AUGUST TECHNOLOGY CORP
Form S-3/A
August 28, 2003

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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

PRE-EFFECTIVE AMENDMENT NO. 1
TO
FORM S-3

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

AUGUST TECHNOLOGY CORPORATION

(Exact name of registrant as specified in its charter)

Minnesota	**41-1729485**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

4900 West 78th Street
Bloomington, Minnesota 55435
(952) 820-0080
(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

John M. Vasuta, General Counsel, August Technology Corporation
4900 West 78th Street
Bloomington, Minnesota 55435
(952) 820-0080
(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public:
As soon as practicable after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. o

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, please check the following box. o

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

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

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

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

The information in this preliminary prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell nor does it seek an offer to buy these securities in any jurisidiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED AUGUST 28, 2003

PROSPECTUS

3,268,250 Shares

Common Stock

We are offering 3,000,000 shares of our common stock. The selling shareholders identified in this prospectus are offering an additional 268,250 shares of common stock. Our common stock is traded on the Nasdaq National Market under the symbol "AUGT." On August 25, 2003, the last reported sale price for our common stock was $10.22 per share.

Investing in our common stock involves risks. See "Risk Factors" beginning on page 5.

	Per Share	Total
Public Price	$	$
Underwriting Discounts	$	$
Proceeds, before expenses, to August Technology Corporation	$	$
Proceeds, before expenses, to the selling shareholders	$	$

The underwriters have a 30-day option to purchase up to an additional 490,238 shares of common stock from us to cover over-allotments.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense. It is illegal for any person to tell you otherwise.

Needham & Company, Inc.

Adams, Harkness & Hill, Inc.

A.G. Edwards & Sons, Inc.

RBC Capital Markets

The date of this prospectus is , 2003

Description of Inside Front Cover

At the top of the page is the following text: "The AXi, EXi, 3Di, NSX, and WAV product lines provide fast and consistent two and three dimensional wafer and die inspection for defects larger than 0.5 micron. The flexibility of our systems allows microelectronic device manufacturers to implement automated, 100% inspection throughout the manufacturing process. These solutions inspect microelectronic devices for defects such as scratches, particles and mechanical damage. Our Yield*Pilot* data management and analysis package translates inspection data into valuable information for analysis, which in turn facilitates enhancements throughout the manufacturing process." This paragraph is accompanied by photos of our AXi, EXi, WAV, 3Di, NSX and Yield*Pilot* products.

At the bottom of the page is a grid showing the various steps of the microelectronic device manufacturing process, segmented by front-end and final manufacturing. The chart highlights our various products and the stages of the process in which these products are used. The chart depicts that our tools are used for automated advanced macro inspection and data management and analysis in the front-end of the process, and that our tools are used for automated advanced macro inspection and metrology in the final manufacturing step of the process.

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You should rely only on the information contained in this prospectus. We have not, and the underwriters have not, authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell, and seeking offers to buy, shares of our common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the

date of this prospectus, regardless of the time of delivery of this prospectus or any sale of our common stock.

Our logo and the name of our products named in this prospectus are our trademarks, trade names or service marks. August Technology, NSX, CV, 3Di, AXi, EXi, Rapid Confocal Sensor, RCS, Yield*Pilot*, WAV and VersaScope are our key trademarks. Each trademark, trade name or service mark of another company appearing in this prospectus belongs to its holder, and does not belong to us.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. You should read this prospectus carefully. All references to "we," "us," "our," "August" or "the company" in this prospectus mean August Technology Corporation. This prospectus contains forward-looking statements, which involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of a variety of factors, including those set forth under "Risk Factors" and elsewhere in this prospectus.

Our Company

Since our founding in 1992, we have become recognized as a world-class provider of automated defect detection and product characterization systems for microelectronic device manufacturers. Our systems provide manufacturers with information that enables process-enhancing decisions, ultimately lowering manufacturing costs, improving time-to-market and enhancing the performance of their products. We combine our core competencies in machine vision technology, optics, lighting and precision motion control with our proprietary software and extensive microelectronic-specific applications experience to deliver scalable, modular systems that excel at the automated detection of advanced macro defects, which we define to be defects greater in size than 0.5 microns. We sell our systems to many of the leading microelectronic device manufacturers throughout the world for inspecting semiconductors, advanced packaging applications, optoelectronics, micro electromechanical systems ("MEMS"), data storage and micro displays.

Rapid advances in microelectronic device technology have allowed manufacturers to enhance the quality and capabilities of these devices. These same enhancements have also increased the cost and complexity of the manufacturing process, as well as the need to ensure quality and reliability, and have made inspection and rapid detection of defects during multiple stages of the manufacturing process increasingly critical. Our products address the need to automate the inspection process for advanced macro defect detection, a process that is otherwise typically performed manually by engineers and technicians using microscopes. Using manual inspection, microelectronic manufacturers are unable to capture critical process data quickly by inspecting every wafer and die after each process step, resulting in a loss of yield, productivity constraints, potentially defective shipments, slower time-to-market, or increased labor and facility requirements. We help solve these problems by providing:

- fast, automated, 100% wafer inspection;
- data collection to enable higher productivity and yields;
- scalable, modular inspection platforms;
- access to expert application development resources; and
- focused efforts toward advanced macro inspection solutions.

Our goal is to dominate the automated inspection market and generate complete product characterization solutions for evolving microelectronic markets in order to drive down costs and time-to-market. We have identified five strategic initiatives that are critical to successfully implementing our vision:

maintain market diversification;

extend our technology leadership position;

develop customer application partnerships;

strengthen our global presence; and

take advantage of external growth opportunities.

We have traditionally provided systems to address the automated inspection needs of the final manufacturing, or back-end, of the microelectronic device manufacturing process, including test, assembly and packaging. We recently have introduced two new systems for advanced macro detection earlier in the front-end wafer manufacturing process. In addition to internal development, we look to expand through strategic acquisitions of complementary products and technologies. In April 2003, we completed the acquisition of Semiconductor Technologies & Instruments, Inc. ("STI"), adding the WAV Series for high speed wafer probe mark inspection and metrology. In July 2003, we acquired the assets of Counterpoint Solutions, Inc. ("CSI"), including the VersaScope, a system in development for advanced microscope-based imaging and analysis, allowing us to serve our customers earlier in their device development process.

Our principal executive offices are at 4900 West 78th Street, Bloomington, Minnesota, 55435, and our telephone number is (952) 820-0080. We were incorporated under the laws of Minnesota in 1992. Our web site address is *www.augusttech.com*. The information on our web site is not part of this prospectus.

The Offering

Common stock offered by August Technology Corporation	3,000,000 shares
Common stock offered by the selling shareholders	268,250 shares
Common stock to be outstanding after the offering	16,661,572 shares
Use of proceeds	For general corporate purposes, including working capital, research and development, capital expenditures, and for potential acquisitions of complementary products, technologies or businesses. See "Use of Proceeds."
Nasdaq National Market symbol	AUGT

The information above is as of August 15, 2003, and based on 13,631,572 shares outstanding and excludes:

1,908,684 shares of common stock issuable upon exercise of stock options outstanding, at a weighted average exercise price of $6.90 per share, after giving effect to the exercise of options to acquire 30,000 shares by the selling shareholders;

an additional 461,278 shares of common stock reserved for future issuance under our 1997 Employee Stock Option Plan;

an additional 272,557 shares of common stock reserved for future issuance under our 2000 Employee Stock Purchase Plan; and

9,375 shares issuable under outstanding warrants.

The number of shares to be outstanding after the offering includes 30,000 shares issuable to selling shareholders upon the exercise of stock options and then offered for resale in the offering.

Unless otherwise specifically stated, information throughout this prospectus assumes:

no exercise of outstanding options to purchase shares of common stock; and

no exercise of the underwriters' over-allotment option.

Summary Consolidated Financial Data
(in thousands, except per share data)

We derived the summary consolidated financial information below for each of the years ended December 31, 2002, 2001 and 2000 from our audited consolidated financial statements, and the summary consolidated financial information below as of June 30, 2003 and for the six months ended June 30, 2003 and 2002 from our unaudited consolidated financial statements, included elsewhere in this prospectus. We derived the summary consolidated financial information below for each of the years ended December 31, 1999 and 1998 from our consolidated audited financial statements, which are not included in this prospectus. You should read the summary consolidated financial data set forth below in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the financial statements and related notes beginning on page F-1.

The "As Adjusted" information reflects the application of the net proceeds from the sale of 3,000,000 shares of our common stock, at an assumed public offering price of $10.22 per share, after deducting the estimated underwriting discounts and estimated offering expenses and giving effect to the issuance of 30,000 shares of our common stock issuable to selling shareholders upon the exercise of stock options and offered for resale in the offering.

	Year Ended December 31,					Six Months Ended June 30,	
	2002	2001	2000	1999	1998	2003[1]	2002
Consolidated Statement of Operations Data:							
Net revenues	$ 25,058	$ 29,784	$ 31,666	$ 12,058	$ 5,787	$ 14,320	$ 12,490
Gross profit	13,990	17,745	19,072	6,948	3,101	7,817	7,161
Operating income (loss)	(8,870)	(2,574)	1,701	(107)	3	(3,805)	(3,929)
Net income (loss)	(8,933)	(351)	1,872	(132)		(3,629)	(4,234)
Net income (loss) per share:							
Basic	$ (0.69)	$ (0.03)	$ 0.17	$ (0.02)	$	$ (0.27)	$ (0.33)
Diluted	$ (0.69)	$ (0.03)	$ 0.16	$ (0.02)	$	$ (0.27)	$ (0.33)

	Year Ended December 31,					Six Months Ended June 30,	
Weighted average shares outstanding:							
Basic	13,033	12,723	11,049	8,688	7,955	13,255	12,939
Diluted	13,033	12,723	11,770	8,688	7,955	13,255	12,939

	June 30, 2003	
	Actual	As Adjusted
Consolidated Balance Sheet Data:		
Cash, cash equivalents and marketable securities	$ 20,206	$ 48,753
Working capital	27,649	56,196
Total assets	42,531	71,078
Total debt		
Total shareholders' equity	32,157	60,704

(1) On April 15, 2003, we acquired all of the outstanding capital stock of STI. STI's results of operations have been included with our results of operations since the date of acquisition.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below before participating in this offering. While the risks described below are the ones we believe are most important for you to consider, these risks are not the only ones that we face. If any of the following risks actually occur, our business, financial condition, operating results or cash flows could be materially harmed. As a result, the trading price of our common stock could decline, and you might lose all or part of your investment.

Risks Related to Our Business

The microelectronic industries that we serve are highly cyclical, causing significant variability in our results of operations.

We primarily serve microelectronic industries, and our business depends heavily upon capital expenditures by manufacturers in these industries. Microelectronic industries are highly cyclical, with periods of capacity shortage and periods of excess capacity; this is historically due to sudden changes in demand for microelectronic devices. In periods of excess capacity, there are often drastic changes in the timing and quantity of capital equipment purchases and investments in new technology or capacity needs by our customers, including sharp cuts in purchases of capital equipment, including our products, by customers. The timing, length and volatility of these periods are difficult to predict, resulting in pressure on our revenues, gross margin and net income. In addition to affecting our customers, downturns also challenge our suppliers, vendors, other partners, as well as our management, sales, engineering, manufacturing, customer service and other employees, who are vital to our success.

During downturns in microelectronic industries, customers typically reduce or delay purchases, and/or delay delivery or cancel orders. As a result, it is imperative that we maintain an organization able to quickly and effectively align with market conditions, including bringing our cost structures in line with current industry and overall market conditions. At the same time, it is imperative that we meet the following objectives:

- continue to serve our existing customers,
- provide new and improved solutions for new and existing customers,

operate effectively with our suppliers and

motivate and retain key employees.

If we are, for any reason, unable to achieve any one or more of the above objectives in an efficient, effective and timely manner, there could be a material adverse effect on our business, financial condition and results of operations. Furthermore, any delays or reductions in future purchases of capital equipment or delays or cancellations of current orders by microelectronic device manufacturers, for any reason, may have a material adverse effect on our business, financial condition and results of operations.

Our future rate of growth is highly dependent on the development and growth of the market for microelectronic device inspection equipment.

We primarily target our products to address the needs of microelectronic device manufacturers for defect inspection and metrology. If for any reason the market for microelectronic device inspection equipment fails to grow in the long term as we expect, we may be unable to maintain current revenue levels in the short term and return to our historical growth in the long term. Growth in this market is dependent to a large extent upon microelectronic manufacturers replacing manual inspection with automated inspection technology. There is no assurance that manufacturers will undertake this replacement at the rate we expect.

Our sales and operating results can fluctuate significantly from period to period, which may adversely affect the market price of our stock.

Our quarterly and annual operating results are affected by a wide variety of factors that could adversely affect sales or operating results, or lead to significant variability in our operating results. In addition, because a significant portion of our revenue in any particular quarter has historically come from the sale of a relatively small number of systems, the loss of any sale could have a significant negative impact. A variety of factors could cause this variability, including the following:

order cancellations or delays in orders by customers;

the long sales cycle of our products;

decreases in capital spending by our customers;

new product introductions by our competitors and competitive pricing pressures;

entrance into, or additional resources focused on, our markets by larger competitors;

component shortages resulting in manufacturing delays; and

delays in the development, introduction and manufacture of our products.

We cannot predict the impact of these and other factors on our revenues and operating results in any future period. Results of operations in any period, therefore, should not be considered indicative of the results to be expected for any future period. Because of this difficulty in predicting future performance, our operating results may fall below expectations of securities analysts or investors in some future quarter or quarters. Our failure to meet these expectations would likely adversely affect the market price of our common stock.

Global economic and political environments are important to economic conditions, and long term continued risk or concerns regarding economic and political circumstances could decrease customer demand for our products.

Future political or related events similar or comparable to the September 11, 2001 terrorist attacks, significant military conflicts, or long term reactions of governments and society to such events, may significantly affect the willingness or ability of our customers to visit our facilities or trade shows, review our systems' capabilities and/or purchase or take delivery of our products, as well as our abilities to visit our customers, to perform application studies for our customers, to sell and deliver solutions and to service those solutions. Any decline in the willingness or ability of our customers to travel and visit our facilities, or in our ability to travel and visit our customers, could have a material adverse effect on our business, financial condition and results of operations. In addition, such events could have an adverse effect on the economy generally, and microelectronic industries in particular, causing our customers to reduce or delay capital equipment purchases.

