

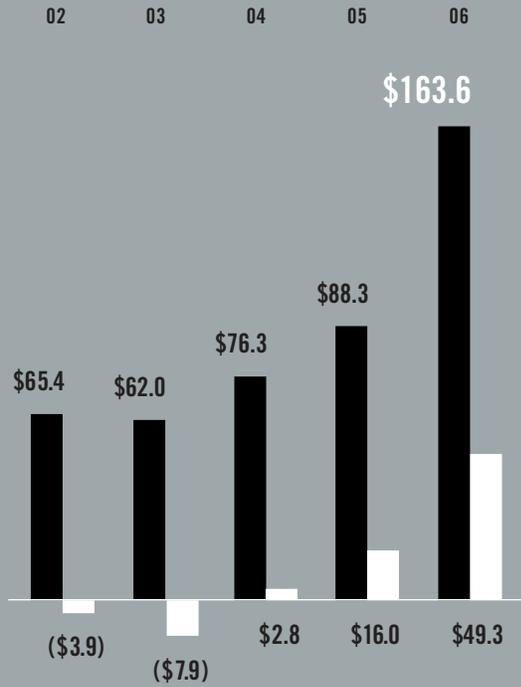


AMERICAN SCIENCE AND ENGINEERING, INC. 2006 ANNUAL REPORT
WORLDWIDE LEADER IN X-RAY DETECTION TECHNOLOGY

Powering Up

REVENUE & OPERATING INCOME (LOSS)

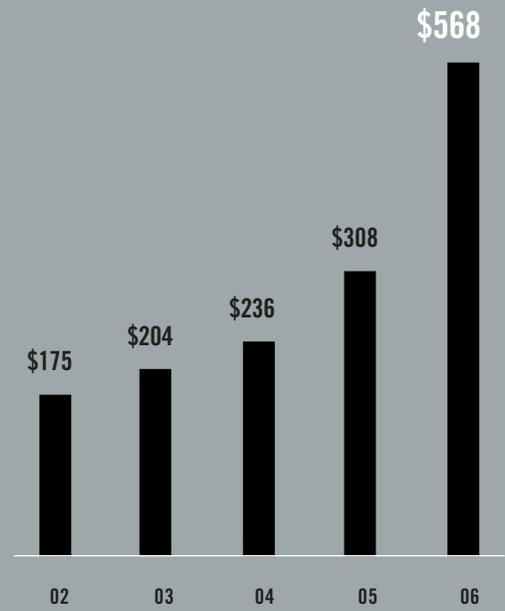
IN MILLIONS



REVENUE OPERATING INCOME

REVENUE PER EMPLOYEE

IN THOUSANDS



BACKLOG

IN MILLIONS



EARNINGS PER SHARE



AS&E X-ray inspection systems are used by governments and corporations around the world to combat terrorism, drug and weapons smuggling, illegal immigration, and trade fraud.

AS&E specializes in detection technologies that can uncover dangerous and elusive threats, including explosives, plastic and metal weapons, and radioactive devices, such as dirty bombs and nuclear WMD. These X-ray systems are deployed worldwide at ports and borders, and military and high-threat facilities. Our signature technology, Z[®] Backscatter™, gives our systems unparalleled detection capabilities, making it the technology of choice when the highest levels of security are required.

IT IS OUR MISSION to be a leading worldwide supplier of innovative X-ray and other inspection solutions in targeted markets, while delivering superior growth in shareholder value over the long term.

We will be customer driven and fill needs with technologically advanced products and services at competitive prices. We will perform with speed and agility.

2006 FINANCIAL HIGHLIGHTS

- For the third consecutive year, AS&E reported record revenues for the fiscal year with net sales of \$163.6 million — an 85% increase from fiscal year 2005.
- Gross margins in fiscal year 2006 grew to 47.8% from 34.5% in fiscal year 2005.
- Operating Income increased 210% (\$49.3 million vs. \$15.9 million) from the prior fiscal year, marking the ninth consecutive quarter of operating profitability.
- AS&E recorded record bookings at \$160.3 million in fiscal year 2006, which represents a 21% increase above the previous record of \$132.4 million in fiscal year 2005.
- Balance Sheet: Current ratio increased to 5.3 in fiscal year 2006 as compared to 3.2 in fiscal year 2005.
- AS&E reported \$3.27 earnings per share, as compared to \$1.31 earnings per share in fiscal year 2005.
- Cash flow from operations increased to \$50.7 million in fiscal year 2006 as compared to \$2.4 million in fiscal year 2005.
- AS&E invested \$9.6 million in research and development (R&D) and product development vs. \$5.7 million in the prior fiscal year — an increase of 68%.
- AS&E's stock price (NASDAQ: ASEI) rose to \$93.40 at the end of fiscal year 2006 as compared to \$44.71 at the end of fiscal year 2005.

2006 MILESTONES

- Dr. Mark Thompson was appointed to AS&E's Board of Directors.
- R&D investment resulted in five new products coming to market including: SmartCheck™ personnel screening system, OmniView™ Gantry system, Z Portal™ cargo and vehicle inspection system, Ruggedized Detection Imaging Module™ (RDIM™), and Gemini™ parcel inspection system.
- AS&E ranked #12 on *Business Week's* national listing of 100 "Hot Growth" Companies, and ranked #2 on *The Boston Globe's* "Globe 100" annual list of Massachusetts' top performing public companies.
- AS&E received the prestigious "R&D 100" Award, the editor's choice of 100 most significant technological innovations of the year, from *R&D Magazine* for developing the SmartCheck Screening System.
- AS&E hosted its first International Sales Conference at its corporate headquarters with representatives from 26 countries.
- AS&E received a milestone order from the U. S Government for 52 Z[®] Backscatter Vans™ (ZBV™).
- AS&E was incorporated into the Russell 3000 Index.
- AS&E completed the renovation and consolidation of our two manufacturing locations and offices into one location. This state-of-the-art facility will further enable us to improve efficiency and provide even better service to our valued customers.

By every measure, the past year was an exceptional one for AS&E. We far exceeded our financial and operational goals. We fully integrated world-class lean manufacturing systems; introduced innovative, versatile products; diversified and expanded markets nationally and abroad; and expanded our investment in research and development. This business strategy resulted in record-breaking financial results, which has prepared us to navigate and profit from the challenges and opportunities that face us — today, and on the road that lies ahead.

Dear Fellow Shareholders:

The past year was an extraordinary one in the history of AS&E. From record-setting financial results to exceptional gains in efficiency and a significant increase in global sales, we showed we are prepared to take advantage of all opportunities — and reap the rewards.

Simply put, fiscal year 2006 was the year AS&E “powered up” the business. We expanded our product portfolio, diversified and added sales channels, and enhanced both our operational efficiency and financial strength — all part of our key four-year turnaround initiative.

These noteworthy advancements created the infrastructure required to seize the past year’s most significant opportunity: winning and ably fulfilling a demanding \$54 million order for Z Backscatter Vans (ZBV) during the second and third quarters.

But our achievements in 2006 went well beyond the ZBV order, and they resulted in a revenue and earnings performance that exceeded our fiscal year 2005 results and fiscal year 2006 business plans.

In fiscal year 2006, revenues grew by 85% to \$163.6 million and bookings increased from \$132 million to \$160 million. Our gross margin percentage rose from 34.5% to 47.8%, while gross profit increased 157% to \$78.2 million, and operating income jumped 210% to \$49.3 million. It was our ninth consecutive quarter of operating profitability, and our stock price increased from \$44.71 to \$93.40 per share. Revenue per employee increased 84% to \$0.6 million, and backlog remained steady at \$68.8 million, as we were able to convert the \$28 million increase in bookings into 2006 revenue. This performance was something we could not have achieved in fiscal year 2005, and it is a tribute to the impressive gains we made in improving our production processes and execution in 2006.

Critical Strategies

What were the building blocks that led to the past fiscal year’s “powering up”?

First, we concentrated resources on product areas that earn us the most new business — specifically, the Z Backscatter Van. The significant increase in gross profit can be attributed to the high content of ZBV revenue as a percentage of total revenue. In addition, we were able to increase product margins through supply

We hit a “grand slam” this fiscal year.
 We had a year marked by extraordinary earnings, a spectacular growth rate, and enhanced financial strength.

chain and factory cost reductions, and reduce production cycle times without increasing factory size or adding multiple shifts. When margin-related expenses increase at a lower percentage rate than revenues, the result is the overall positive impact of increased volume on gross profit.

Second, careful management of all of our expenses over the past three years has enabled us to maintain a low break-even point in comparison with annual revenue growth. Thus our ability to hold growth in selling, general, and administrative expenses (exclusive of R&D) well below the corresponding growth in revenue had a very favorable impact on operating income.

For the third year in a row, we ended the fiscal year with excellent fourth-quarter results. Our people did an excellent job in meeting all shipment goals — resulting in \$40.8 million in revenue for the quarter. We accomplished all of this while completing the renovation and consolidation of our two manufacturing facilities and offices into one location. This state-of-the-art facility will further enable us to improve efficiency and provide even better service to our valued customers.



The ZBV Approach

In 2006, we continued to strengthen and expand our world-class Product Management organization by adding new talent and implementing a more effective product management process. Our

Preparedness meets opportunity.

With our solid infrastructure and lean manufacturing capabilities, we readily filled a demanding contract from a U.S. government agency.

product managers continue to provide strong leadership and set the tone for innovation, growth, and increased profitability.

Once again, the strongest contributor to AS&E's 2006 performance and growth was the Z Backscatter Systems area, and the key contributor was the Z Backscatter Van. It was a record year for the ZBV as revenues increased 152% over 2005, driven by the \$54 million milestone order for 52 ZBVs — an order our people expertly executed with an extremely short lead time. We are hearing from our customers around the world that the ZBV is far exceeding their expectations, and we are excited about its prospects for continued revenue growth.

The ZBV's success lies in its high value proposition — meaning it delivers excellent performance, features, and reliability relative to its price — as well as its streamlined design for manufacturing efficiency. This ZBV approach to product design is the same one we are applying to all product development. It is the approach that has made the ZBV the number one-selling non-intrusive inspection system for cargo and vehicles, with over 200 sold to 43 users in 20 nations.*

*Data as of July 21, 2006



Global Sales Growth

International sales growth is a high priority at AS&E, and we added several new customers in that area in 2006, including such government agencies as Customs, Police, and Military Force Protection — all with excellent potential for significant repeat orders. Also on the international front, we undertook a strategic partnership with Nuctech to gain access to the vast Chinese security inspection market. We are off to a good start. In the fourth quarter, we delivered our first ZBV sub-systems to Nuctech for sale in China. Cooperation between our people and their Nuctech counterparts is excellent, and each company shares the vision to provide the most advanced X-ray security solutions. Also in 2006, we further enhanced the ZBV's functionality to better serve customer needs by adding such features as a personnel scanning capability, foreign language graphical user interfaces (GUI), harsh environment, hot/cold weather packages, CE Mark compliance, JP-8 fuel compatibility, and image enhancements.

Although the work of our clients is sensitive and often confidential, our customers worldwide use the ZBV in a wide range of applications, including the detection of car and truck bombs, IEDs (Improvised Explosive Devices), and VBIEDs (Vehicle-Borne Improvised Explosive Devices). Field reports also tell us that the ZBV is very effective in port and border crossing environments.

Powerful New Products

New product development was a high priority in 2006. Using the ZBV as our model, we worked hard to deliver new products that meet the needs of our customers and are affordable, reliable, profitable, and available in short lead times.

RDIM

Meeting the requirements of the Department of Defense (DoD), we introduced the Ruggedized Detection Imaging Module (RDIM) system. After successfully testing the initial system, additional RDIMs were shipped and are now being effectively deployed.

CARGO SYSTEMS

In response to national and international demand for effective cargo security solutions at ports and borders, we introduced the

Technicians in AS&E's first-class manufacturing facility utilize lean manufacturing and design principles to build the ZBV.



OmniView Gantry and Z Portal systems. The OmniView Gantry has a unique combination of technologies that delivers the most reliable means to inspect cargo — the only multi-view relocatable system available today combining 6.0 MeV high-energy transmission inspection with three Z Backscatter X-ray views. The Z Portal drive-through inspection system is a high-throughput screening gateway. The relocatable Z Portal can be configured with one, two, or three proprietary Z Backscatter X-ray detectors for enhanced detection of security threats, contraband, and stowaways. We recently completed manufacturing the first Z Portal system and the first OmniView Gantry, to be delivered in fiscal year '07.

With simple yet innovative modular designs and state-of-the-art imaging, OmniView Gantry and Z Portal provide customized functionality for multi-view detection of threats and contraband. Each is affordably priced with functionalities that easily meet or surpass our competitors' offerings, with excellent potential for sales, both domestically and internationally.

Our skilled Cargo Systems Group completed and delivered all of our major cargo projects on time and on budget. Project margins exceeded our plans and contributed to our overall gross margin improvement over the last year. The year ended on a very positive note for the cargo products area — in the fourth quarter, we were awarded the largest single contract in AS&E's history from a Middle Eastern Customs agency. The order included a wide variety of our cargo and parcel inspection systems, including multiple OmniView Gantry systems and multiple parcel systems to secure borders, seaports, and airports. The first phase of the \$45 million project is funded at \$25 million. The second phase includes additional OmniView Gantry systems.



PARCEL AND PERSONNEL SYSTEMS

The key development in our Parcel Systems area was the introduction of the Gemini system, an affordably priced parcel inspection system that combines dual-energy transmission X-rays with our patented Z Backscatter technology for unparalleled threat

We're "powering up" the business.

With new products, global market channels, and business and manufacturing efficiency, we are prepared to take advantage of all opportunities.

detection. Gemini's multi-technology capability provides security officials with the most reliable and comprehensive means for detecting illegal contraband and threats, such as guns, IEDs, and plastic explosives at aviation checkpoints and high-threat facilities, among other uses. Needless to say, we are very excited about this unique product's potential.

To meet the ever-increasing requirement for advanced personnel screening, we launched the new SmartCheck system, designed for use in airports, military bases, and other high-threat facilities. Unlike other personnel screening systems, SmartCheck simultaneously detects both metallic and non-metallic objects, such as composite weapons, guns and knives, plastic explosives, drugs, and contraband. Utilizing AS&E's Z Backscatter technology ensures that the system is safe for operators and those being scanned — the measured radiation dose from a single scan is equivalent to two minutes of airplane flight at altitude.

AS&E worked diligently with the U.S. Transportation Safety Administration (TSA) to develop software for the SmartCheck system to address privacy concerns of the traveling public. SmartCheck, equipped with privacy algorithms, modifies the X-ray images to present only an outline of a scanned individual, while precisely distinguishing and locating potential threats on the body. This enables security officials to effectively locate potential threats while securing individual privacy. Last summer, representatives from TSA and Congress got a firsthand look at SmartCheck's privacy software when we conducted a successful demonstration of the technology in Washington, D.C.

A cargo security official operates the multi-view OmniVew Gantry system. The bi-directional system moves on rails over stationary vehicles or cargo.



FIELD SERVICE STRENGTH

Another outstanding contributor to our bottom line was our Field Service group, which increased its annual revenue by 80% over the prior year. These results stemmed from continued strong renewals of service agreements from major customers and

We're building bridges with customers.

We continue to develop trust and confidence with our customers by understanding and responding to their needs, wants, and expectations.

from new orders precipitated by our rapidly increasing installed base of new products like the ZBV. Our major customers, particularly the DoD, rated AS&E Field Service and Support at the highest level for overall customer satisfaction for training, responsiveness, spare parts availability, and quality. As we expand global sales channels, we are enhancing our Field Service capabilities by adding spare parts depots in strategic growth regions throughout the world. This will provide better service to our customers, as well as increase revenues for the Company.

The Next Breakthroughs

Our mission statement drives us to innovate and continually improve current product offerings and technologies and to develop technologies that go beyond Z Backscatter and X-rays. Although a significant amount of internal research and development (IRAD) funding was allocated to the introduction of the new products already discussed, our R&D program continues to make excellent strides to develop technology solutions to support our product lines' roadmaps for growth, and new technologies to solve major security concerns in the global marketplace.



Contract Research and Development (CRAD) funding is a critical component in accelerating development of new technologies in markets with high potential. In 2006, we exceeded our bookings goal for CRAD projects with substantial work conducted in collaboration with universities, government research laboratories, and other companies with complementary research projects. We filed a significant number of new patent disclosures during the year and strengthened our global intellectual property position. We also added a rapid prototyping capability for new product concept development. This capability, in conjunction with our new and well-equipped engineering and physics laboratories, will increase efficiency and speed up the process of bringing new or improved technologies and breakthrough products to market.

Building and Bolstering Channels

As part of AS&E's five-year strategic vision, development of our Sales and Marketing capability has been a high priority. We fortified our international sales team and added staffing in marketing and sales administration. We also bolstered our international agent network to increase our sales channel capability. To support this expanded network of sales agents, we hosted our first International Sales Conference at our world headquarters, offering extensive training and live demonstrations of our products and technologies. The latter initiative has led to market penetration in several international regions, including Asia-Pacific, Europe, the Middle East, and Africa. In addition, we made our first ZBV sale in South America, another area where we see potential for our products.

All told, we are very encouraged by the progress we made during the year to increase global awareness and promote the advantages of our Z Backscatter technology. As customers throughout the world become enlightened about the potential of Z Backscatter products to increase cost-efficiency and significantly improve their detection capability, we see greater opportunities and a bright future for AS&E.

On the domestic front, we worked very hard in 2006 to strengthen and expand relationships with our valued customers in the DoD, TSA, U.S. Customs and Border Protection, the Domestic Nuclear Detection Office, as well as law enforcement and other government agencies. It is AS&E's top priority to be attentive to these customers'

To protect high-threat facilities, law enforcement officials in the Middle East use the ZBV to screen for plastic explosives, illegal drugs, and other contraband.



operational needs, technology concerns, and expectations. We view these customers as strategic partners who provide us with the motivation to develop exciting new technologies to excel in the security marketplace.

We're continually raising the bar.

We will continue to build new sales channels, develop innovative products, and optimize other key performance metrics to drive growth.

The Road Ahead

In retrospect, 2006 was an outstanding year — far better than we had planned. We accomplished, and in several cases exceeded, all of our strategic goals, including the introduction of new products and meeting our key operating targets for revenue, profitability, and cash flow. Another of those important objectives included strengthening our balance sheet, and our success in meeting that goal has positioned us to be more aggressive in attacking our 2007 targets. I am also pleased that the very favorable press we received last year has increased our ability to attract some very talented people to join the AS&E team.

In the coming year, we will continue to emphasize markets, strategy, and new products — including the pursuit of new or alternative technologies for non-intrusive security inspection. Building sales channels, strengthening our field service infrastructure, and enhancing R&D capabilities will remain high priorities to drive our growth. We also will work vigorously to educate the marketplace on the advantages and optimal applications of our Z Backscatter and related proprietary technologies. Our management strategy of recruiting highly motivated and talented people, training and developing our entire workforce, continually raising the bar on individual and team performance, and holding ourselves accountable for results will remain our standard method of operation. And we will be relentless in our efforts to build a highly proactive, customer-driven culture at AS&E.

I would like to thank the members of our Board of Directors for their outstanding guidance, particularly with their valuable participation in our 2006 and 2007 strategic planning processes; our senior management team for their hard work and commitment to customer satisfaction and rapid response; and our outstanding employees for their loyalty and desire to meet customer and shareholder expectations.

On behalf of AS&E's management team and our Board, thank you for your support and encouragement in 2006. We remain absolutely committed to customer satisfaction, company growth, and to increasing shareholder value over the long term. And we remain confident and enthusiastic about the future at AS&E.



Anthony R. Fabiano
President & CEO
American Science and Engineering, Inc.
August 2006





AS&E CODE OF BUSINESS CONDUCT AND ETHICS We ... strive to foster a culture of honesty and accountability. Our commitment to the highest level of ethical conduct should be reflected in all of the Company's business activities ... One of our Company's most valuable assets is our reputation for integrity, professionalism, and fairness. We ... recognize that our actions are the foundation of our reputation and adhering to this Code and applicable law is imperative.

(To review the complete Code, please go to "Investor Information" on our Web site, www.as-e.com.)

AS&E VALUES People: The men and women of AS&E are the core of our success. We value and respect each individual regardless of their race, religion, ethnic background, or position in the company. We value a fair and safe environment where each of us can perform to the best of our ability. We recognize that we are all engaged in this enterprise together — each of us an individual, all of us a team.

Shareholders: Our shareholders have entrusted us with building a company that will deliver superior growth over time. We value the vision, leadership, and sound business practices that result in profitable growth. We will build our reputation by executing crisply and conducting all business dealings to the highest ethical standards.

Customers: We are customer focused. They are the reason for our existence. We strive to provide technologically advanced products and services to meet and exceed our customers expectations for capability, quality, and price. We listen carefully to what our customers tell us and respond with innovation and best-in-class support.

Operations: We value teamwork and lean, efficient operations. We value clear roles and responsibilities that enable accountability and the ability to adapt quickly to change throughout our Company. We will continuously improve our products by pro-actively designing in quality upfront. We value professionalism, productivity, and personal safety in all operations.

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended March 31, 2006

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

Commission file number 1-6549

AMERICAN SCIENCE AND ENGINEERING, INC.

