shrinkage in critical dimensions, and the evolution of ultra-thin gate process control, is critical to our success. Accordingly, we devote a significant portion of our technical, management and financial resources to research and development programs. Research and development expenditures consist primarily of salaries and related expenses of employees engaged in research, design and development activities. They also include consulting fees, prototype equipment expenses and the cost of related supplies. Our research and development expenditures were, $9.0 million, $11.6 million and $11.8 million in 2000, 2001 and 2002. These changes represent increases of 28.9% from 2000 to 2001 and 1.7% from 2001 to 2002. Research and development expenditures represented 10.2%, 14.6% and 20.6% of revenues in 2000, 2001 and 2002. The increase in research and development expenses from 2000 through 2002 resulted from higher personnel costs, parts costs associated with new product development and engineering facilities expansion.

In-Process Research and Development. The acquisition of YMG resulted in our recording of a one-time expense of $3.5 million for the write-off of in-process research and development (IPRD). The IPRD we acquired related to automated defect inspection technology to be used in stand alone and integrated metrology equipment. At the time of the acquisition, we determined that the IPRD had not reached technological feasibility and that it did not have an alternative future use. Accordingly, this amount was immediately expensed in the consolidated statement of operations upon the acquisition date.

Selling, General and Administrative. Selling, general and administrative expense is primarily comprised of salaries and related costs for sales, marketing, and general administrative personnel, as well as commissions, and other non-personnel related expenses. Our selling, general and administrative expense was $14.5 million, $12.2 million and $11.0 million in 2000, 2001 and 2002. These changes represent decreases of 15.8% from 2000 to 2001 and 9.4% from 2001 to 2002. Selling, general and administrative expense represented 16.4%, 15.3% and 19.2% of revenues in 2000, 2001 and 2002. The decreases from 2000 through 2002 resulted from lower commissions, the completion of certain infrastructure projects in prior periods and cost reduction initiatives that were implemented as a result of the semiconductor industry slowdown.

Amortization. Our expense for amortization was $0.3 million in 2000 and 2001 and $0.4 million in 2002. The increase in 2002 is attributable to the amortization of intangible assets having definite useful lives acquired from the acquisition of YMG. Effective January 1, 2002 we adopted the provisions prescribed by the Financial Accounting Standards Board (FASB) in Statement of Financial Accounting Standards (SFAS) No. 142, "Goodwill and Intangible Assets". Consequently, we ceased amortizing goodwill as of such date. Amortization expense relating to goodwill is immaterial in 2000 and 2001.

Interest Income and other, net. Interest income and other, net was $2.2 million, $2.8 million and $2.1 million in 2000, 2001 and 2002. The increase from 2000 to 2001 resulted from investing the net proceeds from our follow-on public offering in February 2001. The decrease from 2001 to 2002 resulted from lower interest rates and the use of cash in the acquisition of YMG as described further in Note 3 to the consolidated financial statements.

Provision (Benefit) for Income Taxes. We use the liability method of accounting for income taxes prescribed by the FASB in SFAS No. 109, "Accounting for Income Taxes". Our provision (benefit) for income taxes was a benefit of $0.4 million in 2000, a provision of $6.5 million in 2001 and a provision of $0.6 million in 2002. Our effective tax rate was (2%), 36% and (69%) in 2000, 2001 and 2002, respectively. During 1998, the net deferred tax asset was reduced to zero with a valuation allowance as a result of recurring losses and with the uncertainty regarding our ability to generate sufficient taxable income. In 2000, based on industry and internal forecasts combined with the successful completion of our initial public offering and the reduction of debt, we reduced the deferred tax valuation allowance by $8.6 million, for certain deferred tax assets that more likely than not would be realized. Despite losses incurred in 2002 and recent downward trends in the industry, management believes it is more likely than not the Company will realize the benefits of its deferred tax assets.* We computed our effective tax rate for 2001 on prevailing federal and state rates adjusted for research and development tax credits and income derived from tax exempt interest. Our effective tax rate for 2002 is less than the expected combined federal and state tax rates of 40% primarily due to the non-deductibility of the IPRD charge for book and tax purposes.

Change in Accounting Principle. Effective January 1, 2000, we changed our method of accounting for revenue recognition to comply with Securities and Exchange Commission's Staff Accounting Bulletin No. 101, "Revenue Recognition in Financial Statements" (SAB 101). Revenue is now recognized upon shipment provided that there is persuasive evidence of an arrangement, delivery has occurred, the sales price is fixed or determinable, and collection of the related receivable is reasonably assured. Certain sales of our products are sold and accounted for as multiple element arrangements, consisting of the sale of the product and installation. We generally recognize revenue upon delivery of the product, which is prior to installation, as the actions required to perform the installation are deemed to be perfunctory. Installation is deemed to be perfunctory based on our sales and installation history for similar products and customers and the fact that other vendors can and have performed the installation. When customer acceptance is subjective and not obtained prior to shipment, we defer a portion of the product revenue until such time as positive affirmation of acceptance has been obtained from the customer. Customer acceptance is generally based on our products meeting published performance specifications. The amount of revenue allocated to the shipment of products is done on a residual method basis. Under this method, the total arrangement value is allocated first to undelivered contract elements, based on their fair values, with the remainder being allocated to product revenue. The fair value of installation services is based

upon billable hourly rates and the estimated time to complete the service. Revenue related to undelivered installation services is deferred until such time as installation is completed at the customer's site. Previously, we had recognized revenue upon shipment of equipment to customers, which usually preceded installation and final customer acceptance, provided final customer acceptance and collection of the related receivable were probable. The effect of the change was to decrease revenue by $2.1 million for the year ended December 31, 2000.

Liquidity and Capital Resources

At December 31, 2002, we had $73.3 million of cash, cash equivalents and short-term investments and $106.1 million in working capital. At December 31, 2001 we had $94.6 million of cash and cash equivalents and $128.6 million in working capital. At December 31, 2000 our cash and cash equivalents totaled $29.7 million, while working capital amounted to $70.1 million.

Typically during periods of revenue growth, changes in accounts receivable and inventories represent a use of cash as we incur costs and expend cash in advance of receiving cash from our customers. Similarly, during periods of declining revenue, changes in accounts receivable and inventories represent a source of cash as inventory purchases decline and revenue from prior periods is collected.

Operating activities used $4.6 million in 2000. Cash provided by operating activities in 2001 and 2002 was $23.0 million and $1.3 million, respectively. The use of cash in operating activities during 2000 was primarily the result of having to fund an increase in accounts receivable and an increase in inventories, offset by net income. Net cash provided by operating activities in 2001 was primarily due to net income combined with a decrease in accounts receivable. The net cash provided by operating activities during 2002 was primarily a result of increases in deferred revenue of $3.9 million, accrued liabilities of $2.0 million, profit before depreciation, amortization and the write-off of IPRD of $3.7 million, partially offset by an increase in inventories of $6.2 million and an increase in accounts receivable of $0.9 million.

Net cash used in investing activities was $1.4 million, $2.4 million and $56.4 million in 2000, 2001 and 2002. Capital expenditures for 2000 were primarily used for the purchase and installation of enterprise resource planning software, computer equipment necessary for our operations and costs associated with renovations to our corporate headquarters. Capital expenditures for 2001 were primarily used for renovations to our corporate facility and upgrades to existing computer systems. Net cash used in investing activities for 2002 included the acquisition of YMG, net of cash acquired, of $25.1 million, purchases of short-term investments of $30.8 million and capital expenditures of $0.6 million. Capital expenditures over the next twelve months are expected to be approximately $1.5 million.*

Net cash provided by financing activities was $0.7 million, $44.4 million and $2.5 million in 2000, 2001 and 2002. In 2000, net cash provided by financing activities equaled the cash proceeds received by us when our employees exercised stock options and participated in the employee stock purchase plan. In February 2001, we completed the follow-on public offering of 1,000,000 shares of our common stock at $45.00 per share. Net proceeds to us after the underwriting discount and other fees amounted to $42.0 million. In addition, we received cash proceeds of $2.3 million from stock option exercises and participation in our employee stock purchase plan. Net cash provided by financing activities in 2002 was a result of proceeds received from sales of shares, including sales of shares through employee stock plans and proceeds received from a director of the Company in connection with his sale of the Company's stock.

Our future capital requirements will depend on many factors, including the timing and amount of our revenues and our investment decisions, which will affect our ability to generate additional cash. We believe that our existing cash, cash equivalents and short-term investments will be sufficient to meet our anticipated cash requirements for working capital, capital expenditures, and research and development activities for the foreseeable future.* Thereafter, if cash generated from operations and financing activities is insufficient to satisfy our working capital requirements, we may seek additional funding through bank borrowings, sales of securities

or other means. There can be no assurance that we will be able to raise any such capital on terms acceptable to us or at all.

Our significant commitments consist of operating leases. We lease our manufacturing, service and sales facilities and certain equipment under operating leases that expire through 2009. The total future minimum lease payments under non-cancelable operating leases at December 31, 2002 amounted to $1,024, $958, $670, $429 and $429 for the years 2003 to 2007, respectively.

Critical Accounting Policies

Management's discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. We review the accounting policies we use in reporting our financial results on a regular basis. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. On an ongoing basis, we evaluate our estimates, including those related to accounts receivable, inventories, intangible assets, income taxes and warranty obligations. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Results may differ from these estimates due to actual outcomes being different from those on which we based our assumptions. These estimates and judgments are reviewed by management on an ongoing basis, and by the Audit Committee at the end of each quarter prior to the public release of our financial results. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our consolidated financial statements.