Two product lines account for a significant portion of our sales, and consequently, continued market acceptance of these product lines is critical to our success.

Approximately 67% of our net revenues in the first half of 2003, and 45% of our net revenues in 2002, came from the sales of our NSX Series and approximately 10% of our net revenues in the first half of 2003 and 37% of our net revenues in 2002 came from the sales of our 3Di Series. Although we have introduced new products in 2003 including the AXi Series and EXi Series, and intend to introduce additional new products in 2003, we still expect that the NSX Series and 3Di Series will continue to account for at least a majority of our net revenues for the next twelve months. Continued market acceptance of these product lines is critical to our success. Any decline in demand for, or

failure to achieve continued market acceptance of, these product lines or any new version of these product lines, would harm our business.

The market acceptance of our products is critical to our growth.

Microelectronic device manufacturing equipment and processes are subject to rapid technological changes. We continue to spend a significant amount of time and resources developing new systems, new models to existing system series and improvements or enhancements on current models. Due to the length of the product development cycles in our industries, we must make these significant time and resource expenditures well in advance of any prospect of a revenue stream from such new products. If our customers do not continue to accept our current products and also accept and integrate our new products into their operations, our revenue, cash flow, operating results or stock price could be negatively impacted.

Our growth expectations are dependent on successfully penetrating the front-end of the microelectronic device manufacturing process.

We have recently introduced the AXi Series and EXi Series which address inspection and metrology needs in the front-end of the microelectronic device manufacturing process, a market segment that we have limited experience in serving. We are not a well-recognized supplier to this market, and will need to establish new customer relationships and win the confidence of these customers to compete effectively in this market. The front-end of the microelectronic device manufacturing market is dominated by large, well-established competitors with significantly greater resources and name recognition than we have. In order to compete effectively with these larger competitors, we must develop process and applications expertise to identify the inspection needs of this market and produce cost-effective, technologically advanced solutions addressing these needs. In addition, we must create and execute programs to effectively service these customers. Failure to successfully penetrate the front-end of the microelectronic device manufacturing market would adversely affect our business.

If we are unable to keep pace with rapid technological changes by developing and introducing successful new products and technologies in a timely manner, our products may become obsolete and our business will be harmed.

The microelectronic capital equipment manufacturing business is a highly competitive business and microelectronic device manufacturing equipment and processes are subject to rapid technological changes. We believe that our future success will depend in part upon our ability to continue to enhance our existing product line to meet customer needs and to develop and introduce new products in a timely manner. We cannot assure you that our product enhancement efforts to improve and advance products, such as the NSX Series and the 3Di Series, or our new product development efforts such as the AXi Series and EXi Series, will be successful or that we will be able to respond effectively to technological change. In addition, we cannot assure that we will choose the most opportunistic new markets and applications.

We continue to make and/or review significant investments in research, development and engineering in new technology and/or businesses with new or complementary products, services and/or technologies, and we are aware of the numerous risks associated therewith, including but not limited to:

diversion of management's attention from day to day operational matters;

lack of synergy, or the inability to realize expected synergies;

failure to commercialize the new technology or business;

failure to meet the expected performance of the new technology or business;

lower-than-expected market opportunities or market acceptance of any new products; and

unexpected reduction of sales of existing products by new products.

If we are unsuccessful at developing new products and technologies, our revenue, operating results or stock price could be negatively impacted.

Our products are complex and any product or process development issues could negatively impact our operations or financial results.

Our products are complex and often the applications of our customers are unique. We believe that our future success will depend in part upon our ability to meet our customers' functionality and reliability requirements in a timely manner. We cannot be sure that our product offerings, application assistance, enhancement efforts, or our new product development efforts will fulfill every functionality and reliability requirement. In addition, new product offerings that are highly complex in terms of software or hardware may require application or service work such as bug fixing prior to acceptance, thereby delaying revenue recognition. If we are unsuccessful in these areas, our market share, revenue, operating results or stock price could be negatively impacted.

Our market is highly competitive and we may lose business to larger and better-financed competitors.

The microelectronic defect inspection equipment industry is highly competitive in all areas of the world. We have many domestic and foreign competitors. Our current primary competitors in final manufacturing are Camtek Ltd., Hitachi, Ltd., Robotic Vision Systems, Inc., and Toray Industries, Inc. As we enter the front-end market, we expect to compete with larger competitors, such as KLA-Tencor Corporation and Rudolph Technologies, Inc., for certain automated macro inspection applications. Most of these competitors, as well as other potential competitors, have substantially greater financial resources and more extensive engineering, manufacturing, marketing and customer support capabilities than we have. Unless we are able to invest significant financial resources in developing products and enhancing customer support worldwide, and are able to gain customer acceptance of our products, we may not be able to compete effectively.

As we continue to diversify into the evolving and emerging microelectronic markets, including semiconductors, advanced packaging, optoelectronics, MEMS, flat panel display, printheads, data storage, disk drives, medical devices and other similar devices, further competitors may enter our markets, or we may enter the markets of other companies.

Our operations could be impaired as a result of disasters, business interruptions beyond our control or similar events, including global or regional outbreaks of infectious diseases such as severe acute respiratory syndrome.

Disasters such as earthquakes, flooding, fire, electricity failure, or accidents that affect our operations, manufacturing facility, or the health of our employees or customers could adversely affect our operating results and financial condition. Continued or future outbreaks of infectious diseases such as severe acute respiratory syndrome ("SARS") or other similar or comparable outbreaks or fears or concerns of possible outbreaks may significantly affect the willingness or ability of our customers to visit our facilities or trade shows, review our systems' capabilities and/or purchase or take delivery of our products, as well as our ability to visit our customers, to perform application studies for our customers, to sell and deliver products, and to service those products. Any government mandated or suggested restrictions on travel, quarantines, or declines in the willingness or ability of our customers to travel and visit our facilities or our ability to travel and visit our customers, could have a material adverse effect on our business, financial condition and results of operations.

Our operating results could be negatively impacted if we are unable to obtain the necessary resources to invest in our growth.

We intend to continue to make investments to support business growth and may require additional funds to respond to business challenges, which include the need to develop new products or enhance existing products, enhance our operating infrastructure, acquire complementary businesses and technologies and satisfy working capital requirements. Accordingly, we may need to engage in equity or debt financing to secure additional funds. Equity and debt financing, however, might not be available when needed or, if available, might not be available on terms satisfactory to us. If we are unable to obtain adequate financing or financing on terms satisfactory to us, our ability to continue to support our business growth and to respond to business challenges could be significantly limited.

Our success depends on attracting and retaining key personnel.

Our future success will depend in large part upon our ability to recruit and retain highly skilled technical, manufacturing, managerial, financial and marketing personnel. The labor market in which we operate is highly competitive and as a result, we may not be able to retain and recruit key personnel. Our failure to hire, retain, or adequately train key personnel could have a negative impact on our performance.

In addition, during the recent microelectronic industry downturn we have had reductions in our work force, reduced or eliminated salary increases and for certain periods implemented pay cuts at the management level, and reduced discretionary spending. Any of the above measures may have long term adverse effects on our ability to retain key personnel.

Our business may be harmed if we fail to obtain and protect our intellectual property rights.

Our success depends in part upon our ability to obtain intellectual property rights and licenses and to preserve other intellectual property rights covering our products and our products under development. To protect these rights, we have obtained four domestic patents and intend to continue to seek patents on our inventions when appropriate. As of the date of this prospectus, we have 49 pending patent applications in the United States and additional international applications and expect our portfolio to grow in the future. The process of seeking intellectual property protection can be time-consuming and expensive. We cannot ensure that:

- patents will be issued from currently pending or future applications;
- our existing patents or any new patents will be sufficient in scope or strength to provide meaningful protection or any commercial advantage to us;
- foreign intellectual property laws will protect our intellectual property rights; or
- others will not independently develop similar products, duplicate our products or design around our technology.

If we do not successfully protect and then enforce our intellectual property rights, our competitive position could suffer, which could harm our operating results.

We also rely on trade secrets, proprietary know-how and confidentiality provisions in agreements with employees, consultants, key customers and vendors to protect our intellectual property. Other parties may not comply with the terms of their agreements with us and we may not be able to adequately enforce our rights against these people.

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

Intellectual property rights are uncertain and involve complex legal and factual questions. We may be unknowingly infringing upon the intellectual property rights of others and may be liable for that infringement, which could result in significant liability for us. If we do infringe upon the intellectual property rights of others, we could be forced to either seek a license to those intellectual property rights or to alter our products so that they no longer infringe. A license could be very expensive to obtain or may not be available at all. Similarly, changing our products or processes to avoid infringing upon the rights of others may be costly or impractical.

We may become responsible for patent litigation costs. If we were to become involved in a dispute regarding intellectual property, whether ours or that of another company, we may have to participate in legal proceedings. These types of proceedings may be costly and time-consuming for us, even if we eventually prevail. If we do not prevail, we might be forced to pay significant damages, obtain licenses, modify our products or processes, stop making products or stop using processes.

STI is involved in a dispute that may result in litigation against STI and us; we may incur significant legal costs and, if we lose, additional financial obligations.

STI is currently involved in a dispute with Rudolph Technologies, Inc. ("Rudolph"). In various letters and conversations with STI and us, Rudolph has asserted that STI owes Rudolph development fees and royalty payments pursuant to a December 24, 1997 development agreement between STI and ISOA, Inc., a company later acquired by Rudolph. Rudolph has also asserted that we may have used ISOA technology in the development of one of our products and owe additional royalties to Rudolph as a result. If Rudolph initiates legal proceedings against STI or us, or if we initiate legal proceedings against Rudolph to resolve this dispute, the legal fees and expenses we incur could be significant. In addition, if litigation ensues, there can be no assurance that we will prevail in such litigation and we may suffer an adverse result requiring us to pay damages or royalties, adversely affecting our business.

Our dependence on a few significant customers exposes us to operating risks.

Sales to our ten largest customers accounted for 83% of net revenues in the first half of 2003, 66% of net revenues in 2002, 75% of net revenues in 2001 and 63% of net revenues in 2000. In 2002, we had two customers each account for more than ten percent of our business, with one accounting for almost sixteen percent. Our customers are able to cancel orders, prior to shipment, with few or no penalties. If a significant customer reduces orders or delays shipments for any reason, our revenues, operating results and financial condition will be negatively affected. In addition, our ability to increase our sales will depend in part upon our ability to obtain orders from new customers for whom there is intense competition.

Our dependence on subcontractors and sole or limited source suppliers may prevent us from delivering an acceptable product on a timely basis and could result in disruption of our operations.

We rely on subcontractors to manufacture many of the components and subassemblies for our products and we depend on single or limited source suppliers for some of our components. Our reliance on subcontractors reduces the level of control we have over the manufacturing process and exposes us to significant risks such as inadequate capacity, late delivery, substandard quality and high costs.

If a supplier were to become unable to provide parts in the volumes needed or at an acceptable price, we would have to identify and qualify acceptable replacements from alternative sources of supply, or manufacture the components internally. Depending on the part, the process of qualifying subcontractors and suppliers generally takes between 60 and 180 days. We generally do not have

written supply agreements with our single or limited source suppliers and purchase our custom components through blanket and individual purchase orders. If we were unable to obtain these components in a timely fashion, we may not be able to meet demands for future shipments. We believe that we would be able to find alternative solutions if supplies were unavailable from any of our sole source suppliers, including the supplier of our image processing component. This may take time and the disruption would adversely affect our results of operations.

We assemble and test all of our products at a single facility, and any disruption in the operations of that facility could adversely impact our business and operating results.

Our processes for manufacturing our automated inspection systems require sophisticated and costly equipment and a specially designed facility. We assemble and test all of our automated inspection systems at one facility located in Bloomington, Minnesota. Any disruption in the operation of that facility, whether due to technical or labor difficulties, destruction or damage from fire or earthquake, infrastructure failures such as power or water shortage or any other reason, could interrupt our manufacturing operations, impair critical systems, disrupt communications with our customers and suppliers and cause us to write off inventory and to lose sales.

Failure to adjust our orders for parts and subcomponents in an accurate and timely manner in response to changing market conditions or customer acceptance of our products could adversely affect our financial position and earnings.

Our earnings could be harmed and our inventory levels could materially increase if we are unable to predict our inventory needs in an accurate and timely manner and adjust our orders for parts and subcomponents should our needs increase or decrease materially due to unexpected increases or decreases in demand for our products. Any material increase in our inventories could result in an adverse effect on our financial position, while any material decrease in our ability to procure needed inventories could result in an inability to supply customer demand for our products thus adversely affecting our revenues.

Our dependence upon international customers and suppliers may reduce our revenues or impede our ability to supply products.

International sales have accounted for a significant and growing portion of our revenues in recent years and we expect that the percentage of sales from international customers will continue to increase. Sales outside of North America accounted for 68% of our net revenues in the first half of 2003, 52% of our net revenues in 2002, 44% of our net revenues in 2001 and 45% of our net revenues in 2000. In addition, we rely on non-U.S. suppliers for several components of the systems we sell. As a result, a major part of our revenues and the ability to manufacture our products are subject to the risks associated with international commerce. International sales and our relationships with suppliers and customers may be hurt by many factors, including:

changes in law or policy resulting in burdensome government controls, tariffs, restrictions, embargoes or export license requirements;

political or economic instability in our target international markets;

instability caused by infectious disease or other like outbreaks, or the threat or concern thereof;

longer payment cycles common in foreign markets;

difficulties in staffing and managing our international operations;

less favorable foreign intellectual property laws making it harder to protect our technology from appropriation by competitors;

difficulties in collecting our accounts receivable because of the geographic distance and unfavorable creditor laws; and

currency fluctuations may increase the relative price of our products in foreign markets and thereby adversely affect sales.

We are also subject to risks associated with shipping products outside of the U.S. including shipping delays, varying business conditions, differing business cultures and cultural diversities, among other risks. If our international sales or relationships with international suppliers and customers are adversely affected by any of these factors, our financial condition could be adversely affected.

Our financial performance is highly dependent upon sales to customers in Asia.