(Exact name of registrant as specified in its charter)

Massachusetts
(State or other jurisdiction of incorporation or organization)
829 Middlesex Turnpike, Billerica, Massachusetts
(Address of principal executive offices)

04-2240991
(IRS Employer Identification No.)
01821
(Zip Code)

(978) 262-8700
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock (\$.66 ² / ₃ par value)	NASDAQ Stock Exchange

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

Indicate by checkmark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act: Yes No

Indicate by checkmark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act: Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer or a non-accelerated filer (as defined in Rule 12b-2 of the Securities Exchange Act of 1934)

Large accelerated filer Accelerated filer Non-accelerated filer

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of voting stock held by non-affiliates of the registrant, computed using the closing sale price of common stock of \$65.59 on September 30, 2005, was \$589,288,000.

9,108,687 shares of Registrant's common stock were outstanding on May 30, 2006.

DOCUMENTS INCORPORATED BY REFERENCE

The registrant intends to file a definitive Proxy Statement pursuant to Regulation 14A within 120 days of the end of the fiscal year ended March 31, 2006. Portions of such Proxy Statement are incorporated by reference in Part III.

AMERICAN SCIENCE AND ENGINEERING, INC.
FORM 10-K
FOR THE PERIOD ENDED MARCH 31, 2006
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CAUTIONARY STATEMENT

Some of the statements contained in this report and in the documents incorporated by reference are “forward-looking” statements, as defined in the Private Securities Litigation Reform Act of 1995 or by the Securities and Exchange Commission in its rules, regulations, and releases, about, among other things, our business and prospects. Our future results may differ materially from our past results and from those projected in the forward-looking statements due to various uncertainties and risks including but not limited to those set forth below under ITEM 1A. RISK FACTORS, one-time events and other important factors disclosed previously and from time to time in our other filings with the SEC. We disclaim any obligation to update any forward-looking statements contained herein after the date of this Annual Report.

PART I

ITEM 1. BUSINESS

American Science and Engineering, Inc., a Massachusetts corporation formed in 1958 (together with its subsidiary, the “Company” or “AS&E®”), develops, manufactures, markets, and sells X-ray inspection and other inspection solutions and provides maintenance, warranty, research, engineering, and training services related to these solutions.

The Company’s sophisticated X-ray inspection products are used for critical detection and security applications by seaport and border authorities, military, airport, federal facility and corporate security providers in the United States and around the globe. These security applications include X-ray inspection and screening systems for combating terrorism, drug and weapon smuggling, trade fraud, and illegal immigration.

The Company’s objective is to distinguish itself from its competitors through technical innovations and a superior approach to detection. The Company’s patented Z[®] Backscatter™ technology detects plastic explosives, plastic weapons, illegal drugs, and other contraband, even when concealed by complex backgrounds. AS&E’s Shaped Energy™ X-ray technology provides the penetration capability of high energy X-rays for dense cargos, without the problems caused by excessive radiation. Radioactive Threat Detection (RTD) technology detects dirty bombs and nuclear devices simultaneous to the production of Z Backscatter and transmission images.

Historically, the Company has focused its product development and marketing efforts on two broad markets: (i) the protection of high-risk government or military personnel and facilities; and (ii) the inspection and clearance of cargo, trucks, and cars at seaports and borders. These markets are driven by domestic and global trends in terrorism, the continuing spread of drugs and people smuggling, and the ongoing increase in global trade which creates greater incentives for duty evasion and trade fraud utilizing false cargo shipping manifests.

Beginning with the terrorist attacks on September 11, 2001, and continuing with the proliferation of global terrorism, as well as the ongoing threat of terrorism posed by the war in Iraq, homeland security and force protection concerns are of paramount importance in the United States and around the world. The Company believes that homeland defense, force protection, and military security initiatives will continue to provide new revenue opportunities, with additional growth in the seaports and borders, federal and military facilities, and corporate security markets.

TECHNOLOGY

The Company’s products utilize a variety of technologies including proprietary Z Backscatter technology, traditional transmission X-ray technology, Shaped Energy technology, and Radioactive Threat Detection (RTD).

Z Backscatter Technology Most of the Company’s X-ray systems utilize AS&E’s patented Z Backscatter technology. Backscattered X-rays refer to those X-rays that are directed toward an object and are scattered, rather than absorbed by that object. Z Backscatter detectors capture these scattered X-rays and use them to create highly readable, photo-like images. A key aspect of Z Backscatter is that objects organic in content (low atomic number or “low Z”), such as drugs, explosives, plastic weapons, or people, scatter X-rays effectively. These organic items stand out as bright objects in the Z Backscatter images, making them easy to identify in even the most complex X-ray backgrounds. As a result, the Z Backscatter images show these potential threats clearly. When used in combination with transmission X-ray technology, Z Backscatter adds significant interpretability to a transmission image enabling an inspector to perform a quicker and more thorough examination of the object in question.

Transmission X-ray Technology Transmission X-rays are used in combination with Z Backscatter in many of the Company’s products. A standard transmission X-ray image results when X-rays are absorbed by or pass through the object under examination. When transmission X-rays pass through the parcel, container, or vehicle being scanned, and are viewed on the transmission monitor, they create a “shadowgram” image, similar to the result of a medical X-ray exam. Shadowgram images are generally high resolution

and result from the X-ray beam penetrating through objects of varying densities. With transmission technology, the more objects or clutter in the path of the beam, the less differentiation of those objects is achieved.

The combination of proprietary Z Backscatter X-ray images and transmission X-ray images gives inspectors more information about the contents of the parcel or container by differentiating dense objects, such as metal, from low Z materials such as explosives.

Shaped Energy Technology This patented high-energy technology is specifically designed for use in examining densely loaded cargo containers at seaports, high threat facilities, and border crossings. Shaped Energy's technology "shapes" the X-ray beam by filtering unnecessary lower dose radiation — allowing for high penetration with safe radiation levels. The systems that utilize Shaped Energy (SE) technology combine the penetration capability of a high-energy X-ray source with the photo-like quality and material discrimination features of the Company's Z Backscatter imaging technology.

An important characteristic of Shaped Energy technology is that it allows for optimal penetration while maintaining a compact footprint and radiation exclusion zone. Historically, high-energy X-ray systems were constrained by the necessity for large exclusion zones and heavy shielding in order to protect against the hazards of excessive radiation. The SE linear accelerator incorporates an X-ray system design that reduces the need for cumbersome shielding and large exclusion zones.

Radioactive Threat Detection Technology An AS&E cargo inspection system enhanced with Radioactive Threat Detection (RTD) can be used to find radioactive threats in vehicles and cargo containers. RTD is highly sensitive to both gamma rays and neutrons—typically associated with dirty bomb materials (such as Cesium 137) or fissile material, such as weapons grade plutonium. RTD is particularly important in light of the potential terrorist threat of explosives packaged with radioactive material that scatters upon deployment, commonly referred to as "dirty bombs." AS&E's Z[®] Backscatter Van™ (ZBV™) and MobileSearch™ X-ray systems, when equipped with RTD, are unique in their ability to perform radioactive material detection while simultaneously producing Z Backscatter and/or transmission X-ray images thereby maintaining optimum throughput.

PRODUCTS AND SYSTEMS

The Company's products and services can be grouped into five different areas including CargoSearch™ Inspection Systems, Z Backscatter Systems, ParcelSearch™ Inspection Systems, Personnel Inspection, and Service and Support.

CargoSearch Inspection Systems The CargoSearch family of systems includes high-energy and medium-energy non-intrusive inspection and screening devices. The systems are primarily used for the inspection of trucks, cars, cargo containers, pallets, and air cargo at locations including border crossings, seaports, military bases, railroad centers, airports, and cargo and transportation hubs. The CargoSearch systems are designed to combat trade fraud, drug trafficking, weapons smuggling, and terrorism. The CargoSearch family includes:

OmniView™ Gantry System is a multi-view, relocatable high-energy cargo and vehicle inspection system. This system combines up to 6 MeV high-energy transmission inspection plus three Z Backscatter X-ray views for left, right, and top-side imaging of cargo. OmniView Gantry provides high penetration into inspected objects — up to 14 inches (350 mm) of steel — yet the system does not require an exterior building or heavy shielding. The OmniView Gantry System's scanning platform operates by moving on rails past stationary vehicles and cargo. The system is bi-directional allowing for a high throughput of approximately 35 trucks per hour. OmniView Gantry is ideal for ports, borders, and high-threat facilities.

Shaped Energy CargoSearch™ System is a fixed site high-energy transmission X-ray inspection system with optional Z Backscatter imaging, ideal for ports, borders, and high-threat facilities. The Shaped Energy CargoSearch configuration provides the stability of a permanent inspection location within a very small footprint.

MobileSearch™ System is a truck-mounted cargo and vehicle X-ray inspection system that adds flexibility, mobility, and the ability to inspect cars (from one or both sides) to the basic CargoSearch concept.

PalletSearch™ System is a conveyORIZED X-ray inspection system designed to perform non-intrusive inspection of mixed cargo shipped on large pallets or in air cargo containers. The system is especially useful for inspecting large, irregularly shaped containers and cargo.

Z Backscatter Systems Z Backscatter technology can be used as a stand-alone technology or in combination with other technologies, including transmission, Shaped Energy, and Radioactive Threat Detection. Z Backscatter-only scanning can be implemented without the use of boom-mounted detectors, allowing for drive-by screening of containers and vehicles in a variety of applications without impeding the flow of commerce.

Z® Backscatter Van™ (ZBV) is a mobile X-ray screening system built into a commercially available delivery van. It utilizes AS&E's patented Z Backscatter X-ray technology to produce photo-like images of the contents of a vehicle or cargo container, highlighting organic materials such as plastic explosives or other anomalies. With one-sided, backscatter-only imaging and the option for Radioactive Threat Detection (RTD), security officials can use ZBV for screening vehicles, sea containers, and other cargo for terrorist threats, trade fraud, and contraband, simply by driving past the subjects.

Z Portal™ is a multi-view, drive-through inspection system capable of scanning cars, vans, trucks, and their cargos for threats and contraband. The relocatable screening system can be configured with one, two, or three Z Backscatter X-ray detectors allowing for left, right and/or top-side imaging of the vehicle under examination.

Ruggedized Detection Imaging Module™ (RDIM™) is a relocatable Z Backscatter imaging system for screening vehicles at a security checkpoint or border crossing. Security officials can screen vehicles and vehicle-borne cargo containers for terrorist threats and contraband simply by directing vehicles to drive past the system. RDIM employs AS&E's patented Z Backscatter technology, which produces photo-like images of the contents of a vehicle, providing manifest verification information and highlighting organic materials, such as explosives or drugs.

ParcelSearch™ Inspection Systems ParcelSearch systems are designed for the non-intrusive X-ray scanning of parcels, baggage, and mail. They are primarily located in government facilities, airports, commercial office buildings, high-security federal facilities (research facilities and military bases), and convention centers. The ParcelSearch family includes:

Model 66ZPlus™ is a compact system designed to handle small packages, including briefcases, carry-on luggage, and mail.

Models 101Z™, 101ZZ™, 101GT™, and 101XL™ are conveyor-based systems allowing rapid inspection of high volumes of luggage and other packages.

Model 101VAN™ is a self-contained conveyor-based parcel inspection system housed in a standard van; designed and built to the rigorous specifications of U.S. Customs and Border Protection.

Personnel Inspection Personnel inspection is a critical part of any threat detection effort. Today, threats can take the smallest of forms and are often easily hidden on a person. With the advent of suicide bombings, personnel screening has taken on an even more important role. Personnel screening is also crucial in the effort to intercept prohibited substances, such as drugs and alcohol.

SmartCheck™ is a personnel screening system to effectively screen for contraband and threats hidden under a person's clothing. SmartCheck simultaneously detects both metallic and non-metallic objects, such as guns and knives, plastic explosives, composite weapons, drugs, other hidden threats, and contraband. Its easily interpreted Z Backscatter image gives the operator an easy-to-read display of where the threat or contraband is hidden, thus eliminating the need for intrusive and time-consuming pat-downs. SmartCheck employs advanced image processing algorithms to enhance privacy, while maintaining a high level of threat detection.

Service and Support AS&E's highly skilled Field Service Engineers (FSEs) provide support services and comprehensive technical training on all of AS&E's X-ray inspection systems worldwide. FSEs are located at AS&E offices in Asia, Europe, the Middle East, and North America. In addition, Technical Support is provided at the Company's headquarters in Billerica, Massachusetts. AS&E provides comprehensive, cost-effective spare parts solutions customized for each system.

INTELLECTUAL PROPERTY

The Company relies on a combination of patent, copyright, trademark, contract, and trade secret laws to establish and protect its proprietary rights in its technology. The Company has patents either issued and/or pending in the United States, Germany, Japan, the United Kingdom, China, Austria, France, Ireland, Italy, Switzerland, Australia, Canada, Hong Kong, India, Israel, The Republic of Korea, New Zealand, Mexico, Norway, The Russian Federation, Ukraine, United Arab Emirates, Malaysia, Thailand, Egypt, and under the Gulf Cooperation Council and the Patent Cooperation Treaty.

In general, the Company pursues a policy of obtaining patent protection both in the United States and in selected foreign countries for subject matter we consider patentable and important to our business strategy. The Company has 51 unexpired patents issued by, and 48 patent applications pending with, the U.S. Patent and Trademark Office, as well as with the respective patent offices of the foreign countries noted above. Over half of our issued patents have been issued in the last five years.

Generally, patents issued in the United States are effective for the longer of 17 years from the date of issue or 20 years from the earliest effective filing date of the corresponding patent application if filed prior to June 8, 1995. The duration of foreign patents varies in accordance with applicable local law. While the duration of our patents varies, we believe that the duration of our patents is adequate relative to the expected lives of our products.

The Company believes that its patents, proprietary technology, know-how, and trademarks provide substantial protection for the Company's competitive position and the Company intends to aggressively protect its intellectual property assets, by litigation or other means, as appropriate. Nevertheless, there can be no assurances that the steps taken by the Company in this regard will be adequate

to prevent misappropriation or infringement of its technology or that the Company's competitors will not independently develop technologies that are substantially equivalent or superior to the Company's technology. Effective protection of intellectual property rights may be limited or unavailable in certain foreign countries. See Item 3: Legal Proceedings below.

SALES AND MARKETING

The Company's X-ray products are marketed to private and governmental organizations through a sales force that contacts potential customers, and responds to public tenders, and other expressions of interest. This sales force includes Company personnel based in the United States and abroad, as well as independent representatives under contracts to sell in foreign countries.

Many of the Company's systems are built for existing customers and the Company maintains an inventory of common parts and sub-assemblies for these systems in order to meet expected customer delivery requirements and spare parts requirements.

CUSTOMERS

The Company has a customer list consisting of government and commercial clients from both the United States and abroad. Domestically, the Company's primary client base is comprised of agencies of the U.S. Government. Approximately 77%, 75%, and 77% of the Company's sales in fiscal 2006, 2005, and 2004, respectively, were derived from either (i) contracting directly with the U.S. Government, or (ii) contracting with contractors working directly with the U.S. Government. Certain of the Company's contracts with the U.S. Government provide the U.S. Government with the standard unilateral right to terminate these contracts for convenience. To date, the Company has not experienced any material losses as a result of this contractual provision. The Company is heavily dependent upon sales to agencies of the U.S. Government and reductions or delays in procurement of the Company's systems by these agencies may have a material adverse effect on the Company.

International sales, primarily to foreign governments, accounted for approximately 14%, 15%, and 12% of the Company's total sales in fiscal 2006, 2005, and 2004, respectively, and continue to be a high priority for the Company as part of its long-term growth strategy. International sales entail longer sales cycles and project financing requirements; however the Company continues to focus on these sales as a means of broadening its customer base and reducing its dependency on sales to the U.S. Government. The Company manages its overseas risk in a number of ways, including actively increasing the number of opportunities it is pursuing at any one time and by working with international funding sources to help customers finance and secure funding of these projects. The majority of international contracts are bid in U.S. dollars. For those contracts that are bid in other currencies, the Company considers the need to engage in hedging contracts to control foreign exchange risk. There were no hedging activities in fiscal 2006, 2005, or 2004.

In fiscal year 2006, the Company had sales to two major customers, both agencies of the U.S. Government, which accounted for 30% and 26% of total sales. In fiscal year 2005, the Company had sales to three major customers, two of which were agencies of the U.S. Government and the third a subcontractor to a U.S. Government agency, which accounted for 17%, 13%, and 13% of total sales. In fiscal year 2004, the Company had sales to two major customers, both agencies of the U.S. Government, which accounted for 19% and 15% of total sales.

COMPETITION

The Company has many competitors in the X-ray product market, including several large and well-established manufacturers of security X-ray equipment with financial and other resources greater than those of the Company. Certain X-ray security system customers select such systems based largely on price. Other customers, notably the U.S. Government and users in countries with high levels of concern over security, tend to select systems based largely on performance and detection capability. The Company's systems offer premium performance and have historically been priced higher than many competing systems. The Company believes that its patented and proprietary technology give it a strong competitive position in the sale of security systems to customers concerned with performance and detection. The Company also believes that its strategy of concentrating on products with unique features, including Z Backscatter and Shaped Energy, and/or competitive pricing will give it a strong position to increase its sales of X-ray systems. However, a number of companies have developed products that compete with the Company's X-ray inspection products. (See "Forward-Looking Information and Factors Affecting Future Performance.")

ISO 9001 CERTIFICATION

In August 2003, the Company announced that its Quality Management System had been registered under the ISO 9001:2000 Standard of the International Organization for Standardization. The Company had been registered under the previous ISO standard since March 2001. ISO 9001 is an internationally recognized quality management and assurance standard.

In qualifying, the Company met or exceeded the standards for establishing a quality management system for preventing non-conformity at every level of the product life cycle, from customer order, through development and production, to installation and support.

The Company believes that demonstrating continuous quality improvement is vital for building customer satisfaction and making business processes more efficient in order to increase its competitive edge.

COMPONENT AVAILABILITY

The Company has not experienced during the last year, and does not currently anticipate, any product delivery delays due to component shortages. The majority of procured components are from U.S. sources. However, the Company is dependent upon certain overseas providers of important components. No rare or exotic materials are utilized. Following the events of September 11, 2001, demand for X-ray system subcomponents increased significantly across the security industry. In response, the Company took steps to mitigate sourcing risks by working closely with its vendors to secure future component availability. In some cases, the Company has chosen to stock certain inventory components to assure future availability. These efforts also included identifying and qualifying second-source providers for a number of critical components of its product lines.

REGULATORY COMPLIANCE

The Company complies with applicable Health and Human Services regulations outlined under the "Regulations for the Administration and Enforcement of the Radiation Control for Health and Safety Act of 1968" (21 CFR 1020.40), published by the U.S. Department of Health and Human Services. All X-ray products of the Company comply with all applicable U.S. Government regulatory standards.

RESEARCH AND DEVELOPMENT

The Company spent approximately \$9,601,000 of its own funds for research and development during fiscal 2006, compared to \$5,727,000 and \$5,535,000 in fiscal 2005 and 2004, respectively. The fiscal 2006 research and development efforts were focused on design modifications and enhancements to existing products, the development of new applications, and the development of new products.

In addition, the Company conducted government-sponsored research primarily focused on advances in X-ray systems, image analysis, and integrated system development for niche security inspection problems. The Company recognized revenues of \$2,804,000, \$2,534,000, and \$444,000, in fiscal 2006, 2005, and 2004, respectively for these efforts. A significant amount of the Company's government sponsored research and development contracts provide for a fixed fee or a reimbursement of allowable costs plus a fixed fee. The Company's contracts in these areas are obtained by submitting research and development proposals to various organizations, sometimes in response to requests for such proposals.

PERSONNEL

As of March 31, 2006 the Company had 288 employees as compared to 286 employees at March 31, 2005. It is the Company's policy to have employees sign nondisclosure agreements as a condition of employment. None of the Company's employees are represented by labor unions.

SALES BACKLOG

The Company's firm (under signed contracts) sales backlog was \$68,840,000, \$72,098,000, and \$33,852,000, at March 31, 2006, March 31, 2005, and March 31, 2004, respectively.

Certain of the Company's contracts with the U.S. Government contain clauses permitting the government to terminate the contract for convenience upon certain terms and conditions, including partial payment to the Company for work performed. Total contracts with U.S Government agencies and subcontractors in the backlog were \$30,058,000, \$48,127,000, and \$16,645,000, at March 31, 2006, 2005, and 2004, respectively. It is estimated that approximately 72% of the 2006 backlog will be filled within the fiscal year ending March 31, 2007.

FINANCIAL INFORMATION ABOUT FOREIGN AND DOMESTIC OPERATIONS AND EXPORT SALES

Most export sales are transacted in U.S. dollars, and many are either secured by irrevocable letters of credit or paid in advance. The following table shows the breakdown of net sales and contract revenues to international and domestic customers and the major regions of international activity based upon customer's country of domicile. All assets are maintained within the United States with the exception of small amounts of spares inventory and cash accounts maintained at foreign locations (less than 1% of the Company's assets).

