

ESSEX CORPORATION  
Form 424B1  
November 23, 2004  
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Filed pursuant to Rule 424(b)(1)

Registration No. 333-120137

PROSPECTUS

6,000,000 Shares

## Essex Corporation

Common Stock

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We are offering 5,000,000 shares of our common stock, and selling shareholders named in this prospectus are offering 1,000,000 shares of common stock. We will not receive any proceeds from the sale of common stock by the selling shareholders. Our common stock is listed on the Nasdaq National Market under the symbol KEYW. The last reported sale price of our common stock on the Nasdaq National Market on November 22, 2004 was \$17.98 per share.

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**Investing in our common stock involves a high degree of risk. Before buying any shares, you should carefully consider the risk factors described in Risk Factors beginning on page 7 of this prospectus.**

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	<u>Per Share</u>	<u>Total</u>
Public offering price	\$ 16.50	\$ 99,000,000
Underwriting discount	\$ 0.88	\$ 5,280,000
Proceeds, before expenses, to us	\$ 15.62	\$ 78,100,000
Proceeds to selling shareholders	\$ 15.62	\$ 15,620,000

The underwriters may also purchase up to an additional 567,634 shares from us and up to 332,366 additional shares from selling shareholders named herein at the public offering price, less the underwriting discount, within 30 days from the date of this prospectus to cover over-allotments.

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

The underwriters expect to deliver the shares on or about November 29, 2004.

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**A.G. EDWARDS**

**C.E. UNTERBERG, TOWBIN**

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The date of this prospectus is November 23, 2004.

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**PROSPECTUS SUMMARY**

*This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information that you should consider before investing in our common stock. You should carefully read the entire prospectus, including the documents incorporated by reference into it, particularly the section entitled **Risk Factors** beginning on page 7 and the consolidated financial statements and the notes to the consolidated financial statements. In this prospectus, **we**, **us** and **our** refer to Essex Corporation, including its consolidated subsidiary.*

**Company Overview**

Essex provides advanced signal, image, and information processing solutions primarily for U.S. Government intelligence and defense customers. We create our solutions by combining our services and expertise with hardware, software, and proprietary and patented technology to meet our customers' requirements. Within the intelligence and defense communities we have established and maintained long-standing and successful customer relationships. We are also developing next generation signal, image and information processing solutions under classified U.S. Government research and development contracts. We have been able to develop our current proprietary technology using a combination of government funding and our own internal funding and we believe this combination will allow us to continue to enhance and expand our technology and services for future market needs.

While we have primarily marketed our services and products to the intelligence and defense markets, we believe we are also well positioned to apply our solutions to growth areas within the commercial market. Historically, our proprietary technology and products, although critical to our solutions offerings, have not accounted for a significant portion of our revenues on a standalone basis.

Achieving information superiority, or the ability to collect, process and disseminate information while denying our adversaries capabilities to do the same, is a primary objective for the intelligence and defense communities. Our services and products facilitate the technology transformation necessary for our intelligence and defense customers to achieve information superiority. We provide advanced processing solutions using optical, optoelectronic, and software technology within the following three business areas:

***Signal Processing.***

**Integrated signal processing solutions.** We offer fully integrated, turn-key systems for processing signals using a variety of commercial-off-the-shelf and customized hardware and software components for our signals intelligence customers.

**Advanced optical signal processors.** We offer high resolution, ultra-wideband signal processors for electronic warfare and signals intelligence applications. These analog signal processors provide significant improvements over digital devices in processing speed and capacity while substantially reducing the size, weight and power requirements of a system.

**Radar signal processors.** We offer advanced optical processing products, which are used as high performance radar signal processing subsystems for advanced ballistic missile defense.

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**Communications and networks.** We offer services and products that support analysis and transmission of communications in a variety of formats. We also offer an optical encryption product for secure high speed communications over optical links. We utilize our optoelectronic and signal processing expertise and products to build highly secure, advanced networks that can provide wavelength provisioning and bandwidth on demand.

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### ***Image Processing.***

**3-D imaging.** We offer services and products that utilize optoelectronic processing and synthetic aperture radar, or SAR, imagery technology to provide high resolution 3-D images. Applications for these solutions include cloud, foliage and ground penetration, change detection, utility monitoring, and mineral exploration.