Sales to customers in Asia accounted for 57% of our net revenues in the first half of 2003 and 45% of our net revenues in all of 2002. We expect our dependence upon the Asian market to increase. In recent years, Asia has experienced serious economic problems including currency devaluations, debt defaults, lack of liquidity and recessions. Our revenues depend upon the capital expenditures of microelectronic manufacturers, many of whom have operations and customers in Asia. Serious economic problems in Asia would likely result in a significant decrease in the sale of equipment to microelectronic industries. If we are unable to maintain our customer relationships in Asia, our future financial condition, revenues and operating results will be negatively affected.

We will continue to rely upon distributors for a portion of our future sales, and a disruption in our relationships with these distributors could have a negative impact on our international sales.

Sales through our independent distributors represented 19% of our net revenues in the first half of 2003 and 8% of our net revenues in all of 2002. We expect this percentage to continue to increase in the near term. In addition, two distributors account for a significant portion of these sales. The activities of these distributors are not fully within our control. Although we believe that we maintain good relations with our independent distributors, the relationships may nevertheless deteriorate in the future. A reduction in the sales or service efforts or financial viability of any of our independent distributors, or a termination of our relationships with them, could harm our sales, our financial results and our ability to support our customers.

We recently acquired STI and CSI and we may make other acquisitions; the acquisitions of STI and CSI and any future acquisitions may not be successful and may adversely affect our business.

We are looking for strategic opportunities to grow and diversify our product offerings through acquisitions. In this regard, we recently completed the acquisitions of STI and CSI. Your evaluation of our business and prospects may be difficult because of our limited operating history with STI and CSI. There can be no assurance that we will be successful in integrating the operations of STI and CSI, identifying other appropriate candidates, or integrating products and operations with any such candidates that we may acquire.

Any such acquisition could involve the dilutive issuance of equity securities and the incurrence of debt. In addition, the acquisitions of STI and CSI and future acquisitions may involve numerous additional risks, including:

the diversion of the attention of our management team from other business concerns;

risks of entering into markets or producing products where we have limited or no experience, including difficulties in integrating purchased technologies and products with our technologies and products;

the potential loss of key customers of an acquired company;

the potential loss of key personnel of an acquired company;

exposure to unanticipated liabilities of an acquired company; and

greater financial requirements for purchase price and added working capital.

Even when an acquired company has already developed and marketed products, there can be no assurance that the products will continue to be successful, that product enhancements will be made in a timely fashion or that pre-acquisition due diligence will have identified all possible issues that might arise with respect to the acquired company or its products.

If a microelectronic device manufacturer is loyal to another microelectronic equipment supplier, we may be unable to sell our products to that potential customer and our sales and market share could suffer as a result.

We believe that once a microelectronic 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, a microelectronic 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.

If we are required to account for stock options as a compensation expense, our net income and earnings per share will be significantly reduced.

Some companies have begun to account for stock options as compensation expense thus resulting in a reduction of their net income and earnings per share. We currently grant all options at fair market value and do not record compensation expense in connection with the grants. It is possible that future laws, regulations or changes in accounting standards will require us to record the fair market value of all stock options as a compensation expense in our consolidated financial statements. If such a change occurs, our net income and earnings per share may be significantly reduced.

If we cannot effectively manage our growth, our business may suffer.

We intend to continue to grow by increasing our sales efforts and completing strategic acquisitions. To effectively manage our growth, we must, among other things:

engage, train and manage a larger sales force and additional service personnel;

expand the geographic coverage of our sales force;

expand our information systems;

identify and successfully integrate acquired businesses into our operations; and

administer appropriate financial and administrative control procedures.

Our anticipated growth will likely place a significant strain on our management, financial, operational, technical, sales and administrative resources. Any failure to effectively manage our growth may cause our business to suffer and our stock price to decline.

Increased competition could impair sales of our products or cause us to reduce our prices.

We expect our current competitors and other companies to continue to improve the design and performance of their products and to introduce new products with competitive prices and performance characteristics. Competitive pressures may from time to time require us to selectively reduce prices on our systems in an effort to protect our market share. Even if we reduce prices, our potential customers may choose to purchase competing products developed by our competitors, many of whom have development, production, marketing and distribution resources significantly greater than our own. Price reductions or lost sales as a result of these competitive pressures would reduce our total revenues and adversely impact our financial results.

Risks Related to this Offering

Our stock price is volatile, and you may not be able to resell your shares at or above the offering price.

The market price and trading volume of our common stock has been subject to significant volatility, and this trend may continue. In particular, trading volume historically has been low and the market price of our common stock has increased dramatically in recent months. The value of our common stock may decline regardless of our operating performance or prospects. Factors affecting our market price include:

our perceived prospects;

variations in our operating results and whether we have achieved our key business targets;

the limited trading volume in shares of our common stock in the public market;

sales or purchases of large blocks of our stock;

changes in, or our failure to meet, our earnings estimates;

changes in securities analysts' buy/sell recommendations;

differences between our reported results and those expected by investors and securities analysts;

announcements of new contracts by us or our competitors;

announcements of legal claims against us;

market reaction to any acquisitions, joint ventures or strategic investments announced by us or our competitors; and

general economic, political or stock market conditions.

Recent events have caused stock prices for many companies, including ours, to fluctuate in ways unrelated or disproportionate to their operating performance. The general economic, political and stock market conditions that may affect the market price of our common stock are beyond our control. The market price of our common stock at any particular time may not remain the market price in the future. In the past, securities class action litigation has been instituted against companies following periods of volatility in the market price of their securities. Any such litigation, if instituted against us, could result in substantial costs and a diversion of management's attention and resources.

We do not anticipate declaring any cash dividends on our common stock.

We have never declared or paid cash dividends on our common stock and do not plan to pay any cash dividends in the near future. Our current policy is to retain all funds and earnings for use in the operation and expansion of our business.

Our management will have broad discretion regarding our use of proceeds from this offering and may not use the proceeds in a manner that increases the value of your investment.

We have not designated any specific use for the net proceeds from our sale of common stock described in this prospectus. Rather, we expect to use the net proceeds for general corporate purposes, including working capital, research and development, capital expenditures, and for potential acquisitions of complementary products, technologies or businesses. Consequently, our management will have significant flexibility in applying the net proceeds of this offering. You will be relying on the judgment of our management regarding the application of the proceeds. Our management will have the ability to apply the proceeds of this offering as it deems appropriate without shareholder approval.

The market price of our common stock may drop significantly when the resale restrictions on our common stock lapse.

Future sales of substantial amounts of shares of our common stock in the public market, or the perception that these sales could occur, could adversely affect the prevailing market price of our common stock and could impair our ability to raise additional capital through future sales of equity securities. Assuming completion of this offering and no other changes in our outstanding shares as of August 15, 2003 we would have 16,661,572 shares outstanding. In addition, our directors, officers and employees will have the right to purchase up to 1,908,684 additional shares of our common stock reserved for issuance under our existing equity incentive compensation plans after giving effect to the exercise of

options to acquire 30,000 shares by the selling shareholders. Holders of 1,561,742 shares of our common stock, after giving effect to the offering, have agreed with the underwriters to refrain from selling their shares for a period of 90 days after this offering. As these restrictions on resale end, the market price of our common stock could drop significantly if holders of these shares sell them or, if the market perceives they intend to sell them.

Provisions of our articles of incorporation, our bylaws and Minnesota law could discourage potential acquisition proposals and delay or prevent a change in control.

Anti-takeover provisions of our Amended and Restated Articles of Incorporation, Amended and Restated Bylaws and Minnesota law could diminish the opportunity for shareholders to participate in acquisition proposals at a price above the then current market price of our common stock. The provisions may also inhibit increases in the market price of our stock that could result from takeover attempts. For example, while we have no present plans to issue any additional series or classes of capital stock, our board of directors, without further shareholder approval, may issue additional series or classes that could have the effect of delaying, deterring or preventing a change in control. The issuance of additional series or classes could adversely affect the voting power of your shares. In addition, our Bylaws provide for a classified board of directors consisting of three classes and require a 75% vote for removal of directors. These provisions could also have the effect of delaying, deterring or preventing a change in control.

FORWARD-LOOKING STATEMENTS

This prospectus, including reports incorporated by reference into this prospectus, contains forward-looking statements including statements concerning the future of our industry, product development, business strategy, continued acceptance of our products, market growth and dependence on significant customers. These statements can be identified by the use of forward-looking terminology such as "may," "will," "expect," "anticipate," "estimate," "continue," or other similar words. When considering forward-looking statements, you should keep in mind the risk factors and other cautionary statements in this prospectus. The risk factors noted above and other factors noted throughout this prospectus could cause our actual results to differ significantly from those contained in any forward-looking statement. Except as required by law, we undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of the 3,000,000 shares of common stock that we are offering will be approximately $28.5 million assuming an offering price of $10.22 per share (the last reported sale price on August 25, 2003) and after deducting underwriting discounts and commissions and estimated offering expenses payable by us. Except for the receipt of approximately $51,246 upon exercise of outstanding options by selling shareholders in connection with this offering, we will not receive any proceeds from the sale of 268,250 shares of common stock by the selling shareholders.

We expect to use the net proceeds from this offering for general corporate purposes, including working capital, research and development, capital expenditures, and for potential acquisitions of complementary products, technologies or businesses; however, we currently have no commitments or agreements with respect to any acquisitions. As of the date of this prospectus, we cannot specify with certainty the particular uses for the net proceeds we will receive in this offering. Accordingly, our management will have broad discretion in applying our net proceeds from this offering. Pending the uses described above, we intend to invest the net proceeds in investment grade, interest-bearing instruments.

PRICE RANGE OF COMMON STOCK

Our common stock, no par value, trades under the symbol "AUGT" on the Nasdaq National Market. The following table sets forth the reported high and low closing sale prices for shares of our common stock on the Nasdaq National Market during the indicated quarters.

	High	Low
Year Ended December 31, 2001		
First Quarter	$ 14.50	$ 9.94
Second Quarter	14.35	9.60
Third Quarter	14.71	8.20
Fourth Quarter	11.04	7.35
Year Ended December 31, 2002		
First Quarter	14.59	8.05
Second Quarter	16.35	9.35
Third Quarter	9.23	3.47
Fourth Quarter	7.40	3.89
Year Ended December 31, 2003		
First Quarter	5.38	2.20
Second Quarter	6.23	3.45
Third Quarter (through August 25, 2003)	11.01	6.73

As of August 25, 2003, there were approximately 198 holders of record of our common stock. In addition, based on information obtained from our transfer agent, there are approximately 1,802 holders whose stock is held in nominee name and/or street name brokerage accounts. The last reported sale price for our common stock on August 25, 2003 was $10.22 per share.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock. We currently intend to retain earnings, if any, to support the development of our business and do not anticipate paying cash dividends for the foreseeable future. Payment of future dividends, if any, will be at the discretion of our board of directors after taking into account various factors, including our financial condition, operating results and current and anticipated cash needs. In addition, our current credit facility prohibits us from paying any cash dividends without our lender's consent.

CAPITALIZATION

The following table sets forth our actual capitalization as of June 30, 2003 and as adjusted to give effect to the issuance and sale by us of 3,000,000 shares of common stock in this offering at the assumed public offering price of $10.22 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us and giving effect to the issuance of 30,000 shares of our common stock issuable to selling shareholders upon the exercise of stock options and offered for resale in the offering.

This capitalization table should be read in conjunction with "Selected Consolidated Financial Data" and our consolidated financial statements and related notes beginning on page F-1.

	As of June 30, 2003	
	Actual	As Adjusted
	(in thousands, except share data) (unaudited)	
Cash, cash equivalents and marketable securities	$ 20,206	$ 48,753

	As of June 30, 2003	
Shareholders' equity:		
Common stock, no par value, 42,000,000 shares authorized; 13,418,815 shares outstanding, actual; and 16,448,815 shares outstanding, as adjusted	$ 43,087	$ 71,634
Undesignated capital stock, no par value, 3,000,000 shares authorized, no shares issued or outstanding		
Deferred compensation related to stock options	(75)	(75)
Accumulated deficit	(10,858)	(10,858)
Accumulated other comprehensive income	3	3
Total shareholders' equity	32,157	60,704
Total capitalization	$ 32,157	$ 60,704

The table assumes no exercise of the underwriters' over-allotment option and excludes 200,000 shares issued in connection with the acquisition of CSI in July 2003 and the potential dilutive effect of the following securities:

1,858,541 shares of common stock issuable upon exercise of options outstanding, at a weighted average exercise price of $6.774 per share, under our 1997 Stock Option Plan;

an additional 524,178 shares of common stock reserved for future issuance under our 1997 Stock Option Plan;

an additional 272,557 shares of common stock reserved for issuance under our 2000 Employee Stock Purchase Plan; and

9,375 shares of common stock reserved for outstanding warrants.

SELECTED CONSOLIDATED FINANCIAL DATA

The consolidated statement of operations data set forth below for each of the years ended December 31, 2002, 2001 and 2000 and the consolidated balance sheet data as of December 31, 2002 and 2001 are derived from the audited consolidated financial statements included in this prospectus. The consolidated statement of operations data for the six months ended June 30, 2003 and 2002 and the consolidated balance sheet data as of June 30, 2003 are derived from our unaudited consolidated financial statements included elsewhere in this prospectus. The consolidated statement of operations data set forth below for the years ended December 31, 1999 and 1998 and the balance sheet data as of December 31, 2000, 1999 and 1998 are derived from our audited consolidated financial statements, which are not included in this prospectus. The consolidated balance sheet data set forth below as of June 30, 2002 are derived from our unaudited consolidated financial statements, which are not included in this prospectus. Our historical results are not necessarily indicative of the results of operations for future periods, and the results of operations for the six months ended June 30, 2003 are not necessarily indicative of the results to be expected for the full year ending December 31, 2003. You should read the data set forth below in conjunction with the financial statements and notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing in this prospectus.