Revenue Recognition. Effective January 1, 2000, we changed our method of accounting for revenue recognition to comply with SAB 101. Revenue is recognized upon shipment provided that there is persuasive evidence of an arrangement, delivery has occurred, the sales price is fixed or determinable, and collection of the related receivable is reasonably assured. Certain sales of our products are sold and accounted for as multiple element arrangements, consisting of the sale of the product and installation. We generally recognize revenue upon delivery of the product, which is prior to installation, as the actions required to perform the installation are deemed to be perfunctory. Installation is deemed to be perfunctory based on our sales and installation history for similar products and customers and the fact that other vendors can and have performed the installation. When customer acceptance is subjective and not obtained prior to shipment, we defer a portion of the product revenue until such time as positive affirmation of acceptance has been obtained from the customer. Customer acceptance is generally based on our products meeting published performance specifications. The amount of revenue allocated to the shipment of products is done on a residual method basis. Under this method, the total arrangement value is allocated first to undelivered contract elements, based on their fair values, with the remainder being allocated to product revenue. The fair value of installation services is based upon billable hourly rates and the estimated time to complete the service. Revenue related to undelivered installation services is deferred until such time as installation is completed at the customer's site.

Allowance for Doubtful Accounts. We maintain allowances for doubtful accounts for estimated losses resulting from the inability of our customers to make required payments. We specifically analyze accounts receivable and analyze historical bad debts, customer concentrations, customer credit-worthiness, current economic trends and changes in our customer payment terms when evaluating the adequacy of the allowance for doubtful accounts. If the financial condition of our customers was to deteriorate, resulting in an impairment of their ability to make payments or our assumptions are otherwise incorrect, additional allowances may be required.

Excess and Obsolete Inventory. We write down our excess and obsolete inventory equal to the difference between the cost of inventory and the estimated market value based upon assumptions about future product life-

cycles, product demand and market conditions. If actual product life-cycles, product demand and market conditions are less favorable than those projected by management, additional inventory write-downs may be required.

Long-Lived Assets and Acquired Intangible Assets. The Company periodically reviews long-lived assets, other than goodwill, for impairment whenever changes in events or circumstances indicate that the carrying amount of an asset may not be recoverable. Goodwill, in accordance with SFAS No. 142, is reviewed for possible impairment at least annually during the fourth quarter for each year. A review of goodwill may be initiated prior to conducting the annual analysis if events or changes in circumstances indicate that the carrying value of goodwill may be impaired. Assumptions and estimates used in the determination of impairment losses, such as future cash flows and disposition costs, may affect the carrying value of long-lived assets and the impairment of such long-lived assets, if any, could have a material effect on our consolidated financial statements.

Warranties. We provide for the estimated cost of product warranties at the time revenue is recognized. While we engage in product quality programs and processes, our warranty obligation is affected by product failure rates, material usage and service delivery costs incurred in correcting a product failure. Should actual product failure rates, material usage or service delivery costs differ from our estimates, revisions to the estimated warranty liability would be required.

Accounting for Income Taxes. As part of the process of preparing our consolidated financial statements, we are required to estimate our actual current tax exposure together with our temporary differences resulting from differing treatment of items for tax and accounting purposes. These temporary differences result in deferred tax assets, which are included within our consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income and to the extent we believe that recovery is not likely, we must establish a valuation allowance. Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and any valuation allowance recorded against our deferred tax assets. At December 31, 2002, we had no valuation allowance established against our deferred tax assets. The valuation allowance is based on our estimates of taxable income by jurisdiction in which we operate and the period over which our deferred taxes will be recoverable. In the event that actual results differ from these estimates or we adjust these estimates in future periods, we may need to establish a valuation allowance, which could materially impact our financial position and results of operations.

Impact of Recent Accounting Pronouncements

In August 2001, the FASB issued SFAS No. 143, "Accounting for Asset Retirement Obligations" (effective for fiscal years beginning after June 15, 2002). SFAS No. 143 addresses accounting and reporting for obligations associated with the retirement of tangible long lived assets and retirement of assets. We are currently evaluating the impact of SFAS No. 143, but do not expect that our adoption on January 1, 2003 will have a material effect on our financial statements.

In July 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities." SFAS No. 146 requires that a liability for a cost associated with an exit or disposal activity be recognized when the liability is incurred. We are required to adopt the provisions of SFAS No. 146 effective for exit or disposal activities initiated after December 31, 2002. The adoption of SFAS No. 146 will impact the types and timing costs associated with any future exit activities of which no material activities are currently planned.

In November 2002, the FASB issued Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness to Others, an interpretation of FASB Statements No. 5, 57 and 107 and a rescission of FASB Interpretation No. 34." This Interpretation elaborates on the disclosures to be made by a guarantor in its interim annual financial statements about its obligations under guarantees issued. The Interpretation also clarifies that a guarantor is required to recognize, at

inception of a guarantee, a liability for the fair value of the obligation undertaken. The initial recognition and measurement provisions of the Interpretation are applicable to guarantees issued or modified after December 31, 2002 and are not expected to have a material effect on our financial statements. The disclosure requirements are effective for financial statements of interim or annual periods ending after December 15, 2002.

In December 2002, the FASB issued SFAS No. 148, "Accounting for Stock-Based Compensation—Transition and Disclosure, an amendment of FASB Statement No. 123." This Statement amends SFAS No. 123, "Accounting for Stock-Based Compensation," to provide alternative methods of transition for a voluntary change to the fair value method of accounting for stock-based employee compensation. We expect to continue to account for stock options under Accounting Principles Board Opinion No. 25. In addition, this Statement amends the disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements. Certain of the disclosure modifications are required for fiscal years ending after December 15, 2002 and are included in the notes to our consolidated financial statements.

Audit Committee Approval of Non-Audit Services

Section 10A(i)(2) of the Securities Exchange Act of 1934, as added by Section 202 of the Sarbanes-Oxley Act of 2002, requires disclosure of the approval of our Audit Committee of non-audit services to be performed by our external auditor. The Audit Committee approved engagements of KPMG LLP, our external auditor, for the following non-audit services: (1) tax services; (2) 401(k) audit; and (3) acquisition related due diligence.

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

Interest Rate Risk

We are exposed to changes in interest rates primarily from our investments in certain available-for-sale securities. Our available-for-sale securities consist primarily of fixed income investments (U.S. Treasury and Agency securities and corporate bonds). We continually monitor our exposure to changes in interest rates and credit ratings of issuers from our available-for-sale securities. Accordingly, we believe that the effects of changes in interest rates and credit ratings of issuers are limited and would not have a material impact on our financial condition or results of operations. However, it is possible that we are at risk if interest rates or credit ratings of issuers change in an unfavorable direction. The magnitude of any gain or loss will be a function of the difference between the fixed rate of the financial instrument and the market rate and our financial condition and results of operations could be materially affected.

Foreign Currency Risk

We do not use foreign currency forward exchange contracts or purchased currency options to hedge local currency cash flows or for trading purposes. All sales arrangements with international customers are denominated in U.S. dollars. We have branch operations in Taiwan, Singapore, China and Korea and a wholly-owned subsidiary in Europe, which are subject to currency fluctuations. These foreign branches are limited in their operations and level of investment so that the risk of currency fluctuations is not expected to be material.

Item 8. *Financial Statements and Supplementary Data*

The consolidated financial statements required by this item are set forth on the pages indicated at Item 15(a).

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

A change in accountants was previously reported on a Current Report on Form 8-K filed on May 31, 2002. In the prior year a change in accountants was reported on a Current Report on Form 8-K filed on April 25, 2001 as amended by Form 8-K/A filed on May 18, 2001.

PART III

Certain information required by Part III is omitted from this Annual Report on Form 10-K because the Registrant will file a definitive proxy statement within one hundred twenty (120) days after the end of the fiscal year pursuant to Regulation 14A (the "Proxy Statement") for its Annual Meeting of Stockholders currently scheduled for May 21, 2003, and the information included in the Proxy Statement is incorporated herein by reference.

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

The information required by this Item with respect to directors and executive officers is incorporated by reference to the Proxy Statement. Information regarding compliance with Section 16 of the Securities Exchange Act of 1934, as amended, is incorporated by reference to the information under the heading "Section 16(a) Beneficial Ownership Reporting Compliance" in the Proxy Statement.

Item 11. *Executive Compensation*

The information required by this Item with respect to the compensation of our executive officers is incorporated by reference to the Proxy Statement.

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

The information required by this Item is incorporated by reference to the Proxy Statement.

Item 13. *Certain Relationships and Related Transactions*

None.

Item 14. *Controls and Procedures*

(a) Evaluation of Disclosure Controls and Procedures.

Our chief executive officer and our chief financial officer, after evaluating our "disclosure controls and procedures" (as defined in Securities Exchange Act of 1934 (the "Exchange Act") Rules 13a-14(c) and 15d-14(c)) as of a date (the "Evaluation Date") within 90 days before the filing date of this Annual Report on Form 10-K, have concluded that as of the Evaluation Date, our disclosure controls and procedures are effective to ensure that information we are required to disclose in reports that we file or submit under the Exchange Act is (i) recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission rules and forms, and (ii) accumulated and communicated to management, including the chief executive officer and chief financial officer, as appropriate to allow timely decisions regarding required disclosure.

The Company's management, including the chief executive officer and chief financial officer, does not expect that our disclosure controls and procedures will prevent all error and all fraud. Because of inherent limitations in any system of disclosure controls and procedures, no evaluation of controls can provide absolute assurance that all instances of error or fraud, if any, within the Company may be detected.

(b) Changes in Internal Controls.