**Geographic information solutions.** We offer geographic information solutions, or GIS, and plug-in software tools that allow users to integrate, compare, and manipulate datasets and images within third party commercial GIS systems. Our tools can also provide users web-access to these systems.

### ***Information Processing.***

**Cognitive processing.** We offer software products and services for analyzing and processing information that is in the form of signals, images, and native language to discover new patterns, relationships, and commonalities within large and complex data environments.

**Critical information technology infrastructure services.** We offer information technology, project management, systems integration and engineering services which facilitate the modernization of the intelligence community's critical voice and video systems and associated infrastructure.

Our current customers include the National Security Agency, the National Reconnaissance Office, the National Geospatial-Intelligence Agency, other intelligence agencies, the Missile Defense Agency, the Defense Advanced Research Project Agency, the U.S. Army, Navy, and Air Force and other defense elements. Many of our advanced processing solutions are used in critical national defense programs. As of September 26, 2004, 164 of our 246 employees have government security clearances, with 127 holding Top Secret/Sensitive Compartmented Information clearances, or TS/SCI, which are security clearances at the highest levels.

We have enhanced our internally developed, core optoelectronic processing technology and solutions with selective acquisitions of complementary technologies and capabilities. We acquired Sensys Development Laboratories, Inc., or SDL, in March 2003; Computer Science Innovations, Inc., or CSI, in April 2004; and substantially all of the assets of Performance Group, Inc., or PGI, in June 2004. SDL's systems and software engineering capabilities, combined with our core capabilities, enabled us to win a \$57.1 million, 4.3-year award with the National Security Agency in October 2003. In September 2004, 18 months after closing the SDL acquisition, we opened a 50,000-square foot leased secure facility in Annapolis Junction, Maryland related to on-going work on this award. In October 2004, we signed an expansion of this award to a new ceiling of \$235.6 million through December 31, 2007, subject to final price negotiations to be completed by December 31, 2004. We believe CSI and PGI bring highly complementary capabilities and technology to our core signal, image, and information processing business areas.

For fiscal 2002 and 2003, we generated revenue of \$4.5 and \$16.3 million, respectively. For the nine months ended September 26, 2004, we generated revenues of \$51.5 million. Over 97% of our revenue in each of these periods was derived from our customers in the intelligence and defense communities.

## **Industry Overview**

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While we primarily serve the intelligence and defense markets, we also believe significant opportunities exist for us to expand into commercial markets.

### *Intelligence and Defense Market.*

The total defense budget, as submitted in the President's 2005 Budget to Congress, is projected to grow from \$375.3 billion in government fiscal year 2004 to \$487.7 billion in government fiscal year 2009. The President's 2005 Budget submission supports the defense transformation process, in which information

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superiority is a primary objective, by including nearly \$75 billion for procurement and nearly \$70 billion for research, development, test and evaluation. The intelligence budget has been classified except for government fiscal years 1997 and 1998. According to the Congressional Research Service, the intelligence budget for those two years was \$26.6 and \$26.7 billion, respectively. Since then, the global threat of terrorism, wars in Iraq and Afghanistan, the demands of homeland security, the needs of the intelligence community and renewed focus on modernizing Department of Defense infrastructures under the information superiority transformation program have led to increased spending.

The U.S. Government is one of the largest purchasers of optoelectronic, signal processing and other information technology services and products. We believe we are well positioned within the intelligence and defense market to capitalize on the following trends:

increased demand for advanced high speed encryption technologies;

emphasis on photonics;

increased focus on missile defense;

increased demand for SAR imagery;

expansion of geographic information solutions; and

strategic recognition of cognitive computing.

### ***Commercial Market Potential.***

A 2003 study by the University of California, Berkeley, estimated that the volume of information being processed and stored worldwide has been increasing by 30% per year, and that total information flow was approximately 18 million terabytes in 2002. This significant increase in information processing load has underscored the need for improved solutions for the processing, transport, distribution, and protection of large bandwidth environments. These large volumes of data have also created the need for business intelligence, which includes a range of technologies and services for gathering, storing, analyzing, and providing access to data to help businesses make better decisions, similar to those serving the information superiority market. We believe new solutions utilizing cognitive processors, optical technology, object recognition, data mining and data synthesis technology and capabilities will be useful in addressing the processing demands of the commercial market's massive data sets.