Years Ended December 31,					Six Months Ended June 30,	
2002	2001	2000	1999	1998	2003[1]	2002
(in thousands, except per share data)						

	Years Ended December 31,					Six Months Ended June 30,	
Consolidated Statement of Operations Data:							
Net revenues	$ 25,058	$ 29,784	$ 31,666	$ 12,058	$ 5,787	$ 14,320	$ 12,490
Cost of revenues	11,068	12,039	12,594	5,110	2,686	6,503	5,329
Gross profit	13,990	17,745	19,072	6,948	3,101	7,817	7,161
Selling, general and administrative expenses[2]	13,013	12,379	10,426	4,737	2,174	6,420	6,226
Research and development expenses	9,847	7,940	6,945	2,318	924	5,202	4,864
Operating income (loss)	(8,870)	(2,574)	1,701	(107)	3	(3,805)	(3,929)
Interest income (expense), net	624	1,427	978	(42)	(1)	176	382
Other expense		(17)					
Income (loss) before provision for (benefit from) income taxes	(8,246)	(1,164)	2,679	(149)	2	(3,629)	(3,547)
Provision for (benefit from) income taxes[3]	687	(813)	807	(17)	2		687
Net income (loss)	$ (8,933)	$ (351)	$ 1,872	$ (132)	$	$ (3,629)	$ (4,234)
Net income (loss) per share:							
Basic	$ (0.69)	$ (0.03)	$ 0.17	$ (0.02)	$	$ (0.27)	$ (0.33)
Diluted	$ (0.69)	$ (0.03)	$ 0.16	$ (0.02)	$	$ (0.27)	$ (0.33)
Weighted average shares outstanding:							
Basic	13,033	12,723	11,049	8,688	7,955	13,255	12,939
Diluted	13,033	12,723	11,770	8,688	7,955	13,255	12,939

	As of December 31,					As of June 30,	
	2002	**2001**	**2000**	**1999**	**1998**	**2003**	**2002**
	(in thousands)						
Consolidated Balance Sheet Data:							
Cash, cash equivalents and marketable securities	$ 18,777	$ 25,857	$ 29,193	$	$	$ 20,206	$ 24,444
Working capital	29,376	37,171	36,872	2,494	1,125	27,649	33,000
Total assets	39,510	47,155	47,897	6,676	2,686	42,531	43,561
Total debt				1,224	190		
Total shareholders' equity	34,867	42,523	41,685	3,347	1,411	32,157	39,406

(1) On April 15, 2003, we acquired all of the outstanding capital stock of STI. STI's results of operations have been included with our results of operations since the date of acquisition.

(2) Selling, general and administrative expenses for the year ended December 31, 2002, 2001 and 2000 and the six months ended June 30, 2003 and 2002 include restructuring related expenses of $1,244, $579, $326, $254 and $568, respectively.

(3) We recorded a full valuation allowance against our deferred tax assets in the second quarter of 2002. The recording of the valuation allowance resulted in a provision for income taxes, rather than the recording of a tax benefit on the pre-tax loss. We have subsequently continued to record a full valuation allowance against our deferred tax assets.

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

The following discussion of our results of operations and financial condition should be read together with the other financial information and consolidated financial statements and related notes included in this prospectus. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a variety of factors including those discussed in "Risk Factors" and elsewhere in this prospectus.

Introduction

Since our founding in 1992, we have become recognized as a world-class provider of automated defect detection and product characterization systems for microelectronic device manufacturers. Our systems provide manufacturers with information that enables process-enhancing decisions, ultimately lowering manufacturing costs, improving time-to-market and enhancing the performance of their products. We combine our core competencies in machine vision technology, optics, lighting and precision motion control with our proprietary software and extensive microelectronic-specific applications experience to deliver scalable, modular systems that excel at the automated detection of advanced macro defects, which we define to be defects greater in size than 0.5 microns. We sell our systems to many of the leading microelectronic device manufacturers throughout the world for inspecting semiconductors, advanced packaging applications, optoelectronics, MEMS, data storage and micro displays.

We have traditionally provided systems to address the automated inspection needs of the final manufacturing or back-end of the microelectronic device manufacturing process, including test, assembly and packaging. We recently have introduced two new systems for advanced macro detection earlier in the front-end wafer manufacturing process. In addition to internal development, we look to expand through strategic acquisitions of complementary products and technologies. In April 2003 we completed the acquisition of STI, adding the WAV Series for high speed wafer probe mark inspection and metrology. In July 2003 we acquired the assets of CSI, including the VersaScope, a system in development for advanced microscope-based imaging and analysis, allowing us to serve our customers earlier in their device development process.

Our business is subject to the cyclical nature of the microelectronic device manufacturing markets we serve. These cycles are caused by significant fluctuations in the supply and demand of microelectronic devices driven by such factors as changes in technology and global economic conditions. There has been a dramatic reduction in demand for microelectronic device manufacturing equipment since 2000. This decreased demand has caused our quarterly orders and sales to fluctuate dramatically. While we have seen some improvements in market conditions, we are not able to predict when the microelectronic device manufacturers' capital spending will recover. Future quarterly and annual results will continue to be impacted by fluctuations in supply and demand of microelectronic devices, the timing of new product announcements and releases by us or our competitors, market acceptance of new or enhanced versions of our products, changes in the pricing of our products and the timing and level of our research and development expenditures.

During the second quarter of 2001, in response to the current downturn, we began to implement, and are still operating under components of, a series of cost management programs. The programs included, at various times, raw material cost reductions, reductions in temporary and contract staffs, work force reductions, mandatory time-off, decreases in discretionary spending and reductions in executive compensation and overtime. Although we continued to maintain various components of the cost management programs during 2002 and the first half of 2003, these savings were offset by our decision to invest in developing our worldwide sales and service organization and in the continued

development of new and existing products to better serve our customers and maintain our technology leadership.

Results of Operations

The following table sets forth, for the periods indicated, certain operating data as a percentage of net revenues:

	Percentage of Net Revenues	
	Years Ended December 31,	Six Months Ended June 30,

	Percentage of Net Revenues				
	2002	2001	2000	2003	2002
Net revenues	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues	44.2	40.4	39.8	45.4	42.7
Gross profit	55.8	59.6	60.2	54.6	57.3
Selling, general and administrative expenses	52.0	41.5	32.9	44.9	49.8
Research and development expenses	39.3	26.7	21.9	36.3	38.9
Operating income (loss)	(35.5)	(8.6)	5.4	(26.6)	(31.4)
Interest income, net	2.5	4.8	3.1	1.2	3.0
Other expense		(0.1)			
Income (loss) before provision for (benefit from) income taxes	(33.0)	(3.9)	8.5	(25.4)	(28.4)
Provision for (benefit from) income taxes	2.7	(2.7)	2.6		5.5
Net income (loss)	(35.7)%	(1.2)%	5.9%	(25.4)%	(33.9)%

Six months ended June 30, 2003 compared to the six months ended June 30, 2002

Net Revenues. Net revenues increased $1.8 million, or 14.7%, to $14.3 million for the six months ended June 30, 2003, from $12.5 million for the same period in 2002. The increase in net revenues was primarily due to higher sales of our NSX Series and CV Series into the traditional semiconductor and advanced packaging markets, and sales of the WAV Series. The increase was partially offset by lower revenues from our 3Di Series, primarily due to the timing of customer acceptance on systems at customer sites under purchase orders.

International sales represented 68% and 52% of net revenues for the six months ended June 30, 2003 and 2002, respectively. International net revenues were primarily the result of sales to Asia, which comprised 57% and 41% of total net revenues for the six months ended June 30, 2003 and 2002, respectively.

Gross Profit. Gross profit increased to $7.8 million for the six months ended June 30, 2003, from $7.2 million for the same period in 2002. The gross margin decreased to 54.6% for the six months ended June 30, 2003, from 57.3% for the same period in 2002. The decrease in gross margin percentage was primarily due to (i) lower than normal gross margins on the WAV Series revenues due to purchase accounting adjustments related to the acquisition of STI, which requires the write-up of the carrying amount of finished goods on hand at the time of the acquisition to fair value; and (ii) an increase in the number of NSX systems that included subsystem options manufactured by third parties, which have lower gross margins than our core inspection systems.

Selling, General and Administrative Expenses. Selling, general and administrative expenses increased 3.1% to $6.4 million, or 44.9% of net revenues, for the six months ended June 30, 2003, from

$6.2 million, or 49.8% of net revenues, for the same period in 2002. The increase in expense dollars was primarily due to costs associated with the integration and ongoing operations of STI, higher variable costs associated with the higher revenues, and costs associated with systems being evaluated by customers. The increase was partially offset by the fact that the prior year included costs related to the modification of our distributor agreement with Metron Technology B.V.

Research and Development Expenses. Research and development expenses increased 6.9% to $5.2 million, or 36.3% of net revenues, for the six months ended June 30, 2003, from $4.9 million, or 38.9% of net revenues, for the same period in 2002. The increase in expenses was primarily due to costs incurred during the first quarter of 2003 related to completing certain stages of development of our new AXi and EXi Series, and costs associated with the ongoing operations of STI.

Interest Income. Interest income was $176,000 for the six months ended June 30, 2003, compared to $382,000 for the same period in 2002. The decrease in interest income was due to lower rates of return earned on investment balances in 2003 as compared to 2002 and lower overall investment balances in 2003. Even though our cash and marketable securities increased during the six months ended June 30, 2003, we had a net use of cash, subsequent to the second quarter of 2002, to fund operations and acquire property and equipment.

Income Taxes. Due to the recording of a full valuation allowance against deferred tax assets, we continued to reflect no benefit from income taxes during the six months ended June 30, 2003. The recording of the valuation allowance in the second quarter of 2002 resulted in a provision for income taxes of $687,000 during the six months ended June 30, 2002, rather than the recording of a tax benefit on the pre-tax loss during the period.

Year ended December 31, 2002 compared to the year ended December 31, 2001

Net Revenues. Net revenues decreased $4.7 million, or 15.9%, to $25.1 million in 2002, from $29.8 million in 2001. The decrease in net revenues was the result of lower NSX Series revenues, partially offset by revenues from our 3Di Series, which was introduced in the fourth quarter of 2001. The decrease in NSX Series revenues was due to the continued downturn in the microelectronic industries. Net revenues derived from international sales represented 52% and 44% of net revenues in 2002 and 2001, respectively. International net revenues were primarily the result of sales to Asia, which comprised 45% and 34% of net revenues in 2002 and 2001, respectively.

Gross Profit. Gross profit decreased to $14.0 million, or 55.8% of net revenues, in 2002, from $17.7 million, or 59.6% of net revenues, in 2001. The decrease in gross margin percentage was primarily due to a decrease in the number of systems manufactured, which resulted in lower manufacturing utilization and increased labor and overhead costs per system sold, and was also impacted by sales of models within the 3Di Series that had lower margins than our other products.

Selling, General and Administrative. Selling, general and administrative expenses, including the restructuring related expenses described below, were $13.0 million, or 52.0% of net revenues, in 2002 and $12.4 million, or 41.5% of net revenues, in 2001. The increase as a percentage of revenues was due to the increase in expenses and the decrease in net revenues. The expense dollars in 2002 increased due to the restructuring related expenses noted below and (i) costs associated with systems being evaluated by customers; (ii) higher travel expenses due to increased international travel in our sales and service organization; and (iii) depreciation expense related to assets capitalized subsequent to 2001. The increase was offset by lower compensation expense and the various components of our cost management programs.

Selling, general and administrative expenses include restructuring related expenses of $1.2 million and $579,000 in 2002 and 2001, respectively. In 2002, these expenses consisted of $459,000 for the

write-off of acquisition related costs, $428,000 related to the modification of our distributor agreement with Metron Technology, B.V. to focus Metron's activities entirely on South Korea and $357,000 of employee severance costs related to reductions in work force. In 2001, these expenses consisted of $348,000 related to the modification of our distributor agreement with Metron, as a result of our decision to sell directly to our customers in Taiwan, and $231,000 of employee severance costs.

Research and Development. Research and development expenses increased $1.9 million, or 24.0%, to $9.8 million, or 39.3% of net revenues, in 2002, from $7.9 million, or 26.7% of net revenues, in 2001. The increase was primarily due to (i) our focus on advancing the development of new and existing products in each of our product lines, which led to the hiring of additional engineers and the use of additional outside contractors; (ii) depreciation and amortization expense related to assets and software capitalized subsequent to 2001; and (iii) travel costs related to visiting customer locations. These increases were partially offset by various components of our cost management programs.

Interest income, net. Net interest income decreased $803,000 to $624,000 in 2002, from $1.4 million in 2001. The decrease is due to lower overall investment balances in 2002, due to the use of cash to fund operations and acquire property and equipment, and lower rates of return earned on investment balances.

Income Taxes. The provision for income taxes in 2002 was $687,000, or an effective tax rate of 8.3%, compared to a benefit of $813,000, or an effective tax rate of 69.8%, in 2001. The income tax expense in 2002 is due to the recording of a full valuation allowance against deferred tax assets in the second quarter of 2002. Statement of Financial Accounting Standards No. 109 "Accounting for Income Taxes," requires the establishment of a valuation allowance to reflect the likelihood of the realization of deferred tax assets. As a result of our taxable earnings history and uncertainty as to the extent and timing of profitability in future periods, we have recorded a full valuation allowance of $5.4 million against deferred tax assets at December 31, 2002. The high effective income tax rate in 2001, compared to the federal statutory rate of 34% plus state and local taxes, was primarily due to the impact of federal and state general business and extraterritorial income credits and tax exempt

interest income that could not be utilized until future years due to our net loss.

Year ended December 31, 2001 compared to the year ended December 31, 2000

Net Revenues. Net revenues decreased $1.9 million, or 5.9%, to $29.8 million in 2001, from $31.7 million in 2000. The decrease in net revenues was the result of fewer shipments of our NSX systems due to a worldwide decline in capital spending by microelectronic device manufacturers throughout 2001. This decline was the result of a significant slowdown in demand for the devices these manufacturers produce, which resulted in manufacturers having increased inventory, overcapacity and, consequently, lower capital spending. Net revenues derived from the sale of NSX systems represented 77% and 90% of net revenues in 2001 and 2000, respectively.

Gross Profit. Gross profit decreased to $17.7 million, or 59.6% of net revenues, in 2001, from $19.1 million, or 60.2% of net revenues, in 2000. The decrease in gross margin percentage was primarily due to the decrease in the number of systems manufactured, which resulted in lower manufacturing utilization and increased labor and overhead costs per system sold.

Selling, General and Administrative. Selling, general and administrative expenses, including the restructuring related expenses described below, were $12.4 million, or 41.5% of net revenues, in 2001, and $10.4 million, or 32.9% of net revenues, in 2000. The expense dollars in 2001 increased due to the restructuring related expenses noted below and higher salaries and benefits related to sales, customer service and administrative employees hired during the second half of 2000 and costs associated with opening our direct sales and service office in Taiwan in 2001. These increases were partially offset by lower discretionary and compensation expenses during the second half of 2001 due to our cost

management programs that were implemented in response to the decrease in orders and shipments during this period.