Subsequent to the Evaluation Date, there were no significant changes in our internal controls or in other factors that could significantly affect internal controls subsequent to the date of their evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

PART IV

Item 15. ***Exhibits, Financial Statement Schedules, and Reports on Form 8-K***

(a) The following documents are filed as part of this Annual Report on Form 10-K:

1. Financial Statements

The consolidated financial statements and consolidated financial statement information required by this Item are included on pages F-1 through F-24 of this report. The Reports of Independent Public Accounts appear on pages F-2 through F-4 of this report.

2. Financial Statement Schedule

See Index to financial statements on page F-1 of this report.

3. Exhibits

(b) Reports on Form 8-K

On October 9, 2002, Rudolph filed a Current Report on Form 8-K to disclose the closing of its acquisition of ISOA, Inc. that occurred on September 25, 2002.

On November 14, 2002, Rudolph filed a Current Report on Form 8-K which contained Certifications that were furnished to the Securities and Exchange Commission pursuant to 18 U.S.C. Section 1350 as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

(c) The following is a list of exhibits. Where so indicated, exhibits, which were previously filed, are incorporated by reference.

Exhibit No.	Description
3.1	Restated Certificate of Incorporation of Registrant (incorporated herein by reference to Exhibit (3.1(b)) to the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-86871 filed on September 9, 1999).
3.2	Amended and Restated Bylaws of Registrant (incorporated herein by reference to Exhibit (3.2(b)) to the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-86871), filed on September 9, 1999).
10.1+	License Agreement, dated June 28, 1995, between the Registrant and Brown University Research Foundation (incorporated herein by reference to Exhibit (10.1) to the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-86871), filed on September 9, 1999).
10.2	Form of Indemnification Agreement (incorporated herein by reference to Exhibit (10.3) to the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-86871), filed on September 9, 1999).
10.3	Amended 1996 Non-Qualified Stock Option Plan (incorporated herein by reference to Exhibit 10.15 to Registrant's quarterly report on Form 10-Q, filed on November 14, 2001).
10.4	Form of 1999 Stock Plan (incorporated herein by reference to Exhibit (10.4) to the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-86871), filed on September 9, 1999).
10.5	Form of 1999 Employee Stock Purchase Plan (incorporated herein by reference to Exhibit (10.5) to the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-86871), filed on September 9, 1999).

10.6 Management Agreement, dated as of July 24, 2000, by and between Rudolph Technologies, Inc. and Paul F. McLaughlin (incorporated herein by reference to Exhibit 10.12 to Registrant's quarterly report on Form 10-Q, filed on November 3, 2000).

10.7 Management Agreement, dated as of July 24, 2000, by and between Rudolph Technologies, Inc. and Robert Loiterman (incorporated herein by reference to Exhibit 10.13 to Registrant's quarterly report on Form 10-Q, filed on November 3, 2000).

10.8 Management Agreement, dated as of July 24, 2000 by and between Rudolph Technologies, Inc. and Steven R. Roth (incorporated herein by reference to Exhibit 10.14 to Registrant's quarterly report on Form 10-Q, filed on November 3, 2000).

10.9 Registration Agreement, dated June 14, 1996 by and among the Registrant, 11, L.L.C., Riverside Rudolph, L.L.C., Dr. Richard F. Spanier, Paul F. McLaughlin (incorporated herein by reference to Exhibit (10.9) to the Registrant's Registration Statement on Form S-1, as amended (SEC File No. 333-86871), filed on September 9, 1999).

10.10 Stockholders Agreement, dated June 14, 1996 by and among the Registrant, Administration of Florida, Liberty Partners Holdings 11, L.L.C., Riverside Dr. Richard F. Spanier, Paul McLaughlin, Dale Moorman, Thomas Cooper and (incorporated herein by reference to Exhibit (10.10) to the Registrant's Form S-1, as amended (SEC File No. 333-86871), filed on September 9, 1999.

10.11 Agreement and Plan of Merger among Rudolph Technologies, Inc., Oasis Acquisition, Inc., ISOA, Inc. and certain shareholders of ISOA, Inc. dated July 22, 2002 (incorporated by reference to an exhibit to the Company's Current Report on Form 8-K as filed with the Commission on October 9, 2002).

21.1 Subsidiaries.

23.1 Consent of PricewaterhouseCoopers LLP, Independent Accountants.

23.2 Notice regarding consent of Arthur Andersen LLP.

23.3 Consent of KPMG LLP, Independent Accountants.

99.1 Letter to Commission Pursuant to Temporary Note 3T.

+ Confidential treatment has been granted with respect to portions of this exhibit.

RUDOLPH TECHNOLOGIES, INC. AND SUBSIDIARIES

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Report of Independent Accountants

To the Stockholders and Board of Directors of Rudolph Technologies, Inc.:

We have audited the 2002 consolidated financial statements of Rudolph Technologies, Inc. and subsidiaries as listed in the accompanying index. In connection with our audit of the 2002 consolidated financial statements, we also have audited the 2002 financial statement schedule as listed in the accompanying index. These consolidated financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements and financial statement schedule based on our audit. The 2001 consolidated financial statements and 2001 financial statement schedule of Rudolph Technologies, Inc. and subsidiaries as listed in the accompanying index were audited by other auditors who have ceased operations. Those auditors expressed an unqualified opinion on those consolidated financial statements and financial statement schedule in their report dated January 25, 2002.

We conducted our audit 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 financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the 2002 consolidated financial statements referred to above present fairly, in all material respects, the financial position of Rudolph Technologies, Inc. and subsidiaries as of December 31, 2002, and the results of their operations and their cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, the related 2002 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/ KPMG LLP

Short Hills, New Jersey
January 29, 2003

Report of Independent Public Accountants

To the Stockholders and Board of Directors of Rudolph Technologies, Inc.:

We have audited the accompanying consolidated balance sheet of Rudolph Technologies, Inc. (a Delaware corporation) and subsidiary as of December 31, 2001, and the related consolidated statements of income, stockholders' equity and cash flows for the year then ended. These financial statements and the schedule referred to below are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audit.

We conducted our audit in accordance with auditing standards generally accepted in the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Rudolph Technologies, Inc. and subsidiary as of December 31, 2001, and the results of their operations and their cash flows for the year then ended in conformity with accounting principles generally accepted in the United States.

Our audit was made for the purpose of forming an opinion on the basic financial statements taken as a whole. The schedule listed under Item 14 (a)2 is presented for purposes of complying with the Securities and Exchange Commission's rules and is not a basic part of the financial statements. This schedule for the year ended December 31, 2001 has been subjected to the auditing procedures applied in our audit of the basic financial statements and, in our opinion, fairly states in all material respects the financial data required to be set forth therein in relation to the basic financial statements taken as a whole.

/s/ ARTHUR ANDERSEN LLP

Roseland, New Jersey
January 25, 2002

This is a copy of the audit report previously issued by Arthur Andersen LLP ("Andersen") in connection with our filing on Form 10-K for the year ended December 31, 2001. This audit report has not been reissued by Andersen, nor has Andersen consented to its inclusion, in connection with this filing on Form 10-K. See exhibit 23.2 for further discussion.

Report of Independent Accountants

To the Stockholders and Board of Directors
of Rudolph Technologies, Inc.

In our opinion, the consolidated statements of income, of cash flows and of changes in stockholders' equity for the year ended December 31, 2000 present fairly, in all material respects, the results of operations and cash flows of Rudolph Technologies, Inc. and subsidiary for the year ended December 31, 2000, in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the 2000 financial statement schedule listed in the accompanying index appearing under Item 14(a)(2), presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audit. We conducted our audit of these statements in accordance with auditing standards generally accepted in the United States of America, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

As discussed in Note 2B to the consolidated financial statements, during the year ended December 31, 2000 the Company changed its method of recognizing revenue.

/s/ PRICEWATERHOUSECOOPERS LLP

Florham Park, New Jersey
January 26, 2001

RUDOLPH TECHNOLOGIES, INC. AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share data)

	December 31, 2001	December 31, 2002
ASSETS		
Current assets:		
Cash and cash equivalents	$ 94,642	$ 42,047
Short-term investments	—	31,223
Accounts receivable, less allowance of $328 in 2001 and $250 in 2002	13,523	16,142
Inventories	22,695	30,488
Income taxes receivable	917	1,336
Deferred income taxes	1,864	1,286
Prepaid expenses and other current assets	654	1,411
Total current assets	134,295	123,933
Property, plant and equipment, net	5,221	7,454
Goodwill	413	13,209
Identifiable intangible assets, net	1,768	11,256
Deferred income taxes	5,790	5,299
Other assets	311	812
Total assets	$147,798	$161,963
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 789	$ 2,587
Accrued liabilities:		
Commissions	180	111
Payroll and related expenses	727	2,684
Warranty	972	1,120
Income taxes payable	—	1,157
Deferred revenue	1,489	5,475
Other current liabilities	1,491	4,748
Total current liabilities	5,648	17,882
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $0.001 par value, 5,000,000 shares authorized, no shares issued and outstanding at December 31, 2001 and 2002	—	—
Common stock, $0.001 par value, 50,000,000 shares authorized, 16,136,003 and 16,330,840 issued and outstanding at December 31, 2001 and 2002, respectively	16	16
Additional paid-in capital	134,315	137,668
Accumulated other comprehensive loss	(304)	(295)
Retained earnings	8,123	6,692
Total stockholders' equity	142,150	144,081
Total liabilities and stockholders' equity	$147,798	$161,963

The accompanying notes are an integral part of these consolidated financial statements.