### **Competitive Strengths**

We believe the following competitive strengths will allow us to take advantage of the trends in our industry:

**Signal, image, and cognitive processing expertise.** We have significant experience in building signal and image processing solutions, using optoelectronic processors, and developing cognitive processing software for the intelligence community.



**Intelligence community experience and relationships.** We have significant intelligence community expertise and a lengthy track record with the intelligence community.

**Skilled employees with high level security clearances.** As of September 26, 2004, 164 of our 246 employees had government security clearances, with 127 of these employees holding TS/SCI, which are security clearances at the highest levels.

**Established sole source award relationships.** Many of our awards are sole source awards, which are awarded without competitive bidding, based on unique capabilities and urgent and compelling needs.

**Experienced management team and expert advisory boards.** Our senior executives have an average of over 20 years of executive and management experience in supporting the U.S. Government

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intelligence and defense communities. In addition, our Technical and National Programs Advisory Board members have extensive experience and relationships within the intelligence, defense and commercial markets.

**Intellectual property.** Our innovative use of optoelectronic and signal processing technology has produced 14 patents and 18 patents pending, covering optical communications devices and 3-D image synthesis.

## **Strategy**

Our objective is to continue to grow our business as a provider of signal, image, and information processing services and products to U.S. Government customers and to leverage our intellectual property and capabilities in this field to both government and commercial customers. Key elements of our strategy include:

**Leverage technology to expand U.S. Government business.** We intend to leverage our high technology services and products to further penetrate the intelligence and defense communities and to expand our participation in other growth areas of the U.S. Government such as homeland security.

**Build on research and development efforts.** We intend to continue to utilize company and customer funded research and development to develop technologies and products that have significant potential in both the government and commercial markets.

**Accelerate business development efforts.** We intend to capitalize on the investments we have made in our business development function, together with our capabilities, relationships and facilities, to effectively compete for additional large procurements.

**Pursue strategic acquisitions.** We intend to continue to pursue strategic acquisitions that cost-effectively add new customers, specific federal agency knowledge, complementary technology, or technological expertise to accelerate our access to existing or new markets.

**Build product channel partnerships.** In commercializing our technologies, we intend to pursue strategic relationships with market leaders in related areas of signal, image, and information processing, as well as communications.

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We were incorporated in the Commonwealth of Virginia in 1969. The address of our principal executive office is 9150 Guilford Road, Columbia, Maryland 21046 and our general telephone number is (301) 939-7000. Our web site address is [www.essexcorp.com](http://www.essexcorp.com). The information on, or that can be accessed through, our web site is not part of this prospectus.

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**The Offering**

Common stock offered by us	5,000,000 shares
Common stock offered by the selling shareholders	1,000,000 shares
Common stock to be outstanding after this offering	20,210,066 shares
Use of proceeds	We intend to use the net proceeds of this offering to fund all or a portion of the costs of any acquisitions of complementary businesses we may determine to pursue in the future. However, we currently have no commitments or agreements and are not involved in any negotiations with respect to any specific acquisition. To the extent that we do not use the net proceeds to consummate acquisitions, any remaining net proceeds will be used for working capital and general corporate purposes, including expansion of our business development activities and for research and development. We will not receive any proceeds from the sale of shares by the selling shareholders. See Use of Proceeds on page 17.
Nasdaq National Market trading symbol	KEYW

The number of shares of common stock to be outstanding after this offering is based upon 15,210,066 shares of common stock outstanding as of September 26, 2004, and 5,000,000 shares of common stock being sold by us in this offering and excludes:

2,357,048 shares of common stock issuable upon the exercise of stock options outstanding as of September 26, 2004, under our stock option plans and individual stock option awards, at a weighted average exercise price of \$3.91 per share;

30,000 shares of common stock issuable upon the exercise of warrants outstanding as of September 26, 2004, at a weighted average exercise price of \$8.50 per share;

1,849,272 shares of common stock reserved for future issuance under our stock option and employee stock purchase plans and bonus plans; and

up to 567,634 shares of common stock to be sold by us if the underwriters exercise their over-allotment option in full.

