AUGUST TECHNOLOGY CORP Form S-3/A March 12, 2004

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Registration No. 333-113342

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

(State or other jurisdiction of incorporation or organization)

41-1729485

(I.R.S. Employer Identification No.)

4900 West 78th Street Bloomington, MN 55435 (952) 820-0080

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Scott A. Gabbard, CAO and Vice President, Finance

August Technology Corporation 4900 West 78th Street Bloomington, MN 55435 (952) 820-0080

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies to:

Robert K. Ranum, Esq. Fredrikson & Byron, P.A. 4000 Pillsbury Center 200 South Sixth Street Minneapolis, Minnesota 55402 (612) 492-7000

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this Registration Statement as determined by market conditions and other factors.

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 offered 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. \circ

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.

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.

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.

This Preliminary Official Statement and the information contained herein are subject to completion or amendment without notice. These securities may not be sold nor may offers to buy them be accepted, prior to the time the Official Statement is delivered in final form. Under no circumstances shall this Preliminary Official Statement constitute an offer to sell or a solicitation of an offer to buy, nor shall there be any sale of, these securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration, qualification or filing under the securities laws of any such jurisdiction.

Subject to completion, dated March 5, 2004

PROSPECTUS

AUGUST TECHNOLOGY CORPORATION

319,375 Shares of Common Stock

This Prospectus relates to the offer and sale of up to 319,375 shares of common stock, no par value, of August Technology Corporation, a Minnesota corporation. Of such shares, 310,000 shares are outstanding and may be offered and sold from time to time by current shareholders of August Technology or by pledgees, donees, transferees, or other successors in interest that receive such shares as a gift, distribution, or other non-sale related transfer. The selling shareholders may offer their shares from time to time through or to brokers or dealers in the over-the-counter market at market prices prevailing at the time of sale or in one or more negotiated transactions at prices acceptable to the selling shareholders. We will not receive any proceeds from the sale of shares by the selling shareholders. See "Plan of Distribution."

The remaining 9,375 shares are being offered for sale by August Technology upon exercise of warrants at a price of \$1.20 per share (the "Warrants"), for which we will receive proceeds of \$11,250.

Our common stock is traded on the Nasdaq National Market under the symbol "AUGT." The closing sale price on March 3, 2004 as reflected on the Nasdaq National Market, was \$16.53 per share.

For information concerning certain risks relating to an investment in August Technology common stock see "Risk Factors" beginning on page 3.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these shares or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The information in this prospectus is not complete and may be changed. The selling shareholders may not sell these shares until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these shares, and it is not soliciting an offer to buy these shares in any state where the offer or sale is not permitted.

The date of this prospectus is

, 2004

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ABOUT AUGUST TECHNOLOGY

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 micron. 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.

Headquartered in Bloomington, Minnesota (principal executive offices are located at 4900 West 78th Street, Bloomington, Minnesota 55435; telephone 952-820-0080), with offices and representation across the globe.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

We have made forward-looking statements in this prospectus and in the documents that are incorporated by reference in this prospectus, all of which are subject to risks and uncertainties. Forward-looking statements include information concerning our possible or assumed future results of operations. Also, when we use words such as "anticipate," "believe," "estimate," "expect," "intend," "may," "could," "possible," "plan," "project," "should," "will," "forecast" and similar words or expressions, we are making forward-looking statements. You should note that an investment in our common stock involves certain risks and uncertainties that could affect our future financial results. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth in "Risk Factors" and elsewhere in this prospectus.

We believe it is important to communicate our expectations to our investors. However, there may be events in the future that we are not able to predict accurately or over which we have no control. The risk factors described in the following pages, as well as any cautionary language in this prospectus, provide examples of risks, uncertainties and events that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Before you invest in our common stock, you should be aware that the occurrence of the events described in these risk factors and elsewhere in this prospectus could materially and adversely affect our business, operating results and financial condition.

RISK FACTORS

You should carefully consider the following risk factors, together with other information contained or incorporated by reference in this prospectus, in evaluating whether to invest in our shares.