Selling, general and administrative expenses include restructuring related expenses of $579,000 and $326,000 in 2001 and 2000, respectively. In 2001, these expenses consisted of $231,000 of employee severance costs related to reductions in work force implemented in the second and fourth quarters in response to the decrease in orders and shipments during this period, and $348,000 of expenses related to the termination of our distributor agreement in Taiwan, as a result of our decision to sell direct to customers in Taiwan. In 2000, these expenses consisted entirely of the write-off of certain internal business automation software as a result of our decision to discontinue the implementation of this software.

Research and Development. Research and development expenses increased $1.0 million, or 14.3%, to $7.9 million, or 26.7% of net revenues, in 2001, from $6.9 million, or 21.9% of net revenues, in 2000. The increase was due to salaries and benefits related to additional engineers hired during 2000 to advance the development of our new 3Di and Yield*Pilot* systems, partially offset by a decrease in hiring and compensation related expenses during the second half of 2001 due to our cost management programs that were implemented during this period.

Interest income, net. Net interest income increased $449,000 to $1.4 million in 2001 from $1.0 million in 2000. The increase was due to interest income earned from investing the proceeds received from our initial public offering in June 2000 for all of 2001, partially offset by lower overall investment balances in 2001 due to the use of cash to fund operations and lower rates of return earned on investment balances.

Income Taxes. The benefit from income taxes in 2001 was $813,000, or an effective tax rate of 69.8%, compared to a provision for income taxes of $807,000, or an effective tax rate of 30.1%, in 2000. The high effective income tax rate in 2001, compared to the federal statutory rate of 34% plus state and local taxes, was primarily due to the impact of federal and state general business and extraterritorial income credits and tax exempt interest income that will not be utilized until future years due to our net loss. The low effective income tax rate in 2000 was primarily due to federal and state general business credits.

Quarterly Results

The following table presents our unaudited consolidated statements of operations data both in absolute dollars and as a percentage of net revenues for each of our last ten quarters. This data has been derived from unaudited consolidated financial statements that have been prepared on the same basis as the annual audited consolidated financial statements and, in our opinion, include all normal recurring adjustments necessary for a fair presentation of such information. These unaudited quarterly results should be read in conjunction with the financial statements and notes thereto appearing in this prospectus. The consolidated results of operations for any quarter are not necessarily indicative of the results to be

expected for any future period.

	Three Months Ended									
	June 30 2003[1]	Mar. 31 2003	Dec. 31 2002	Sept. 30 2002	June 30 2002	Mar. 31 2002	Dec. 31 2001	Sept. 30 2001	June 30 2001	Mar. 31 2001
	(in thousands, except per share data)									
Net revenues	$ 7,757	$ 6,563	$ 6,295	$ 6,273	$ 6,980	$ 5,510	$ 5,472	$ 3,253	$ 10,155	$ 10,904
Cost of revenues	3,548	2,955	2,920	2,819	2,965	2,364	2,351	1,494	3,923	4,271
Gross profit	4,209	3,608	3,375	3,454	4,015	3,146	3,121	1,759	6,232	6,633
Selling, general and administrative expenses[2]	3,213	3,207	3,007	3,780	3,400	2,826	3,008	2,691	3,503	3,177
Research and development expenses	2,434	2,768	2,636	2,347	2,729	2,135	1,791	1,809	2,176	2,164
Operating income (loss)	(1,438)	(2,367)	(2,268)	(2,673)	(2,114)	(1,815)	(1,678)	(2,741)	553	1,292
Interest income (expense), net	78	98	118	124	174	208	250	330	354	476
Income (loss) before provision for (benefit from) income taxes	(1,360)	(2,269)	(2,150)	(2,549)	(1,940)	(1,607)	(1,428)	(2,411)	907	1,768
Provision for (benefit from) income taxes[3]					1,491	(804)	(689)	(1,033)	290	619
Net income (loss)	$ (1,360)	$ (2,269)	$ (2,150)	$ (2,549)	$ (3,431)	$ (803)	$ (739)	$ (1,378)	$ 617	$ 1,149
Net income (loss) per share:										
Basic	$ (0.10)	$ (0.17)	$ (0.16)	$ (0.19)	$ (0.26)	$ (0.06)	$ (0.06)	$ (0.11)	$ 0.05	$ 0.09
Diluted	$ (0.10)	$ (0.17)	$ (0.16)	$ (0.19)	$ (0.26)	$ (0.06)	$ (0.06)	$ (0.11)	$ 0.05	$ 0.09
Weighted average shares outstanding:										
Basic	13,352	13,158	13,130	13,123	13,033	12,845	12,795	12,768	12,687	12,640
Diluted	13,352	13,158	13,130	13,123	13,033	12,845	12,795	12,768	13,301	13,290

	Percentage of Net Revenues Three Months Ended									
	June 30 2003[1]	Mar. 31 2003	Dec. 31 2002	Sept. 30 2002	June 30 2002	Mar. 31 2002	Dec. 31 2001	Sept. 30 2001	June 30 2001	Mar. 31 2001
Net revenues	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Cost of revenues	45.7	45.0	46.4	44.9	42.5	42.9	43.0	45.9	38.6	39.2
Gross profit	54.3	55.0	53.6	55.1	57.5	57.1	57.0	54.1	61.4	60.8
Selling, general and administrative expenses[2]	41.4	48.9	47.8	60.3	48.7	51.3	55.0	82.7	34.5	29.1
Research and development expenses	31.4	42.2	41.9	37.4	39.1	38.7	32.7	55.6	21.4	19.8
Operating income (loss)	(18.5)	(36.1)	(36.1)	(42.6)	(30.3)	(32.9)	(30.7)	(84.2)	5.5	11.9
Interest income (expense), net	1.0	1.5	1.9	2.0	2.5	3.8	4.6	10.1	3.4	4.3
	(17.5)	(34.6)	(34.2)	(40.6)	(27.8)	(29.1)	(26.1)	(74.1)	8.9	16.2

	Percentage of Net Revenues Three Months Ended									
Income (loss) before provision for (benefit from) income taxes										
Provision for (benefit from) income taxes[3]					21.4	(14.6)	(12.6)	(31.8)	2.8	5.7
Net income (loss)	(17.5)%	(34.6)%	(34.2)%	(40.6)%	(49.2)%	(14.5)%	(13.5)%	(42.3)%	6.1%	10.5%

(1) On April 15, 2003 we acquired all of the outstanding capital stock of STI. STI's results of operations have been included with our results of operations since the date of acquisition.

(2) Selling, general and administrative expenses for the three months ended March 31, 2003, September 30, 2002, June 30, 2002, December 31, 2001 and June 30, 2001 include restructuring related expenses of $254, $676, $568, $147 and $432, respectively.

(3) We recorded a full valuation allowance against our deferred tax assets in the second quarter of 2002. The recording of the valuation allowance resulted in a provision for income taxes, rather than the recording of a tax benefit on the pre-tax loss. We have subsequently continued to record a full valuation allowance against our deferred tax assets.

Liquidity and Capital Resources

During the six months ended June 30, 2003, working capital decreased to $27.6 million as compared to $29.4 million at December 31, 2002. The decrease was primarily due to an increase in accounts payable and customer deposits and the use of cash to acquire STI and property and equipment, partially offset by the reinvestment of maturities of long-term marketable securities into short-term marketable securities.

At June 30, 2003 our principal sources of liquidity consisted of $20.2 million of cash, cash equivalents and marketable securities and our revolving credit line agreement, which expires in April 2004. The credit line agreement allows for borrowings of up to $5.0 million, subject to availability based on accounts receivable and inventory balances. We have no outstanding debt at June 30, 2003. Our liquidity is affected by many factors, some of which are based on the normal ongoing operations of our business, the most significant of which include the timing of the collection of receivables, the level of inventories and capital expenditures and acquisitions.

Accounts Receivable. Our accounts receivable decreased $1.9 million from December 31, 2002 to June 30, 2003, representing 59 days' sales outstanding ("DSO") during the three months ended June 30, 2003. This compares to a DSO of 99 days in the fourth quarter of 2002. Due to the high mix of international revenues during a given quarter, which generally require a longer time for collection, we believe our DSO will be between 70 and 80 days in the third and fourth quarters of 2003.

Inventories. Our inventories increased $2.8 million from December 31, 2002 to June 30, 2003, primarily due to inventory acquired with STI and an increase in inventory at customer sites under purchase orders. The increase in inventory at customer sites under purchase orders is primarily related to shipments of our AXi Series. We anticipate that a portion of the inventory at customer sites will be recognized as revenue during the third quarter of 2003. We expect inventory at customer sites under purchase orders will increase as shipments of newly introduced products increase.

Capital Expenditures. Our capital expenditures during the quarter were $360,000, and we expect our total capital expenditures to be between $1.0 and $1.5 million in 2003. Capital expenditures consist primarily of the capitalization of finished goods used to support our engineering, sales and service efforts.

Acquisitions. In addition to the cash paid for the acquisitions of STI and CSI, we anticipate using additional cash to integrate these operations. The amount of additional cash is dependent upon how quickly and effectively we complete the integrations. Unanticipated integration problems or costs may adversely affect our overall level of liquidity. As a result of the acquisition of STI, we entered into a two year lease for 10,600 square feet of space in Plano, Texas at an annual rental cost of approximately $106,000. As a result of the acquisition of CSI,

we will lease 1,200 square feet in Thornwood, New York at a monthly rental cost of approximately $2,200. The lease may be terminated at any time with a six month notice.

Our liquidity is also affected by factors beyond our control related to the uncertainties of global economies and the cyclical nature of the microelectronic industries we serve.

Although liquidity requirements will fluctuate based on the timing and extent of all of these factors and others, we believe that existing cash and investment balances, along with the net proceeds of the common stock we are offering and our line of credit, will be adequate to satisfy our existing liquidity requirements for at least the next twelve months.

Cash Flows

Net cash provided by operating activities for the six months ended June 30, 2003 was $3.3 million, which resulted primarily from decreased accounts receivable and increased customer deposits and

accounts payable partially offset by our net loss and increased inventory during the period. Net cash used in investing activities was $3.8 million, primarily due to $1.8 million of net purchases of marketable securities, $1.4 million of cash paid to acquire STI and $588,000 of purchases of property and equipment. Net cash provided by financing activities was $176,000, primarily from the proceeds received from issuances of common stock.

Net cash used in operating activities for the six months ended June 30, 2002 was $1.2 million, resulting primarily from our net loss, which was partially offset by non-cash charges and decreased prepaid expenses and other current assets. Net cash provided by investing activities was $2.0 million, primarily due to $3.3 million of net proceeds from maturities of marketable debt securities offset by the purchases of $1.3 million of property and equipment and other assets. Net cash provided by financing activities was $1.0 million from the proceeds received from issuances of common stock.

The following table summarizes our future cash payments due under contractual obligations as of December 31, 2002:

	Noncancelable Operating Lease Obligations
	(in thousands)
2003	$ 711
2004	685
2005	674
2006	226
Total	$ 2,296

Critical Accounting Policies, Significant Judgments and Estimates

Revenue Recognition. We derive revenues from the sale of systems, spare parts and services.

System sales. We require customers, excluding our distributors, that have new inspection applications to complete pre-shipment authorization testing of purchased systems at our facility, prior to shipment. During this testing, the customer verifies that the system meets their specifications and authorizes shipment. For systems that require such testing we recognize revenue as follows:

Revenue, for systems meeting pre-shipment authorization testing, is recognized when the product has shipped, title and risk of loss have transferred to the customer and collection of the resulting receivable is probable. We do not deem installation to be essential to the functionality of our systems as it does not involve altering the system's features or capabilities or the building of complex interfaces.

Revenue, related to sales of systems that have not been demonstrated to meet customer specifications prior to shipment, is recognized when title and risk of loss have transferred to the customer, installation has occurred and collection of the resulting receivable is probable.

When the customer has already accepted a previous system, with the same specifications, for the same application, we do not require pre-shipment authorization testing. Revenue is recognized when the product has shipped, title and risk of loss have transferred to the customer and collection of the resulting receivable is probable.

System sales are accounted for as multiple-element arrangements. In transactions that include multiple products and/or services, we allocate the revenue to each element based on their relative fair value (or in the absence of fair value, the residual method) and recognize the associated revenue when all revenue recognition criteria have been met for each element.

Spare parts revenue. Spare parts revenue is recognized when the parts have been shipped, title and risk of loss have transferred to the customer and collection of the resulting receivable is probable.

Service revenue. Service revenue is recognized after the services are performed and collection of the resulting receivable is probable. Revenue, from maintenance contracts, is recognized ratably over the period of the contract. Service revenues were insignificant during the six months ended June 30, 2003 and the years ended December 31, 2002, 2001 and 2000.

Valuation of Accounts Receivable. We review accounts receivable to determine which are doubtful of collection. In making the determination of the appropriate allowance for doubtful accounts, we consider our history of write-offs, relationships with our customers and the overall credit worthiness of our customers. For the three years ended December 31, 2002, we have had accounts receivable write-offs totaling $20,000, and had no write-offs during the six months ended June 30, 2003. Changes in the credit worthiness of customers, general economic conditions and other factors may impact the level of future write-offs.

Valuation of Inventory. We review inventory for obsolescence and excess quantities to determine that items deemed obsolete or excess are appropriately reserved. In making the determination, we consider future sales of related products and the quantity of inventory at the balance sheet date assessed against each part's past usage rates and future expected usage rates. For the three years ended December 31, 2002, we have written off inventory totaling $200,000. We had an allowance for obsolete and excess inventory of $320,000 at June 30, 2003, which represents our estimate of obsolete and excess inventory. Changes in factors such as technology, customer demand, competitor product introductions and other matters could affect the level of obsolete and excess inventory in the future.

Accounting for Income Taxes. The preparation of our consolidated financial statements requires us to estimate our actual current tax exposure together with our temporary differences resulting from differing treatment of tax items for tax and accounting. These temporary differences result in the recognition of deferred tax assets and liabilities, which are included within our consolidated balance sheet. Statement of Financial Accounting Standards No. 109 "Accounting for Income Taxes," requires the establishment of a valuation allowance to reflect the likelihood of the realization of deferred tax assets. Significant management judgment is required in determining our provision for income taxes, our deferred tax assets and liabilities and any valuation allowance recorded against our net deferred tax assets. We evaluate the weight of all available evidence to determine whether it is more likely than not that some portion or all of the deferred income tax assets will not be realized. During 2002 and the six months ended June 30, 2003, we recorded a valuation allowance for the full amount of our deferred tax assets due to uncertainties surrounding our ability to utilize some or all of our deferred tax assets, primarily consisting of certain net operating losses, as well as other temporary differences between book and tax accounting. If the realization of deferred tax assets in the future is considered more likely than not, an adjustment to the deferred tax assets would increase net income in the period such determination is made. In the event that actual results differ from these estimates or we adjust these estimates in future periods, we may need to adjust our valuation allowance, which could materially affect our financial position and results of operations.