Unless otherwise indicated, the information in this prospectus assumes no exercise of the underwriters' over-allotment option.

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The following summarizes certain historical, pro forma and as adjusted consolidated financial information. We derived the historical financial information from our audited and unaudited consolidated financial statements. The unaudited pro forma consolidated statement of operations data for the fiscal year ended December 28, 2003, and for the nine months ended September 26, 2004, give effect to our acquisitions of Computer Science Innovations, Inc. on April 30, 2004, and Performance Group, Inc. on June 25, 2004 as if both acquisitions had been completed at the beginning of each period. The as adjusted consolidated balance sheet data reflect the sale of 5,000,000 shares of common stock by us in this offering and our receipt of the net proceeds therefrom, after deducting underwriting discounts and commissions and estimated offering expenses.

This information should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations, Selected Consolidated Financial Data, Unaudited Pro Forma Selected Consolidated Financial Information, and our consolidated financial statements and notes to our consolidated financial statements incorporated by reference in this prospectus.

	Actual					Pro Forma Fiscal Year Ended	Actual			Pro Forma Nine Months Ended
	Dec. 26, 1999	Dec. 31, 2000	Dec. 30, 2001	Dec. 29, 2002	Dec. 28, 2003		Dec. 28, 2003	Sept. 26, 2004	Sept. 26, 2004	
<b>Consolidated Statement of Operations and Pro Forma Data:</b>										
Revenues	\$ 4,813	\$ 3,255	\$ 2,642	\$ 4,506	\$ 16,286	\$ 28,959	\$ 11,220	\$ 51,502	\$ 56,261	
Operating income (loss)	101	(1,183)	(3,577)	(2,150)	208	1,304	127	1,198	1,266	
Net income (loss)	\$ 45	\$ (1,191)	\$ (3,569)	\$ (2,174)	\$ 139	\$ 1,245	\$ 66	\$ 1,381	\$ 1,452	
Basic income (loss) per common share	\$ 0.01	\$ (0.52)	\$ (0.67)	\$ (0.29)	\$ 0.02	\$ 0.14	\$ 0.01	\$ 0.09	\$ 0.10	
Diluted income (loss) per common share	\$ 0.01	\$ (0.52)	\$ (0.67)	\$ (0.29)	\$ 0.01	\$ 0.13	\$ 0.01	\$ 0.08	\$ 0.09	

	As of Sept. 26, 2004	
	Actual	As Adjusted
<b>Consolidated Balance Sheet Data:</b>		
Working capital	\$ 22,119	\$ 99,834
Total assets	47,766	125,481
Total debt	44	44
Shareholders' equity	39,725	117,440

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**RISK FACTORS**

*Investing in our common stock involves a high degree of risk. Before purchasing our common stock, you should carefully consider the risks described below in addition to the other information contained or incorporated by reference in this prospectus, including our consolidated financial statements and related notes. Our business, results of operations and financial condition may be materially and adversely affected due to any of the following risks.*

*The trading price of our common stock could decline due to any of these risks, and you could lose all or part of your investment.*

**Risks Related to Our Business**

**We currently rely on sales to U.S. Government entities, particularly in the intelligence and defense areas, and the loss of certain of our awards with the U.S. Government could have an adverse impact on our operating results.**

We depend on sales to the U.S. Government. For fiscal years 2003 and 2002, awards from the U.S. intelligence and defense communities and other departments and agencies of the Department of Defense accounted for approximately \$15.9 million, or 98% of our revenues, and \$4.4 million, or 97% of our revenues, respectively. For the nine months ended September 26, 2004, these contracts accounted for approximately \$50.2 million, or 98% of our revenues.