Net Sales and Contract Revenues

Fiscal Year	2006		2005		2004	
			(Dollars in thousands)			
Domestic	\$ 141,491	86%	\$ 75,376	85%	\$ 66,848	88%
International	22,113	14%	12,938	15%	9,494	12%
Net Sales and Contract Revenues	<u>\$ 163,604</u>	<u>100%</u>	<u>\$ 88,314</u>	<u>100%</u>	<u>\$ 76,342</u>	<u>100%</u>
Percent of International Revenue by Major Region:						
Middle East & Africa	50.4%		15.9%		34.2%	
Pacific Rim	36.4%		62.6%		34.4%	
Europe	11.4%		21.5%		29.1%	
All Other	1.8%		—%		2.3%	

AVAILABLE INFORMATION

The Company's principal executive offices are located at 829 Middlesex Turnpike, Billerica, MA 01821; telephone number 978-262-8700; corporate website www.as-e.com. We make available, free of charge through our Web site, our annual Form 10-K, current reports on Form 10-Q and Form 8-K, and amendments to these reports filed or furnished pursuant to Section 13(a) of the Securities Exchange Act of 1934 as soon as practicable. In addition, our reports, proxy and information statements, and other information filed with the SEC are available at the SEC's Public Reference Room at 100 F Street, NE, Room 1580, Washington, D.C. 20549 (1-800-SEC-0330), and are also available from the SEC's website at www.sec.gov.

ITEM 1A. RISK FACTORS

The Company's reliance on a small number of customers for a large portion of its revenues could harm its business and prospects.

The Company's business is heavily dependent on sales to a small number of customers, which include agencies of the United States government. During fiscal 2006, two customers accounted for 56% of the Company's total revenues. During fiscal 2005, three customers accounted for 43% of the Company's total revenues and during fiscal 2004, two customers accounted for 34% of the Company's total revenues. Certain of the Company's government contracts may be terminated at the government's discretion. The termination of the Company's relationship with one or more of its significant customers or the reduction or delay of orders of its systems by these customers would substantially reduce the Company's revenues, and its business and prospects may be harmed.

The Company conducts its business worldwide, which exposes it to a number of difficulties in coordinating its international activities and dealing with multiple regulatory environments.

The Company's revenues to international customers, including foreign governments, accounted for approximately 14%, 15%, and 12% of its net revenues for the fiscal years ended March 31, 2006, March 31, 2005, and March 31, 2004, respectively, and a significant number of domestic customer orders require shipments to, and services provided in, overseas locations. In addition, the Company transacts business internationally with a number of its key suppliers. As a result of the Company's worldwide business operations, it is subject to various risks including:

- international regulatory requirements and policy changes;
- lengthy sales cycles;
- longer payment cycles by foreign customers;
- difficulties in inventory management, accounts receivable collection and the management of distributors or representatives;

- difficulties in staffing and managing foreign operations;
- geopolitical instability;
- political and economic changes and disruptions;
- favoritism towards local suppliers;
- governmental currency controls;
- interruption to transportation flow for delivery of parts to us and finished goods to our customers;
- currency exchange rate fluctuations; and
- tariff regulations.

Although the Company's international sales have been denominated primarily in U.S. dollars, changes in currency exchange rates that increase the relative value of the U.S. dollar may make it more difficult for the Company to compete with foreign manufacturers on price or otherwise have a material adverse effect on its sales and operating results.

The Company's lengthy sales cycle requires it to incur significant expenses with no assurance that it will generate revenue or recover such expenses.

A substantial portion of the Company's sales depends upon the decision of governmental agencies to upgrade or expand security at border crossing inspection sites, existing airports, seaports, and other facilities. Accordingly, a portion of the Company's product sales is subject to delays associated with the lengthy approval processes that often accompany such capital expenditures. During these approval periods, the Company expends significant financial and managerial resources in anticipation of future orders that may not occur. If the Company fails to receive an order after expending these resources, it may be unable to generate sufficient revenue to recover the costs incurred, and its business and prospects may be harmed.

The Company's business is dependent upon governmental policies and appropriations.

The Company's largest customers are government agencies and demand for its products is dependent upon national priorities and governmental initiatives. These priorities and initiatives are subject to change from time to time in response to the economic and political environment. The Company is also exposed to the United States budget approval and appropriation cycle, which may be subject to significant and unpredictable delays. If demand for the Company's products is reduced because of a change in economic or political conditions, or if there are delays in receiving governmental approvals and appropriations, sales of the Company's products may be adversely affected, and its business and prospects may be harmed.

Changes in governmental regulations may reduce demand for the Company's products or increase its expenses.

The Company competes in markets in which the Company or its customers must comply with federal, state, local, and foreign regulations, such as health and safety regulations. The Company develops, configures, and markets its products to meet its customers' needs created by these regulations. Any significant change in these regulations could reduce demand for the Company's products or increase its costs to comply with new regulations, both of which may adversely affect its operating results.

The Company's reliance on only a limited number of suppliers for some key components for its products could harm its business and prospects.

The Company relies on only a limited number of suppliers for some key components for its products. The Company's reliance on limited supply sources reduces its control over timely delivery, price increases, reliability, and quality of critical components. Obtaining alternative sources of supply of these key components could involve significant delays and other costs, and may not be available to the Company on reasonable terms, if at all. If the Company changes any of its suppliers, the potential new supplier would be required to go through a qualification process, creating potential delays or reductions in product shipments. The failure of any supplier to provide quality and timely components at an acceptable price, or an interruption of supplies from such a supplier could result in lost or deferred sales, which would harm the Company's business and prospects.

Fluctuations in the Company's quarterly operating results may cause its stock price to fluctuate.

Given the nature of the markets in which the Company participates, it cannot reliably predict future revenue and profitability. A high proportion of the Company's costs are fixed, due in part to its significant sales, research and development, and manufacturing costs. As a result of its fixed costs, small declines in revenue could disproportionately affect the Company's operating results and stock price in a quarter. Factors that may affect the Company's quarterly operating results and the market price of its common stock include:

- demand for and market acceptance of its X-ray inspection systems;
- lengthy sales cycles and the effect of large orders;
- changes in political agendas or national priorities;
- adverse changes in the level of economic activity in regions in which the Company does business;
- political unrest in the regions where the Company transacts business;

- adverse changes in industries on which the Company is particularly dependent;
- competitive pressures resulting in lower selling prices for its products;
- delays or problems in the introduction of new products;
- the Company's competitors' announcement or introduction of new products, services or technological innovations;
- variations in the Company's product mix;
- the timing and amount of the Company's expenditures in anticipation of future sales;
- increased costs of raw materials or supplies; and
- changes in the volume or timing of product orders.

The Company could incur substantial costs as a result of product liability claims and adverse publicity if its X-ray inspection systems fail to detect bombs, explosives, weapons, contraband, or other threats to personal safety.

If the Company's X-ray inspection systems fail to detect the presence of bombs, explosives, weapons, contraband, or other threats to personal safety, the Company could be subject to product liability claims and negative publicity, which could result in increased costs, reduced sales, and a decline in the market price of the Company's common stock. There are many factors beyond the Company's control that could result in the failure of its products to detect the presence of bombs, explosives, weapons, contraband, or other threats to personal safety. Examples of these factors include operator error or misuse of or malfunction of its equipment. The failure of the Company's systems to detect the presence of these dangerous materials may lead to personal injury, loss of life, and extensive property damage and may result in potential claims against the Company.

The Company's insurance may be insufficient to protect it from product liability claims.

The Company's product liability and umbrella liability insurance may be insufficient to protect it from product liability claims. Moreover, there is a risk that product liability insurance will not continue to be available to the Company at a reasonable cost, if at all. If liability claims exceed the Company's current or available insurance coverage, its business and prospects may be harmed. Regardless of the adequacy of the Company's product liability insurance protection, any significant claim may have an adverse affect on its industry and market reputation, leading to a substantial decrease in demand for its products and reduced revenues.

The Company may not be able to fund its research and development activities.

The Company generates funds for its research and development activities from operations, private sources, and the government. The Company may be unable to generate the funds necessary to support its research and development activities if it does not generate sufficient funds from operations, other potential private sources, or the government. The Company may not successfully compete with other companies and research institutions for government funding and funding from other private sources. Additionally, government-funding priorities are subject to frequent changes. For example, in fiscal 2006 and 2005, the Company recorded \$2,804,000 and \$2,534,000, respectively, for government-sponsored research and development. There is no guarantee that the Company will receive funds for government-sponsored research in the future. If the Company is unable to fund its research and development activities through its operations or from outside sources, the Company may be unable to continue to innovate or bring its innovations to market on a timely or cost effective basis, or its innovations may be surpassed by other competitors or new technologies.

The Company's success depends on new product development.

The Company's continuing research and development program is designed to develop new products and to enhance and improve its current products. The Company plans to expend significant resources on the development of its new products. The successful development of its products and product enhancements is subject to numerous risks, both known and unknown, including:

- unanticipated delays;
- access to capital;
- budget overruns;
- technical problems; and
- other difficulties that could result in the abandonment or substantial change in the design, development, and commercialization of new products and product enhancements, including for example, changes requested or required by governmental and regulatory agencies.

Given the uncertainties inherent with product development and introduction of X-ray inspection systems, the Company cannot assure that its product development efforts will be successful on a timely basis or within budget, if at all. The Company's failure to develop new products and product enhancements on a timely basis or within budget would harm its business and prospects.

The Company's success depends upon its ability to adapt to rapid changes in technology and customer requirements.

The market for the Company's products has been characterized by rapid technological changes, frequent product introductions, and evolving industry standards and customer requirements. The Company believes that these trends will continue into the foresee-

able future. The Company's success will depend, in part, upon its ability to enhance its existing products, successfully develop new products that meet changing customer and regulatory requirements, and gain market acceptance. If the Company fails to do so, its products may be rendered obsolete or uncompetitive by new industry standards or changing technology, in which case its revenue and operating results would suffer. In developing any new product, the Company may be required to make a substantial investment before it can determine the commercial viability of the new product. If the Company fails to accurately foresee its customers' needs and future activities, it may invest heavily in research and development of products that do not lead to significant revenue.

The Company may not be able to compete successfully.

A number of companies have developed products that compete with the Company's X-ray inspection products. Many of the Company's competitors are larger and have greater financial resources than it does. Some of its competitors have more extensive research, marketing and manufacturing capabilities, and greater technical and personnel resources than the Company does, and may be better positioned to continue to improve their technology in order to compete in an evolving industry. The Company's failure to compete successfully could decrease demand for its products or make its products obsolete.

In the inspection systems market, competition is based primarily on the following factors:

- product performance, functionality and quality;
- price;
- the overall costs of the system;
- prior customer relationships;
- technological capabilities of the product;
- certification by government authorities;
- local market presence; and
- breadth of the sales and service organization.

To remain competitive, the Company must develop new products and periodically enhance its existing products in a timely manner. The Company anticipates that it may have to adjust the prices of some of its products to stay competitive. In addition, new competitors may emerge, and entire product lines may be threatened by new technologies or market trends that reduce the value of these product lines.

The Company's business could be harmed if it is unable to protect its intellectual property.

The Company relies primarily on a combination of trade secrets, patents, copyrights, trademarks, licensing arrangements, and confidentiality procedures to protect its technology. Despite its precautions, the steps the Company has taken to protect its technology may be inadequate. Existing trade secret, patent, trademark, and copyright laws offer only limited protection. The Company's patents could be invalidated or circumvented. The laws of some foreign countries in which the Company's products are or may be developed, manufactured, or sold may not protect its products or intellectual property rights to the same extent as do the laws of the United States. This may make the possibility of piracy of the Company's technology and products more likely. The Company cannot assure that the steps it has taken to protect its intellectual property will be adequate to prevent misappropriation of its technology. The Company's business could be harmed if it is unable to protect its intellectual property.

The Company's business may be materially and adversely affected by infringement claims initiated by the Company or its competitors.

Initiating or defending against the enforcement of the Company's intellectual property rights may result in significant, protracted, and costly litigation. The Company has previously been involved in various litigations involving its intellectual property and has been successful in protecting such interests to date. However, the Company is currently involved in civil litigation filed by a competitor seeking a declaratory judgment that the competitor's product did not infringe upon certain of the Company's patents. The Company expects intellectual property disputes to be an ordinary part of its business for the foreseeable future. The Company may initiate claims or litigation against third parties for infringement of its intellectual property rights, or to establish the validity of its property rights. There can be no assurance that the Company will prevail in any such action. Litigation by or against the Company could result in significant expense and divert the efforts of technical and management personnel, whether or not such litigation results in a favorable outcome for the Company. In the event of an adverse result in any such litigation, the Company could be required to pay substantial damages, cease the manufacture, use, and sale of infringing products, expend significant resources to develop non-infringing technology, discontinue the use of certain processes, or obtain licenses for the infringing technology. If a license were required, the Company cannot assure that it would be able to obtain one on commercially reasonable terms, if at all. The Company cannot assure that it will be successful in developing non-infringing technology or that the cost or time required to develop such technology will be reasonable.

The Company's success depends on its ability to attract and retain qualified management professionals.

During the fiscal years 2005 and 2004, the CEO and certain other members of our senior management team left the Company. The Company subsequently recruited what it believes to be a highly qualified team of executives to join the Company. The Company's future

success will continue to depend in large measure upon the continued contributions of its senior management team and other key personnel. If we lose professionals or are unable to attract new talent, we will not be able to maintain our position in the market or grow our business.

Future sales of the Company's common stock by existing stockholders could depress the market price of the Company's common stock.

Substantially all of the Company's outstanding shares of common stock are freely tradable without restriction or further registration. Affiliates must sell all shares they own in compliance with the volume and other requirements of Rule 144, except for the holding period requirements. Nevertheless, sales of substantial amounts of common stock by the Company's stockholders, or even the potential for such sales, may cause the market price of the Company's common stock to decline and could impair the Company's ability to raise capital through the sale of the Company's equity securities.

Existing external financing may not be available in the future.

The Company may require additional capital to finance continuing operations. The Company cannot assure that operations will continue to be profitable, that it will generate levels of revenues and cash flows sufficient to fund operations, or, if necessary, that the Company will be able to obtain additional financing on satisfactory terms, if at all. Any existing financing arrangements may not be available or sufficient to meet the Company's cash needs or may not be available in the future, or, if available, at a cost that the Company believes is reasonable.

The volatility of the Company's stock price could adversely affect an investment in the Company's common stock.

The market price of the Company's common stock has been, and may continue to be, highly volatile. The Company believes that a variety of factors could cause the price of the Company's common stock to fluctuate, perhaps substantially, including:

- announcements of developments related to the Company's business;
- quarterly fluctuations in the Company's actual or anticipated operating results and order levels;
- general conditions in the worldwide economy;
- announcements of technological innovations;
- new products or product enhancements by the Company or its competitors;
- developments in patents or other intellectual property rights and litigation; and
- developments in the Company's relationships with its customers and suppliers.

In addition, in recent years the stock market in general and the markets for shares of small capitalization and "high-tech" companies in particular, have experienced extreme price fluctuations which have often been unrelated to the operating performance of affected companies. Any such fluctuations in the future could adversely affect the market price of the Company's common stock.

Provisions in the Company's articles of organization and the Company's shareholder rights plan may have the effect of discouraging advantageous offers for the Company's business or common stock, and limit the price that investors might be willing to pay in the future for shares of the Company's common stock.

Provisions in the Company's articles of organization and the Company's shareholder rights plan may have the effect of discouraging or preventing a change in control. These provisions could limit the price that certain investors might be willing to pay in the future for shares of the Company's common stock. Specifically, the Company's articles of organization authorize its Board of Directors to issue up to 100,000 shares of preferred stock in one or more series, to fix certain rights, preferences, privileges, and restrictions granted to or imposed upon any wholly unissued shares of preferred stock, to fix the number of shares constituting any such series, and to fix the designation of any such series, without further vote or action by its shareholders. The terms of any series of preferred stock, which may include priority claims to assets and dividends and special voting rights, could adversely affect the rights of the holders of common stock and thereby reduce the value of the Company's common stock. The Company has no present plans to issue shares of preferred stock. The Company has in place a shareholder rights plan, adopted in 1998, under which its stockholders are entitled to purchase shares of its preferred stock under certain circumstances. These circumstances include the purchase of 15% or more of the outstanding shares of common stock by a person or group, or the announcement of a tender or exchange offer to acquire 15% or more of the outstanding common stock. The shareholder rights plan may have the effect of impeding or preventing certain types of transactions involving a change in control of the Company that could be beneficial to the stockholders.

The Company does not plan to pay dividends on its common stock.

The Company has not declared or paid a cash dividend on its common stock in recent years, and it does not expect to declare or pay any cash dividends in the foreseeable future. The Company intends to retain all earnings, if any, in order to expand its operations. Investors should not rely on dividends from the common stock as a possible source of income.

ITEM 1B. UNRESOLVED STAFF COMMENTS

There are no material unresolved written comments that were received from the SEC staff 180 days or more before the end of our fiscal year relating to our periodic or current reports under the Securities Exchange Act of 1934.

ITEM 2. PROPERTIES

The Company's executive offices, research, manufacturing, and warehouse facilities are located in Billerica, Massachusetts. In December 2004, the Company renewed its lease for this facility and entered into an agreement with the landlord to add an additional 24,974 square feet to its leased space and to construct a 26,200 square foot high bay manufacturing space in the back of the premises. The lease provided for a tenant allowance for this high bay space and for additional refurbishments in the building. The balance of construction and renovation costs above this tenant allowance were the responsibility of the Company. The construction and refurbishments were completed on March 1, 2006 at which time the lease commenced for a period of 10 years. The Company now occupies 167,000 square feet of space in the 187,000 square foot facility owned by an unaffiliated real estate limited partnership. The remaining space is currently unoccupied and is available for lease from the building owner.

In October 1999, the Company leased 56,000 square feet of manufacturing and office space in an office park near the main office in Billerica Massachusetts. The original lease had a term of five years. The Company had extended this lease to February 28, 2006 at which time it consolidated these operations into the Company's renovated Billerica facility.

The Company's former High Energy Systems division had leased 24,733 square feet of manufacturing, research and development, and office space in Mountain View, California. The lease commenced on February 1, 2004 and had an initial term of seven years with an option to extend for an additional five-year period. In January 2005, as part of the asset sale agreement with Accuray, Incorporated, the Company assigned its rights and obligations under this lease to Accuray. The Company is secondarily liable for the lease payments in the event of default by Accuray.

The Company believes that its facilities, with its recently completed renovations and expansion, are adequate and provide sufficient production capacity for its present intended purposes. The Company's facilities are currently utilized primarily on a one-shift basis. The Company is able to add additional capacity by adding second and third shifts if necessary.

ITEM 3. LEGAL PROCEEDINGS

In February 2004, L-3 Communications, Inc. ("L-3") filed a lawsuit against the Company in the United States District Court for the District of Massachusetts in Boston, seeking declaratory judgments of non-infringement and/or invalidity of two of the Company's patents — United States Patent No. 6,292,533 and No. 5,903,623. The Company answered L-3's underlying complaint, vigorously opposing the plaintiff's non-infringement and invalidity claims, and subsequently engaged in substantial discovery. In November 2005, the Company filed a motion to dismiss the case. Pending the court's ruling, the parties have suspended discovery as to the underlying claims.

The Company is also subject to various legal proceedings and claims that arise in the ordinary course of business. At the present time, it is not possible to predict the outcome of these matters; however, the Company currently believes that resolving these matters will not have a material adverse impact on its financial condition, results of operations, or cash flows.

ITEM 4. SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matter was submitted to a vote of the Company's security holders during the fourth quarter of the fiscal year covered by this report.

PART II

ITEM 5. MARKET FOR THE COMPANY'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the NASDAQ National Market under the symbol ASEI. Prior to October 6, 2004, our common stock was traded on the American Stock Exchange. The market price range for the common stock for the last two fiscal years as reported on the NASDAQ National Market or American Stock Exchange, as applicable, is as follows:

Fiscal Year	Quarter Ended	High	Low
2006	March 31, 2006	\$ 93.86	\$ 59.83
	December 31, 2005	74.95	52.33
	September 30, 2005	73.05	36.50
2005	June 30, 2005	45.79	35.95
	March 31, 2005	\$ 49.50	\$ 32.40
	December 31, 2004	44.50	27.60
	September 30, 2004	33.65	18.15
	June 30, 2004	22.50	13.05

As of May 30, 2006, there were approximately 828 holders of record of the Company's common stock.

No cash dividends have been declared in the two most recent fiscal years and the Company does not contemplate paying any dividends in the immediate future. The Company's credit facility restricts the payment of dividends (except in shares of the Company's stock) without the consent of the bank.

EQUITY COMPENSATION PLAN INFORMATION

The following table provides information about the Company's stock option plans and the common stock that may be issued upon the exercise of options and rights under all existing equity compensation plans as of March 31, 2006.