RUDOLPH TECHNOLOGIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF INCOME (LOSS)
(In thousands, except share and per share data)

	Year Ended December 31,		
	2000	2001	2002
Revenues	$ 88,107	$ 79,398	$ 57,445
Cost of revenues	41,854	39,798	33,576
Gross profit	46,253	39,600	23,869
Operating expenses:			
Research and development	9,022	11,625	11,828
In-process research and development	—	—	3,500
Selling, general and administrative	14,463	12,171	11,025
Amortization	339	339	412
Total operating expenses	23,824	24,135	26,765
Operating income (loss)	22,429	15,465	(2,896)
Interest income and other, net	2,174	2,774	2,050
Income (loss) before provision (benefit) for income taxes and cumulative effect of a change in accounting principle	24,603	18,239	(846)
Provision (benefit) for income taxes	(431)	6,499	585
Income (loss) before cumulative effect of a change in accounting principle	25,034	11,740	(1,431)
Cumulative effect of a change in accounting principle (net of tax of $924)	1,458	—	—
Net income (loss)	$ 23,576	$ 11,740	$ (1,431)
Basic earnings (loss) per share:			
Income (loss) before cumulative effect of a change in accounting principle	$ 1.69	$ 0.74	$ (0.09)
Cumulative effect of a change in accounting principle	(0.09)	—	—
Net income (loss)	$ 1.60	$ 0.74	$ (0.09)
Diluted earnings (loss) per share:			
Income (loss) before cumulative effect of a change in accounting principle	$ 1.58	$ 0.71	$ (0.09)
Cumulative effect of a change in accounting principle	(0.09)	—	—
Net income (loss)	$ 1.49	$ 0.71	$ (0.09)
Weighted average number of shares outstanding:			
Basic	14,773,295	15,899,933	16,215,237
Diluted	15,805,188	16,531,461	16,215,237

The accompanying notes are an integral part of these consolidated financial statements.

RUDOLPH TECHNOLOGIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

For the years ended December 31, 2000, 2001 and 2002

(In thousands, except share data)

	Common Stock		Additional Paid-in Capital	Accumulated Other Comprehensive Loss	Retained Earnings (Accumulated Deficit)	Total	Comprehensive Income (Loss)
	Shares	Amount					
Balance at December 31, 1999	14,684,706	$ 15	$ 85,025	$(237)	$(27,193)	$ 57,610	
Proceeds from sales of shares through employee stock plans	187,179	—	672	—	—	672	
Net income	—	—	—	—	23,576	23,576	$23,576
Tax benefit of exercise of employee stock options	—	—	1,688	—	—	1,688	
Currency translation	—	—	—	(38)	—	(38)	(38)
Comprehensive income							$23,538
Balance at December 31, 2000	14,871,885	15	87,385	(275)	(3,617)	83,508	
Issuance of common stock, net of expenses	1,000,000	1	42,031	—	—	42,032	
Proceeds from sales of shares through employee stock plans	264,118	—	2,364	—	—	2,364	
Net income	—	—	—	—	11,740	11,740	$11,740
Tax benefit of exercise of employee stock options	—	—	2,535	—	—	2,535	
Currency translation	—	—	—	(29)	—	(29)	(29)
Comprehensive income							$11,711
Balance at December 31, 2001	16,136,003	16	134,315	(304)	8,123	142,150	
Proceeds from sales of shares through employee stock plans and other	194,837	—	2,468	—	—	2,468	
Net loss	—	—	—	—	(1,431)	(1,431)	$(1,431)
Tax benefit of exercise of employee stock options	—	—	885	—	—	885	
Currency translation	—	—	—	(417)	—	(417)	(417)
Unrealized gain on investments, net of income tax expense of $132	—	—	—	426	—	426	426
Comprehensive loss							$(1,422)
Balance at December 31, 2002	16,330,840	$ 16	$137,668	$(295)	$ 6,692	$144,081	

The accompanying notes are an integral part of these consolidated financial statements.

RUDOLPH TECHNOLOGIES, INC. AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CASH FLOWS

(In thousands)

	Year Ended December 31,		
	2000	2001	2002
Cash flows from operating activities:			
Net income (loss)	$ 23,576	$11,740	$ (1,431)
Adjustments to reconcile net income (loss) to net cash and cash equivalents provided by (used in) operating activities:			
Amortization	339	339	412
In-process research and development	—	—	3,500
Depreciation	661	1,027	1,233
Tax benefit for sale of shares through employee stock plans	1,688	2,535	885
Provision for (recovery of) doubtful accounts	143	(115)	(78)
Deferred income taxes	(7,150)	1,808	252
Decrease (increase) in assets, net of acquired business:			
Accounts receivable	(17,815)	13,709	(860)
Income taxes receivable	(1,349)	432	(419)
Inventories	(12,400)	1,067	(6,215)
Prepaid expenses and other assets	(46)	(221)	(1,497)
Increase (decrease) in liabilities, net of acquired business:			
Accounts payable	1,347	(2,726)	135
Accrued liabilities	1,178	(1,659)	1,996
Income taxes payable	—	—	1,157
Deferred revenue	4,345	(3,510)	3,986
Other current liabilities	857	(1,468)	(1,713)
Net cash and cash equivalents provided by (used in) operating activities	(4,626)	22,958	1,343
Cash flows from investing activities:			
Purchase of business, net of cash acquired	—	—	(25,069)
Purchases of short-term investments	—	—	(30,797)
Purchases of property, plant and equipment	(1,388)	(2,431)	(618)
Proceeds from disposal of property, plant and equipment	16	—	—
Net cash and cash equivalents used in investing activities	(1,372)	(2,431)	(56,484)
Cash flows from financing activities:			
Proceeds from sale of common stock, net of expenses	—	42,032	—
Proceeds from sales of shares through employee stock plans and other	672	2,364	2,468
Net cash and cash equivalents provided by financing activities	672	44,396	2,468
Effect of exchange rate changes on cash and cash equivalents	(14)	(17)	78
Net increase (decrease) in cash and cash equivalents	(5,340)	64,906	(52,595)
Cash and cash equivalents at beginning of period	35,076	29,736	94,642
Cash and cash equivalents at end of period	$ 29,736	$94,642	$ 42,047
Supplemental disclosures of cash flow information:			
Cash paid during the period for:			
Income taxes	$ 5,454	$ 2,030	—

The accompanying notes are an integral part of these consolidated financial statements.

1. Organization and Nature of Operations:

Rudolph Technologies, Inc. (the "Company") designs, develops, manufactures and supports high-performance process control equipment used in semiconductor device manufacturing. The Company has branch sales and service offices in China, Korea, Taiwan and Singapore and a wholly-owned sales and service subsidiary in Europe. The Company operates in a single segment and supports a wide variety of applications in the areas of diffusion, etch, lithography, CVD, PVD, and CMP.

On September 25, 2002, the Company acquired all of the outstanding stock of ISOA, Inc., a Texas corporation (ISOA), through a merger of Oasis Acquisition, Inc., a wholly owned subsidiary of the Company, with and into ISOA, with ISOA as the surviving corporation, renamed Yield Metrology Group (YMG). YMG had licensed its technology for use in the semiconductor industry and recently began transitioning to a semiconductor capital equipment supplier. YMG's core technologies are knowledge-based algorithms used in wafer macro-defect detection and classification. The purchase consideration for YMG, including direct acquisition costs, was $25.2 million in cash. The transaction was accounted for using the purchase method of accounting for business combinations (See Note 3).

2. Summary of Significant Accounting Policies:

A. Consolidation:

The consolidated financial statements reflect the accounts of the Company and its wholly-owned subsidiaries. All intercompany accounts and transactions have been eliminated.

B. Revenue Recognition and Change in Accounting Principle

Effective January 1, 2000, the Company changed its method of accounting for revenue recognition to comply with Securities and Exchange Commission's Staff Accounting Bulletin No. 101, Revenue Recognition in Financial Statements (SAB 101). Revenue is now recognized upon shipment provided that there is persuasive evidence of an arrangement, delivery has occurred, the sales price is fixed or determinable, and collection of the related receivable is reasonably assured. Certain sales of the Company's products are sold and accounted for as multiple element arrangements, consisting of the sale of the product and installation. The Company generally recognizes revenue upon delivery of the product, which is prior to installation, as the actions required to perform the installation are deemed to be perfunctory. Installation is deemed to be perfunctory based on the Company's sales and installation history for similar products and customers and the fact that other vendors can and have performed the installation. When customer acceptance is subjective and not obtained prior to shipment, the Company defers a portion of the product revenue until such time as positive affirmation of acceptance has been obtained from the customer. Customer acceptance is generally based on the Company's products meeting published performance specifications. The amount of revenue allocated to the shipment of products is done on a residual method basis. Under this method, the total arrangement value is allocated first to undelivered contract elements, based on their fair values, with the remainder being allocated to product revenue. The fair value of installation services is based upon billable hourly rates and the estimated time to complete the service. Revenue related to undelivered installation services is deferred until such time as installation is completed at the customer's site. Previously, the Company had recognized revenue upon shipment of equipment to customers, which usually preceded installation and final customer acceptance, provided final customer acceptance and collection of the related receivable were probable. The effect of the change was to decrease revenue by $2.1 million for the year ended December 31, 2000.

Revenues from parts sales are recognized at the time of shipment. Revenue from service contracts is recognized ratably over the period of the contract. A provision for the estimated cost of fulfilling warranty obligations is recorded at the time the related revenue is recognized.

Sales contracts with distributors contain fixed prices, current payment terms and are not subject to distributor's resale or any other contingencies. Accordingly, sales of finished products to distributors are recognized as revenue at the time of shipment. Distributors do not maintain inventory of our products, other than a small quantity of spare parts for warranty and maintenance purposes.