For fiscal 2003 and 2002, our top three customer engagements accounted for approximately \$8.5 million, or 52% of our revenues, and \$3.5 million, or 78% of our revenues, respectively. For the nine months ended September 26, 2004, our top three customer engagements accounted for approximately \$39.7 million, or 77% of our revenues. For fiscal years 2003 and 2002, our award with the Missile Defense Agency accounted for approximately \$3.3 million, or 21% of our revenues, and \$2.1 million, or 46% of our revenues, respectively. For the nine months ended September 26, 2004, our largest award with the National Security Agency accounted for approximately \$34.2 million, or 67% of our revenues. The loss or significant reduction in government funding of a program for which we are the contractor or in which we participate could reduce our revenue and cash flows and have an adverse effect on our operating results.

**We depend on U.S. Government awards which are only partially funded; the U.S. Government has no obligation to fully fund our awards.**

Budget decisions made by the U.S. Government are outside of our control and have significant consequences for our business. Funding for U.S. Government awards is subject to Congressional appropriations. Although multi-year awards may be planned or authorized in connection with major procurements, Congress generally appropriates funds on a fiscal year basis even though a program may be expected to continue for several years. Consequently, awards often initially receive only partial funding, and additional funds are committed only as Congress makes further appropriations. The termination of funding for one of our U.S. Government awards would result in a loss of anticipated future revenues attributable to that program which could have an adverse impact on our operations and increase our overall costs of doing business.

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Our backlog was approximately \$73.0 million as of September 26, 2004, of which approximately \$26.2 million was funded. Our backlog includes orders under awards that in some cases extend for several years, with the latest expiring in 2011. Our estimate of the portion of the backlog as of September 26, 2004 from which we expect to recognize revenue in the remainder of fiscal 2004 may not be precise because the receipt and timing of any revenue is subject to various contingencies, many of which are beyond our control. The U.S. Government's ability to select multiple winners under multiple award schedule contracts, government-wide acquisition contracts, blanket purchase agreements and other indefinite delivery, indefinite quantity, or IDIQ, contracts, as

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well as its right to award subsequent task orders among such multiple winners, means that there is no assurance that unfunded contract backlog will result in actual orders. The actual receipt of revenues on awards included in backlog may never occur or may change because a program schedule could change or the program could be canceled, or a contract could be reduced, modified, or terminated early. Moreover, under IDIQ contracts, the U.S. Government is not obligated to order more than a minimum quantity of goods or services. If we fail to realize revenue from engagements included in our backlog as of September 26, 2004, our revenue and operating results for fiscal 2004, as well as future reporting periods, may be materially harmed.

### **U.S. Government awards are subject to immediate termination and are heavily regulated.**

Our U.S. Government awards can be terminated by the U.S. Government either at its convenience or if we default. If the U.S. Government terminates one of our awards, we are entitled to payment of compensation only for work done and commitments made at the time of termination. If our U.S. Government awards are terminated for default, we would be obligated to pay the excess costs incurred by the U.S. Government in procuring undelivered items from another source. If any or all of our U.S. Government awards are terminated under either of these circumstances, we may be unable to procure new awards to offset the lost revenues.

In addition, supplying defense-related services and equipment to U.S. Government agencies subjects us to risks specific to the defense industry, including the ability of the U.S. Government to unilaterally:

suspend us from receiving new awards pending resolution of alleged violations of procurement laws or regulations;

terminate our existing awards;

reduce the value of our existing awards;

audit our award-related costs and fees, including allocated indirect costs; and

control and prohibit the export of our products.

Because a significant portion of our revenues are dependent on our procurement, performance and payment under our U.S. Government awards, the loss of one or more large awards would have an adverse impact on our financial condition.

### **A key part of our strategy involves pursuing acquisitions; however, acquisitions may not achieve intended results.**

A key part of our strategy is to selectively pursue acquisitions. We acquired Sensys Development Laboratories, Inc., or SDL, in March 2003; Computer Science Innovations, Inc., or CSI, in April 2004; and substantially all of the assets of Performance Group, Inc., or PGI, in June 2004. We intend to continue to pursue acquisition opportunities in the future. If we do identify an appropriate acquisition candidate, we may not be able to successfully negotiate the terms of the acquisition. We may use all or a substantive portion of our proceeds from this offering on one or more acquisitions, although we currently have no commitments or agreements and are not involved in any negotiations with respect to any specific acquisitions. In addition, in connection with an acquisition, we may incur significant amortization expenses related to intangible assets.