Plan category	Number of securities to be issued upon exercise of outstanding options and rights as of March 31, 2006 (a)	Weighted-average exercise price of outstanding options and rights (b)	Number of securities remaining available for future issuance under equity compensation plans as of March 31, 2006 (excluding securities reflected in column(a))
Equity compensation plans approved by security holders:			
1995 Combination Plan	19,466	\$ 14.36	—
1999 Combination Plan	78,667	\$ 17.95	—
2000 Combination Plan	91,933	\$ 30.30	—
2002 Combination Plan	185,804	\$ 26.83	250
2003 Stock Plan for Non-Employee Directors	118,485	\$ 40.23	2,515
2005 Equity and Incentive Plan	303,147	\$ 54.69	438,070
Equity compensation plans not approved by security holders:			
1996 Plan for Non-Employee Directors	7,000	\$ 13.06	—
1997 Non-Qualified Option Plan	44,811	\$ 23.25	—
1998 Non-Qualified Option Plan	49,722	\$ 29.72	—
Total	<u>899,035</u>	<u>\$ 37.17</u>	<u>440,835</u>

The Company did not repurchase any of its securities during fiscal 2006.

ITEM 6. SELECTED FINANCIAL DATA

The following selected financial data is qualified by reference to, and should be read in conjunction with, the consolidated financial statements, including the notes thereto, and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” included elsewhere in this Annual Report.

Fiscal Year	2006	2005	2004	2003	2002
	(Dollars in thousands, except per share amounts)				
Net sales and contract revenues	\$ 163,604	\$ 88,314	\$ 76,342	\$ 61,958	\$ 65,396
Net income (loss)	29,786	11,185(1)	1,911	(7,951)	(4,512)
Income (loss) per share—diluted	3.27	1.31	0.26	(1.20)	(0.87)
Total assets	173,389	98,287	55,803	47,316	50,241
Stockholders’ equity	130,198	61,570	38,433	32,358	23,129

(1) Includes a gain of \$5,442,000 on the sale of certain assets of the Company’s High Energy Systems division.

ITEM 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

This Management’s Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with our consolidated financial statements and notes thereto which appear elsewhere in this Annual Report on Form 10-K. The following discussion contains forward-looking statements and should also be read in conjunction with the “Cautionary Statement” included at the beginning of this Annual Report on Form 10-K.

2006 COMPARED TO 2005

Overview American Science and Engineering, Inc. develops and manufactures state-of-the-art X-ray inspection systems for homeland security and other critical defense applications. The Company’s primary technologies are: 1) Z Backscatter technology which is used to detect plastic explosives, illegal drugs, and other contraband even when artfully concealed in complex backgrounds; and 2) Shaped Energy X-ray inspection systems which combine the material discrimination features of Z Backscatter with the penetration capability of high-energy X-rays for dense cargos.

The Company in fiscal 2006 focused on its core mission — providing innovative X-ray and other inspection solutions in targeted markets, while delivering superior growth in shareholder value over the long term. In its focus on innovation, the Company expended its research and development resources on the design of modifications to its existing products and the development of product alternatives to continue to bring leading edge products to its customers. In focusing on shareholder value, the Company focused on improving its sales and marketing infrastructure, controlling overhead costs, and reducing production costs to improve margins.

Net sales and contract revenues for fiscal 2006 increased by 85% to \$163,604,000 compared to fiscal 2005 revenues of \$88,314,000. The Company reported net income before taxes of \$45,769,000 in fiscal 2006 compared to a net income before taxes of \$11,267,000 in the previous fiscal year. Net income for fiscal 2006 was \$29,786,000 (\$3.27 per share on a diluted basis) as compared to a net income of \$11,185,000 (\$1.31 per share on a diluted basis) in fiscal 2005. Backlog at March 31, 2006 was \$68,840,000, a 5% decrease from the backlog of \$72,098,000 reported at the previous fiscal year end, due primarily to the fulfillment during fiscal 2006 of certain orders received in fiscal 2005; and the Company’s enhanced ability to fulfill customer orders more efficiently in 2006.

Results of Operations Total net sales and contract revenues of \$163,604,000 in fiscal 2006 increased by \$75,290,000 or 85% from the previous year. Revenues related to product sales and contracts increased by \$59,164,000 or 86% due primarily to increased revenues of approximately \$52,408,000 in sales of Z Backscatter Systems. These systems continued to experience high order volume in fiscal 2006 from the federal government customer base and experienced increased international demand. Revenues on the Company’s CargoSearch systems increased \$8,401,000 from fiscal 2005 due primarily to a large follow-on order from one customer. After-market parts revenues increased by \$3,704,000 to \$10,588,000 due primarily to orders received for spares to accompany new system installations. These product revenue increases were offset by a \$906,000 decrease in ParcelSearch product revenues attributable to lower unit sales and a decrease in revenues of \$4,267,000 related to the Company’s former High Energy Systems division, which was sold in the fourth quarter of fiscal 2005. Service revenues increased in fiscal 2006 by \$16,124,000 or 83% to \$35,528,000 due to increases in service contract revenues related to the increased shipments of systems in 2005 and 2006.

In fiscal 2006, 86% of the Company's revenues were from domestic customers as compared to 85% in fiscal 2005. In fiscal 2006, the Company had sales to two customers which accounted for 56% of total sales. In fiscal year 2005, the Company had sales to three major customers which accounted for 43% of total sales.

Cost of sales and contracts of \$85,406,000 in fiscal 2006 increased by \$27,580,000 or 48% from the previous year. Cost of product sales and contracts of \$65,374,000 increased by \$18,300,000 or 39% as compared to the prior year. Cost of product sales and contracts totaled 51% of revenues in fiscal 2006 as compared to 68% of revenues in fiscal 2005. This decrease is primarily attributable to the Company's efforts in reducing direct product costs, to production efficiencies associated with higher volume manufacturing, and to continued strong sales from the Company's higher margin products. The cost of service revenues increased \$9,280,000 or 86% from the prior year. Cost of service revenues totaled 56% of revenues in fiscal 2006 as compared to 55% of revenues in fiscal 2005.

Selling, general, and administrative expenses in fiscal 2006 increased by \$5,355,000 to \$19,642,000 compared to fiscal 2005 and represented 12% of revenues in fiscal 2006 as compared to 16% of revenues in fiscal 2005. This increase in spending can be attributed to increases in incentive compensation costs (\$2,444,000) related to the bonuses and stock compensation earned during the period, increased salaries and payroll related costs (\$359,000) as the Company increased its sales and marketing capabilities, increased marketing costs (\$722,000), increased insurance related costs (\$451,000) attributable to the increased revenues, increased travel and telephone expenditures (\$410,000), increases in expenses related to the Company's ongoing ERP system implementation project (\$188,000), increased audit expenditures (\$232,000) attributable to the change in auditors during the year and Sarbanes-Oxley compliance costs, and increased legal expenditures (\$625,000) related to ongoing litigation expenses and other corporate initiatives. Offsetting these increases was a decrease in general and administrative costs of \$638,000 associated with the Company's High Energy Systems division, which was sold in the fourth quarter of fiscal 2005.

Company funded research and development spending increased by \$3,874,000 to \$9,601,000 in fiscal 2006, a 68% increase compared to the \$5,727,000 spent in fiscal 2005. Research and development spending remained constant at 6% of revenues in both fiscal 2006 and fiscal 2005. In fiscal 2006, the Company continued to focus on design modifications to its existing products and the development of product alternatives to continue to bring innovative products to its customers.

In January 2005, the Company completed an agreement to sell certain assets, comprised of inventory, fixed assets, intellectual property, and certain revenue producing contracts of its High Energy Systems Division to Accuray, Incorporated ("Accuray"). The Company recognized a gain, net of related expenses, on the sale of these assets of \$5,442,000 which was included in income from operations in the year ended March 31, 2005. In fiscal 2006 an additional \$336,000 in gain was recognized related to this sale as the Company adjusted certain reserves for warranty exposure established at the time of sale due to favorable warranty experience in the current year.

Other income (expense) was \$3,522,000 in expense in fiscal 2006 as compared to \$4,649,000 in expense in fiscal 2005. Interest income increased by \$1,938,000 due to increased funds available for investment in higher return investment vehicles. This increase in other income was offset by \$6,094,000 related to the fair value mark to market charge associated with outstanding warrants issued as part of a private placement of common stock in May of 2002. During fiscal 2005, this mark to market adjustment resulted in \$5,101,000 in expense.

The Company reported pre-tax income of \$45,769,000 in fiscal 2006 as compared to a pre-tax income of \$11,267,000 in the previous fiscal year primarily due to the increased revenues and expense reductions noted above. The Company recorded income tax expense of \$15,983,000 in fiscal 2006 as compared to \$82,000 in the prior fiscal year. In prior years, the Company was able to reduce its income tax expense primarily through the release of valuation allowance reserves established on tax net operating loss carryforward assets and other tax credits. During fiscal 2006, all remaining reserves were released and all tax net operating loss carryforwards were fully utilized.

The Company reported net income of \$29,786,000 in fiscal 2006 as compared to net income of \$11,185,000 in fiscal 2005.

2005 COMPARED TO 2004

Results of Operations Total net sales and contract revenues increased by \$11,972,000 or 16% in fiscal 2005 compared to fiscal 2004. Revenues related to product sales and contracts increased by \$6,462,000 or 10% due primarily to increased revenues of approximately \$31,630,000 in sales of Z Backscatter Systems. These systems were introduced as a new product with four units delivered in fiscal 2004 and forty-seven units delivered primarily to governmental clients in fiscal 2005. After-market parts revenues increased by \$4,729,000 to \$6,883,000 due primarily to a \$4.4 million order in fiscal 2005 from one customer. The Company also experienced increased revenues in the contract research and development area which earned revenues of \$2,534,000 in fiscal 2005 as compared to \$444,000 in fiscal 2004 due in part to additional funding being received on contracts initiated in fiscal 2004. These product revenue increases were offset by a \$25,539,000 decrease in CargoSearch system sales as the Company had no shipments of MobileSearch systems in fiscal 2005 as compared to \$21,525,000 in revenue in fiscal 2004. This decrease in demand was attributable to a shift in focus to the Company's Z Backscatter System to address the customer's current mobile security requirements. In addition,

the Company's CargoSearch products experienced a \$4,014,000 decrease in revenues related to the completion of a major program in fiscal 2005 which contributed significantly to 2004 revenues. The Company's ParcelSearch products experienced a \$3,633,000 decrease in revenue to \$12,848,000 in fiscal 2005 as the Company continued to see this sector of the business have decreasing demand. Revenues from the Company's High Energy Systems division decreased by \$2,814,000 from 2004 due in part to the sale of certain major contracts of this division in the fourth quarter of fiscal 2005. Service revenues increased in fiscal 2005 by \$5,510,000 or 40% to \$19,404,000 due to increases in service contract revenues related to the increased shipments of systems in 2004 and 2005.

In fiscal 2005, 85% of the Company's revenues were from domestic customers as opposed to 88% in fiscal 2004. In fiscal 2005, the Company had sales to three major customers which accounted for 43% of total sales. In fiscal year 2004, the Company had sales to two major customers which accounted for 34% of total sales.

Cost of sales and contracts of \$57,826,000 in fiscal 2005 increased by \$1,418,000 or 3% from the previous year. Cost of product sales and contracts decreased by \$602,000 or 1% as compared to the prior year. Cost of product sales and contracts totaled 68% of revenues in fiscal 2005 as compared to 76% of revenues in fiscal 2004. This decrease was primarily attributable to the Company's efforts in reducing direct product costs and to a shift in mix from lower margin products to those with higher gross margins. In addition, in fiscal 2004, a \$1,979,000 loss was recognized on a contract recognized on a percentage of completion basis which did not incur the same losses in fiscal 2005. The cost of service revenues increased by \$2,020,000 or 23% in fiscal 2005 as compared to fiscal 2004. Cost of service revenues totaled 55% of revenues in fiscal 2005 as compared to 63% of revenues in fiscal 2004. Service margins improved as the Company entered into several large service contracts in fiscal 2005, replacing certain unprofitable service contracts and time and material service arrangements.

Selling, general and administrative expenses increased by \$2,639,000 to \$14,287,000 compared to fiscal 2004 and represented 16% of revenues in fiscal 2005 as compared to 15% of revenues in fiscal 2004. This increase can be attributed to increases in incentive compensation costs (\$953,000) related to the achievement of Company objectives, increased salaries and payroll related costs (\$990,000) as the Company increased its sales and marketing capabilities, increased marketing costs (\$121,000), and increased insurance related costs (\$114,000).

Company funded research and development spending increased \$192,000 to \$5,727,000 in fiscal 2005, a 3% increase compared to the \$5,535,000 spent in fiscal 2004. Research and development spending was 6% of revenues in fiscal 2005 as compared to 7% of revenues in fiscal 2004. In fiscal 2005, the Company continued to focus on design modifications to its existing products and the development of product alternatives to continue to bring innovative products to its customers.

In January 2005, the Company completed an agreement to sell certain assets comprised of inventory, fixed assets, intellectual property, and certain revenue producing contracts of its High Energy Systems Division to Accuray, Incorporated ("Accuray"). The sales price for the assets totaled \$8,300,000 of which \$5,500,000 was received in cash and \$2,800,000 in the form of a promissory note, \$2,000,000 of which was secured by a letter of credit. The note receivable bore an interest rate of 7% and matured in January of 2006. The Company recognized a gain, net of related expenses, on the sale of these assets of \$5,442,000 which was included in income from operations in the year ended March 31, 2005.

Other income (expense) was \$4,649,000 in expense in fiscal 2005 as compared to \$931,000 in expense in fiscal 2004. Interest income increased by \$468,000 due to increased cash available for investment in higher return investment vehicles. This increase in other income was offset by a charge of \$5,101,000 related to the fair value mark to market charge associated with outstanding warrants issued as part of a private placement of common stock in May of 2002. During fiscal 2004, this mark to market adjustment resulted in \$1,273,000 in expense.

The Company reported pre-tax income of \$11,267,000 in fiscal 2005 as compared to a pre-tax income of \$1,820,000 in the fiscal 2004 primarily due to the increased revenues and expense reductions noted above. The Company utilized certain net operating loss carryforwards and tax credits fully reserved for in prior periods to reduce its fiscal 2005 effective tax rate. The provision for income taxes recorded for fiscal year 2005 represented liabilities for alternative minimum taxes and foreign taxes. At March 31, 2005, the Company had deferred tax assets of \$9,740,000. The Company had applied over the last two years a full valuation allowance against its deferred tax assets. The Company evaluated its required valuation allowance at March 31, 2005 based upon its three year cumulative income and its projections of future income, and determined that it was more likely than not that its deferred tax asset would not be realized. As such, it maintained a full valuation allowance on its deferred tax asset at March 31, 2005.

The Company reported net income of \$11,185,000 in fiscal 2005 as compared to net income of \$1,911,000 in fiscal 2004.

LIQUIDITY AND CAPITAL RESOURCES

Cash and cash equivalents at year-end increased by \$35,237,000 to \$50,655,000 at March 31, 2006 as compared to \$15,418,000 at March 31, 2005. Cash flow provided by operations of \$50,662,000 resulted from the following:

- Reported net income of \$29,786,000 adjusted for non-cash items of depreciation and amortization of \$989,000, provisions for inventory, accounts receivable, and unbilled reserves of \$2,673,000, gain on sale of assets of \$336,000, and a change in the value of warrants issued of \$6,094,000.
- The reduction of income taxes payable of \$10,515,000 due to tax benefits received from employee stock option exercises.
- The deferral of \$5,627,000 in deferred income taxes. Offsetting this was a \$2,715,000 reversal of certain deferred tax asset valuation allowances related to net operating losses from prior years.
- A decrease in inventories of \$5,248,000 as inventory acquired for backlogged orders at March 31, 2005 was delivered in fiscal 2006.
- A decrease in accounts receivable of \$2,408,000 from the prior year due primarily to the collection in fiscal 2006 of a number of large past due receivables outstanding at March 31, 2005.
- An increase in accrued expenses and other current liabilities of \$4,358,000 due primarily to incentive compensation accruals.
- An increase in prepaid expenses and other assets of \$5,566,000 due primarily to the prepayment of estimated taxes during the year.
- The decrease in customer deposits of \$5,029,000 as milestones received on one large percentage of completion contract in fiscal 2005 were earned during the current fiscal year.
- The increase in unbilled costs and fees of \$3,338,000 due to the timing of milestone payments on certain contracts accounted for on a percentage of completion basis.

Net cash of \$30,612,000 was used for investing activities in fiscal 2006. Fiscal 2006 capital expenditures totaled \$11,224,000 versus \$2,691,000 for fiscal 2005. Investments in fixed assets were comprised primarily of information technology, leasehold improvements related to the Company's 2006 facilities expansion, and furniture and fixtures. The Company invested \$61,334,000 in short-term investments during the year and had maturities of \$39,146,000 on short-term investments. In addition, the Company received \$2,800,000 in cash proceeds upon repayment of a note receivable related to the sale of certain assets of the Company's High Energy Systems division.

Net cash provided by financing activities was \$15,190,000 in fiscal 2006. Cash was provided primarily by proceeds of \$11,972,000 received from the exercise of employee stock options and the exercise of warrants held by outside investors. In addition, the Company received \$3,339,000 in financing from its landlord for leasehold improvements related to its corporate facilities expansion. Restricted cash decreased by \$257,000 from the prior year as certain stand-by letters of credit collateralized by cash expired during the year.

On November 30, 2004, the Company modified its two credit agreements with Silicon Valley Bank East. The modifications extended the credit facilities which expired on November 30, 2004 through November 29, 2006 and reduced the export loan and security facility, guaranteed by the Export-Import Bank of the United States, from \$20.0 million to \$10.0 million. The domestic facility is a \$5.0 million domestic loan and security agreement to support the Company's routine working capital needs. Maximum borrowings for this facility are set at the lower of (a) the sum of 80% of eligible domestic accounts receivable plus 10% of finished goods inventory up to \$750,000, or (b) \$5 million.

The credit facilities bear an interest rate of the greater of 4.0% or the Silicon Valley Bank prime rate (7.75% at March 31, 2006). The credit agreements are collateralized by certain assets of the Company and contain certain restrictions, including limitations on distributions in excess of \$100,000 that can be made to stockholders, and the disposition or encumbrances of assets, and require the maintenance of certain financial covenants. As of March 31, 2006, the Company was in compliance with these covenants.

At March 31, 2006, there were no borrowings outstanding against these credit facilities. The Company had outstanding \$813,000 in stand-by letters of credit against the domestic facility and \$454,000 in stand-by letters of credit against the export facility. Of the outstanding letters of credit, \$300,000 relates to the Company's building lease and the remainder is guaranteeing performance on certain international projects. No amounts have been drawn against these letters of credit. In addition at March 31, 2006, the Company has a restricted cash balance of \$98,000 related to certain bank required deposits for outstanding letters of credits, bid bonds, and other bank-related fees.

In recent years, the Company has funded its operations and capital expenditures with cash generated by operations, including deposits from customers on long-term projects, from proceeds received from stock issuances and option exercises, and from lines of credit available to the Company. The Company currently has no debt outstanding and believes that its cash flows from operations, cash and investments on hand, and available lines of credit are sufficient to meet the current and foreseeable operating requirements of the Company's business.

Contractual Obligations The Company leases various office equipment and facilities under non-cancelable leases. In addition, in the normal course of business, the Company enters into purchase orders with its vendors for the purchase of materials or services to meet its production needs. The following table summarizes the Company's contractual obligations as of March 31, 2006.

	Total	Less than 1 year	1-3 years	3-5 years	After 5 years
Recorded Contractual Obligations:					
Lease financing liability	\$ 10,417	\$ 787	\$ 1,655	\$ 1,922	\$ 6,053
Other long-term obligations	69	17	35	17	—
Unrecorded Contractual Obligations:					
Operating Leases	1,437	153	288	288	708
Purchase Commitments	4,498	4,395	100	3	—
Total	<u>\$ 16,421</u>	<u>\$ 5,352</u>	<u>\$ 2,078</u>	<u>\$ 2,230</u>	<u>\$ 6,761</u>

Inflation The Company does not believe that inflation has had a material effect on its results of operations. There can be no assurance, however, that the Company's business will not be affected by inflation in the future.

CRITICAL ACCOUNTING POLICIES

The Company considers certain accounting policies related to revenue recognition, inventories, allowances for obsolete and excess inventory, warrant liability, and income taxes to be critical policies due to the estimation processes involved in each.

Revenue Recognition The Company derives a portion of its revenue from fixed-price contracts, which require the accurate estimation of the cost and scope of each contract. The Company's fixed-site CargoSearch systems are sold under fixed-price arrangements. Revenue is recognized using percentage of completion accounting, generally using the Company's best estimate of total costs to measure the percent complete with revisions to estimates reflected in the period identified.

The Company recognizes certain other CargoSearch system sales and other product revenue in accordance with SEC Staff Accounting Bulletin No. 101, Revenue Recognition in Financial Statements ("SAB 101"), modified by Emerging Issues Task Force No. 00-21, Revenue Arrangements with Multiple Deliverables, and Staff Accounting Bulletin No. 104, Revenue Recognition ("SAB 104") which requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services rendered; (3) the fee is fixed and determinable; and (4) collectibility is reasonably assured. Determination of criteria (3) and (4) are based on management's judgments regarding the fixed nature of the fee charged for services rendered and products delivered, and the collectibility of those fees. Should changes in conditions cause management to determine these criteria are not met for certain future transactions, revenue recognized for any reporting period could be adversely affected. In those instances where the Company enters into agreements involving multiple revenue elements, the agreement is divided into separate elements of accounting, the arrangement consideration is allocated to these elements based on fair value, and revenue recognition is considered separately for each individual element. The Company recognizes field service revenues as services are performed and generally recognizes revenues under maintenance contracts on a straight-line basis over the contract period which reasonably approximates the period under which the services are rendered. Revenues received in advance of services being rendered are deferred until such services have been provided.