C. 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 and liabilities and disclosure of contingent liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates made by management include allowance for doubtful accounts, inventory obsolescence, recoverability and useful lives of property, plant and equipment, and identifiable intangible assets, recoverability of goodwill, recoverability of deferred tax assets and liabilities for product warranty. Actual results could differ from those estimates.

D. Cash and Cash Equivalents:

Cash and cash equivalents include cash and highly liquid debt instruments with original maturities of three months or less when purchased.

E. Allowance For Doubtful Accounts:

The Company evaluates the collectibility of accounts receivable based on a combination of factors. In the cases where the Company is aware of circumstances that may impair a specific customer's ability to meet its financial obligation the Company records a specific allowance against amounts due, and thereby reduces the net recognized receivable to the amount management reasonably believes will be collected. For all other customers, the Company recognizes allowances for doubtful accounts based on the length of time the receivables are outstanding, industry and geographic concentrations, the current business environment and historical experience.

F. Inventories:

Inventories are stated at the lower of cost (first-in, first-out) or market. Demonstration units, which are available for sale, are stated at their manufacturing costs and reserves are recorded to adjust the demonstration units to their net realizable value.

G. Property, Plant and Equipment:

Property, plant and equipment are stated at cost. Depreciation of property, plant and equipment is computed using the straight-line method over the estimated useful lives of the assets which are thirty years for buildings, seven years for machinery and equipment and furnitures and fixtures, and three years for computer equipment. Leasehold improvements are amortized using the straight-line method over the lesser of the lease term or the estimated useful life of the related asset. Repairs and maintenance costs are expensed as incurred and major renewals and betterments are capitalized.

H. Impairment of Long-Lived Assets:

Long-lived assets, such as property, plant, and equipment, and identifiable acquired intangible assets with definite useful lives, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of assets to be held and used is measured by a comparison of the carrying amount of an asset to estimated undiscounted future cash flows expected to be generated by the asset. If the carrying amount of an asset exceeds its estimated future cash flows, an impairment charge is recognized by the amount by which the carrying amount of the asset exceeds the fair value of the asset, which is generally based on discounted cash flows.

I. Goodwill and Acquired Intangible Assets:

In July 2001, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 141, "Business Combinations", and SFAS No. 142, "Goodwill and Other Intangible Assets". SFAS No. 141 requires that the purchase method of accounting be used for all business combinations completed after June 30, 2001. SFAS No. 141 also specifies the criteria that intangible assets acquired in a purchase method business combination must meet to be recognized and reported apart from goodwill. SFAS No. 142 requires that goodwill and intangible assets with indefinite useful lives no longer be amortized, but instead they will be tested for impairment at least annually in accordance with the provisions of SFAS No. 142. SFAS No. 142 also requires that intangible assets with definite useful lives be amortized over their respective estimated useful lives to their estimated residual values, and reviewed for impairment in accordance with SFAS No. 144, "Accounting for the Impairment or Disposal of Long-Lived Assets."

The Company has adopted the provisions of SFAS No. 141 for acquisitions initiated after June 30, 2001, and SFAS No. 142 effective January 1, 2002. In connection therewith, the Company determined that it has one reporting unit. Goodwill acquired in business combinations completed before July 1, 2001 has been amortized through December 31, 2001. Effective January 1, 2002, as part of the adoption of SFAS No. 142, the Company is no longer amortizing goodwill. SFAS No. 142 requires that the Company perform an assessment of whether there is an indication that goodwill is impaired based on the provisions of SFAS No. 142. To the extent an indication exists that the goodwill may be impaired, the Company must measure the impairment loss, if any. Under SFAS No. 142, goodwill impairment is deemed to exist if the net book value of a reporting unit exceeds its estimated fair value. The Company performed an assessment to determine whether goodwill was impaired as of January 1, 2002, the date of adoption, and as of December 31, 2002, and determined that there was no impairment to its goodwill balance at these dates. The Company will test for impairment at December 31 each year. Amortization expense related to goodwill was immaterial for the years ended December 31, 2000 and 2001.

J. Concentration of Credit Risk:

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist primarily of accounts receivable and cash. The Company performs ongoing credit evaluations of its customers and generally does not require collateral for sales on credit. The Company maintains reserves for potential credit losses. The Company maintains cash and cash equivalents with higher credit quality financial institutions and monitors the amount of credit exposure to any one financial institution.

K. Warranties:

The Company generally provides a warranty on its products for a period of twelve to fifteen months against defects in material and workmanship. Warranty expense amounted to $1,349, $915 and $1,225 for the years

ended December 31, 2000, 2001 and 2002, respectively. The Company has established reserves of $972 and $1,120 at December 31, 2001 and 2002, respectively, for anticipated future warranty costs.

L. Income Taxes:

The Company accounts for income taxes using the asset and liability approach for deferred taxes which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in the Company's consolidated financial statements or tax returns. A valuation allowance is recorded to reduce a deferred tax asset to that portion which more likely than not will be realized. Additionally, tax assets are separated into current and non-current amounts based on the classification of the related assets for financial reporting purposes.

M. Translation of Foreign Currencies:

The Company has foreign branches in China, Korea, Taiwan and Singapore, and a wholly-owned subsidiary in Europe which use their local currency as their functional currency. Assets and liabilities are translated at exchange rates in effect at the balance sheet date, and income and expense accounts and cash flow items are translated at average exchange rates during the period. Resulting translation adjustments are recorded directly as a separate component of stockholders' equity under the caption, "Accumulated other comprehensive loss." Foreign exchange rate gains and losses included in operating results are not material for all periods presented.

N. Stock-based Compensation:

At December 31, 2002, the Company has stock-based employee compensation plans which are described more fully in Note 9. The Company accounts for its stock option plans in accordance with the provisions of Accounting Principles Board (APB) Opinion No. 25, "Accounting for Stock Issued to Employees," and related interpretations. As such, compensation expense is recorded on the date of grant only if the current market price of the underlying stock exceeds the exercise price. No stock-based employee compensation cost is reflected in net income (loss), as all options granted under those plans had an exercise price equal to the market value of the underlying common stock on the date of grant. The Company has adopted the disclosure standards of SFAS No. 123, "Accounting for Stock-Based Compensation," which requires the Company to provide pro forma net income and pro forma earnings per share disclosures for employee stock option grants made in 1995 and future years as if the fair-value-based method of accounting for stock options as defined in SFAS No. 123 had been applied. The following table illustrates the effect on net income (loss) and per share amounts if the Company had applied the fair value recognition provisions of SFAS No. 123 to stock-based employee compensation:

	Year Ended December 31,		
	2000	2001	2002
Net income (loss), as reported	$23,576	$11,740	$(1,431)
Deduct: Total stock-based employee compensation expense determined under fair value based method, net of related income tax benefits	1,697	3,345	4,376
Pro forma net income (loss)	$21,879	$ 8,395	$(5,807)
Net income (loss) per share:			
Basic—as reported	$ 1.60	$ 0.74	$ (0.09)
Basic—pro forma	$ 1.49	$ 0.53	$ (0.36)
Diluted—as reported	$ 1.49	$ 0.71	$ (0.09)
Diluted—pro forma	$ 1.40	$ 0.51	$ (0.36)

The fair value of each stock option granted during the year is estimated on the date of grant using the Black-Scholes option pricing model with the following assumptions:

Employee Stock Options	2000	2001	2002
Expected life (years)	5.0	5.0	5.0
Expected volatility	109.0%	95.0%	85.0%
Expected dividend yield	0.0%	0.0%	0.0%
Risk-free interest rate	5.2%	3.5%	3.8%
Weighted average fair value of options granted during the year	$28.39	$23.16	$9.24

Employee Stock Purchase Plan shares	2000	2001	2002
Expected life (years)	0.5	0.5	0.5 to 2.0
Expected volatility	109.0%	95.0%	85.0%
Expected dividend yield	0.0%	0.0%	0.0%
Risk-free interest rate	5.2%	3.5%	1.7%
Weighted average fair value of options granted during the year	$24.50	$11.40	$9.84

O. Software Development Costs:

The Company accounts for software development costs in accordance with SFAS No. 86, "Accounting for Costs of Computer Software to Be Sold, Leased or Marketed." SFAS No. 86 requires that certain software product development costs incurred after technological feasibility has been established, be capitalized and amortized, commencing upon the general release of the software product to the Company's customers, over the economic life of the software product. Annual amortization of capitalized costs is computed using the greater of: (i) the ratio of current gross revenues for the software product over the total of current and anticipated future gross revenues for the software product or (ii) the straight-line basis. Software product development costs incurred prior to the product reaching technological feasibility are expensed as incurred and included in research and development costs. Capitalized costs to date have been immaterial and, accordingly, SFAS No. 86 has no significant impact on the financial position or results of operations of the Company.

P. 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 approximates fair value due to their short maturities.

Q. Risks Inherent in the Business:

The Company sells its products to the semiconductor device industry and believes that changes in any of the following areas could have a material adverse effect on the Company's financial position, results of operations or cash flows: advances and trends in new technologies and industry standards; competitive pressures in the form of new products or price reductions on current products; changes in product mix; changes in the overall demand for products and services offered by the Company; changes in customer relationships; litigation or claims against the Company based on intellectual property, patent, product, regulatory or other factors; risks associated with changes in domestic and international economic and/or political conditions or regulations; dependency on suppliers and availability of necessary product components and the Company's ability to attract and retain employees necessary to support its growth.

R. Recent Accounting Pronouncements:

In August 2001, the FASB issued SFAS No. 143, "Accounting for Asset Retirement Obligations" (effective for fiscal years beginning after June 15, 2002). SFAS No. 143 addresses accounting and reporting for obligations associated with the retirement of tangible long-lived assets and retirement of assets. The Company is currently evaluating the impact of SFAS No. 143, but does not expect that its adoption on January 1, 2003 will have a material effect on its financial statements.