Cautionary Statements

Certain statements contained in this Form S-3 and other written and oral statements made from time to time by us do not relate strictly to historical or current facts. As such, they are considered "forward-looking statements" which provide current expectations or forecasts of future events. Such statements can be identified by the use of terminology such as "anticipate," "believe," "estimate," "expect," "intend," "may," "could," "possible," "plan," "project," "should," "will," "forecast" and similar words or expressions. Our forward-looking statements generally relate to our growth strategies, financial results, product development and sales efforts. One must carefully consider forward-looking statements and understand that such statements involve a variety of risks and uncertainties, known and unknown, and may be affected by inaccurate assumptions, including, among others, those discussed below. Consequently, no forward-looking statement can be guaranteed and actual results may vary materially. We undertake no obligation to update any forward-looking statement, but investors are advised to consult any further disclosures by us on this subject in our filings with the Securities and Exchange Commission, especially on Forms 10-K, 10-Q and 8-K (if any), in which we discuss in more detail various important factors that could cause actual results to differ from expected or historic results. We note these factors as permitted by the Private Securities Litigation Reform Act of 1995. It is not possible to foresee or identify all such factors. As such, investors should not consider any list of such factors to be an exhaustive statement of all risks, uncertainties or potentially inaccurate assumptions.

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,

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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

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an adverse effect on the economy generally, and microelectronic industries in particular, causing our customers to reduce or delay capital equipment purchases.

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
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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"), avian flu, 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

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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 December 31, 2003, 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

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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.

We have initiated litigation against Rudolph Technologies, Inc. and its subsidiary; we may incur significant legal costs and, if we lose, additional financial obligations.

On September 23, 2003, we filed a complaint in the district court of Dallas County, Texas seeking a declaratory judgment that we have no liability to Rudolph Technologies, Inc. or its subsidiary, ISOA, Inc. (doing business as Yield Metrology Group) with respect to claims they have asserted against us and our subsidiary, STI. In addition, we are seeking a judgment against Rudolph and ISOA for repayment of royalties previously paid by STI to ISOA and costs and attorney's fees incurred in bringing this action. 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., which Rudolph later acquired and renamed Yield Metrology Group. 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 may incur significant legal fees and expenses in pursuing this action for a declaratory judgment. In addition, 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 73%, 66% and 75% of net revenues in 2003, 2002 and 2001, respectively. 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.

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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 the United States accounted for 76%, 52% and 44% of our net revenues in 2003, 2002 and 2001, respectively. 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.

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

Sales to customers in Asia accounted for 64%, 45% and 34% of our net revenues in 2003, 2002 and 2001, respectively. 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 14%, 8% and 29% of our net revenues in 2003, 2002 and 2001, respectively. One distributor accounts 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.

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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.

USE OF PROCEEDS

Our proceeds, before deducting estimated offering expenses, from the exercise of the Warrants are estimated to be \$11,250, which will be used for our working capital. There can be no assurance that the

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Warrants will be exercised. August Technology will not receive any proceeds from the sale of any of the shares offered by the selling shareholders.

SELLING SHAREHOLDERS

Set forth below is the name of each selling shareholder, the number of shares of August Technology common stock beneficially owned by such selling shareholder on the date hereof, the number of shares offered hereby and the percentage of common stock to be owned if all shares registered hereunder are sold by the selling shareholder. We issued the shares to ASTI Holdings Limited in April 2003 in connection with our acquisition of all of the outstanding capital stock of Semiconductor Technologies and Instruments, Inc. We issued the shares to Michael Plisinski in July 2003 in connection with our acquisition of the assets of Counterpoint Solutions, Inc. The shares offered hereby shall be deemed to include shares offered by any pledgee, donee, transferee or other successor in interest of any of the selling shareholders listed below, provided that this prospectus is amended or supplemented if required by applicable law.

Name	Number of Shares Beneficially Owned	Number of Shares Offered Hereby	Number of Shares Beneficially Owned After Offering	% Owned After Offering
ASTI Holdings Limited	110,000	110,000		*
Michael Plisinski	211,200	200,000	11,200	*

*

Less than 1%.

PLAN OF DISTRIBUTION

The 9,375 shares offered by us will be issued upon exercise of outstanding Warrants to purchase our common stock, which Warrants were originally issued in connection with our July 1998 financing are fully exercisable and expire on July 23, 2005.

The selling shareholders may sell the shares of common stock offered by them on the Nasdaq National Market or otherwise at prices and on terms then prevailing or at prices related to the then current market price, or in negotiated transactions. When used in this prospectus, "selling shareholders" include donees and pledgees selling shares received from the named selling shareholders after the date of this prospectus. We will pay all expenses associated with registering the selling shareholders' shares, including legal fees incurred by the selling shareholders. The selling shareholders will pay any brokerage commissions and similar expenses attributable to the sale of their shares. The common stock may be sold in:

a block trade, where a broker or dealer will try to sell the common stock as agent but may position and resell a portion of the block as principal to facilitate the transaction;

transactions where a broker or dealer acts as principal and resells the common stock for its account pursuant to this prospectus;

an exchange distribution in accordance with the rules of such exchange; and

ordinary brokerage transactions and transactions in which the broker solicits purchases.