Certain of the Company's products are covered by a warranty for a one-year period. The Company accrues a warranty reserve for estimated costs to provide warranty services. The Company's estimate of costs to service its warranty obligations is based on historical experience and management's expectations of future conditions. To the extent the Company experiences increased warranty claim activity or increased costs associated with servicing those claims, its warranty accrual will increase resulting in decreased gross profit.

Inventories and Related Allowance for Obsolete and Excess Inventory Inventories consist of material, labor, and manufacturing overhead and are recorded at the lower of cost or net realizable value. Excessive manufacturing overhead costs such as idle facility expense, freight, handling costs, and wasted material (spoilage) attributable to abnormally low volumes (levels that materially differ from budgeted production plans due primarily to changes in customer demand) are excluded from inventory and recorded as an expense in the period incurred. The Company regularly reviews inventory quantities on hand and records a provision for excess and obsolete inventory based primarily on the estimated forecast of product demand over the next twelve to eighteen months. Demand for products can fluctuate significantly. A significant increase in the demand for the Company's products could result in a short-term increase in inventory balances, while a significant decrease in demand could result in an increase in the amount of excess

inventory quantities on hand. Additionally, inventory reserves require estimates of future product demand, which may materially impact the provision required for excess and obsolete inventory. In the future, if inventory were determined to be overvalued, the Company would be required to recognize such costs in its cost of goods sold at the time of such determination. Likewise, if inventory is determined to be undervalued, the Company may have over-reported costs of goods sold in previous periods and would be required to recognize such additional operating income at the time of sale. Therefore, although the Company makes every effort to ensure the accuracy of forecasts of future product demand, any significant unanticipated changes in demand or technological developments could have a significant impact on the value of its inventory and reported operating results.

Warrant Liability In fiscal 2003, the Company issued 295,475 warrants in connection with a private placement offering of common stock. As of March 31, 2006, 57,075 of these warrants remain outstanding. These warrants can be exchanged for cash under certain circumstances including a merger, sale or tender offer of the Company, and as such the Company recorded the fair value of these warrants as a long-term liability on the balance sheet. The fair value of these warrants is adjusted each period with the resulting gain or loss recorded as other income (expense) in the statement of operations. The Black-Scholes method is used to value the warrants, and the calculation requires the use of estimates for stock price volatility and interest rates. The Black-Scholes value of these warrants can fluctuate significantly based on the current fair market value of the Company's common stock, changes in interest rates, or changes in the volatility of the Company's stock price.

Income Taxes The Company accounts for income taxes in accordance with SFAS No. 109, "Accounting for Income Taxes." Accordingly, the Company recognizes deferred income taxes based on the expected future tax consequences of differences between the financial statement basis and the tax basis of assets and liabilities, calculated using enacted tax rates in effect for the year in which the differences are expected to be reflected in the tax return. The Company evaluates the need for a valuation allowance against its net deferred tax assets at year end based upon its three year cumulative income and its projections of future income, and records a valuation allowance against any net deferred tax assets if it is more likely than not that they will not be realized.

NEW ACCOUNTING PRONOUNCEMENTS

In December 2004, the Financial Accounting Standards Board ("FASB") issued Statement of Financial Accounting Standards ("SFAS") No. 123(R), "Share-Based Payment," which establishes accounting standards for all transactions in which an entity exchanges its equity instruments for goods and services. SFAS 123(R) revises SFAS No. 123, "Accounting for Stock-Based Compensation," supercedes Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," and amends Financial Accounting Standard No. 95, "Statement of Cash Flows." SFAS No. 123(R) generally requires the Company to measure the cost of employee services received in exchange for an award of equity instruments based on the fair value of the award on the date of the grant. The standard requires the fair value on the grant date to be estimated using either an option-pricing model which is consistent with the terms of the award, or a market observed price, if such a price exists. The resulting cost must be recognized over the period during which an employee is required to provide service in exchange for the award, which is usually the vesting period. In April 2005, the SEC deferred the effective date for SFAS 123(R) to the beginning of the first fiscal year that begins after June 15, 2005. The Company expects to adopt SFAS 123(R) on the effective date on a modified prospective basis without restatement of prior period. As a result of SFAS 123(R), the Company currently expects that income from continuing operations will decrease by approximately \$5,862,000 in 2007. This amount represents the net of tax expense for existing stock option awards that will vest during 2007 and does not reflect any new awards or modifications to existing awards that could occur in the future. Future stock based compensation will be impacted by additional grants, forfeiture rates, and stock price volatility, among other factors.

In December 2004, the FASB issued SFAS No.151, "Inventory Costs," which amends part of Accounting Research Bulletin ("ARB") No. 43, "Inventory Pricing," concerning the treatment of certain types of inventory costs. The provisions of ARB No. 43 provided that certain inventory-related costs, such as double freight and re-handling, might be "so abnormal" that they should be charged against current earnings rather than be included in the cost of inventory. As amended by SFAS No. 151, the "so abnormal" criterion has been eliminated. Thus, all such abnormal costs are required to be treated as current period charges under all circumstances. In addition, fixed production overhead should be allocated based on the normal capacity of the production facilities, with unallocated overhead charged to expense when incurred. SFAS 151 is required to be adopted for fiscal years beginning after June 15, 2005. The Company does not believe its adoption will have a material impact on its results of operations, financial position, and cash flows.

In December 2004, the FASB issued a FASB Staff Position ("FSP") 109-1, "Application of FASB Statement No. 109 'Accounting for Income Taxes' to the Tax Deduction on Qualified Production Activities Provided by the American Jobs Creation Act of 2004". The new act provides for a special tax deduction on qualified production activities income that effectively reduces the Company's tax rate. The FASB has decided that these amounts should be recorded as a special deduction and recorded in the year earned. The Company does not believe that the adoption of this FSP statement will have a material impact on the Company's consolidated financial statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company is subject to interest rate risk on its credit facilities, which have variable interest rates tied to the Prime Rate. As of March 31, 2006, the Company had no variable interest rate debt outstanding. See Note 3 of Notes to Consolidated Financial Statements for a discussion of our long-term indebtedness.

The cash accounts for the Company's operations in Hong Kong, England, and Abu Dhabi are maintained in Hong Kong dollars, pounds sterling, and dirhams, respectively. Foreign currency accounts are marked to market at current rates that resulted in immaterial translation adjustments to stockholders' equity. The gains and losses from foreign currency transactions are included in the statement of operations for the period and were also immaterial. A hypothetical 10% change in foreign currency rates would not have a material impact on the Company's results of operations or financial position.

As of March 31, 2006, the Company holds short-term investments consisting of money market funds and U.S. government and government agency bonds. The Company's primary objective with its investment portfolio is to invest available cash while preserving principal and meeting liquidity needs. These investments have an average interest rate of approximately 4.6% and are subject to interest rate risk. As a result of the average maturity and conservative nature of the investment portfolio, a sudden change in interest rates would not have a material adverse effect on the value of these investments.

In fiscal 2003, the Company issued 295,475 warrants in connection with a private placement offering of common stock. As of March 31, 2006, 57,075 of these warrants remain outstanding. These warrants can be exchanged for cash under certain circumstances including a merger, sale or tender offer of the Company, and as such a liability equal to Black-Scholes value of the warrants is recorded on the balance sheet. Changes in the fair value of the warrants are recorded as other income (expense). The Black-Scholes value of these warrants can fluctuate significantly based on the current fair market value of the Company's common stock. A 10% change in the fair market value of the Company's common stock, holding other assumptions constant, would have approximately a \$532,000 positive or negative impact on earnings.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements and supplementary financial information listed in the Index to Consolidated Financial Statements on page 32 are filed as part of this Annual Report on Form 10-K and are incorporated into this Item by reference.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

On November 3, 2005, PricewaterhouseCoopers LLP ("PwC") resigned as the Company's independent registered public accounting firm upon completion of its procedures on the Company's unaudited interim financial statements as of and for the three and six-month periods ended September 30, 2005 and the Form 10-Q in which such unaudited interim financial statements would be included. The reports of PwC on the financial statements for the years ended March 31, 2005 and 2004 contained no adverse or disclaimer of opinion and were not qualified or modified as to uncertainty, audit scope, or accounting principle. Except for the material weakness in internal control over financial reporting described in this paragraph, during the years ended March 31, 2005 and 2004, and through November 3, 2005, the Company did not have any reportable events within the meaning of Item 304(a)(1)(v) of Regulation S-K. The Company and PwC reported a material weakness in the Company's internal control over financial reporting in the Company's Annual Report on Form 10-K for the year ended March 31, 2005. That Annual Report stated the Company did not maintain effective controls over the review and monitoring of the accounting presentation on the sale of long-lived assets, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

During the years ended March 31, 2005 and 2004 and through November 3, 2005, there were no disagreements with PwC on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements if not resolved to the satisfaction of PwC would have caused PwC to make reference thereto in its reports on the financial statements of the Company for such years.

On December 13, 2005, the Audit Committee of the Board of Directors of American Science and Engineering, Inc. (the "Company") engaged Vitale, Caturano & Company, Ltd. ("Vitale") as its independent registered public accounting firm to audit the Company's consolidated financial statements and internal control over financial reporting as of and for the year ending March 31, 2006. The Company did not consult with Vitale during the two most recent fiscal years and through December 13, 2005 regarding either the application of accounting principles to a specific transaction, either completed or proposed, or the type of audit opinion that might be rendered on the consolidated financial statements of the Company, as well as any matters or reportable events described in Items 304(a)(2)(i) or (ii) of Regulation S-K.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

As of the end of the period covered by this report, under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, the Company reviewed and evaluated the effectiveness of the Company's disclosure controls and procedures pursuant to Rules 13a-15(e) and 15d-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Based upon their evaluation, our Chief Executive Officer and our Chief Financial Officer concluded that our disclosure controls and procedures were effective as of March 31, 2006 to ensure that information required to be disclosed by the Company in the reports filed and submitted by it under the Exchange Act is recorded, processed, summarized, and reported within the time period specified in the Securities and Exchange Commission's rules and forms, and to provide reasonable assurance that information required to be disclosed by the Company in such reports is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate to allow timely decisions regarding required disclosure.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Our management conducted an evaluation of the effectiveness of our internal control over financial reporting using the framework in "Internal Control-Integrated Framework" issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this evaluation under the criteria established in "Internal Control—Integrated Framework", our management concluded that the Company's internal control over financial reporting was effective as of March 31, 2006. Vitale, Caturano & Company, Ltd., our independent registered public accounting firm, has audited management's assessment of the effectiveness of the Company's internal control over financial reporting and the effectiveness of our internal control over financial reporting as of March 31, 2006, and has issued their report which is included herein.

Changes in Internal Controls over Financial Reporting

There have been no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Securities Exchange Act of 1934, during the quarter ended March 31, 2006 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE COMPANY

CODE OF CONDUCT

The Company has adopted a Code of Conduct that applies to our Board of Directors, Chief Executive Officer, Chief Financial Officer, and all employees of the Company. The Company's Code of Conduct is posted on our website at www.as-e.com and may be accessed in the Corporate Governance section of the Investor Information page. The Company intends to satisfy the disclosure requirement under Item 10 of Form 8-K, regarding an amendment to, or waiver from, our Code of Conduct by posting such information on our website at the location specified above.

The other information called for by this item is hereby incorporated by reference from the Registrant's Definitive Proxy Statement relating to the 2006 Annual Meeting of Stockholders, which Proxy Statement will be filed with the Securities and Exchange Commission on or about July 28, 2006.

ITEM 11. EXECUTIVE COMPENSATION

The information called for by this item is hereby incorporated by reference from the Registrant's Definitive Proxy Statement relating to the 2006 Annual Meeting of Stockholders, which Proxy Statement will be filed with the Securities and Exchange Commission on or about July 28, 2006.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information called for by this item is hereby incorporated by reference from the Registrant's Definitive Proxy Statement relating to the 2006 Annual Meeting of Stockholders, which Proxy Statement will be filed with the Securities and Exchange Commission on or about July 28, 2006.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information called for by this item is hereby incorporated by reference from the Registrant's Definitive Proxy Statement relating to the 2006 Annual Meeting of Stockholders, which Proxy Statement will be filed with the Securities and Exchange Commission on or about July 28, 2006.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information called for by this item is hereby incorporated by reference from the Registrant's Definitive Proxy Statement relating to the 2006 Annual Meeting of Stockholders, which Proxy Statement will be filed with the Securities and Exchange Commission on or about July 28, 2006.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

The financial statements listed in the Index to Consolidated Financial Statements on page 33 are filed as part of this report, and such Index is incorporated in this Item by reference.

The exhibits listed in the Exhibit Index on page 54 are filed as part of this report, and such Index is incorporated in this Item by reference.

AMERICAN SCIENCE AND ENGINEERING, INC. AND SUBSIDIARY
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

(Submitted in answer to Item 8, Item 9A, and Item 15 of Form 10-K, Securities and Exchange Commission)

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CONSOLIDATED FINANCIAL STATEMENTS

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Financial statement schedules have been omitted because of the absence of conditions under which they are required or because the required information is given in the financial statements or notes thereto.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
American Science and Engineering, Inc.:

We have audited the accompanying consolidated balance sheet of American Science and Engineering, Inc. and subsidiary as of March 31, 2006 and the related consolidated statements of operations, stockholders' equity and comprehensive income, and cash flows for the year then ended. We also have audited management's assessment, included in the accompanying Management's Report on Internal Control over Financial Reporting, appearing under item 9A, that American Science and Engineering, Inc. and subsidiary maintained effective internal control over financial reporting as of March 31, 2006, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). American Science and Engineering, Inc.'s management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express an opinion on these financial statements, an opinion on management's assessment, and an opinion on the effectiveness of the company's internal control over financial reporting based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, and whether effective internal control over financial reporting was maintained in all material respects. Our audit of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of American Science and Engineering, Inc. and subsidiary as of March 31, 2006 and the results of their operations and their cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America. Also, in our opinion, management's assessment that American Science and Engineering, Inc. maintained effective internal control over financial reporting as of March 31, 2006 is fairly stated, in all material respects, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Furthermore, in our opinion, American Science and Engineering, Inc. maintained, in all material respects, effective internal control over financial reporting as of March 31, 2006, based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

/s/ Vitale, Caturano & Company, Ltd.

VITALE, CATURANO & COMPANY, LTD.

June 9, 2006

Boston, Massachusetts

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of
American Science and Engineering, Inc.:

In our opinion, the accompanying consolidated balance sheet as of March 31, 2005 and the related consolidated statements of operations, stockholders' equity and comprehensive income and cash flows for each of two years in the period ended March 31, 2005 present fairly, in all material respects, the financial position of American Science and Engineering, Inc. and subsidiary at March 31, 2005, and the results of their operations and their cash flows for each of the two years in the period ended March 31, 2005, in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used, and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Boston, Massachusetts

June 17, 2005

American Science and Engineering, Inc. and Subsidiary
Consolidated Balance Sheets
March 31, 2006 and 2005

(Amounts in thousands, except share and per share amounts)

	2006	2005
Assets		
Current assets:		
Cash and cash equivalents	\$ 50,655	\$ 15,418
Restricted cash and investments	98	355
Short-term investments	43,117	20,590
Accounts receivable, net of allowances of \$345 in 2006 and \$501 in 2005	25,868	28,170
Unbilled costs and fees, net of allowances of \$36 in 2006 and \$76 in 2005	4,057	691
Note receivable	—	2,800
Inventories	16,886	24,941
Prepaid expenses and other current assets	9,862	1,957
Deferred income taxes	3,381	—
Total current assets	153,924	94,922
Building, equipment and leasehold improvements, net	18,717	3,329
Deferred income taxes	748	—
Other assets, net	—	36
Total assets	<u>\$ 173,389</u>	<u>\$ 98,287</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	\$ 6,659	\$ 6,743
Accrued salaries and benefits	6,554	3,158
Accrued warranty costs	3,606	2,322
Deferred revenue	3,331	3,634
Customer deposits	6,103	11,132
Current portion of lease financing liability	787	—
Other current liabilities	1,853	3,001
Total current liabilities	28,893	29,990
Lease financing liability, net of current portion	9,630	—
Warrant liability	4,038	6,137
Other long term liabilities	630	590
Total liabilities	<u>43,191</u>	<u>36,717</u>
Commitments and contingencies (Notes 2 and 8)		
Stockholders' equity:		
Preferred stock, no par value		
Authorized—100,000 shares		
Issued—None	—	—
Common stock, \$0.66 ² / ₃ par value		
Authorized—20,000,000 shares		
Issued and outstanding 9,070,679 shares in 2006 and 8,341,480 shares in 2005	6,047	5,560
Capital in excess of par value	94,061	54,098
Accumulated other comprehensive income	(16)	(12)
Unearned compensation	(1,773)	(169)
Retained earnings	31,879	2,093
Total stockholders' equity	<u>130,198</u>	<u>61,570</u>
Total liabilities and stockholders' equity	<u>\$ 173,389</u>	<u>\$ 98,287</u>

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

American Science and Engineering, Inc. and Subsidiary
Consolidated Statements of Operations
For the Years Ended March 31, 2006, 2005, and 2004
(Amounts in thousands except per share amounts)

	2006	2005	2004
Net sales and contract revenues:			
Net product sales and contract revenues	\$ 128,076	\$ 68,910	\$ 62,448
Net service revenues	<u>35,528</u>	<u>19,404</u>	<u>13,894</u>
Total net sales and contract revenues	<u>163,604</u>	<u>88,314</u>	<u>76,342</u>
Cost of sales and contracts:			
Cost of product sales and contracts	65,374	47,074	47,676
Cost of service revenues	<u>20,032</u>	<u>10,752</u>	<u>8,732</u>
Total cost of sales and contracts	<u>85,406</u>	<u>57,826</u>	<u>56,408</u>
Gross profit	<u>78,198</u>	<u>30,488</u>	<u>19,934</u>
Selling, general and administrative expenses	19,642	14,287	11,648
Research and development costs	9,601	5,727	5,535
Gain on sale of assets	<u>(336)</u>	<u>(5,442)</u>	<u>—</u>
Operating expenses	<u>28,907</u>	<u>14,572</u>	<u>17,183</u>
Operating income	<u>49,291</u>	<u>15,916</u>	<u>2,751</u>
Other income (expense):			
Interest and investment income	2,513	575	107
Interest expense	(24)	—	—
Other, net	83	(123)	235
Change in warrant valuation	<u>(6,094)</u>	<u>(5,101)</u>	<u>(1,273)</u>
Total other income (expense)	<u>(3,522)</u>	<u>(4,649)</u>	<u>(931)</u>
Income before provision for (benefit from) income taxes	45,769	11,267	1,820
Provision for (benefit from) income taxes	15,983	82	(91)
Net income	<u>\$ 29,786</u>	<u>\$ 11,185</u>	<u>\$ 1,911</u>
Income per share—Basic	\$ 3.48	\$ 1.41	\$ 0.27
—Diluted	\$ 3.27	\$ 1.31	\$ 0.26
Weighted average shares—Basic	8,555	7,937	7,155
—Diluted	9,113	8,565	7,345

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

American Science and Engineering, Inc. and Subsidiary
Consolidated Statements of Stockholders' Equity and Comprehensive Income
For the Years Ended March 31, 2006, 2005, and 2004
(Amounts in thousands, except share amounts)

	Common Stock		Capital in Excess of Par Value	Retained Earnings (Accumulated Deficit)	Accumulated Other Comp. Income	Unearned Compensation	Total	Comprehensive Income
	Shares	Par Value						
Balance, March 31, 2003	6,871,729	\$ 4,581	\$ 38,780	\$ (11,003)	\$ —	\$ —	\$ 32,358	\$ (7,951)
Net income	—	—	—	1,911	—	—	1,911	1,911
Exercise of stock options	477,619	318	3,220	—	—	—	3,538	—
Issuance of stock under employee compensation plans	39,698	26	374	—	—	—	400	—
Issuance of restricted stock	26,614	18	309	—	—	(327)	—	—
Translation adjustment	—	—	—	—	14	—	14	14
Amortization of unearned compensation	—	—	—	—	—	212	212	—
Balance, March 31, 2004	7,415,660	4,943	42,683	(9,092)	14	(115)	38,433	\$ 1,925
Net income	—	—	—	11,185	—	—	11,185	11,185
Exercise of stock options and warrants	900,566	600	10,749	—	—	—	11,349	—
Issuance of stock under employee compensation plans	17,296	12	424	—	—	—	436	—
Issuance of restricted stock	7,958	5	242	—	—	(247)	—	—
Translation adjustment	—	—	—	—	(2)	—	(2)	(2)
Amortization of unearned compensation	—	—	—	—	—	193	193	—
Unrealized gain (loss) on available for sale securities	—	—	—	—	(24)	—	(24)	(24)
Balance, March 31, 2005	8,341,480	5,560	54,098	2,093	(12)	(169)	61,570	\$ 11,159
Net income	—	—	—	29,786	—	—	29,786	29,786
Exercise of stock options and warrants	695,777	465	19,700	—	—	—	20,165	—
Issuance of stock under employee compensation plans	9,344	6	484	—	—	—	490	—
Issuance of restricted stock	24,078	16	2,135	—	—	(2,151)	—	—
Tax benefit accrued on stock option exercises	—	—	17,540	—	—	—	17,540	—
Compensation expense on stock options	—	—	104	—	—	—	104	—
Translation adjustment	—	—	—	—	(3)	—	(3)	(3)
Amortization of unearned compensation	—	—	—	—	—	547	547	—
Unrealized gain (loss) on available for sale securities	—	—	—	—	(1)	—	(1)	(1)
Balance, March 31, 2006	9,070,679	\$ 6,047	\$ 94,061	\$ 31,879	\$ (16)	\$ (1,773)	\$ 130,198	\$ 29,782