In July 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities." SFAS No. 146 requires that a liability for a cost associated with an exit or disposal activity be recognized when the liability is incurred. The Company is required to adopt the provisions of SFAS No. 146 effective for exit or disposal activities initiated after December 31, 2002. The adoption of SFAS No. 146 will impact the types and timing of costs associated with any future exit activities.

In November 2002, the FASB issued Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness to Others, an interpretation of FASB Statements No. 5, 57 and 107 and a rescission of FASB Interpretation No. 34." This Interpretation elaborates on the disclosures to be made by a guarantor in its interim annual financial statements about its obligations under guarantees issued. The Interpretation also clarifies that a guarantor is required to recognize, at inception of a guarantee, a liability for the fair value of the obligation undertaken. The initial recognition and measurement provisions of the Interpretation are applicable to guarantees issued or modified after December 31, 2002 and are not expected to have a material effect on the Company's financial statements. The disclosure requirements are effective for financial statements of interim or annual periods ending after December 15, 2002.

In December 2002, the FASB issued SFAS No. 148, "Accounting for Stock-Based Compensation—Transition and Disclosure, an amendment of FASB Statement No. 123." This Statement amends SFAS No. 123, "Accounting for Stock-Based Compensation," to provide alternative methods of transition for a voluntary change to the fair value method of accounting for stock-based employee compensation. The Company expects to continue to account for stock options under APB Opinion No. 25. In addition, this Statement amends the disclosure requirements of SFAS No. 123 to require prominent disclosures in both annual and interim financial statements. Certain of the disclosure modifications are required for fiscal years ending after December 15, 2002 and are included in the notes to these consolidated financial statements.

3. Business Combinations:

On September 25, 2002, the Company acquired all of the outstanding stock of ISOA, Inc., a Texas corporation (ISOA), through a merger of Oasis Acquisition, Inc., a wholly owned subsidiary of the Company, with and into ISOA, with ISOA as the surviving corporation, renamed Yield Metrology Group (YMG). YMG is a spin-off from Texas Tech University's International Center for Informatics Research. Over the past 16 years, YMG has licensed its technology for use in the semiconductor industry and recently began transitioning to a semiconductor capital equipment supplier. YMG's core technologies are knowledge-based algorithms used in wafer macro-defect detection and classification. Customers in Asia, Europe and the U.S. are currently using its recently introduced WaferView family of tools. The Company believes YMG's technology will significantly expand its product offering and provide additional value to our customers. YMG will continue to maintain its offices in Richardson, Texas. The transaction was accounted for using the purchase method of accounting for business combinations and, accordingly, the results of operations of YMG have been included in the Company's consolidated financial statements since the date of acquisition.

The purchase consideration for YMG, including direct acquisition costs, was $25,235 in cash. The purchase price has been allocated to the net assets acquired and liabilities assumed based upon their respective fair market values.

The allocation of the purchase consideration to the assets acquired and liabilities assumed follows:

Cash	$ 166
Accounts receivable	1,623
Inventories	1,413
Property, plant and equipment	2,838
Other assets	445
Accounts payable and accrued liabilities	(1,684)
Deferred taxes	(817)
Other liabilities	(4,945)
Identifiable intangible assets	13,400
Goodwill	12,796
	$25,235

The excess of the purchase price over the fair value of the net assets acquired and liabilities assumed was allocated to goodwill. The total goodwill of $12,796, none of which is deductible for tax purposes, is not being amortized in accordance with SFAS No. 141, "Business Combinations" and SFAS No. 142, "Goodwill and Intangible Assets." All remaining and future acquired goodwill will be subject to an impairment test each year using a fair-value-based approach pursuant to SFAS No. 142. Identifiable intangible assets include patented technology and in-process research and development (IPRD). The Company is amortizing the patented technology of approximately $9,900 on a straight-line basis over its estimated remaining useful life of 16 years. The amount allocated to IPRD of $3,500 is related to automated defect inspection technology to be used in stand alone and integrated metrology equipment. Such amount was charged to expense at the acquisition date as the IPRD had not reached technological feasibility and had no alternative future use.

The Company used the income approach to estimate the fair value of the developed technology and IPRD. The income approach measures the value of an asset by the present value of its future economic benefits. Value indications are developed in this technique by discounting expected cash flows to their present value at a rate of return that incorporates the risk-free rate for the use of funds, the expected rate of inflation and risks associated with the asset. The discount rate selected is generally based on rates of return available from alternative investments of similar type and risk as of September 25, 2002. The income approach was deemed to be an appropriate method of valuation for these assets, since the income approach focuses on the ability of the assets to generate future earnings.

The following unaudited pro forma consolidated financial information presents the combined results of operations of the Company and YMG as if the acquisition occurred at the beginning of the periods presented, after giving effect to certain adjustments, including amortization expense. Due to the non-recurring nature of the $3,500 IPRD charge, this amount has not been included in the unaudited pro forma consolidated financial information. The unaudited pro forma consolidated financial information does not necessarily reflect the results of operations that would have occurred had the acquisition been completed as of the dates indicated or of the results that may be obtained in the future (in thousands except per share information).

	Year Ended December 31,	
	2001	2002
	(Unaudited)	
Revenues	$83,565	$63,686
Net income	$11,083	$ 1,258
Earnings per share:		
Basic	$ 0.70	$ 0.08
Diluted	$ 0.66	$ 0.08

4. Short-Term Investments:

The Company has evaluated its investment policies consistent with SFAS No. 115, "Accounting for Certain Investments in Debt and Equity Securities," and determined that all of its investment securities are to be classified as available-for-sale. Available-for-sale securities are carried at fair value, with the unrealized gains and losses reported in stockholders' equity under the caption "Accumulated other comprehensive loss." Realized gains and losses, interest and dividends on available-for-sale securities are included in interest income and other, net. Net gains and losses of $169 are included in the consolidated statements of income (loss) for 2002. Gross unrealized gains on available-for-sale securities were $562 and gross unrealized losses on available-for-sale securities were $4 as of December 31, 2002.

At December 31, 2002, these short-term investments are categorized as follows:

	Amortized Cost	Gross Unrealized Holding Gains	Gross Unrealized Holding Losses	Fair Value
Treasury notes and obligations of U.S. Government agencies	$23,793	$276	$—	$24,069
Asset-backed securities	1,119	41	—	1,160
Corporate bonds	3,722	170	(2)	3,890
Mortgage-backed securities	2,031	75	(2)	2,104
Total short-term investments	$30,665	$562	$ (4)	$31,223

The estimated fair value of short-term investments classified by the maturity date listed on the security, regardless of the consolidated balance sheet classification, is as follows at December 31, 2002:

	Amortized Cost	Fair Value
Due within one year	$ 831	$ 842
Due after one through five years	24,612	24,902
Due after five through ten years	3,628	3,829
Due after ten years	1,594	1,650
Total short-term investments	$30,665	$31,223

5. Identifiable Intangible Assets and Goodwill:

Effective July 1, 2001, the Company adopted SFAS No. 141, which requires all business combinations be accounted for using the purchase method. Effective January 1, 2002, the Company adopted SFAS No. 142, which eliminated the requirement to amortize goodwill and indefinite-lived intangible assets. The following information provides the required disclosures of SFAS No. 141 and SFAS No. 142:

Identifiable intangible assets:

Identifiable intangible assets as of December 31, 2002 are as follows:

	Weighted Average Useful Life	Gross Carrying Amount	Accumulated Amortization	Net
Purchased technology	12 years	$22,731	$21,220	$ 1,511
Patented technology (Note 3)	16 years	9,900	155	9,745
Total		$32,631	$21,375	$11,256

Intangible asset amortization expense amounted to $258, $258 and $412 for the years ended December 31, 2000, 2001 and 2002, respectively. Assuming no change in the gross carrying value of identifiable intangible assets, the estimated amortization expense for each of the next five years is $876.

Goodwill:

The changes in the carrying amount of goodwill are as follows:

Balance as of December 31, 2000	$ 494
Goodwill amortization	81
Balance as of December 31, 2001	413
Goodwill acquired (Note 3)	12,796
Balance as of December 31, 2002	$13,209

6. Property, Plant and Equipment:

Property, plant and equipment, net is comprised of the following:

	December 31,	
	2001	2002
Land and building	$ 2,611	$ 4,968
Machinery and equipment	1,410	1,502
Furniture and fixtures	1,181	1,393
Computer equipment	2,139	2,770
Leasehold improvements	789	979
	8,130	11,612
Accumulated depreciation	(2,909)	(4,158)
Property, plant and equipment, net	$ 5,221	$ 7,454

Depreciation expense amounted to $661, $1,027 and $1,233 for the years ended December 31, 2000, 2001, and 2002, respectively.

7. Inventories:

Inventories are comprised of the following:

	December 31,	
	2001	2002
Materials	$15,048	$16,530
Work-in-process	5,637	11,622
Finished goods	2,010	2,336
Total inventories	$22,695	$30,488

The Company has established reserves of $1,426 and $1,697 at December 31, 2001 and 2002, for slow moving and obsolete inventory.

8. Commitments and Contingencies:

The Company rents space for its manufacturing and service operations and sales offices. Total rent expense for these facilities amounted to $797, $1,169 and $1,126 for the years ended December 31, 2000, 2001 and 2002, respectively.

The Company also leases certain equipment pursuant to operating leases, which expire through 2006. Rent expense related to these leases amounted to $52, $169 and $80 for the years ended December 31, 2000, 2001 and 2002, respectively.