Off-Balance Sheet Arrangements. We have not created, and are not party to, any special- purpose or off-balance sheet entities for the purpose of raising capital, incurring debt or operating parts of our business that are not consolidated into our financial statements. We do not have any arrangements or relationships with entities that are not consolidated into our financial statements that are reasonably likely to materially affect our liquidity or the availability of our capital resources.

Acquisitions

On April 15, 2003, we completed the purchase of all of the outstanding capital stock of STI, pursuant to a Settlement and Purchase Agreement dated February 26, 2003, as amended, by and between August, STI and STI's sole shareholder, ASTI Holdings, Limited ("ASTI") of Singapore. The Settlement and Purchase Agreement also resolved any remaining disputes between us and STI and ASTI regarding the May 23, 2002 Purchase Agreement with STI and ASTI that we terminated in August 2002. Pursuant to the Settlement and Purchase Agreement, we purchased all of the outstanding stock of STI for a purchase price of $1.25 million in cash and 215,385 shares of our common stock. We used existing cash resources to pay the cash portion of the purchase price. The parties have placed 215,000 shares issued in the transaction in escrow to secure ASTI's performance of certain covenants including ASTI's agreement to indemnify us against damages in connection with STI's dispute with a third party. See "Business Legal Proceedings" for a discussion of the dispute.

On July 3, 2003, we acquired substantially all the assets of CSI, a Thornwood, New York based developer of wafer inspection, review and failure analysis solutions. The transaction was structured as an asset acquisition, with purchase consideration consisting of 200,000 shares of our common stock, $57,000 of cash paid at closing and up to an additional $100,000 of cash to be paid upon the achievement of certain product sales, amounting to approximately $1.55 million.

Impact of Accounting Standards

In December 2002, the Emerging Issues Task Force ("EITF") reached a consensus on EITF 00-21, "Revenue Arrangements with Multiple Deliverables." This issue addresses certain aspects of the accounting by a vendor for arrangements under which it will perform multiple revenue-generating activities. In some arrangements, the different revenue-generating activities (deliverables) are sufficiently separable and there exists sufficient evidence of their fair values to separately account for some or all of the deliverables (that is, there are separate units of accounting). In other arrangements, some or all of the deliverables are not independently functional, or there is not sufficient evidence of their fair values to account for them separately. This issue addresses when and, if so, how an arrangement involving multiple deliverables should be divided into separate units of accounting. This issue does not change otherwise applicable revenue recognition criteria. The guidance in this issue is effective for revenue arrangements entered into in fiscal periods beginning after June 15, 2003. The adoption of EITF 00-21 will not have a material effect on our consolidated financial statements.

In April 2003, the FASB issued SFAS No. 149, "Amendment of Statement 133 on Derivative Instruments and Hedging," which amends and clarifies financial accounting and reporting for derivative instruments. SFAS 149 became effective for us in July 2003. We do not expect that the adoption of SFAS 149 will have an effect on our consolidated financial statements.

On May 15, 2003, the Financial Accounting Standards Board issued SFAS No. 150, "Accounting for Certain Financial Instruments with Characteristics of Both Liabilities and Equity." This Statement requires issuers to classify as liabilities (or assets in some circumstance) three classes of freestanding financial instruments that embody obligations for the issuer. Generally, the statement is effective for financial instruments entered into or modified after May 31, 2003 and is otherwise effective at the beginning of the first interim period beginning after June 15, 2003. We adopted the provisions of the statement on July 1, 2003. We did not enter into any financial instruments within the scope of the statement during June 2003. We do not expect that the adoption of SFAS 150 will have an effect on our consolidated financial statements.

Qualitative and Quantitative Disclosures about Market Risk

Market Risk. We are exposed to market risk primarily from changes in interest rates and credit risk. We do not have material exposure to market risk from fluctuations in foreign currency exchange rates because all sales are made in U.S. dollars.

Interest Rate Risk. We are exposed to interest rate risk primarily from investments in cash equivalents and short-term and long-term marketable debt securities (the "Investment Portfolio"). The entire Investment Portfolio is classified as available-for-sale and, accordingly, is recorded on the consolidated balance sheet at fair value based on quoted market prices, with unrealized gains and losses reported in Shareholders' Equity under the caption "Accumulated other comprehensive income (loss)". The entire Investment Portfolio is denominated in U.S. dollars. We do not use derivative financial instruments in the Investment Portfolio. Due to the short duration of our Investment Portfolio, an immediate 100 percent change in interest rates is not expected to have a material adverse effect on our near-term financial condition or results of operations.

Credit Risk. Financial instruments which potentially subject us to credit risk consist principally of securities in the Investment Portfolio and trade receivables. We limit credit risk related to the Investment Portfolio by placing all investments with high credit quality issuers and limit the amount of investment with any one issuer. As of December 31, 2002, 91% of the Investment Portfolio consisted of government securities and corporate commercial paper and bonds with maturities of one year or less. We limit credit risk associated with trade receivables by performing ongoing credit evaluations and believe that there is no additional risk beyond amounts provided for collection losses to be inherent in trade receivables.

BUSINESS

Since our founding in 1992, we have become recognized as a world-class provider of automated defect detection and product characterization systems for microelectronic device manufacturers. Our systems provide manufacturers with information that enables process-enhancing decisions, ultimately lowering manufacturing costs, improving time-to-market and enhancing the performance of their products. We combine our core competencies in machine vision technology, optics, lighting and precision motion control with our proprietary software and extensive microelectronic-specific applications experience to deliver scalable, modular systems that excel at the automated detection of advanced macro defects, which we define to be defects greater in size than 0.5 microns. We sell our systems to many of the leading microelectronic device manufacturers throughout the world for inspecting semiconductors, advanced packaging applications, optoelectronics, MEMS, data storage and micro displays.

We have traditionally provided systems to address the automated inspection needs of the final manufacturing or back-end of the microelectronic device manufacturing process, including test, assembly and packaging. We recently have introduced two new systems for advanced macro detection earlier in the front-end wafer manufacturing process. In addition to internal development, we look to expand through strategic acquisitions of complementary products and technologies. In April 2003 we completed the acquisition of STI, adding the WAV product line for high speed wafer probe mark inspection and metrology. In July 2003 we acquired the assets of CSI, including the VersaScope, a system in development for advanced microscope-based imaging and analysis, allowing us to serve our customers earlier in their device development process.

Our Market

Rapid advances in semiconductor and other microelectronic device technology, including miniaturization, increasing complexity and advanced packaging and interconnect solutions, allow manufacturers to enhance the quality and capabilities of their devices. These advances often increase both the complexity of the processes required to produce the devices and the associated production costs. Because of these increased costs and the need to ensure that performance and reliability are not sacrificed, the role of inspection and rapid detection of defects during multiple stages of the microelectronic production process is becoming increasingly critical. Defects can occur throughout the manufacturing process as a result of such things as equipment misalignment, contamination, residue, corrosion, or the misapplication of various films. Defects such as scratches, cracks and chip-outs also can be generated by mechanical handling in the manufacturing process.

Historically, manufacturers generally have relied on engineers and technicians using microscopes to manually inspect sample batches of wafers to detect defects during the various stages of the manufacturing process. As a result, it has been impractical and cost-prohibitive for manufacturers to capture critical process data by inspecting every wafer and die after each process step. These manual inspection limitations result in the following:

Yield loss due to a lack of process data. The inability to capture adequate data throughout the manufacturing process prevents microelectronic device manufacturers from locating problems on a timely basis and taking corrective action. Timely corrective action could minimize the scrapping of valuable wafers and improve the process for and yield of future products.

Productivity constraints. As microelectronic devices have become more complex, the need for more extensive inspections and defect data has increased significantly. Given these requirements, manufacturers must either add more technicians, significantly impacting productivity of the microelectronic fabrication facility, or fab, or assume a greater risk of defects remaining undetected until later in the process.

Defective product shipments. By inspecting less than 100% of their products, manual inspection requires manufacturers to assume a greater risk of shipping defective products to their customers.

Slower time-to-market. As microelectronic device and end-product life cycles decrease, the speed at which manufacturers must reach optimal production yields has become increasingly critical. This pressure to minimize time-to-market requires manufacturers to reduce the amount of time spent training technicians, qualifying new production equipment and managing the logistics of a manual inspection process.

Increased labor and facility requirements. The large number of technicians and microscopes needed to manually inspect microelectronic devices requires valuable floor space and significant capital commitments. In addition, attracting and retaining qualified technicians have become increasingly difficult.

Automated inspection systems and data management and analysis software allow manufacturers to overcome these limitations by allowing them to inspect 100% of their products and identify and resolve these defects at various stages of the manufacturing process, helping to drive down production costs, increase throughput and decrease time-to-market. Gartner Dataquest estimates the combined markets for inspection and metrology equipment and process control software for wafer fabrication and packaging to be approximately $2.6 billion in 2003, $3.5 billion in 2004, $5.1 billion in 2005, $4.5 billion in 2006 and $3.6 billion in 2007. Within this market, we estimate that our current suite of products, focused on the detection of defects of 0.5 microns or greater, addresses a market opportunity of approximately $143 million in 2003, $225 million in 2004, $373 million in 2005, $330 million in 2006 and $266 million in 2007. The projected increase in market size through 2005 and subsequent decrease reflect the cyclical nature of the microelectronic industries.

Our Solution

We deliver automated advanced macro defect inspection systems for microelectronic industries. Our systems provide device manufacturers with valuable information about their products and processes, at a speed that makes it practical to inspect each device rather than a small sample lot. We accomplish this by combining our core competencies in machine vision technology, optics, lighting, and precision motion control with our proprietary software and extensive microelectronic-specific applications experience to provide cost-effective solutions. We offer our systems at several price performance levels to satisfy our customers' diverse requirements. Specifically, we provide:

Fast, automated, 100% wafer inspection. Our systems are specifically designed to address our customers' need for fast, automated inspection tools. Our systems are able to inspect up to 120 wafers per hour depending upon the application and wafer size. Depending on the application, our systems can inspect a complex die approximately 100 times faster than a human operator. This speed allows our customers to inspect 100% of their production without decreasing throughput.

Data collection to enable higher productivity and yields. Our systems enable microelectronic device manufacturers to cost-effectively collect and process defect data at multiple key points in the production process and provide manufacturers with the information required to improve their production processes and yields. Integrated reporting and analysis tools allow manufacturers to extract critical information about product defects, including location, size and other important defect characteristics.

Scalable, modular inspection platforms. Our systems are designed on common platforms that allow us to configure flexible systems to meet our customers' application and throughput requirements. This flexibility provides an easy upgrade path for customers to respond to changes in process technologies, substrate sizes or materials.

Access to expert application development resources. Our advanced application engineers and design experts work collaboratively with our customers to optimize the use of inspection in their manufacturing process. This reduces their process development time and costs. We have field

application engineers in strategic locations throughout the world to work with our customers on-site and provide the knowledge and expertise to deliver a total inspection solution.

Focus on advanced macro inspection. We focus on serving various advanced macro inspection applications rather than attempting to pursue the entire range of possible inspection and metrology applications. This allows us to most effectively concentrate our resources on delivering leading solutions to these 0.5 micron and larger applications.

Our Strategy

Our strategy is built around achieving our vision to dominate the automated inspection market and generate complete product characterization solutions for evolving microelectronic markets in order to drive down costs and time-to-market. We have identified five strategic initiatives that are critical to successfully implementing our vision:

Market diversification. We leverage our core competencies across a variety of microelectronic industries using similar manufacturing processes and within multiple applications. While our customers include the suppliers of semiconductor devices used in a wide range of high-growth electronic products such as cellular phones, fiber-optic switches, personal digital assistants, cable modems, network switches and personal computers, they also include suppliers of microelectronic devices in markets and applications such as advanced packaging, optoelectronics, MEMS, data storage and micro displays. In 2002, 76% of our net revenues were associated with customer applications outside of traditional semiconductor manufacturing, primarily in advanced packaging and optoelectronics applications. By maintaining our diversification initiatives, we strive to maximize our market opportunity while lessening the impact from the economic cycles of any one industry.

Technology leadership. Through our technology leadership we deliver customer-driven product innovations focused on price, performance and flexibility. Technology leadership is critical to increasing our competitive win rate, maintaining strong gross margins and building market dominance. Our recent product development efforts resulted in several new product and feature introductions within our existing NSX Series, 3Di Series and Yield*Pilot* product lines. New introductions in 2003 include the AXi advanced macro inspection series and EXi edge inspection and metrology series. These products allow us to enter the front-end of the microelectronic device manufacturing process more aggressively by addressing advanced macro inspection needs. We plan to continue to make significant investments in research and development to maintain and extend our technology leadership.

Customer application partnerships. Our customer application partnership program is designed to meet specific customer requirements with solutions that are engineered to their unique specifications. Through this process, we are able to forge stronger and more strategic relationships with existing and new customers.

Global presence. We continually maintain and enhance our global presence in order to provide the infrastructure necessary to support our global customer base. In 2002, we enhanced our presence in Asia with added staff in our Taiwan office and direct sales and service in Singapore to better support our customers in Southeast Asia. We believe our direct presence in Southeast Asia and our relationships with large Taiwanese foundries will be a catalyst for expansion in mainland China. We also have direct sales and service personnel and independent distributors located strategically in Europe and Japan. Our support services include web-based service capability and 24-hour global support.

External growth. We increase and enhance our growth opportunities through external sources, including acquisitions, collaborations, licensing and joint ventures. We have completed the acquisitions of STI and CSI in 2003 and will continue to examine potential acquisitions that will provide us with additional products, technological expertise, or sales and service capabilities. The acquisition of STI expands our presence within final manufacturing and brings access to key customers and technology. We acquired CSI to improve our data analysis and defect classification capabilities. We are also active

in industry collaborations, such as the Advanced Packaging and Interconnect Alliance ("ApiA") and the Die Products Consortium ("DPC"). The ApiA is focused on enhancing productivity and process solutions for advanced packaging. The DPC is a collaboration of leading chip manufacturers and equipment suppliers promoting improved die product quality and manufacturing processes. We believe that organizations such as these will enable us to build stronger relationships with industry leaders and increase our market opportunity by driving the need for advanced automated inspection products.