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

American Science and Engineering, Inc. and Subsidiary
Consolidated Statements of Cash Flows
For the Years Ended March 31, 2006, 2005, and 2004
(Amounts in thousands)

	2006	2005	2004
Cash flows from operating activities:			
Net income	\$ 29,786	\$ 11,185	\$ 1,911
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	989	1,234	1,612
Provisions for contracts, inventory, and accounts receivable reserves	2,673	2,057	988
Gain on sale of assets	(336)	(5,442)	—
Change in value of warrants	6,094	5,101	1,273
Realized gain on short-term investments	—	(8)	(51)
Amortization of bond discount	(356)	(95)	—
Stock compensation expense	651	193	212
Deferred income taxes	5,627	—	—
Reduction of income taxes paid due to the tax benefit from employee stock option exercises	10,515	—	—
Reversal of deferred tax asset valuation allowance relating to the utilization of tax net operating losses	(2,715)	—	—
Change in assets and liabilities:			
Accounts receivable	2,408	(13,650)	(4,299)
Unbilled costs and fees	(3,338)	3,722	(125)
Inventories	5,248	(16,660)	3,397
Prepaid expenses and other assets	(5,566)	(67)	(966)
Accounts payable	(84)	3,053	(1,637)
Deferred revenue	(212)	1,577	(135)
Customer deposits	(5,029)	6,713	1,672
Accrued expenses and other current liabilities	4,358	3,476	1,696
Non-current liabilities	(51)	7	(57)
Total adjustments	20,876	(8,789)	3,580
Net cash provided by operating activities	50,662	2,396	5,491
Cash flows from investing activities:			
Proceeds from maturities of short-term investments	39,146	9,987	5,063
Purchases of short-term instruments	(61,334)	(28,653)	(2,319)
Proceeds from sale of assets	2,800	5,500	—
Purchases of property and equipment	(11,224)	(2,691)	(462)
Disposals of property and equipment	—	127	12
Cash provided by (used for) investing activities	(30,612)	(15,730)	2,294
Cash flows from financing activities:			
Decrease in restricted cash and investments	257	230	1,310
Proceeds from financing of leasehold improvements	3,339	—	—
Repayment of leasehold financing	(378)	—	—
Proceeds from exercise of warrants	1,854	1,743	—
Proceeds from exercise of stock options	10,118	8,549	3,538
Cash provided by financing activities	15,190	10,522	4,848
Foreign currency translation effect on cash	(3)	(2)	14
Net increase (decrease) in cash and cash equivalents	35,237	(2,814)	12,647
Cash and cash equivalents at beginning of year	15,418	18,232	5,585
Cash and cash equivalents at end of year	\$ 50,655	\$ 15,418	\$ 18,232
Supplemental disclosures of cash flow information:			
Interest paid	\$ 24	\$ —	\$ —
Income taxes paid	\$ 7,598	\$ 166	\$ —
Non-cash transactions:			
Issuance of stock for 401K match	\$ 490	\$ 436	\$ 400
Issuance of restricted stock	\$ 2,151	\$ 247	\$ 327
Assumption of debt / lease financing receivable	\$ 2,303	\$ —	\$ —
Note receivable in exchange for sale of assets	\$ —	\$ 2,800	\$ —
Fair value of warrants exercised	\$ 8,193	\$ 1,057	\$ —

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

American Science and Engineering, Inc. and Subsidiary
Notes to Consolidated Financial Statements

1. NATURE OF OPERATIONS AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

American Science and Engineering, Inc. (the "Company") is engaged in the development and manufacture of sophisticated X-ray inspection systems for critical detection and security screening solutions for sale primarily to U.S. and foreign government agencies.

Principles of Consolidation: The consolidated financial statements include the accounts of the Company and its wholly owned subsidiary. All significant inter-company balances and transactions have been eliminated in consolidation.

Use of Estimates: The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Reclassifications: Certain amounts in the prior period financial statements have been reclassified to conform to the current period presentation.

Cash and Cash Equivalents: The Company considers all investments with original maturities of 90 days or less to be cash equivalents. The Company maintains cash and cash equivalent balances with financial institutions that exceed federally insured limits. The Company has not experienced any losses related to these balances, and management believes its credit risk to be minimal. Cash and cash equivalents are carried at cost, which approximates fair market value at year-end 2006 and 2005. The Company has repurchase agreements with its banks. The repurchase agreements are collateralized by investments principally consisting of U.S. Government Agency securities in the amount of at least 100% of such obligation.

Restricted Cash and Investments: The Company's Export and Security Agreements with its banks require certain cash and investment balances to be restricted as collateral against outstanding standby letters of credit. The restricted cash amounts with Silicon Valley Bank are in the form of certificates of deposits that mature beyond 90 days.

Short-term Investments: Short-term investments consist of investments in money market funds and U.S government and government agency bonds. These investments are classified as available-for-sale and are recorded at their fair market values. The unrealized holding gains or losses on these securities are included as a component of comprehensive income in the Consolidated Statements of Stockholders' Equity and Comprehensive Income.

Accounts Receivable: The allowance for doubtful accounts reflects our best estimate of probable losses inherent in the accounts receivable balance. We determine the allowance based on known troubled accounts, historical experience, and other currently available evidence. Activity in the allowance for doubtful accounts is as follows (in thousands):

	Balance at Beginning of Year	Charged (Credited) to Costs and Expenses	Deductions/Writeoffs Charged to Reserves	Balance at End of Year
2006	\$ 501	\$ (106)	\$ 50	\$ 345
2005	\$ 250	\$ 251	\$ —	\$ 501
2004	\$ 246	\$ 27	\$ 23	\$ 250

In fiscal 2006, the Company had a net credit to bad debt expense as it collected on certain accounts receivable balances which were significantly aged and deemed to be uncollectible at March 31, 2005.

Inventories: Inventories consist of material, labor, and manufacturing overhead and are recorded at the lower of cost, using the weighted average cost method, or net realizable value. Excessive manufacturing overhead costs attributable to idle facility expenses, freight, handling costs, and wasted material (spoilage) attributable to abnormally low production volumes (levels that materially differ from budgeted production plans due primarily to changes in customer demand) are excluded from inventory and recorded as an expense in the period incurred.

The components of inventories at March 31, 2006 and 2005 were as follows (in thousands):

	2006	2005
Raw materials, completed subassemblies and spare parts	\$ 6,856	\$ 12,763
Work-in-process	6,325	5,458
Finished goods	3,705	6,720
	<u>\$ 16,886</u>	<u>\$ 24,941</u>

The Company periodically reviews quantities of inventory on hand and compares these amounts to expected usage of each particular product or product line. The Company records, as a charge to cost of sales, any amounts required to reduce the carrying value to net realizable value.

Building, Equipment, and Leasehold Improvements: The Company provides for depreciation and amortization of its fixed assets on a straight-line basis over estimated useful lives of 3-11 years or remaining lease terms. Expenditures for normal maintenance and repairs are charged to expense as incurred. Significant additions, renewals, or betterments that extend the useful lives of the assets are capitalized at cost. The cost and accumulated depreciation applicable to equipment and leasehold improvements sold, or otherwise disposed of, are removed from the accounts, and any resulting gain or loss is included in the consolidated statements of operations.

Building, equipment, and leasehold improvements consisted of the following at March 31 (in thousands):

	Estimated Useful Lives	2006	2005
Building and leasehold improvements	Lesser of 11 years or remaining lease term	\$ 14,380	\$ 2,117
Equipment and tooling	3-10 years	2,465	2,251
Computer equipment and software	3-5 years	10,268	7,791
Furniture and fixtures	5-7 years	1,272	1,023
Demo and test equipment	3-7 years	3,122	1,948
Motor vehicles	3 years	<u>18</u>	<u>18</u>
Total		31,525	15,148
Less accumulated depreciation and amortization		<u>(12,808)</u>	<u>(11,819)</u>
Building, equipment and leasehold improvements, net		<u>\$ 18,717</u>	<u>\$ 3,329</u>

Revenue Recognition: The Company recognizes certain CargoSearch and Z Backscatter system sales and other product revenue, primarily ParcelSearch systems and after-market parts, in accordance with SEC Staff Accounting Bulletin ("SAB") No. 101, Revenue Recognition in Financial Statements modified by Emerging Issues Task Force ("EITF") No. 00-21 and SAB No. 104, which requires that four basic criteria must be met before revenue can be recognized: (1) persuasive evidence of an arrangement exists; (2) delivery has occurred or services rendered; (3) the fee is fixed and determinable; and (4) collectibility is reasonably assured. In those instances where the Company enters into agreements involving multiple revenue elements, the agreement is divided into separate elements of accounting, the arrangement consideration is allocated to these elements based on fair value, and revenue recognition is considered separately for each individual element. Revenues on cost reimbursable and long-term fixed price contracts are generally recorded as costs are incurred using the percentage of completion method. These contracts are for custom-built systems or contract engineering projects, and the length of these contracts typically range from 9 to 24 months from order to delivery and acceptance. Percentages-of-completion are determined by relating the actual costs of work performed to date for each contract to its estimated final costs. Revisions in costs and profit estimates are reflected in the period in which the facts causing the revision become known.

Certain contracts require payments from the customer upon execution of the agreement that are included in customer deposits. Individual customer deposits are reduced by the amount of revenue recognized on the contract until a zero balance is reached. Revenue recognized in excess of billings or customer deposits under the contracts is included in unbilled costs and fees in the accompanying balance sheet. The amounts in unbilled costs and fees at March 31, 2006 are expected to be billed and collected during fiscal 2007.

For all fixed price contracts, if a loss is anticipated on the contract, a provision is made in the period in which such losses are determined.

Under the terms of certain of its cost reimbursement contracts, the Company is not permitted to bill customers a specified portion of the contract value until completion. Such retainages (approximately \$77,000 and \$42,000 at March 31, 2006 and 2005, respectively) result from both commercial contract retentions and government contract withholdings generally for up to 15% of fees, as well as the difference between the actual and provisional indirect cost billing rates. Retainages are included in the accompanying consolidated balance sheets as components of unbilled costs and fees. The accuracy and appropriateness of the Company's direct and indirect costs and expenses under these cost reimbursement contracts and, therefore, its accounts receivable recorded pursuant to such contracts, are subject to regulation and audit, including by the U.S. Defense Contract Audit Agency ("DCAA") or by other appropriate agencies of the U.S. Government. Such agencies have the right to challenge the Company's cost estimates or allocations with respect to any government contract. Additionally, a portion of the payments to the Company under government contracts are provisional payments that are subject to potential adjustment upon audit by such agencies. Historically, such audits have not resulted in any significant disallowed costs. Although the Company can give no assurances, in the opinion of management, any adjustments likely to result from inquiries or audits of its contracts will not have a material adverse impact on the Company's financial condition or results of operations.

The Company recognizes sales for its systems that are produced in a standard manufacturing operation and have shorter order to delivery cycles at the time of shipment of the system to the customer and when other revenue recognition criteria are met. The costs of installation at the customer's site are accrued at the time of shipment. Management believes the customer's post-delivery acceptance provisions and installation are perfunctory and inconsequential. The Company has never failed to successfully complete a system installation. Installation is non-complex and does not require specialized skills; the related costs are predictable and insignificant to the total purchase price. The Company has demonstrated a history of customer acceptance subsequent to shipment and installation of these systems.

Service revenues are recognized on time and materials engagements as the services are provided. Service contract revenues are recognized on a straight-line basis over the length of the contract, which reasonably approximates the period service revenues are earned.

The Company records billed shipping and handling fees and billed out-of-pocket expenses as revenue and the associated costs as cost of goods sold in the accompanying consolidated statements of operations.

Included in accounts receivable and unbilled costs and fees at March 31, 2006 and 2005 are \$24,241,000 and \$27,405,000, respectively, attributable to both prime and subcontracts with federal and state governments. The Company establishes a reserve against unbilled costs and fees based on known troubled accounts or contracts, historical experience, and other currently available evidence. Activity in the allowance for unbilled costs and fees is as follows (in thousands):

	Balance at Beginning of Year	Charged (Credited) to Costs and Expenses	Deductions/Writeoffs Charged to Reserves	Balance at End of Year
2006	\$ 76	\$ (28)	\$ 12	\$ 36
2005	\$ 394	\$ 55	\$ 373	\$ 76
2004	\$ 437	\$ —	\$ 43	\$ 394

In fiscal 2006, the Company had a net credit to bad debt expense as it collected on certain unbilled receivable balances which were significantly aged and deemed to be uncollectible at March 31, 2005.

Warranty Costs: The Company generally provides on certain of its products a one year parts and labor warranty with the purchase of domestic equipment, and a one year parts only warranty with international equipment. The anticipated cost for this one year warranty is accrued for at the time of the sale based upon historical experience and management's estimates of future liabilities, and is recorded as accrued warranty costs (See Note 5).

Deferred Revenue: The Company offers to its customers extended warranty and service contracts. The coverage period of these contracts will typically range from one to five years, and typically with advance payments that are recorded as deferred revenue. Revenue is recognized on a straight-line basis over the life of the contract, which reasonably approximates the period these revenues are earned. Costs associated with these extended warranty and service contracts are expensed to cost of goods sold as incurred.

Impairment of Long-Lived Assets: Long-lived assets are reviewed for possible impairment whenever events or changes in circumstances indicate that the carrying amount of such assets may not be recoverable in accordance with SFAS No. 144, Accounting for the Impairment and Disposal of Long-Lived Assets.

Impairment is assessed by comparing the estimated undiscounted cash flows over the asset's remaining life to the carrying amount of the asset. If the estimated cash flows are insufficient to recover the investment, an impairment loss is recognized based on the difference between the carrying value of the asset and the fair value of the asset less any costs of disposal.

Accrued Salaries and Benefits: Accrued salaries and benefits at March 31, 2006 and March 31, 2005 include the following (in thousands):

	2006	2005
Accrued payroll and payroll related taxes	\$ 461	\$ 415
Accrued benefits	166	143
Accrued bonus	4,799	1,673
Accrued vacation	1,128	927
	<u>\$ 6,554</u>	<u>\$ 3,158</u>

Customer Deposits: For most international orders, the Company generally includes, as part of its terms and conditions, an advance deposit with order acceptance. For long-term international contracts, the Company will generally include milestone payments tied to a specific event and/or passage of time. These deposit amounts are recorded as a liability under Customer Deposits until reduced by revenue recognized against the specific contract.

Deferred Rent: The Company has a lease for its office and manufacturing facilities, which includes escalation clauses. Accounting principles generally accepted in the United States of America require the rental expense to be recorded on a straight-line basis over the life of the lease, resulting in deferred rent being reflected in the accompanying consolidated balance sheets.

Research and Development: Internally funded research and development costs including direct labor, material, subcontractor expenses, and related overheads are expensed as incurred. Internally funded research and development costs were \$9,601,000, \$5,727,000, and \$5,535,000 in fiscal 2006, 2005, and 2004, respectively. In addition, the Company recognized revenues of \$2,804,000, \$2,534,000, and \$444,000, in fiscal 2006, 2005, and 2004, respectively related to government-sponsored research and development earned primarily on a cost reimbursement basis as discussed above.

Fair Value of Financial Instruments: The Company's financial instruments consist primarily of cash and cash equivalents, short-term investments, accounts receivable, unbilled costs and fees, accounts payable, warrant liability, and letters of credit. The carrying amounts of these instruments approximate fair value.

Income Per Common and Potential Common Shares: Basic earnings per common share is computed by dividing net income available to common stockholders by the weighted average number of shares of common stock outstanding during the year. Diluted earnings per share include the dilutive impact of options and warrants using the average share price of the Company's common stock for the period. For the years ended March 31, 2006, 2005, and 2004, respectively, 72,000, 42,000, and 875,000 shares attributable to the exercise of outstanding options and warrants are excluded from diluted earnings per share, as their effect is anti-dilutive.

	Year Ended		
	March 31, 2006	March 31, 2005 (in thousands)	March 31, 2004
Weighted average number of common shares outstanding—basic	8,555	7,937	7,155
Assumed exercise of stock options and warrants, using the treasury stock method	<u>558</u>	<u>628</u>	<u>190</u>
Weighted average number of common and potential common shares outstanding—diluted	<u>9,113</u>	<u>8,565</u>	<u>7,345</u>

Income Taxes: The Company accounts for income taxes in accordance with Statement of Financial Accounting Standards ("SFAS") No. 109, "Accounting for Income Taxes." Accordingly, the Company recognizes deferred income taxes based on the expected future tax consequences of differences between the financial statement basis and the tax basis of assets and liabilities, calculated using enacted tax rates in effect for the year in which the differences are expected to be reflected in the tax return. The Company records a valuation allowance against any net deferred tax assets if it is more likely than not that they will not be realized.

Pro Forma Stock-Based Compensation Expense: As permitted by SFAS No. 123, "Accounting for Stock-Based Compensation," the Company has elected to continue to apply Accounting Principles Board ("APB") Opinion No. 25, "Accounting for Stock Issued to Employees," to account for its stock-based compensation plans. Had compensation cost for outstanding awards in 2006, 2005, and 2004 under the Company's stock-based compensation plans been determined based on the fair value at the grant dates consistent with

the method set forth under SFAS No. 123, the effect on the Company's net income (loss) and income (loss) per share would have been as follows (in thousands except per share amounts):

	2006	2005	2004
Net income:			
As reported	\$ 29,786	\$ 11,185	\$ 1,911
Add: Stock based compensation recognized in earnings	651	193	212
Less: Stock based compensation using fair value method for all awards	(9,234)	(5,623)	(3,676)
Pro forma	<u>\$ 21,203</u>	<u>\$ 5,755</u>	<u>\$ (1,553)</u>
Income (loss) per share—Basic:			
As reported	\$ 3.48	\$ 1.41	\$ 0.27
Pro forma	\$ 2.48	\$ 0.73	\$ (0.22)
Income (loss) per share—Diluted:			
As reported	\$ 3.27	\$ 1.31	\$ 0.26
Pro forma	\$ 2.34	\$ 0.67	\$ (0.22)

The fair value of each option granted was estimated on the grant date using the Black-Scholes option pricing model with the following weighted average assumptions: risk-free interest rates of 3.4% for fiscal year 2006, 3.7% to 5.0% for fiscal year 2005, and 5.0% for fiscal 2004; an expected volatility of 53%, 73%, and 72%, for fiscal years 2006, 2005, and 2004, respectively; an expected dividend yield of 0% in all periods; and an expected life of 3 years, 5 years, and 7 years for fiscal 2006, 2005, and 2004, respectively.

New Accounting Pronouncements: In December 2004, the Financial Accounting Standards Board (“FASB”) issued SFAS No. 123(R), “Share-Based Payment” (SFAS 123(R)) which establishes accounting standards for all transactions in which an entity exchanges its equity instruments for goods and services. SFAS 123(R) revises SFAS No. 123, supercedes APB No. 25, and amends Financial Accounting Standard No. 95, “Statement of Cash Flows.” SFAS No. 123(R) generally requires the Company to measure the cost of employee services received in exchange for an award of equity instruments based on the fair value of the award on the date of the grant. The standard requires the fair value on the grant date to be estimated using either an option-pricing model which is consistent with the terms of the award or a market observed price, if such a price exists. The resulting cost must be recognized over the period during which an employee is required to provide service in exchange for the award, which is usually the vesting period. In April 2005, the SEC deferred the effective date for SFAS 123(R) to the beginning of the first fiscal year that begins after June 15, 2005. The Company expects to adopt SFAS 123(R) on the effective date on a modified prospective basis without restatement of prior periods. As a result of SFAS 123(R), the Company currently expects that income from continuing operations will decrease by approximately \$5,862,000 in 2007. This amount represents the expense for existing stock option awards that will vest during 2007 and does not reflect any new awards or modifications to existing awards that could occur in the future. Future stock based compensation will be impacted by additional grants, forfeitures rates, and stock price volatility, among other factors.

In December 2004, the FASB issued SFAS No. 151, “Inventory Costs,” which amends part of Accounting Research Bulletin (“ARB”) No. 43, “Inventory Pricing,” concerning the treatment of certain types of inventory costs. The provisions of ARB No. 43 provided that certain inventory-related costs, such as double freight and re-handling, might be “so abnormal” that they should be charged against current earnings rather than be included in the cost of inventory. As amended by SFAS No. 151, the “so abnormal” criterion has been eliminated. Thus, all such abnormal costs are required to be treated as current-period charges under all circumstances. In addition, fixed production overhead should be allocated based on the normal capacity of the production facilities, with unallocated overhead charged to expense when incurred. SFAS No. 151 is required to be adopted for fiscal years beginning after June 15, 2005. The Company does not believe its adoption will have a material impact on its results of operations, financial position, and cash flows.