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We also may incur significant write-offs of goodwill associated with companies, businesses or technologies that we acquire.

Acquisitions and strategic investments may involve a number of other risks, including:

difficulties in integrating the operations, technologies, and products of the acquired companies;

diversion of management's attention from our existing business;

potential difficulties in completing the acquired company's projects; and

the potential loss of the acquired company's key employees.



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**We face intense competition from a number of competitors that have greater resources than we do, which could result in price reductions, reduced profitability and loss of market share.**

We operate in highly competitive markets and may encounter intense competition to win U.S. Government awards. If we are unable to successfully compete for new business, our revenue growth may decline. Many of our competitors are larger and have greater financial, technical, marketing and public relations resources than we do. Larger competitors include Lockheed Martin Corporation and divisions of large defense contractors such as Boeing Support Services. These competitors may be able to compete more effectively for very large scale government awards. These competitors also may be able to provide customers with different or greater capabilities or benefits than we can provide in areas such as technical qualification, past performance on larger scale contracts, geographic presence, price, and the availability of key professional personnel. Our competitors also have established or may establish relationships among themselves or with third parties, including through mergers and acquisitions, to increase their ability to address customers' needs. Accordingly, it is possible that new competitors or alliances among competitors may emerge against whom it will be difficult for us to compete.

In addition, competition in the commercial market for network communications equipment is intense. This market has historically been dominated by such large companies as Alcatel, Ciena, Cisco Systems, JDS Uniphase, Lucent Technologies, NEC and Nortel Networks. Some of these companies, as well as emerging companies, are currently developing products that may compete in the areas that our technology is designed to address. We also may face competition from other large communications companies who may enter our markets. Many of these possible competitors have longer operating histories, greater name recognition, larger customer bases and greater financial, technical and business development resources than we do and may be able to undertake more extensive marketing efforts and adopt more aggressive pricing policies than we can. In addition, additional competitors with significant market presence and financial resources may enter our markets, which are rapidly evolving, further intensifying competition.

**Unfavorable government audit results could force us to adjust previously reported operating results and could subject us to a variety of penalties and sanctions.**

The federal government audits and reviews our performance on awards, pricing practices, cost structure, and compliance with applicable laws, regulations, and standards. Like most large government vendors, our awards are audited and reviewed on a continual basis by federal agencies, including the Defense Contract Management Agency and the Defense Contract Audit Agency. An audit of our work, including an audit of work performed by companies we have acquired or may acquire or subcontractors we have hired or may hire, could result in a substantial adjustment in the current period operating results. For example, any costs which were originally reimbursed could subsequently be disallowed. In this case, cash we have already collected may need to be refunded and our operating margins may be reduced.

If a government audit uncovers improper or illegal activities, we may be subject to civil and criminal penalties and administrative sanctions, including termination of contracts, forfeiture of profits, suspension of payments, fines and suspension or debarment from doing business with U.S. Government agencies. In addition, we could suffer serious harm to our reputation if allegations of impropriety were made against us, even if the allegations were not true. Audits for costs incurred on work performed after fiscal 2001 for Essex, CSI and SDL, and after 1994 for PGI have not yet been completed.

If we were suspended or debarred from contracting with the U.S. Government generally, or any specific agency, if our reputation or relationship with U.S. Government agencies were impaired, or if the government otherwise ceased doing business with us or significantly decreased the amount of business it does with us, our revenue and operating results would be materially harmed.



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### **If we are unable to manage our growth, our business could be adversely affected.**

Achieving our plans for growth will place significant demands on our management, as well as on our administrative, operational and financial resources. For us to successfully manage our growth, we must continue to improve our operational, financial and management information systems and expand, motivate and manage our workforce. If we are unable to successfully manage our growth without compromising the quality of our services, we could lose existing customers and our ability to attract new customers could be adversely affected.