Our Products

We strive to be early to market with innovative solutions to emerging microelectronic device manufacturing needs. In 1997, we introduced the NSX Series, our first automated defect inspection system for final manufacturing, and since then have maintained leadership of that market segment. In 2003, we introduced inspection technology to address the front-end of the microelectronic device manufacturing process with the introduction of the AXi Series and EXi Series of products. The following table summarizes the primary attributes of our products:

Applications

			Front-End			
Product	**Introduced**	**Functionality**	**Fab**	**Outgoing Quality Control**	**Final Manufacturing**	**Price Range**
EXi Series	2003	2D defect detection on the wafer's edge Metrology of edge features		X	X	Not yet announced
AXi Series	2003	Advanced detection of defects >0.5 micron Inspection of patterned and unpatterned wafers In line, high-speed, 100% inspection Full color review	X	X		$600,000 $1,000,000
3Di Series	2001	2D and 3D wafer bump inspection and metrology system In line, high-speed, 100% inspection		X	X	$475,000 $1,200,000
Yield*Pilot*	2000	Tool-centric defect and metrology review and analysis software used with the NSX, 3Di, AXi and EXi Series Reduces defect review time Allows offline defect review	X	X	X	$85,000 $250,000
NSX Series	1997	Fully automated defect detection >0.5 micron 2D wafer, die and bump inspection In line, high-speed, 100% inspection		X	X	$275,000 $1,100,000
WAV Series[(1)]	1997	Probe mark wafer and die defect inspection and metrology Defect detection >1.0 micron In line, high-speed, 100% inspection Fully integrated on prober		X	X	$150,000 $400,000
CV Series	1993	Verification of critical wafer carrier dimensions	X			$115,000 $250,000
VersaScope[(2)]	To be introduced	Advanced imaging microscope-based system Harmony review and classification system	X			Not yet announced

(1) Acquired with the acquisition of STI in April 2003.

(2) Acquired with the acquisition of CSI in July 2003.

EXi Series Automated wafer edge inspection and metrology systems. In July 2003, we introduced the EXi Series for wafer edge inspection and metrology, which inspects for chip-outs, cracks, delamination, residual resist, particles and other defects that occur along the edge of the wafer. The EXi Series also automatically performs metrology of key edge features and is designed for deployment at several locations throughout the fab. For example, automated edge inspection, implemented during the lithography process, will identify wafer edge variations and particles early and allow for possible wafer rework that can increase yields and reduce manufacturing costs.

Due to the increase in edge area and wafer stress levels in 300mm wafer processing, the value of wafer edge inspection is magnified. The EXi Series, built on our established defect detection technology, provides fully automated inspection and handling at throughputs of up to 120 wafers per hour. The EXi Series also incorporates our latest user-interface platform, making the system easy to set up and run in production.

We expect systems to be available for customer evaluation and testing in the fourth quarter of 2003 and sales to begin in 2004.

AXi Series Automated defect inspection systems. In January 2003, we introduced our AXi Series, designed specifically as an advanced macro defect inspection tool to be used throughout the fab process. The ability to inspect 100% of wafers for defects between 5 and 10 microns at throughputs greater than one hundred 300mm wafers per hour, offers device manufacturers new insight into their complex manufacturing process. We believe other macro defect solutions currently are unable to achieve this combination of resolution and throughput. The AXi Series has been deployed in several lines at one of the world's leading device manufacturers, where we are working with the customer to bring the systems into full production. We expect additional customer selections for the AXi Series during the second half of 2003.

We expect to begin to recognize revenue in the second half of 2003.

3Di Series Automated wafer bump inspection systems. Our 3Di automated inspection and metrology system is a high throughput, two-dimensional ("2D") and three-dimensional ("3D") tool specifically designed for the latest and most advanced microelectronic device packaging processes, including flip-chip wafer bumping. In 2002, we enhanced this product family with the introduction of entry level and high performance models of the 3Di system. With three model options, the 3Di Series is well suited to serve the needs of our customers.

The 3Di Series incorporates the 2D defect inspection capabilities of the NSX Series and features our proprietary Rapid Confocal Sensor ("RCS") 3D inspection technology. This patent-pending technology, conceived by merging the proven concepts of confocal microscopy with innovative optical design and proprietary software, has established its high speed, high accuracy 3D inspection capabilities in the production lines of leading microelectronic device manufacturers. Our RCS is particularly well suited for the future of 3D bump and other advanced packaging inspection applications because of its ability to scale to meet the future requirements of our customers.

Revenues from the 3Di Series represented 10% and 37% of our net revenues during the first half of 2003 and all of 2002, respectively. The 3Di Series is available with up to 300mm wafer handling in addition to film frame handling and may be tailored toward specific customer applications with various options and features.

YieldPilot Defect review and process analysis software. Yield*Pilot*, which provides a means for efficient defect review and classification, continues to play a pivotal role in enabling our customers to make process-enhancing decisions. By filtering, classifying and then presenting only the relevant data, Yield*Pilot* assists process engineers in quickly and effectively making the decisions that lead to yield enhancements. Currently, nearly 50% of our systems are delivered with the optional Yield*Pilot* package either for evaluation or direct implementation in the customer's yield enhancement strategy.

NSX Series Automated defect inspection systems. We became pioneers of automated macro defect inspection in 1997 with the introduction of our NSX Series. These flexible automated wafer and die defect inspection systems deliver high-speed, consistent, reliable defect detection to microelectronic device manufacturers. As a replacement for technicians in the inspection process, the NSX Series significantly improves the quality and throughput of the inspection process, leading to lower overall manufacturing costs.

The NSX Series is driven by proprietary software and includes integrated yield enhancement tools such as automated data collection and reporting, extensive communication options and fast, easy setup using Windows®-based menus. The NSX Series handles all wafer sizes, 50mm up to 300mm, with both whole wafer and film frame capabilities. The new NSX-105 is the highest performance model in the series, demonstrating industry-leading inspection throughput and capabilities, and delivering the best price/performance ratio of all NSX models. With four models available in the NSX Series, customers may tailor systems toward their specific application, process, or budget by choosing from a range of system capabilities.

Revenues from the NSX Series represented 67% and 45% of our net revenues in the first half of 2003 and in all of 2002, respectively.

WAV Series Probe mark inspection systems. The WAV Series, which was added to our product line with our April 2003 acquisition of STI, is a leading solution for high-speed inspection and metrology of defects caused by the electrical probing process. As devices continue to get smaller the electrical probing process is more likely to create damage. The WAV Series systems check for this potential damage immediately following the electrical probing process and warn process engineers of potential yield problems.

In 2002, the WAV Series generated revenues of $3.1 million for STI.

CV Series Cassette verification and metrology. The CV Series is designed to automatically verify critical wafer carrier dimensions. Using advanced machine vision technology and proprietary software, our CV Series systems identify out-of-tolerance cassettes and up to 300mm Front Opening Unified Pods, allowing microelectronic device manufacturers to remove dimensionally defective carriers and thereby decrease wafer damage and improve yield.

Revenues from the CV Series represented 8% and 4% of our net revenues in the first half of 2003 and in all of 2002, respectively.

VersaScope Advanced imaging microscope-based system. As part of our acquisition of CSI in July 2003, we acquired VersaScope, a product that was in development at CSI. We are continuing this development and expect to have units available for evaluation and testing at customer facilities in the fourth quarter of 2003, with sales beginning in 2004. VersaScope operates with the Harmony software system developed by CSI to automate the control of advanced microscope-based inspection equipment and facilitate the processing of defect images. VersaScope is designed to offer a unique combination of ease of use, flexibility and advanced microscope imaging, enabling technicians to more quickly review, classify and annotate defects. When the VersaScope is coupled with our broad array of high performance defect detection systems, the combination is expected to provide customers with an efficient and complete inspection and review solution.

Research and Development

Our success depends on our ability to effectively develop and commercialize new technologies and products. Our research and development activities emphasize application development and new product introductions in collaboration with our customers. Our engineering teams support these efforts with software development, machine vision technology, optics, lighting and precision motion control expertise. Our recent product development efforts resulted in several new product and feature introductions within our NSX Series, 3Di Series and Yield*Pilot* product lines. New product introductions include the AXi advanced macro inspection series and EXi edge inspection and metrology series. We also placed significant effort into leveraging our core automated inspection technologies into other applications within the microelectronic device manufacturing process and anticipate announcing new products related to this effort in 2003. We spent 36.3% of our net revenue on research and development during the first six months of 2003, 39.3% during all of 2002, 26.7% during 2001 and 21.9% during 2000.

To maintain technology leadership and pursue customer driven opportunities for the application of our core technologies, we plan to continue to invest in research and development to bring new products to market and add additional capabilities to extend our market leadership and meet our customers' product characterization needs.

Customers

We have sold our systems to many of the leading microelectronic device manufacturers throughout the world, in markets and applications such as semiconductors, advanced packaging, optoelectronics, MEMS, data storage and micro displays. In 2002, 52% of our net revenues were derived from sales outside of the U.S., consisting of 37% to customers in Taiwan and 15% to customers in other countries, including South Korea, Singapore, Northern Ireland, Japan, Switzerland and the United Kingdom. Customers accounting for greater than 10% of net revenues during 2002 included Intel Corporation and Silicon Precision Industries Co., Ltd. Customers accounting for greater than 10% of net revenues during 2001 included Intel Corporation and Seagate Technology LLC. There were no other customers, excluding our distributors, which accounted for greater than 10% of net revenues during 2002 or 2001.

Sales, Service and Marketing

We provide direct sales, service and field application support through strategically placed offices in key regions throughout the world. In the United States, we currently have sales and service personnel in California, Arizona, Florida, New Mexico, North Carolina, Oregon, Texas and at our corporate headquarters in Minnesota. Internationally, we service customers directly in Taiwan, China, Southeast Asia, the United Kingdom, Ireland, Benelux, Scandinavia and France. In addition, we have sales and service personnel in Europe, Japan and South Korea to support our distributors in these areas.

In 2001, we modified our ongoing relationship with our distributor, Metron Technology B.V., to exclude Taiwan from its territory and made further modifications in 2002 to focus Metron's activities entirely on South Korea. With respect to our European distributors, we terminated our distributor agreement with Firfax Systems effective January 2003 and notified Quasys AG of our intent to terminate our distributor agreement effective April 2004 in order to provide direct sales, customer service and support to customers in Europe. We market all of our products in Japan through Marubeni Solutions Corporation and the WAV Series in Europe through High Tech Trade, GmbH. Each of our distributors has entered into an international distributor agreement with us. All of our distributor agreements grant our distributors an exclusive territory, provide for price and payment procedures, specify the applicable warranty procedures and contain a confidentiality provision.

Backlog

Our backlog was $14.8 million as of June 30, 2003, as compared to $9.1 million as of December 31, 2002. Our backlog consists of orders for which we have accepted purchase orders and have either assigned shipment dates within the next twelve months or under which systems have shipped but have not yet met customer specifications. These orders are subject to cancellation or delay by the customer without penalty. In addition, since only a portion of our revenues for any quarter represents systems in backlog, we do not believe that backlog is a meaningful or accurate indication of our future revenues and performance.

Competition

While we believe that we are currently the leader in the commercialization of solutions for the inspection of advanced macro defects of 0.5 micron and larger, several other firms also manufacture similar products. Our primary competitors in final manufacturing are Camtek Ltd., Hitachi, Ltd., Robotic Vision Systems, Inc., and Toray Industries, Inc. As we enter the front-end market, we expect to

compete with larger competitors, such as KLA-Tencor Corporation and Rudolph Technologies, Inc., for certain macro applications.

Significant competitive factors in our market include performance, ease of use, development of new technologies, established customer base, application support, customer service, product flexibility, price and ability to deliver products on a timely basis. We believe we compete favorably with respect to these factors, but must continue to develop and design new and improved products in order to maintain our competitive position.

Manufacturing

We perform system design, assembly and testing at our headquarters in Bloomington, Minnesota. We utilize an outsourcing strategy for the manufacture of many of our components and major subassemblies. Our manufacturing activities are considered horizontal in nature and consist primarily of testing and assembling parts, components and subassemblies acquired from our vendors, and integrating these parts into our products. Our engineering and manufacturing teams work together to continually improve the modularity of our systems and reduce the number of discrete components and subassemblies required to serve our various product families. To meet specific customer requirements, we often manufacture products that include custom system engineering and software development. Our manufacturing operations do not require a major investment in capital equipment.

We use numerous domestic and international vendors to supply parts for the manufacture and support of our products. Although we make reasonable efforts to ensure that parts are available from multiple qualified suppliers, this is not always possible. Accordingly, some key parts are obtained only from a single supplier or a limited group of suppliers. We endeavor to minimize the risk of product interruption by selecting and qualifying alternative suppliers for key parts, monitoring the financial condition of key suppliers and maintaining appropriate inventories of key parts. We continually strive to reduce our component lead time and build cycles to maximize the efficiency of our manufacturing operations. During the first half of 2003, we worked with our suppliers to reduce significantly the lead times of our key components. If we do not receive a sufficient quantity of parts in a timely and cost-effective manner to meet production requirements, our results of operations may be materially and adversely affected. We do not maintain long-term supply contracts with any of our suppliers. We do enter into blanket purchase orders with

key suppliers for parts with long lead times. These purchase orders are generally to lock-in prices and provide the supplier with visibility of future requirements.

Intellectual Property

Proprietary information plays a significant role in the development of our products. We rely upon a combination of contract provisions and copyright, trademark, patent and trade secret laws to protect our proprietary know-how, ideas, inventions, goodwill and rights in our solutions and products. We also have a policy of seeking U.S. and foreign patents on technology considered of particular strategic or competitive importance. As of August 15, 2003, we had four issued U.S. patents and 49 pending U.S. patent applications on our key inventions including those associated with our key product lines. We have also applied for foreign patent rights covering our solutions and products in strategic markets. The technological focus of the issued patents and pending applications includes general microelectronic 2D and 3D inspection techniques as well as devices, systems and processes in the following areas: lighting, focusing, sensing, viewing, material handling, imaging, inspecting and data manipulating. We also license some of our exclusive and non-exclusive software programs from third party developers and incorporate them into our products.