In December 2004, the FASB issued a FASB Staff Position (FSP) 109-1, Application of FASB 109 to the Tax Deduction on Qualified Production Activities provided by the American Jobs Creation Act of 2004. The new act provides for a special tax deduction on qualified production activities income that effectively reduces the Company's tax rate. The FASB has decided that these amounts should be recorded as a special deduction, and recorded in the year earned. The Company does not believe that the adoption of this FSP statement will have a material impact on the Company's consolidated financial statements.

2. LEASE AGREEMENTS

The Company leases certain equipment under operating lease arrangements and facilities under non-cancelable operating leases with various renewal options. For operating leases which contain fixed escalations in rental payments, the Company records the total rent payable on a straight-line basis over the original lease term as defined in SFAS 98, "Accounting for Leases." Deferred rent, included in other non-current liabilities in the accompanying balance sheet, represents the difference between rent expense computed on a straight-line basis and actual cash payments for rent. The Company incurred \$634,000, \$1,226,000, and \$1,115,000 of operating rent expense in 2006, 2005, and 2004 respectively. The security deposits on these leases amount to \$27,000 in cash deposits at March 31, 2006. In conjunction with the Company's lease for its headquarters, the Company has issued security in the form of a standby letter of credit in the amount of \$300,000 with an original expiration date of March 1, 2006 and contains automatic extensions through May 15, 2016.

In March 2005, the Company renewed its lease agreement for its corporate headquarters and manufacturing facilities in Billerica, Massachusetts. As part of the lease agreement, the Company's landlord agreed to certain renovations to the Billerica facility including the construction of additional high bay manufacturing space. The Company was responsible for a portion of the construction costs and was deemed to be the owner of the building during the construction period under EITF 97-10, "The Effect of Lessee Involvement in Asset Construction". During the year ended March 31, 2006, the Company capitalized \$5,153,000 to record the facility on its books with an offsetting credit to the Lease financing liability. In addition, amounts paid for construction were recorded as construction in progress and the landlord construction allowances of \$5,642,000 (of which \$2,303,000 was receivable at year end) were recorded as additional lease financing liability.

At the completion of the construction in February 2006, the lease was reviewed for potential sale-leaseback treatment in accordance with SFAS No. 98. Based on this review, it was determined that the lease did not qualify for sale-leaseback treatment in accordance with SFAS No. 98. As a result, building and tenant improvement and associated lease financing liabilities will remain on the Company's books. The Lease financing liability will be amortized over the lease term based on the payments designated in the agreement, and the building and tenant improvement assets will be depreciated on a straight line basis over their useful lives.

Future minimum rental payments under the Company's non-cancelable leases, excluding real estate taxes, insurance, and operating costs paid by the Company, required over the initial terms of the leases are as follows (in thousands):

Year Ending March 31,	Operating Leases	Capital Leases
2007	\$ 153	\$ 1,145
2008	144	1,145
2009	144	1,146
2010	144	1,156
2011	144	1,270
Thereafter	708	6,620
Total payments	<u>\$ 1,437</u>	12,482
Imputed interest		(2,065)
Lease financing liability		\$ 10,417
Less: Current portion of lease financing liability		787
Lease financing liability, net of current portion		<u>\$ 9,630</u>

3. LINE OF CREDIT

On November 30, 2004, the Company modified its two credit agreements with Silicon Valley Bank East. The modifications extended the credit facilities which expired on November 30, 2004 through November 29, 2006 and reduced the export loan and security facility, guaranteed by the Export-Import Bank of the United States, from \$20.0 million to \$10.0 million. The domestic facility is a \$5.0 million domestic loan and security agreement to support the Company's routine working capital needs. Maximum borrowings for this facility are set at the lower of (a) the sum of 80% of eligible domestic accounts receivable plus 10% of finished goods inventory up to \$750,000 or; (b) \$5 million.

The credit facilities bear an interest rate of the greater of 4.0% or the Silicon Valley Bank prime rate (7.75% at March 31, 2006). The credit agreements are collateralized by certain assets of the Company and contain certain restrictions, including limitations on distributions in excess of \$100,000 that can be made to stockholders, and the disposition or encumbrances of assets, and require the maintenance of certain financial covenants. As of March 31, 2006, the Company was in compliance with these covenants.

At March 31, 2006, there were no borrowings outstanding against these credit facilities. Under the terms of the credit agreements, the Company was required to pay certain one-time facility fees which are being amortized over the lives of the facilities and is required to pay a fee of 0.50% quarterly on unused amounts under the line of credits. Total expense incurred related to these fees were \$172,000, \$300,000, and \$190,000, in fiscal 2006, 2005, and 2004, respectively.

The Company had outstanding \$813,000 in stand-by letters of credit against the domestic facility and \$454,000 in stand-by letters of credit against the export facility. Of the outstanding letters of credit, \$300,000 relates to the Company's building lease and the remainder is guaranteeing performance on certain international projects. No amounts have been drawn against these letters of credit. In addition at March 31, 2006, the Company has a restricted cash balance of \$98,000 related to certain bank required deposits related to outstanding letters of credits, bid bonds, and other bank-related fees.

4. INCOME TAXES

The provision for (benefit from) income taxes for the years ended March 31, 2006, 2005, and 2004 consisted of the following (in thousands):

	2006	2005	2004
Current:			
Federal	\$ 11,388	\$ 46	\$ —
State	1,653	6	(123)
Foreign	30	30	32
	<u>13,071</u>	<u>82</u>	<u>(91)</u>
Deferred			
Federal	5,090	—	—
State	537	—	—
Change in Valuation Allowance	(2,715)	—	—
	<u>2,912</u>	<u>—</u>	<u>—</u>
Total	<u>\$ 15,983</u>	<u>\$ 82</u>	<u>\$ (91)</u>

The difference between the total expected provision for (benefit from) income taxes computed by applying the statutory federal income tax rate to income before provision for (benefit from) income taxes and the recorded provision for (benefit from) income taxes for the three years in the period ended March 31, is as follows (in thousands):

	2006	2005	2004
Provision for (benefit from) income taxes at statutory rate	\$ 16,019	\$ 3,944	\$ 619
State tax provision (benefit) net of federal effect	1,424	4	(90)
Permanent tax differences for non-deductible expenses/ non-taxable income	2,133	1,808	455
Research tax credits	(226)	(25)	(60)
Effect of ETI exclusion	(678)	(70)	(85)
Change in valuation allowance	(2,715)	(5,380)	(940)
Qualifying manufacturing credits	(189)	—	—
Other	215	(199)	10
Provision for (benefit from) income taxes	<u>\$ 15,983</u>	<u>\$ 82</u>	<u>\$ (91)</u>

During fiscal 2006, the prior year deferred tax valuation allowance of \$9,740,000 was reversed, due to the determination by the Company that the benefits of the deferred tax asset will more likely than not be realized in the current and future years. The prior year valuation allowance was established by a combination of prior year operating activities and the exercise of non-qualified stock options

and disqualifying dispositions of incentive stock options by employees. The amount that related to prior year operating activities totaled \$2,715,000 and was recorded as a reduction of current year income tax expense. The amount that related to the exercise of stock options of \$7,025,000 was recorded as a component of equity in accordance with the provisions of APB No. 25 and SFAS No. 109.

The significant components of the net deferred tax assets at March 31, 2006 and 2005 are as follows (in thousands):

	2006		2005	
	Current	Non-current	Current	Non-current
Assets:				
Net operating loss carry forwards	\$ —	\$ 3	\$ —	\$ 4,206
Accounts receivable and unbilled costs and fees	147	—	289	—
Inventory	1,468	—	1,419	—
Deferred revenue	—	131	—	215
Accrued vacation	338	—	271	—
Accrued warranty costs	1,396	—	903	—
Research & development and other tax credits	—	—	—	2,052
Depreciation	—	470	—	341
Unearned compensation	—	144	—	—
Other	32	—	20	24
Deferred income tax assets	3,381	748	2,902	6,838
Valuation allowance	—	—	(2,902)	(6,838)
Net deferred income taxes	<u>\$ 3,381</u>	<u>\$ 748</u>	<u>\$ —</u>	<u>\$ —</u>

Included in prepaid expenses at March 31, 2006 is \$5,157,000 of prepaid taxes for estimated tax payments made during the course of the year, which are refundable as the Company experienced greater than anticipated tax benefits from exercises of stock options during the latter half of the fiscal year which have reduced the Company's taxable income.

5. WARRANTY OBLIGATIONS

Certain of the Company's products carry a one-year warranty, the costs of which are accrued for at time of shipment or delivery. Accrual rates are based upon historical experience over the preceding twelve months and management's judgment of future exposure. Warranty experience for the years ended March 31, 2006 and 2005 is as follows (in thousands):

	2006	2005
Warranty accrual at beginning of period	\$ 2,322	\$ 699
Accruals for warranties issued during the period	2,816	2,979
Warranty costs incurred during period	(1,532)	(1,356)
Warranty accrual at end of period	<u>\$ 3,606</u>	<u>\$ 2,322</u>

6. STOCKHOLDERS' EQUITY

Preferred Stock: The Company's articles of organization authorize its Board of Directors to issue up to 100,000 shares of preferred stock in one or more series, to determine and fix certain relative rights and preferences of the shares of any series, to fix the number of shares constituting any such series, and to fix the designation of any such series, without further vote or action by its shareholders. The Company has no present plans to issue shares of preferred stock. In 1998, the Company designated a series of Preferred Stock as Series A Junior Participating Cumulative Preferred Stock (the "Series A Preferred Stock") to be issued upon the exercise of Rights issued under the Company's Shareholder Rights Plan. Under the Shareholder Rights Plan, adopted in 1998, its stockholders are entitled to purchase shares of its Series A Preferred Stock under certain circumstances. These circumstances include the purchase of 15% or more of the outstanding shares of common stock by a person or group, or the announcement of a tender or exchange offer to acquire 15% or more of the outstanding common stock.

Common Stock and Warrant Offering: On May 28, 2002, the Company closed on a private placement offering of common stock and warrants. A total of 1,115,000 shares were sold to accredited investors at a price of \$17.64 each. In addition, warrants to purchase an additional 295,475 shares of common stock at a price of \$23.52 were issued. Proceeds to the Company approximated \$18.4 million, net of approximately \$1.3 million of issuance costs of which \$3.1 million was assigned to the warrants issued. The warrants were immediately vested and have a five-year life expiring in May of 2007. Due to certain conversion features of these warrants that provide that the holder may opt for a cash settlement in certain instances, including a merger, a sale of all or substantially all of the Company's assets, or a tender offer or exchange offer of shares of the Company's stock, a liability equal to the Black-Scholes valuation of the warrants at the deal closing date was recorded on the Company's balance sheet. The "mark to market" change in the warrants valuation of \$6,094,000, \$5,101,000, and \$1,273,000 was recorded as other expense for the years ended March 31, 2006, March 31, 2005, and March 31, 2004, respectively. The liability of \$4,038,000 and \$6,137,000 representing the fair market value of outstanding warrants at period end is recorded as a non-current liability at March 31, 2006 and March 31, 2005, respectively. The fair market value of the warrants was determined using the Black-Scholes pricing model with an assumed volatility of 49% and 73% at March 31, 2006 and March 31, 2005, respectively, an interest rate of 4.6% and 3.25% at March 31, 2006 and March 31, 2005, respectively and a life equal to the remaining term of the warrants at each period end.

During the year ended March 31, 2006, warrants to purchase 78,825 shares of common stock were exercised resulting in total proceeds received of \$1,854,000. In addition, the Company issued 61,998 shares of common stock upon the cashless exercise of warrants to purchase 85,475 shares of common stock. The fair market value of the warrants at the date of exercise totaled \$8,193,000. The cash proceeds and the fair value of the liability were recorded as additional paid in capital at March 31, 2006.

Stock Option and Other Compensation Plans: The Company has various stock option and other compensation plans for directors, officers, and employees. The Company has the following stock option plans outstanding as of March 31, 2006: the 1995 Combination Plan, the 1996 Plan for Non-Employee Directors, the 1997 Non-Qualified Option Plan, the 1998 Non-Qualified Option Plan, the 1999 Combination Plan, the 2000 Combination Plan, the 2002 Combination Plan, the 2003 Stock Plan for Non-Employee Directors, and the 2005 Equity and Incentive Plan. There are 3,780,000 shares authorized under these plans. Vesting periods are at the discretion of the Board of Directors and typically range between one and three years. Options under these plans are granted at fair market value and have a term of five or ten years from the date of grant.

The Company's 2003 Stock Plan for Non-Employee Directors allows for the granting of restricted stock to non-employee directors. The Company granted 3,512 shares of restricted common stock during the year ended March 31, 2006. Stock-based compensation cost is measured on these restricted shares based on the fair value on the grant date, and is recorded as unearned compensation as a separate component of stockholders' equity, and subsequently amortized as compensation expense over the one-year vesting period.

During fiscal 2006, the Company instituted a long term incentive plan for certain key employees. The plan calls for the issuance of restricted stock and options which vest upon the achievement of certain performance based goals. A total of 20,566 shares of restricted stock and options to purchase an additional 5,933 shares were granted during the year ended March 31, 2006. These performance-based awards are subject to variable accounting. Stock-based compensation cost was measured on the restricted shares based on the fair value on the measurement date, and was recorded as unearned compensation as a separate component of stockholders' equity. This compensation cost is remeasured at each period end and is being amortized to compensation expense over the projected vesting period. Compensation expense of \$372,000 was recorded during the period on these performance based shares and options when the Company assessed that it was probable that the performance vesting condition would be met. The compensation expense was measured based on the intrinsic value of the performance awards as of March 31, 2006. The fair market value of the variable options was determined using the Black-Scholes pricing model with an assumed volatility of 53%, an interest rate of 3.4, and an expected life of three years.

Stock Option Activity: A summary of the Company's stock option activity is as follows:

	2006		2005		2004	
	Number of Shares	Weighted Average Exercise Price	Number of Shares	Weighted Average Exercise Price	Number of Shares	Weighted Average Exercise Price
Options outstanding, beginning of year	1,065,964	\$ 20.66	1,480,641	\$ 10.66	2,159,860	\$ 10.03
Options granted	378,010	55.23	507,795	31.75	485,685	11.48
Options exercised	(554,954)	18.23	(826,466)	10.34	(477,619)	7.40
Options canceled or expired	(10,550)	44.44	(96,006)	13.87	(687,285)	11.50
Options outstanding, end of year	<u>878,470</u>	<u>\$ 36.79</u>	<u>1,065,964</u>	<u>\$ 20.66</u>	<u>1,480,641</u>	<u>\$ 10.66</u>
Options exercisable, end of year	265,778	\$ 18.80	371,585	\$ 10.74	863,360	\$ 10.11
Options available for grant	440,835		87,943		586,845	
Weighted average fair value per share of options granted during the year		\$ 20.99		\$ 21.68		\$ 7.40

The following summarizes certain data for options outstanding and exercisable at March 31, 2006:

	Number of Shares	Range of Exercise Prices	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life
Options outstanding:	10,767	\$ 6.50—\$10.00	\$ 7.14	4.5
	249,003	10.01—20.00	11.96	6.9
	116,250	20.01—30.00	27.24	8.4
	74,041	30.01—40.00	38.95	8.7
	88,199	40.01—50.00	44.88	9.0
	243,810	50.01—60.00	53.65	9.1
	95,800	60.01—80.00	63.92	9.6
	600	80.01—83.02	83.02	10.0
	<u>878,470</u>		<u>\$ 36.79</u>	<u>8.4</u>
Options exercisable:	9,100	\$ 6.50—\$10.00	\$ 6.98	
	154,703	10.01—20.00	11.59	
	85,200	20.01—30.00	28.42	
	7,375	30.01—40.00	37.96	
	9,400	40.01—47.13	46.51	
	<u>265,778</u>		<u>\$ 18.80</u>	

The Company realizes a tax deduction upon the exercise of non-qualified stock options and disqualifying dispositions of incentive stock options due to the recognition of compensation expense in the calculation of its taxable income. The amount of the compensation recognized for tax purposes is based on the difference between the market value of the common stock and the option price at the date the options are exercised and/or sold. These tax benefits are credited to additional paid-in capital if it is considered more likely than not that they will be realized. No tax benefits were recorded in fiscal 2005 or 2004 as available tax benefits of \$5,115,000 and \$550,000 were offset by valuation allowances in accordance with SFAS 109. During fiscal 2006, a tax benefit of \$10,515,000 was recorded to additional paid-in capital for fiscal 2006 exercises and/or sales and an additional \$7,025,000 was recorded for prior year exercises and/or sales upon the reversal of the valuation allowance on deferred tax assets.

On April 22, 2005 American Science and Engineering, Inc. announced that its Board of Directors had accelerated the vesting of certain unvested stock options previously awarded to employees. The accelerated options were issued under various equity incentive plans maintained by the Company. The acceleration of outstanding unvested options was immediately effective on a fully-vested basis. Options held by the Chief Executive Officer, the Chief Financial Officer, all other members of management, and any other employees participating in incentive or commission compensation plans were not included in the acceleration plan. Options held by members of

the Board of Directors were also excluded from the vesting acceleration. Options to purchase approximately 193,553 shares of common stock were subject to acceleration. The Company effected this acceleration in order to provide a deserved reward to relevant employees for their significant contributions in connection with the outstanding performance of the Company. The Board of Directors determined that such action was also in the best interests of the shareholders as it believed that such plan would engender loyalty, promote equity ownership, and encourage increased future performance by the subject employee population. The Company recorded compensation expense of \$64,000 during the year ended March 31, 2006 related to these accelerated options for options exercised by individuals who terminated employment prior to the original option vesting date.

7. BUSINESS SEGMENT INFORMATION

In accordance with the provisions of SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information," the Company has determined that it has only one operating segment, the X-ray product segment. This includes X-ray detection and imaging products used primarily for the detection of illegal drugs, weapons and explosives, and smuggled goods. The equipment is purchased by sophisticated government and commercial clients focused on the detection of organic material in complex backgrounds and the ability to see the contents of containers with precision.

Geographical Data: All of the Company's export sales originate from the United States. Less than 1% of the Company's assets are in any foreign country. The following table shows the breakdown of net sales and contract revenues to foreign and domestic customers and the major regions of international activity based upon customer country of domicile (dollars in thousands):

Fiscal Year	2006		2005		2004	
Domestic	\$ 141,491	86%	\$ 75,376	85%	\$ 66,848	88%
International	22,113	14%	12,938	15%	9,494	12%
Net Sales and Contract Revenues	<u>\$ 163,604</u>	<u>100%</u>	<u>\$ 88,314</u>	<u>100%</u>	<u>\$ 76,342</u>	<u>100%</u>
Percent of International Revenue by						
Major Region:						
Middle East & Africa	50.4%		15.9%		34.2%	
Pacific Rim	36.4%		62.6%		34.4%	
Europe	11.4%		21.5%		29.1%	
All Other	1.8%		—%		2.3%	

Major Customers: Sales to major customers (representing in excess of 10% of consolidated revenues) consisted of the following:

Fiscal 2006: \$48,722,000 and \$43,485,000, respectively, to two customers.

Fiscal 2005: \$14,639,000, \$11,755,000, and \$11,274,000 respectively, to three customers.

Fiscal 2004: \$14,674,000 and \$11,090,000 respectively, to two customers.

Domestically, the Company's primary client base is comprised of agencies of the U.S. Government. Approximately 77%, 75%, and 77% of the Company's sales in fiscal 2006, 2005, and 2004 respectively, were derived from either (i) contracting directly with the U.S. Government, or (ii) contracting with contractors working directly with the U.S. Government. Certain of the Company's contracts with the U.S. Government provide the U.S. Government with the standard unilateral right to terminate these contracts for convenience. To date, the Company has not experienced any material losses as a result of this contractual provision.

Three customers at March 31, 2006 had accounts receivable balances representing in excess of 10% of consolidated accounts receivable. These customers, all agencies of the U.S. Government, had receivables totaling \$8,128,000 (31%), \$3,574,000 (14%), and \$2,713,000 (10%) at March 31, 2006. Three customers at March 31, 2005 had accounts receivable balances representing in excess of 10% of consolidated accounts receivable. Two of these customers, both agencies of the U.S. Government, had receivables totaling \$9,363,000 (33%) and \$2,960,000 (11%) at March 31, 2005. The third customer, a subcontractor to the U.S. Government, had a receivable totaling \$5,210,000 (18%) at March 31, 2005.

Included in unbilled costs and fees at March 31, 2006 was \$2,414,000 related to two customers, which is expected to be billed and collected during fiscal 2007. There were no individually significant unbilled costs and fees outstanding at March 31, 2005.