The common stock may also be sold through short sales of shares, put or call option transactions, loans or pledges of the shares, hedging or similar transactions, or a combination of such methods. The selling shareholders may or may not involve brokers or dealers in any of these transactions. In effecting sales, brokers or dealers engaged by the selling shareholders may arrange for other brokers or dealers to participate. The selling shareholders may, from time to time, authorize underwriters acting as their

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agents to offer and sell the common stock upon such terms and conditions as shall be set forth in a prospectus supplement. Underwriters, brokers or dealers will receive commissions or discounts from the selling shareholders in amounts to be negotiated immediately prior to sale. Offers and sales may also be made directly by the selling shareholders, or other bona fide owners of the common stock, so long as an applicable exemption from state broker-dealer registration requirements is available in the jurisdiction of sale. The selling shareholders, underwriters, brokers or dealers and any other participating brokers or dealers may be deemed to be "underwriters" within the meaning of the Securities Act in connection with these sales, and any discounts and commissions received by them and any profit realized by them on the resale of the common stock may be deemed to be underwriting discounts and commissions under the Securities Act.

All or any portion of the shares of common stock covered by this prospectus that qualify for sale under Rule 144 under the Securities Act may be sold under Rule 144 rather than pursuant to this prospectus.

There is no assurance that the selling shareholders will offer for sale or sell any or all of the shares of common stock covered by this prospectus.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any document we file at the SEC's public reference rooms in Washington, D.C., New York, New York and Chicago, Illinois. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms. Our SEC filings are also available to the public from the SEC's website at "http://www.sec.gov."

The SEC allows us to "incorporate by reference" the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings (File No. 000-30637) we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934:

- 1. Annual Report on Form 10-K for the fiscal year ended December 31, 2003;
- Current Reports on Form 8-K dated February 18, 2004 and February 27, 2004.
- The description of August Technology common stock which is contained or incorporated by reference in the Registration Statement on Form S-1, Reg. No. 333-32692, which was declared effective by the Securities and Exchange Commission on June 13, 2000.

You may request a copy of these filings, at no cost, by writing or telephoning our Chief Accounting Officer at the following address:

Scott A. Gabbard, CAO and Vice President, Finance August Technology Corporation 4900 West 78th Street Bloomington, Minnesota 55435 (952) 820-0080

This prospectus is part of a registration statement we filed with the SEC. You should rely only on the information or representations provided in this prospectus. We have authorized no one to provide information other than that provided in this prospectus. We have authorized no one to provide you with different information. You should not assume that the information in this prospectus is accurate as of any date other than the date on the front of the document.

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PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following expenses will be paid by the Registrant in connection with the distribution of the shares registered hereby. The Registrant is paying all of the selling shareholders' expenses related to this offering, except the selling shareholders will pay any applicable broker's commissions and expenses as well as fees and disbursements of counsel and experts for the selling shareholders. All of such expenses, except for the SEC registration fee, are estimated.

SEC Registration Fee	\$	653.83
Legal Fees and Expenses		5,000.00
Accountants' Fees and Expenses		5,000.00
Miscellaneous		1,000.00
	_	
Total	\$	11,653.83

Item 15. Indemnification of Directors and Officers.

Minnesota Statutes, Section 302A.521, provides that a Minnesota business corporation shall indemnify a person, who is made or threatened to be made a party to a proceeding by reason of the former or present official capacity of the person with respect to August Technology, against judgments, penalties, fines, including, without limitation, excise taxes assessed against the person with respect to an employee benefit plan,

settlements and reasonable expenses, including attorneys' fees and disbursements, incurred by the person in connection with the proceeding with respect to the same acts or omissions if such person (1) has not been indemnified by another organization or employee benefit plan for the same judgments, penalties or fines; (2) acted in good faith; (3) received no improper personal benefit and statutory procedure has been followed in the case of any conflict of interest by a director; (4) in the case of a criminal proceeding, had no reasonable cause to believe the conduct was unlawful; and (5) in the case of acts or omissions occurring in the person's performance in the official capacity of director or, for a person not a director, in the official capacity of an officer, board committee member or employee, reasonably believed that the conduct was in the best interests of August Technology, or, in the case of performance by a director, officer or employee of August Technology, involving service as a director, officer, partner, trustee, employee or agent of another organization or employee benefit plan, reasonably believed that the conduct was not opposed to the best interests of August Technology.