Total future minimum lease payments under noncancelable operating leases as of December 31, 2002 amounted to $1,024, $958, $670, $429 and $429 for the years 2003 to 2007, respectively.

Under various licensing agreements, the Company is obligated to pay royalties based on net sales of products sold. There are no minimum annual royalty payments. Royalty expense amounted to $3,285, $2,924 and $1,763 for the years ended December 31, 2000, 2001 and 2002, respectively.

9. Employee Benefit and Stock Option Plans:

In 1996, the Company adopted the 1996 Stock Option Plan (the "Option Plan"). Under the Option Plan, the Company was authorized to grant options to purchase up to 1,069,902 shares of common stock. All of the outstanding options became 100% vested upon the initial public offering of the Company on November 12, 1999. As of December 31, 2001 and 2002, there were no shares of common stock reserved for future grants under the Option Plan.

The Company established an Employee Stock Purchase Plan (the "ESPP") effective August 31, 1999. Under the terms of the ESPP, eligible employees may have up to 15% of eligible compensation deducted from their pay and applied to the purchase of shares of Common Stock. The price the employee must pay for each share of stock will be 85% of the lower of the fair market value of the Common Stock at the beginning of the twenty four month offering period or at the end of the applicable six month purchase period. The ESPP qualifies as a non-compensatory plan under section 423 of the Internal Revenue Code. As of December 31, 2001 and 2002, there were 520,099 and 779,413 shares available for issuance under the ESPP, respectively.

The Company established the 1999 Stock Plan (the "1999 Plan") effective August 31, 1999. The 1999 Plan provides for the grant of 2,000,000 stock options and stock purchase rights, subject to annual increases, to

employees, directors and consultants at an exercise price equal to or greater than the fair market value of the common stock on the date of grant. Options granted under the 1999 Plan vest over a five year period and expire ten years from the date of grant. As of December 31, 2001 and 2002, there were 472,492 and 349,139 shares of common stock reserved for future grants under the 1999 Plan, respectively.

The following tables summarize the stock option activity for the years ended December 31, 2000, 2001 and 2002:

	Options Outstanding		
	Number of Shares	Weighted Average Exercise Price per Share	Number of Shares Exercisable
Balance at December 31, 1999	1,531,662	$ 9.21	678,311
Granted	247,500	36.19	
Exercised	(152,727)	1.17	
Canceled	(110,483)	19.35	
Balance at December 31, 2000	1,515,952	13.68	690,326
Granted	936,425	31.53	
Exercised	(221,789)	7.59	
Canceled	(101,848)	22.47	
Balance at December 31, 2001	2,128,740	21.73	667,769
Granted	506,500	13.41	
Exercised	(153,594)	5.07	
Canceled	(60,427)	27.09	
Balance at December 31, 2002	2,421,219	$20.92	952,952

Stock option information as of December 31, 2002 is as follows:

Options Outstanding			Options Vested and Exercisable	
Range of Exercise Prices	Options Outstanding	Weighted Avg. Remaining Contract Life	Weighted Avg. Exercise Price per Share	Number Exercisable
$ 0.56 - $ 0.73	276,605	5.50	$ 0.70	276,605
10.11 - 16.00	1,058,585	8.16	16.00	327,313
17.48 - 39.69	671,065	8.50	28.90	193,052
40.00 - 50.75	414,964	8.09	40.91	155,982
$ 0.56 -$50.75	2,421,219	7.94	$18.25	952,952

The Company has a 401(k) savings plan to provide retirement and incidental benefits for its employees. As allowed under Section 401(k) of the Internal Revenue Code, the Plan provides tax-deferred salary deductions for eligible employees. Employees may contribute from 1.0% to 15.0% of their annual compensation to the Plan, limited to a maximum annual amount as set periodically by the Internal Revenue Service. The Plan provides a 50% match of all employee contributions up to 6 percent of the employee's salary. Company matching contributions to the Plan totaled $188, $200 and $276 for the years ended December 31, 2000, 2001 and 2002, respectively.

In addition, the Company has a profit sharing program, wherein a percentage of pre-tax profits, at the discretion of the Board of Directors, is provided to all employees who have completed a stipulated employment

period. The Company did not make contributions to this program for the years ended December 31, 2000, 2001 and 2002.

10. Income Taxes:

The components of income tax expense (benefit) are as follows:

	Year Ended December 31,		
	2000	2001	2002
Current:			
Federal	$ 5,062	$3,963	$ 478
State	733	728	108
Foreign	—	—	—
	5,795	4,691	586
Deferred:			
Federal	(4,962)	2,132	8
State	(1,264)	386	130
Foreign	—	(710)	(139)
	(6,226)	1,808	(1)
Total income tax expense (benefit)	$ (431)	$6,499	$ 585

Income before income tax was generated principally by domestic operations in 2000 and 2001. Income (loss) before income tax of $927 and ($1,773) was generated by domestic and foreign operations, respectively in 2002.

Deferred tax assets are comprised of the following:

	December 31,	
	2001	2002
Amortization of intangibles	$5,427	$1,222
Deferred revenue	52	21
Domestic net operating loss caryforwards	—	2,875
Foreign net operating loss carryforwards	710	850
Research and development credit carryforward	—	326
Inventory obsolescence reserve	532	634
Fixed assets	154	170
Warranty	325	376
Accounts receivable	122	93
Employee stock options	207	109
Other	125	(91)
Net deferred tax asset	$7,654	$6,585

The provision (benefit) for income taxes differs from the amount of income tax determined by applying the applicable U.S. income tax rate of 34% to income (loss) before provision (benefit) for income taxes and cumulative effect of a change in accounting principle as follows:

	Year Ended December 31,		
	2000	2001	2002
Federal income tax provision at statutory rate	$ 8,611	$6,201	$ (288)
State taxes, net of federal effect	(345)	1,114	201
Change in valuation allowance	(8,600)	—	—
In-process research and development write-off	—	—	1,190
Research tax credit	(360)	(466)	(374)
Other	263	(350)	(144)
Provision (benefit) for income taxes	$ (431)	$6,499	$ 585
Effective tax rate (benefit)	(2%)	36%	(69%)

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, projected future taxable income, and tax planning strategies in making this assessment. During 1998, the net deferred tax asset was reduced to zero with a valuation allowance as a result of recurring losses and with the uncertainty regarding the Company's ability to generate sufficient taxable income. In 2000, based on industry and internal forecasts combined with the successful completion of its initial public offering and the reduction of debt, the Company reduced the deferred tax valuation allowance by $8,600, for certain deferred tax assets that more likely than not would be realized. Based upon the level of historical taxable income and projections for future taxable income over the periods in which the deferred tax assets are deductible, management believes it is more likely than not that the Company will realize the benefits of its deferred tax assets at December 31, 2002. However, the deferred tax assets considered realizable at December 31, 2002, could be reduced in the near term if estimates of future taxable income during the carryforward period are reduced.

In connection with the Company's acquisition of YMG in 2002, the Company acquired patented technology which gives rise to a deferred tax liability of $3,500 as of December 31, 2002. The Company also acquired U.S. and state net operating loss (NOL) carryforwards in connection with the YMG acquisition which, as of December 31, 2002, give rise to deferred tax assets totaling $2,900. These NOL carryforwards of $7,700 expire between 2013 and 2022 for U.S. purposes, and between 2003 and 2007 for state purposes. The annual utilization of these NOL carryforwards is limited under certain provisions of the Internal Revenue Code. The foreign NOL carryforwards of $2,400 as of December 31, 2002 may generally be carried forward indefinitely.

12. Geographic Reporting and Customer Concentration:

	Year Ended December 31,		
	2000	2001	2002
Revenues from third parties:			
United States	$39,902	$36,749	$34,152
Asia	34,765	29,084	17,271
Europe	10,695	11,546	5,945
Other	2,745	2,019	77
Total	$88,107	$79,398	$57,445
Customers comprising 10% or more of the Company's total revenue for the period indicated:			
A	19.4%	33.4%	46.8%
B	21.9%	14.8%	6.8%
Accounts receivable of customers comprising 10% or more of the Company's total revenue for the period indicated:			
A	$ 3,955	$ 3,199	$ 9,582
B	$ 3,122	$ 1,562	$ 13

Substantially all of the assets of the Company are within the United States of America.

13. Earnings (Loss) Per Share:

The Company has adopted SFAS No. 128, "Earnings per Share", which requires the presentation of basic earnings (loss) per share and diluted earnings (loss) per share. Basic earnings (loss) per share is computed by dividing net income (loss) by the weighted average number of common shares outstanding during the period. Diluted earnings (loss) gives effect to all potential dilutive common shares outstanding during the period. The computation of diluted earnings (loss) per share does not assume conversion, exercise or contingent exercise of securities that would have an anti-dilutive effect.

The computations of basic and diluted earnings (loss) per share for the years ended December 31, 2000, 2001 and 2002 are as follows:

	Income (Numerator)	Shares (Denominator)	Per-Share Amount
For the year ended December 31, 2000			
Basic earnings per share:			
Net income	$23,576	14,773,295	$ 1.60
Effect of dilutive stock options	—	1,031,893	(0.11)
Diluted earnings per share:			
Net income	$23,576	15,805,188	$ 1.49
For the year ended December 31, 2001			
Basic earnings per share:			
Net income	$11,740	15,899,933	$ 0.74
Effect of dilutive stock options	—	631,528	(0.03)
Diluted earnings per share:			
Net income	$11,740	16,531,461	$ 0.71
For the year ended December 31, 2002			
Basic loss per share:			
Net loss	$ (1,431)	16,215,237	$(0.09)
Effect of dilutive stock options	—	—	—
Diluted loss per share:			
Net loss	$ (1,431)	16,215,237	$(0.09)

For the years ended December 31, 2000 and 2001, the Company had outstanding options to purchase 184,750 and 420,136 shares of common stock, respectively, which were excluded from the calculation due to the anti-dilutive nature of these instruments. For the year ended December 31, 2002, all outstanding stock options, totaling 2,421,219, were excluded from the computation of diluted loss per share because the effect in the period would be anti-dilutive.