8. SALES OF ASSETS

In January 2005, the Company completed an agreement to sell certain assets, comprised of inventory, fixed assets, intellectual property, and certain revenue producing contracts of its High Energy Systems Division to Accuray, Incorporated ("Accuray"). The sales price for these assets totaled \$8,300,000 of which \$5,500,000 was received in cash and \$2,800,000 in the form of a promissory note (presented as note receivable in the consolidated balance sheet at March 31, 2005), \$2,000,000 of which was secured by a letter of credit. The note receivable bore an interest rate of 7% and matured in January of 2006. The Company recognized a gain on the sale of these assets of \$5,442,000, which was included in income (loss) from operations in the year ended March 31, 2005. During fiscal 2006, upon expiration of the warranty period for material sold, the unused warranty reserve of \$336,000, established at the time of sale, was reversed and is included as additional gain on sale of assets for the year ended March 31, 2006. In conjunction with this sale, certain employees of the High Energy Systems Division were employed by Accuray and the Company entered into a license agreement and a supply agreement for linear accelerators with Accuray.

9. COMMITMENTS AND CONTINGENCIES

Deferred Compensation: The Company had an unfunded deferred compensation plan, originally adopted in 1976 and amended at various times, for certain retired directors. This plan is closed such that no other directors are qualified for compensation under this plan. This plan provides for periodic payments beginning at age 65, the amount of which depends on the director's length of service. The Company paid \$17,000 in 2006, \$18,000 in 2005, and \$14,000 in 2004 under this deferred compensation plan. As of March 31, 2006 and 2005, \$69,000 and \$93,000 respectively, is accrued for under this plan.

Lease Liability: In conjunction with the sale of the High Energy Systems division in fiscal 2005 (see Note 8), the lease for the California operations of the High Energy Systems Division was assigned to Accuray. The Company remains secondarily liable for the remaining lease payments in the event of default by Accuray during the lease term which expires in February 2011. Total remaining lease payments at March 31, 2006 totaled \$1,803,000. No accrual for this contingent liability has been recorded at March 31, 2006 as payment of this expense is considered remote.

Litigation: In February 2004, L-3 Communications, Inc. ("L-3") filed a lawsuit against the Company in the United States District Court for the District of Massachusetts in Boston, seeking declaratory judgments of non-infringement and/or invalidity of two of the Company's patents — United States Patent No. 6,292,533 and No. 5,903,623. The Company answered L-3's underlying complaint, vigorously opposing the plaintiff's non-infringement and invalidity claims, and subsequently engaged in substantial discovery. In November 2005 the Company filed a motion to dismiss the case. Pending the court's ruling, the parties have suspended discovery as to the underlying claims.

The Company is also subject to various legal proceedings and claims that arise in the ordinary course of business. At the present time, it is not possible to predict the outcome of these matters; however, the Company currently believes that resolving these matters will not have a material adverse impact on its financial condition, results of operations or cash flows.

Purchase Commitments: In the normal course of business, the Company enters into purchase orders with its vendors for the purchase of materials or services to meet its production needs. At March 31, 2006, the Company had \$4,498,000 of open purchase orders which are expected to be fulfilled primarily within the next 2 years. Certain single source vendors or vendors producing custom material require significant lead times from order to delivery of their material. Should the demand for the Company's products decline significantly, or should there be a significant shift in the mix of products being demanded, the Company may incur cancellation charges related to these commitments, that could be material to the Company's results of operations. To date, the Company has not experienced any material losses related to cancellation penalties.

Employment Agreements: On September 15, 2005, the Company's Board of Directors approved a Change of Control and Termination for Convenience program for the Company's Chief Executive Officer and other members of the Company's executive staff, including its Chief Financial Officer. Under this program the Company's Chief Executive Officer, in the event of a change of control, is eligible to receive a payment equal to three times his average base salary plus his annual target bonus, the continuation of health benefits for a period of three years and the vesting of all options and restricted stock. In the event of termination without cause, the Chief Executive Officer is eligible for a payment equal to two times his average base salary and the continuation of health benefits for a period of eighteen months. The Company's other executive staff, in the event of a change of control, are eligible to receive a payment equal to one year's average base salary plus his or her annual target bonus, the continuation of health benefits for a period of three years, and the vesting of all options and restricted stock. In the event of termination without cause, the members of the executive staff are eligible to receive a payment equal to one times his or her average base salary and the continuation of health benefits for one year.

Retirement Savings Plan: The Company maintains a 401(k) Retirement Savings Plan for all employees with more than 500 hours and 6 months of credited service annually. The Plan is funded by elective employee contributions of up to 15% of their compensation. Under the Plan the Company matches 50% of employee contributions for each participant up to 3% of compensation in the form of Company common stock. Expenses under the Plan, consisting of Company contributions and Plan administrative expenses paid by the Company, totaled \$520,000, \$462,000, and \$390,000, in 2006, 2005, and 2004 respectively.

American Science and Engineering, Inc. and Subsidiary
Unaudited Quarterly Consolidated Financial Data
For the Years Ended March 31, 2006 and March 31, 2005

	2006 by quarter				2005 by quarter			
	1st	2nd	3rd	4th	1st	2nd	3rd	4th(1)
	(In thousands, except per share amounts)							
Net sales and contract revenues	\$ 35,162	\$ 49,141	\$ 38,540	\$ 40,761	\$ 16,812	\$ 21,054	\$ 23,480	\$ 26,968
Gross profit	14,592	24,776	19,374	19,456	5,138	6,997	8,509	9,844
Operating income	8,032	17,607	12,627	11,025	409	2,538	3,368	9,601
Net income (loss)	6,997	8,396	9,668	4,725	(541)	400	2,023	9,303
Net income (loss) per share								
—Basic	\$ 0.84	\$ 0.99	\$ 1.12	\$ 0.54	\$ (0.07)	\$ 0.05	\$ 0.25	\$ 1.13
—Diluted	\$ 0.78	\$ 0.93	\$ 0.95	\$ 0.51	\$ (0.07)	\$ 0.05	\$ 0.23	\$ 1.04

(1) The fourth quarter of 2005 net income includes \$5.4 million in operating income related to the gain on the sale of certain assets of Company's High Energy Systems division in January 2005.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AMERICAN SCIENCE AND ENGINEERING, INC.

DATED: June 9, 2006

By: 
Anthony R. Fabiano
President and Chief Executive Officer

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ ANTHONY R. FABIANO</u> Anthony R. Fabiano	Director and President and Chief Executive Officer (Principal Executive Officer)	June 9, 2006
<u>/s/ KENNETH J. GALAZNIK</u> Kenneth J. Galaznik	Chief Financial Officer and Treasurer (Principal Financial Officer)	June 9, 2006
<u>/s/ DENIS R. BROWN</u> Denis R. Brown	Director	June 9, 2006
<u>/s/ ROGER P. HEINISCH</u> Roger P. Heinisch	Director	June 9, 2006
<u>/s/ HAMILTON W. HELMER</u> Hamilton W. Helmer	Director	June 9, 2006
<u>/s/ ERNEST J. MONIZ</u> Ernest J. Moniz	Director	June 9, 2006
<u>/s/ WILLIAM E. ODOM</u> William E. Odom	Chairman of the Board, Director	June 9, 2006
<u>/s/ MARK S. THOMPSON</u> Mark S. Thompson	Director	June 9, 2006
<u>/s/ CARL W. VOGT</u> Carl W. Vogt	Director	June 9, 2006

EXHIBIT INDEX

Exhibit Number	Description of Exhibit (and Statement) of Incorporation by Reference, If Applicable)	Page Number (If Filed)
(3)(a)	Restated Articles of Organization of the Company (filed as an Exhibit to the Company's Annual Report on Form 10-K for the year ended September 30, 1967, and incorporated herein by reference)	
(3)(b)	Articles of Amendment to Restated Articles of Organization of Company (filed as Exhibit 2(a)(ii)(B) to the Company's Registration Statement on Form S-7, No. 2-56452, filed May 25, 1976, and incorporated herein by reference)	
(3)(c)	Articles of Amendment to Restated Articles of Organization of Company (filed as Exhibit 12 to the Company's Annual Report on Form 10-K for the year ended March 31, 1976, and incorporated herein by reference)	
(3)(d)	By-laws of Company, as amended (filed as Exhibit 2(a)(iii) to the Company's Registration Statement on Form S-7, No. 2-56452, filed May 25, 1976, and incorporated herein by reference)	
(3)(e)	Amended and Restated By-laws of American Science & Engineering, Inc. (filed as Exhibit 3.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2003, and incorporated herein by reference)	
(4)	Shareholders Rights Plan (filed as Exhibit to the Company's filing on Form dated, 1992 and incorporated herein by references)	
(4)(a)	Shareholder Rights Agreement (filed as Exhibit to the Company's filing on Form 8-A12B dated April 17, 1998 and incorporated herein by reference)	
(10)(b)(xii)	1997 Non-Qualified Stock Option Plan (filed as Exhibit 99 to the Company's Registration Statement on Form S-8, File No. 333-27927, filed on May 28, 1997 and incorporated herein by reference)	
(10)(b)(xiii)	1998 Non-Qualified Stock Option Plan (filed as Exhibit (10)(b)(xiii) to the Company's Annual Report on Form 10-K for the year ended March 31, 1998, and incorporated herein by reference)	
(10)(c)(i)	Lease of Billerica property (filed as Exhibit 10(c) to the Company's Annual Report on Form 10-K for the year ended March 31, 1995 and incorporated herein by reference)	
(10)(c)(ii)	Amendment to Lease of Billerica property (filed as Exhibit 10(c)(ii) to the Company's Annual Report on Form 10-K for the year ended March 28, 1997 and incorporated herein by reference)	
(10)(c)(iii)	Lease of 33 Manning Road, Billerica, MA (filed as Exhibit 10-1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 1999 and incorporated herein by reference)	
(10)(c)(iv)	1999 Combination Stock Option Plan (filed as Exhibit 99 to the Company's Registration Statement on Form S-8, File No. 333-91801, filed on November 30, 1999 and incorporated herein by reference)	
(10)(c)(v)	2000 Combination Stock Option Plan (filed as Exhibit 99 to the Company's Registration Statement, filed as Exhibit A to the Definitive Proxy Statement on Schedule 14A filed on August 18, 2000 and incorporated herein by reference)	
(10)(c)(vi)	2002 Combination Stock Option Plan (filed as Exhibit 99.1 to the Company's Registration Statement on Form S-8, No. 333-102338, filed on January 3, 2003 and incorporated herein by reference)	
(10)(c)(xv)	Lease of Mountain View, California facility for High Energy Systems Division (filed as Exhibit 10(c)(xv) to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2003, and incorporated herein by reference)	
(10)(c)(xvi)*	Employment Offer Letter between the Company and Anthony R. Fabiano dated August 21, 2003 (filed as Exhibit 10(c)(xv) to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003, and incorporated herein by reference)	
(10)(c)(xvii)	Second Amendment of Lease of 829 Middlesex Turnpike, Billerica, Massachusetts (filed as Exhibit 10(c)(vii) to the Company's Quarterly Report on Form 10-Q for the quarter ended December 31, 2004, and incorporated herein by reference)	
(10)(c)(xviii)	Amendment of 2002 Combination Stock Option Plan (filed as Exhibit 99.1 to the Company's Registration Statement on Form S-8, No. 333-102338, filed on January 3, 2003 and incorporated herein by reference)	
(10)(c)(xix)	2003 Stock Plan for Non-Employee Directors (filed as Exhibit 4.1 to the Company's Registration Statement on Form S-8, File No. 333-117843, filed on July 30, 2004 and incorporated herein by reference)	
(10)(c)(xx)	Amendment to 2003 Stock Plan for Non-Employee Directors (filed as Exhibit 10(c)(xx) to the Company's Annual Report on Form 10-K for the year ended March 31, 2005 and incorporated herein by reference)	
(10)(c)(xxi)	2005 Equity and Incentive Plan (filed as Exhibit 4.1 to the Company's Registration Statement on Form S-8, No. 333-129851, filed on November 21, 2005 and incorporated herein by reference)	

- (10)(c)(xxii) Change in Control & Severance Benefit Agreement between the Company and Anthony Fabiano, dated November 3, 2005 (filed herewith)
- (10)(c)(xxiii) Form of Change in Control & Severance Benefit Agreement between the Company and Named Executives (filed herewith)
- (10)(c)(xxiv) Form of Restricted Stock Agreement (Performance) under the AS&E 2005 Equity and Incentive Plan (filed herewith)
- (10)(c)(xxv) Form of Stock Option Agreement (Performance) under the AS&E 2005 Equity and Incentive Plan (filed herewith)
- (10)(c)(xxvi) Form of Stock Option Agreement (ISO) under the AS&E 2005 Equity and Incentive Plan (filed herewith)
- (10)(c)(xxvii) Form of Stock Option Agreement (NQ) under the AS&E 2005 Equity and Incentive Plan (filed herewith)
- (10)(d)(xi) Loan and Security Agreement between American Science and Engineering, Inc., and Silicon Valley Bank East dated August 11, 2003 (filed as Exhibit 10(d)(xi) to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003, and incorporated herein by reference)
- (10)(d)(xii) Export Import Bank Loan and Security Agreement between American Science and Engineering, Inc., and Silicon Valley Bank East dated August 11, 2003 (filed as Exhibit 10(d)(xii) to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2003, and incorporated herein by reference)
- (10)(d)(xiii) Asset Purchase Agreement between Accuray Incorporated and American Science and Engineering, Inc. dated December 11, 2004**
- (22.1) Identification of Company's subsidiary, AS&E Global, Inc., incorporated in Massachusetts (filed as Exhibit 22.1 to the Company's Annual Report on Form 10-K for the year ended March 31, 2003, and incorporated herein by reference)
- (23.1) Consent of Independent Registered Public Accounting Firm
- (23.2) Consent of Independent Registered Public Accounting Firm
- (31.1) Certification of Chief Executive Officer pursuant to Rule 13a-14(a)
- (31.2) Certification of Chief Financial Officer pursuant to Rule 13a-14(a)
- (32.1) Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- (32.2) Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

* Contract with Management

** The Registrant agrees to furnish a supplemental copy of the schedules to this agreement to the SEC upon request

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

As independent registered public accountants, we hereby consent to the incorporation of our report dated June 9, 2006 relating to the consolidated financial statements and management's assessment of the effectiveness of internal control over financial reporting and the effectiveness of internal control over financial reporting of American Science and Engineering, Inc. for the year ended March 31, 2006 included in this Form 10-K, into the previously filed Registration Statements on Form S-8 (Nos. 333-05797, 333-09257, 333-13259, 333-27927, 333-69717, 333-91801, 333-53842, 333-102338, 333-117843, 333-117844 and 333-129851) and Form S-3 (Nos. 033-61903, 333-09151 and 333-89836).

/s/ Vitale, Caturano & Company, Ltd.

VITALE, CATURANO & COMPANY, LTD.

June 9, 2006

Boston, Massachusetts

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements on Form S-8 (Nos. 333-05797, 333-09257, 333-13259, 333-27927, 333-69717, 333-91801, 333-53842, 333-102338, 333-117843, 333-117844, and 333-129851) and Form S-3 (Nos. 033-61903, 333-09151 and 333-89836) of American Science and Engineering, Inc. of our report dated June 17, 2005 relating to the financial statements, which appears in this Form 10-K.

/s/ PricewaterhouseCoopers LLP

Boston, MA

June 9, 2006

CERTIFICATION OF CHIEF EXECUTIVE OFFICER
Section 302 Certification

I, Anthony R. Fabiano, certify that:

1. I have reviewed this report on Form 10-K of American Science and Engineering, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiary, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonable likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: June 9, 2006

/s/ ANTHONY R. FABIANO

Anthony R. Fabiano
President and Chief Executive Officer

CERTIFICATION OF CHIEF FINANCIAL OFFICER
Section 302 Certification

I, Kenneth J. Galaznik, certify that:

1. I have reviewed this annual report on Form 10-K of American Science and Engineering, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision to ensure that material information relating to the registrant, including its consolidated subsidiary, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's fourth fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and;
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: June 9, 2006

/s/ KENNETH J. GALAZNIK

Kenneth J. Galaznik
Chief Financial Officer and Treasurer

**CERTIFICATION PURSUANT TO
SECTION 1350, CHAPTER 63 OF TITLE 18, UNITED STATES CODE,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

Pursuant to Section 1350, Chapter 63 of Title 18, United States Code, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned, the President and Chief Executive Officer of American Science & Engineering, Inc. (the "Company"), does hereby certify that to the undersigned's knowledge:

1. the Company's Annual Report on Form 10-K for the year ended March 31, 2006 ("10-K") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. the information contained in the Company's 10-K being filed fairly presents, in all material respects, the financial condition and results of operation of the Company

Date: June 9, 2006

/s/ ANTHONY R. FABIANO

Anthony R. Fabiano
President and Chief Executive Officer

A signed original of this written statement required by Section 906 has been provided to American Science & Engineering, Inc. and will be retained by American Science & Engineering, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

**CERTIFICATION PURSUANT TO
SECTION 1350, CHAPTER 63 OF TITLE 18, UNITED STATES CODE,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

Pursuant to Section 1350, Chapter 63 of Title 18, United States Code, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned, the Chief Financial Officer and Treasurer of American Science & Engineering, Inc. (the "Company"), does hereby certify that to the undersigned's knowledge:

1. the Company's Annual Report on Form 10-K for the year ended March 31, 2006 ("10-K") fully complies with the requirements of Section 13(a) or 5(d) of the Securities Exchange Act of 1934; and
2. the information contained in the Company's 10-K being filed fairly presents, in all material respects, the financial condition and results of operation of the Company

Date: June 9, 2006

/s/ KENNETH J. GALAZNIK

Kenneth J. Galaznik

Chief Financial Officer and Treasurer

A signed original of this written statement required by Section 906 has been provided to American Science & Engineering, Inc. and will be retained by American Science & Engineering, Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

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BOARD OF DIRECTORS

Lt. Gen. (Ret.) William E. Odom
Chairman of the Board
*Director, National Security Studies,
Hudson Institute*

Anthony R. Fabiano
*President and Chief Executive Officer,
American Science and Engineering, Inc.*

Denis R. Brown
Private Investor

Roger P. Heinisch, Ph.D.
*Vice President, Engineering (Retired)
Alliant Techsystems*

Hamilton W. Helmer, Ph.D.
*Managing Director,
Strategy Capital*

Ernest J. Moniz, Ph.D.
*Professor of Physics,
Massachusetts Institute of Technology*

Mark Thompson, Ph.D.
*President and Chief Executive Officer,
Fairchild Semiconductor*

Carl W. Vogt
*Retired Partner,
Fulbright and Jaworski*

SENIOR MANAGEMENT

Kenneth Breur
Vice President, Operations

Joseph Callerame, Ph.D.
Vice President, Science and Technology

Anthony R. Fabiano
President and Chief Executive Officer

Kenneth Galaznik
Chief Financial Officer and Treasurer

Paul H. Grazewski
Vice President, Product Management

William F. Grieco
Vice President and General Counsel

Andrey Mishin, Ph.D.
Vice President, High Energy Systems

George M. Peterman
Vice President, Human Resources

Robert G. Postle
Vice President, Worldwide Marketing and Sales

CONTACT INFORMATION

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Billerica, MA 01821
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Fax. (978) 262-8804
<http://www.as-e.com>

Investor Relations: ir@as-e.com
President's Office: ceo@as-e.com
Sales: sales@as-e.com
International Sales: intlsales@as-e.com

ANNUAL MEETING

The Special Meeting in Lieu of the Annual Meeting of Stockholders of American Science and Engineering, Inc. will be held September 14, 2006 at 10:30 a.m. at the Dolce International Conference Center, 44 Middlesex Turnpike, Bedford, Massachusetts.

AUDITORS

Vitale, Caturano & Co., Ltd.
Boston, Massachusetts

EXTERNAL LEGAL COUNSEL

Ropes and Gray LLP
Boston, Massachusetts

BANKING

Silicon Valley Bank
Santa Clara, California

TRANSFER AGENT AND REGISTRAR

American Stock Transfer and Trust Company
New York, New York

STOCK LISTING

NASDAQ
Symbol: ASEI

SEC FILINGS

Copies of American Science and Engineering, Inc.'s filings with the Securities and Exchange Commission (SEC) may be obtained online at www.as-e.com in the Investor Information section.

AS&E is an Equal Opportunity Employer. It is our policy to recruit, hire, train, and promote personnel in all job classifications without regard to race, religion, color, national origin, sex, or age. Above and beyond nondiscrimination, we are committed to an Affirmative Action Program dedicated to hiring, training, and advancement within the Company of minorities, women, people with disabilities, and veterans.

AS&E and Z Backscatter are registered trademarks of American Science and Engineering, Inc. 66Zplus, 101GT, 101XL, 101Z, 101ZVan, 101ZZ, BodySearch, CargoSearch, Gemini, MobileSearch, PalletSearch, OmniView, ParcelSearch, Ruggedized Detection Imaging Module (RDIM), Shaped Energy, SmartCheck, Z Backscatter Van (ZBV), and Z Portal are trademarks of American Science and Engineering, Inc.

AS&E is ISO 9001:2000 registered.



WHEN YOU CAN'T AFFORD TO COMPROMISE.

AMERICAN SCIENCE AND ENGINEERING, INC.

829 MIDDLESEX TURNPIKE | BILLERICA, MA 01821 USA | TEL: 978-262-8700 | FAX: 978-262-8804 | [WWW.AS-E.COM](http://www.as-e.com)