"Proceeding" means a threatened, pending or completed civil, criminal administrative, arbitration or investigative proceeding, including one by or in the right of the corporation. Section 302A.521 contains detailed terms regarding such right of indemnification and reference is made thereto for a complete statement of such indemnification rights. In addition, Section 302A.521, subd. 3, requires payment by August Technology, upon written request, of reasonable expenses in advance of final disposition of the proceeding in particular instances. A decision as to required indemnification is made by a disinterested majority of the board of directors present at a meeting at which a disinterested quorum is present, or by a designated committee of the Board, by special legal counsel, by the shareholders, or by a court.

August Technology's Amended and Restated Articles of Incorporation provide that a director is not liable to August Technology or its shareholders for monetary damages resulting from a breach of fiduciary duty as a director except to the extent provided by the Minnesota Business Corporation Act. As authorized by the Minnesota Business Corporation Act, directors are not liable for monetary damages regarding negligence in the performance of their duties, except for liability (i) for any breach of the director's duty of loyalty to August Technology or its shareholders, (ii) for act or omissions not

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in good faith or which involve intentional misconduct or a knowing violation of laws, (iii) under the Minnesota statutory provision making directors personally liable, under a negligence standard, for unlawful dividends or unlawful stock repurchases or redemptions, or (iv) for any transaction for which the director derived an improper personal benefit. This does not affect the availability of equitable remedies such as an injunction to present or remedy a director's breach of the duty of care.

August Technology and the selling shareholder listed herein have agreed to indemnify each other, under certain conditions, against certain liabilities arising under the Securities Act.

Item 16. Exhibits.

See Exhibit Index on page following signatures.

(ii)

Item 17. Undertakings.

(a) The undersigned Registrant hereby undertakes:

(1)

To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represents a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price

represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement;

- (iii)

 To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement; Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the Registration Statement.
- That, for the purposes of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3)

 To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (b)

 Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the foregoing provisions, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed

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in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by final adjudication of such issue.

- (c) The undersigned Registrant hereby undertakes that:
 - (1)

 For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the Registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
 - For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (d)

 The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's Annual Report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the Registration Statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Bloomington, State of Minnesota, on March 12, 2004.

AUGUST TECHNOLOGY CORPORATION

By /s/ JEFF L. O'DELL

Jeff L. O'Dell, Chief Executive Officer

In accordance with the requirements of the Securities Act of 1933, this Registration Statement was signed by the following persons in the capacities and on the date stated.

Signature	Title	Date
/s/ JEFF L. O'DELL	Chief Executive Officer and Director (principal executive officer)	March 12, 2004
Jeff L. O'Dell /s/ STANLEY D. PIEKOS	Chief Financial Officer (principal financial	March 12, 2004
Stanley D. Piekos /s/ SCOTT A. GABBARD	officer) Chief Accounting Officer and Vice President,	March 12, 2004
Scott A. Gabbard *	Finance (principal accounting officer) Director	March 12, 2004
James A. Bernards	Director	March 12, 2004
Roger E. Gower	Director	March 12, 2004
Michael W. Wright	Director	March 12, 2004
Linda Hall Whitman *By: /s/ STANLEY D. PIEKOS		
Stanley D. Piekos as Attorney-in-Fact pursuant to power of attorney previously filed	II-4	

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

EXHIBITS

to

Form S-3 Registration Statement

August Technology Corporation

(Exact name of Registrant as specified in its charter)

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Exhibit	
4.1	Amended and Restated Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Registrant's Registration Statement on Form S-1, Reg. No. 333-32692).
4.2	Amended and Restated Bylaws (incorporated by reference to Exhibit 3.2 to the Registrant's Registration Statement on Form S-1, Reg. No. 333-32692).
5.1*	Opinion and Consent of Fredrikson & Byron, P.A.
23.1*	Consent of KPMG LLP.
23.2*	Consent of Fredrikson & Byron, P.A. (included in Exhibit 5.1).
24.1	Power of attorney from directors (included on signature page of this Registration Statement).
* Filed h	nerewith
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