Although we believe that the copyrights, trademarks and patents we own are of value, we do not believe that they will determine our success, which depends principally upon our engineering, manufacturing, marketing and service skills.

Employees

As of August 15, 2003, we employed 164 people, including 65 in research and development, 34 in service, technical support and training, 28 in sales and marketing, 17 in administration and 20 in manufacturing. We also utilize independent contractors and temporary employees. None of our employees is represented by a labor union and we consider our employee relations to be good.

Facilities

We currently have the facilities described below.

Location	Type	Principal Use	Square Footage	Ownership
Bloomington, Minnesota	Office, plant, warehouse	Headquarters, Research and Development, Sales and Service, Manufacturing, Marketing and Administration	78,437	Leased
Plano, Texas	Office, warehouse	Research and Development, Sales and Service	10,600	Leased
Hsinchu, Taiwan	Office, warehouse	Sales and Service	4,607	Leased
Thornwood, New York	Office	Research and Development, Sales and Service	1,208	Leased

The lease with respect to our Bloomington facility expires on April 30, 2006, but may be renewed by us for an additional three year term.

Legal Proceedings

From time to time in the ordinary course of business, we are subject to claims, asserted or unasserted, or named as a party to lawsuits or investigations. Litigation, in general, and intellectual property and securities litigation in particular, can be expensive and disruptive to normal business operations. Moreover, the results of legal proceedings cannot be predicted with any certainty and in the case of more complex legal proceedings such as intellectual property and securities litigation, the results are difficult to predict at all.

In connection with the acquisition of STI, we placed 180,000 of the shares issued in the transaction in escrow to secure ASTI's performance of its agreement to indemnify us against damages up to a maximum amount of $670,000 in connection with STI's dispute with Rudolph. Shares distributed from the escrow in payment of any indemnification claim will be valued at the market price of our common stock on the date of resolution of the claim. In various letters and conversations with STI and us, Rudolph has asserted that STI owes Rudolph development fees and

royalty payments pursuant to a December 24, 1997 Development Agreement between STI and ISOA, Inc., a company later acquired by Rudolph. Rudolph has also asserted that we may have used ISOA technology in the development of one of our products and owe additional royalties to Rudolph as a result. We believe STI has no obligations to Rudolph under the December 24, 1997 Development Agreement and that we have used no ISOA technology in any of our products. If Rudolph initiates legal proceedings against STI or us, or if we initiate legal proceedings against Rudolph to resolve this dispute, the legal fees and expenses we incur could be significant. In addition, if litigation ensues, there can be no assurance that we will prevail in such litigation and we may suffer an adverse result requiring us to pay damages or royalties adversely affecting our business. Notwithstanding the foregoing, we believe the indemnification escrow established in connection with the acquisition of STI is reasonably likely to protect us against losses in connection with Rudolph's claims.

MANAGEMENT

Executive Officers and Directors

Our executive officers and directors and their ages as of August 28, 2003, are as follows:

Name	Age	Position
Jeff L. O'Dell	42	Chief Executive Officer and Chairman of the Board of Directors
David L. Klenk	39	President, Chief Operating Officer and Assistant Secretary
Stanley D. Piekos	55	Chief Financial Officer, Treasurer and Assistant Secretary
Scott A. Gabbard	36	Chief Accounting Officer and Vice President, Finance
John M. Vasuta	35	Vice President, Intellectual Property; Chief Legal and Compliance Officer; General Counsel and Secretary
D. Mayson Brooks	44	Vice President, Global Sales and Field Operations
Wayne J. Hubin	60	Vice President, Manufacturing
Albert A. Eliasen	37	Vice President, Engineering
Ardelle R. Johnson	48	Vice President, Strategic Marketing
Michael W. Wright	56	Director
Linda Hall Whitman	55	Director
James A. Bernards	56	Director
Roger E. Gower	63	Director

Jeff L. O'Dell was one of our co-founders and has served as our Chief Executive Officer since 1992 and Chairman of the Board since 1994. From 1992 to July 2001, Mr. O'Dell also served as President. From August 1987 to August 1992, Mr. O'Dell was Director of Sales and Marketing for MicroVision Corporation, which develops and manufactures robotic and inspection systems. From February 1985 to August 1987, Mr. O'Dell was a Field Applications Engineer for Cognex Corporation, which designs, develops and markets machine vision systems that are used to automate a wide range of manufacturing processes. From March 1984 to February 1985, Mr. O'Dell served as a Systems Analyst for Control Data Corporation.

David L. Klenk joined us in April 1993 and has served as our President since July 2001 and Chief Operating Officer since April 1999. Mr. Klenk served on our Board of Directors from 1994 to March 2000. Mr. Klenk oversees the engineering, manufacturing, customer service and employee services groups. Prior to becoming our Chief Operating Officer, Mr. Klenk served as our Director of Operations.

Stanley D. Piekos joined us in April 2003 as Chief Financial Officer. From February 1998 until March 2003, Mr. Piekos served as Senior Vice President, Finance and Corporate Development and Chief Financial Officer at American Superconductor, a developer and manufacturer of products using superconductor technology for the electric power industry. From May 1994 to February 1998, Mr. Piekos was the Chief Financial Officer for Brooks Automation, a supplier of automation solutions for the semiconductor industry. From June 1985 to May 1994, Mr. Piekos worked for Helix Technology Corporation, a manufacturer of products based on cryogenic and vacuum technology, serving as Vice President and Chief Financial Officer since 1991. He also held financial and general management positions with W.R. Grace & Co.

Scott A. Gabbard became our Vice President of Finance in July 2002. Mr. Gabbard also currently serves as our Chief Accounting Officer. Prior to becoming Chief Accounting Officer and Vice President

of Finance, Mr. Gabbard served as our Corporate Controller since joining us in February 2000 and as Acting Chief Financial Officer from May 2002 to April 2003. From September 1995 through January 2000, Mr. Gabbard was Assistant Controller with U.S. Office Products, an international supplier of office products and business services. From August 1993 to September 1995, Mr. Gabbard was an auditor with Price Waterhouse, LLP. Mr. Gabbard is a Certified Public Accountant.

John M. Vasuta has been our Vice President of Intellectual Property, Chief Legal and Compliance Officer and General Counsel since May 2000. Mr. Vasuta has also been our Secretary or Assistant Secretary since October 2000. From February 1999 to May 2000, Mr. Vasuta was Senior Intellectual Property Counsel with Bridgestone-Firestone, a manufacturer of tires, fiber optics and automotive parts. From July 1997 to February 1999, Mr. Vasuta was Senior Patent Counsel and Research and Development Business Manager for Kennametal Inc., a tooling manufacturer. Mr. Vasuta was an attorney in various law firms from 1991 to 1997, most recently at Sand & Sebolt, where he was a partner.

D. Mayson Brooks became our Vice President of Global Sales and Field Operations in February 2002. Prior to becoming Vice President of Global Sales and Field Operations, Mr. Brooks served as our Vice President of Sales and Marketing since July 1999. Prior to joining us, from June 1987 through June 1999, Mr. Brooks worked in various managerial capacities for Air Products and Chemicals, Inc., most recently as Commercial Manager, European electronics division. Mr. Brooks served from June 1981 to May 1987 in the United States Navy and was awarded two achievement medals.

Wayne J. Hubin has been our Vice President of Manufacturing since November 1999. Before joining us, Mr. Hubin was Manufacturing Operations Manager for BOC Edwards, Inc. from August 1999 to November 1999. From 1984 to August 1999, Mr. Hubin worked in various managerial capacities for FSI International, Inc., a supplier of micro-lithography, surface conditioning and chemical dispense equipment used in the fabrication of microelectronics, most recently as Manufacturing Operations Manager.

Albert A. Eliasen joined us as Vice President of Engineering in November 2000. From May 1995 to November 2000, Mr. Eliasen was employed by Axcelis Technologies, Inc., a semiconductor equipment supplier. He served in various capacities with Axcelis Technologies, most recently as TPS Platform Manager, managing engineers for the thermal products platform including new product development and sustaining engineering.

Ardelle R. Johnson recently joined us in August 2003 as Vice President of Strategic Marketing after having served as a consultant to the company in front-end wafer fab processes. From 1980 to April 2003, Mr. Johnson worked in various capacities for FSI International, Inc. first as an applications engineer, then as a Product Manager introducing FSI into the lithography market sector, and later as Vice President of Sales and Marketing for FSI's lithography division.

Michael W. Wright has served as one of our directors since 2000. Mr. Wright has been Chief Operating Officer of Entegris, Inc., a supplier to semiconductor manufacturers, since May of 2002. From January 2001 to May 2002, Mr. Wright was President of the microelectronics group of Entegris, Inc. From 1998 to 2001, he was Senior Vice President of Corporate Marketing of Entegris, Inc. From 1996 to 1998, Mr. Wright was Vice President and General Manager of Integrated Solutions, Inc., a lithography supplier. From 1995 to 1996, he was Director of International Design Corporation. Mr. Wright is also the founder of Wright Williams and Kelly, a provider of management consulting services.

Linda Hall Whitman has served as one of our directors since 2002. Ms. Whitman has been Chief Executive Officer of QuickMedX, a medical services company, since May of 2002. Prior to that,

Ms. Whitman was President of Ceridian Performance Partners from 1996 to 2000, and Vice President of Ceridian's Business Integration from 1995 to 1996. From 1980 to 1995, Ms. Whitman held various positions at Honeywell including Vice President of Consumer Business Group; Director of Home Systems; Director of Marketing for HVAC Commercial Controls; Director of Customer Service, Traffic and Distribution; Director of Information Technology; International Market Manager; and Strategic Marketing Manager. Since 1999, Ms. Whitman has served on the Ninth District Federal Reserve Bank Board. She currently also serves as a director of two other public companies, Health Fitness Corporation, and MTS Systems Corporation.

James A. Bernards has served as one of our directors since 1998. Mr. Bernards is currently President of Facilitation, Inc., a business consulting services company, and President of Brightstone Capital, Ltd., a venture capital fund manager. Mr. Bernards was co-founder and President of the accounting firm of Stirtz, Bernards & Co. from May 1981 to June 1993. He currently serves as a Director of three other public companies, Health Fitness Corporation, Entegris, Inc., and FSI International, Inc., and several private companies.

Roger E. Gower has served as one of our directors since 1998. Mr. Gower has been Chairman of the Board, President, Chief Executive Officer and Director of Micro Component Technology, Inc. since April 1995. Prior to that time, Mr. Gower was employed by Datamedia

Corporation of Nashua, New Hampshire, a network and PC security software development company, where he served as President and Chief Executive Officer since 1991. Prior to 1991, he was President and Chief Executive Officer of Intelledix, Inc., a Corvallis, Oregon-based manufacturer of robotic and automation systems for the semiconductor and disk drive manufacturing industries.

PRINCIPAL AND SELLING SHAREHOLDERS

The following table sets forth certain information with respect to the beneficial ownership of our outstanding common stock by (i) each director; (ii) each of our executive officers; (iii) all of our directors and executive officers as a group; (iv) each of those known by us to be beneficial owners of more than 5% of our common stock; and (v) each of our current shareholders who is expected to sell shares in the offering.

Unless otherwise specified, the business address of the shareholder is our address as set forth in this prospectus.

Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission and generally means sole or shared power to vote or direct the voting or to dispose or direct the disposition of any common stock. Except as indicated by footnote, and subject to community property laws where applicable, the persons named in the table below have sole voting and investment power with respect to all shares of common stock shown as beneficially owned by them. The percentage of beneficial ownership is based upon 13,625,966 shares of common stock outstanding as of July 31, 2003, and 16,655,966 shares of common stock outstanding after completion of this offering assuming no exercise of the underwriter's over-allotment option and after giving effect to the exercise of options to acquire 30,000 shares by selling shareholders.

			Beneficial Ownership Prior to Offering[1][2]			Beneficial Ownership After Offering[1][2]	
Name and Address	Common Shares Owned	Options Exercisable Within 60 Days	Number	Percent	Number of Shares Offered	Number	Percent
Jeff L. O'Dell[3]	1,328,641	10,500	1,339,141	9.8%	132,865	1,206,276	7.2%
D. Mayson Brooks	984	78,750	79,734	*	7,800	71,934	*
Stanley D. Piekos				*			*
Scott A. Gabbard		57,292	57,292	*	5,700	51,592	*
David L. Klenk		165,896	165,896	1.2%	16,500	149,396	*
John M. Vasuta	5,907	105,484	111,391	*		111,391	*
Albert A. Eliasen	5,375	36,460	41,835	*		41,835	*
Ardelle R. Johnson				*			*
Wayne J. Hubin	10,000	47,734	57,734	*		57,734	*
James A. Bernards[4]	347,500	23,869	371,369	2.7%		371,369	2.2%
Roger E. Gower		61,369	61,369	*		61,369	*
Michael W. Wright		46,299	46,299	*		46,299	*
Linda Hall Whitman		18,658	18,658	*		18,658	*
Mark R. Harless[3]	736,620	4,250	740,870	5.4%		740,870	4.4%
ESI Investment Company[5]	785,800		785,800	5.8%		785,800	4.7%
Wellington Trust Company, NA[6]	857,100		857,100	6.3%		857,100	5.1%
RS Investment Management[7]	1,469,300		1,469,300	10.8%		1,469,300	8.8%
Wellington Management Company, LLP[8]	1,825,000		1,825,000	13.4%		1,825,000	11.0%
ASTI Holdings, Limited[9]	215,385		215,385	1.6%	105,385	110,000	*
All current directors and executive officers as a group (13 persons)[4]	1,698,407	652,311	2,350,718	16.5%	162,865	2,187,853	12.7%

*

Less than one percent.

(1)

Unless otherwise indicated, each person named or included in the group has sole power to vote and sole power to direct the disposition of all shares listed as beneficially owned.

(2)

Amounts include shares that are not currently outstanding but are deemed beneficially owned because of the right to acquire them pursuant to options exercisable either currently or within 60 days after July 31, 2003. Pursuant to Securities and Exchange Commission rules, shares deemed beneficially owned by virtue of an individual's right to acquire them are also treated as outstanding

when calculating the percent of the class owned by such individual and when determining the percent owned by any group in which the individual is included.

(3)