14. Quarterly Consolidated Financial Data (unaudited):

The following tables present certain unaudited consolidated quarterly financial information for each of the eight quarters ended December 31, 2002. In the opinion of the Company's management, this quarterly information has been prepared on the same basis as the consolidated financial statements and includes all adjustments (consisting only of normal recurring adjustments) necessary to present fairly the information for the period presented. The results of operations for any quarter are not necessarily indicative of results for the full year or for any future period.

The Company's business is not seasonal; therefore year-over-year quarterly comparisons of the Company's results of operations may not be as meaningful as the sequential quarterly comparisons set forth below which tend to reflect the cyclical activity of the semiconductor industry as a whole. Quarterly fluctuations in expenses are related directly to sales activity and volume and may also reflect the timing of operating expenses incurred throughout the year. The quarter ended September 30, 2002, includes a one-time expense of $3,500 for the write-off of in-process research and development acquired from the acquisition of YMG.

	Quarters Ended				
	March 31, 2002	June 30, 2002	September 30, 2002	December 31, 2002	Total
Revenues	$ 12,038	$ 13,118	$ 15,199	$ 17,090	$ 57,445
Gross profit	5,163	5,381	6,233	7,092	23,869
Income (loss) before income taxes	694	1,019	(3,071)	512	(846)
Net income (loss)	447	656	(3,091)	557	(1,431)
Net income (loss) per share:					
Basic	$ 0.03	$ 0.04	$ (0.19)	$ 0.03	$ (0.09)
Diluted	$ 0.03	$ 0.04	$ (0.19)	$ 0.03	$ (0.09)
Weighted average number of shares outstanding:					
Basic	16,145,675	16,179,502	16,226,346	16,322,014	16,215,237
Diluted	16,845,390	16,722,438	16,226,346	16,550,990	16,215,237

	Quarters Ended				
	March 31, 2001	June 30, 2001	September 30, 2001	December 31, 2001	Total
Revenues	$ 30,561	$ 23,088	$ 15,058	$ 10,691	$ 79,398
Gross profit	16,748	11,999	6,735	4,118	39,600
Income before income taxes	9,691	6,533	1,257	758	18,239
Net income	6,101	4,117	859	663	11,740
Net income per share:					
Basic	$ 0.40	$ 0.26	$ 0.05	$ 0.04	$ 0.74
Diluted	$ 0.38	$ 0.25	$ 0.05	$ 0.04	$ 0.71
Weighted average number of shares outstanding:					
Basic	15,363,284	16,039,391	16,081,194	16,111,965	15,899,933
Diluted	16,057,313	16,712,286	16,649,058	16,697,575	16,531,461

RUDOLPH TECHNOLOGIES, INC. AND SUBSIDIARIES

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS
(In thousands)

Column A	Column B	Column C		Column D	Column E
Description	Balance at Beginning of Period	Charged to (Recovery of) Costs and Expenses	Charged to Other Accounts (net)	Deductions	Balance at End of Period
Year 2002:					
Allowance for doubtful accounts	$ 328	$ (78)	$—	$ —	$ 250
Inventory valuation	1,426	271	—	—	1,697
Warranty	972	1,225	—	1,077	1,120
Year 2001:					
Allowance for doubtful accounts	443	(115)	—	—	328
Inventory valuation	960	466	—	—	1,426
Warranty	1,072	915	—	1,015	972
Year 2000:					
Allowance for doubtful accounts	300	143	—	—	443
Deferred tax asset valuation allowance	8,600	(8,600)	—	—	—
Inventory valuation	575	385	—	—	960
Warranty	475	1,349	—	752	1,072

SIGNATURES

PURSUANT TO THE REQUIREMENTS OF SECTION 13 OR 15 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.

RUDOLPH TECHNOLOGIES, INC.

By: /s/ PAUL F. MCLAUGHLIN
Paul F. McLaughlin
Chairman and Chief Executive Officer

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES 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 DATE INDICATED.

Signature	Title	Date
/s/ PAUL F. MCLAUGHLIN **Paul F. McLaughlin**	Chairman and Chief Executive Officer	March 24, 2003
/s/ STEVEN R. ROTH **Steven R. Roth**	Senior Vice President, Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	March 24, 2003
/s/ DAVID BELLUCK **David Belluck**	Director	March 25, 2003
/s/ DANIEL H. BERRY **Daniel H. Berry**	Director	March 25, 2003
/s/ PAUL CRAIG **Paul Craig**	Director	March 24, 2003
/s/ THOMAS G. GREIG **Thomas G. Greig**	Director	March 26, 2003
/s/ CARL E. RING, JR. **Carl E. Ring, Jr.**	Director	March 23, 2003
/s/ RICHARD F. SPANIER **Richard F. Spanier**	Director	March 22, 2003
/s/ AUBREY C. TOBEY **Aubrey C. Tobey**	Director	March 24, 2003

RUDOLPH TECHNOLOGIES, INC.

SARBANES-OXLEY ACT SECTION 302(a) CERTIFICATION

I, Paul F. McLaughlin, certify that:

1. I have reviewed this annual report on Form 10-K of Rudolph Technologies, Inc.;
2. Based on my knowledge, this annual report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;
3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:
   a. designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
   b. evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and
   c. presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):
   a. all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and
   b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and
6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 24, 2003

By: /s/ PAUL F. MCLAUGHLIN

Paul F. McLaughlin
Chairman and Chief Executive Officer

I, Steven R. Roth, certify that:

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

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

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

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the registrant and we have:

   a. designed such disclosure controls and procedures to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   b. evaluated the effectiveness of the registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this annual report (the "Evaluation Date"); and

   c. presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;

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

   a. all significant deficiencies in the design or operation of internal controls which could adversely affect the registrant's ability to record, process, summarize and report financial data and have identified for the registrant's auditors any material weaknesses in internal controls; and

   b. any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls; and

6. The registrant's other certifying officers and I have indicated in this annual report whether or not there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 24, 2003

By: /s/ STEVEN R. ROTH

Steven R. Roth
Senior Vice President,
Chief Financial Officer

Corporate Information

BOARD OF DIRECTORS

Paul F. McLaughlin
Chairman of the Board and
Chief Executive Officer

David Belluck
Vice President
Riverside Partners, Inc.

Daniel H. Berry
Industry Consultant

Paul Craig
President
Riverside Partners, Inc.

Thomas G. Greig
Managing Director
Liberty Capital Partners, Inc.

Carl E. Ring, Jr.
Former Managing Director
Liberty Capital Partners, Inc.

Richard F. Spanier
Director, Chairman Emeritus

Aubrey C. Tobey
President
ACT International Consulting, Inc.

EXECUTIVE OFFICERS

Paul F. McLaughlin
Chairman of the Board and
Chief Executive Officer

Robert M. Loiterman
Senior Vice President and General
Manager of Integrated Metrology

Steven R. Roth
Senior Vice President, Finance and
Administration and Chief Financial Officer

Nathan H. Little
Vice President of Operations

KEY EMPLOYEES

George J. Collins
Vice President of Marketing

Robert DiCrosta
Vice President of Global Customer Support

Ajay Khanna
Vice President of International Sales

Christopher J. Morath
Director of Product Development

R. Gregory Wolf
Director of Technology Acquisition

Michael J. Darwin
Director of Technology Development

CORPORATE HEADQUARTERS

Rudolph Technologies, Inc.
One Rudolph Road
Flanders, New Jersey 07836

WORLDWIDE OFFICES

Rudolph Technologies Yield Metrology Group
Richardson, Texas

Rudolph Technologies Europe B.V.
Woerden, The Netherlands

Rudolph Technologies China
Shanghai, China

Rudolph Technologies Korea
Seoul, Korea

Rudolph Technologies Singapore
Singapore

Rudolph Technologies Taiwan
Hsin-Chu City, Taiwan

SHAREHOLDER INFORMATION

General Shareholder and Investor Questions May Be Directed to Either:

Steven R. Roth
Chief Financial Officer
Rudolph Technologies, Inc.
One Rudolph Road
Flanders, New Jersey 07836
973-691-1300

or:

Michael Polyviou
FD Morgen-Walke
Financial and Corporate
Communications
380 Lexington Avenue
New York, New York 10168
212-850-5600

Legal Counsel
Wilson Sonsini Goodrich & Rosati
Palo Alto, California

Independent Accountants
KPMG LLP
Short Hills, New Jersey

Registrar and Transfer Agent
American Stock Transfer &
Trust Company
6201 15th Avenue
Brooklyn, New York 11219
718-921-8261
Web Site: www.amstock.com

Stock Symbol
Common Stock is traded on the Nasdaq National Market® under the symbol, RTEC.

Annual Meeting
Stockholders are invited to attend the Annual Meeting at 10:00AM On Wednesday, May 21st, at our corporate headquarters in Flanders, New Jersey.

Form 10-K
The Annual Report on Form 10-K filed with the Securities and Exchange Commission is available without charge upon written request to:

Investor Relations
Rudolph Technologies, Inc.
One Rudolph Road
Flanders, New Jersey 07836
973-691-1300
Web Site: www.rudolphtech.com