### **Our success depends largely on our ability to attract and retain key personnel.**

Our success has historically depended in large part on our ability to attract and retain highly skilled technical, managerial and operational personnel, particularly those knowledgeable about the U.S. Government intelligence and defense agencies, those with security clearances and those skilled in optoelectronics and optical communications equipment. In addition, the relationships and reputation that many members of our senior management team have established and maintain with government personnel contribute to our ability to maintain good customer relationships and to identify new business opportunities. The loss of key personnel may impair our ability to obtain new U.S. Government awards or adequately perform under our current U.S. Government awards. We also rely on the skills and expertise of our senior technical development personnel, the loss of any of whom could prevent us from completing current development projects and restrict new development projects. We currently do not maintain key man insurance on any of our executives or key employees.

### **We have a history of net losses and we may not achieve or sustain profitability.**

Although we had net income of \$139,000 for fiscal 2003, we incurred a net loss for each of our fiscal years 2002, 2001, and 2000. As of September 26, 2004, we had an accumulated deficit of approximately \$12.9 million. If revenues do not meet our expectations, or if our expenses exceed our expectations, we may incur substantial operating losses in the future, in which case the price of our common stock may decline.

### **We enter into fixed price arrangements that could subject us to losses in the event costs exceed our expectations.**

We provide some of our services and products through fixed price arrangements. For the nine months ended September 26, 2004, fixed price arrangements accounted for 3% of our revenues. Fixed price arrangements accounted for 16% and 28% of our revenues for fiscal 2003 and 2002, respectively. In a fixed price award, the price is not subject to adjustment based on cost incurred to perform the required work under the award. Therefore, we fully absorb cost overruns on fixed price awards.

Cost overruns reduce our profit margin on the contract and may result in a loss. Additionally, we estimate sales and costs that are related to performance in accordance with award specifications and the possibility of obsolescence in connection with long-term procurements. Failure to anticipate technical problems, estimate costs accurately or control costs during performance of a fixed price award may reduce our profit, result in significant losses or cause a loss on the award.

### **Our quarterly operating results may vary widely.**

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Our quarterly revenues and operating results have fluctuated significantly in the past, and may fluctuate in the future. A number of factors can cause our revenue, cash flow and operating results to vary from quarter to quarter, including:

acquisitions of other businesses;

commencement, completion or termination of projects during any particular quarter;

variable purchasing patterns under government awards, blanket purchase agreements and IDIQ awards;

seasonal work patterns due to vacation, holiday, and weather incidences resulting in reduced work days on our time and materials awards;

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changes in Presidential administrations and senior U.S. Government officials that affect the timing of technology procurement; and

changes in policy or budgetary measures that adversely affect appropriations for government awards in general.

Changes in the number of projects commenced, completed or terminated during any quarter may cause significant variations in our cash flow from operations because a relatively large amount of our expenses is fixed. We may incur significant operating expenses during the start-up and early stages of an award and typically do not receive corresponding payments until subsequent quarters. We also may incur significant or unanticipated expenses when awards expire or are terminated. In addition, payments due to us from U.S. Government agencies may be delayed due to customer payment cycles or as a result of the failure of Congress and the President to approve budgets in a timely manner.

**If we are unable to protect our intellectual property effectively, we may be unable to prevent third parties from using our technologies, which would impair our competitive advantage.**

We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. We also enter into confidentiality or license agreements with our key employees and consultants and control access to and distribution of our software, documentation and other proprietary information. We believe that our patents and patent applications provide us with a competitive advantage and, therefore, patent protection is important to our business. However, our patent and other intellectual property protection may not adequately protect our rights or permit us to gain or keep any competitive advantage. For instance, unauthorized parties may attempt to copy, reverse engineer or otherwise obtain and use our patented products or technology without our permission, eroding or eliminating the competitive advantage we hope to gain through the exclusive rights provided by patent protection. Moreover, our existing patents and pending patent applications, if granted, may not protect us against competitors that independently develop proprietary technologies that are substantially equivalent or superior to our technologies, or design around our patents. The competitive advantage provided by patenting our technology may erode if we do not upgrade, enhance and improve our technology on an ongoing basis to meet competitive challenges.

In addition, we conduct research and development under projects with the U.S. Government. In general, our rights to technologies we develop under those projects are subject to the U.S. Government's non-exclusive, non-royalty bearing, world-wide license to use those technologies. In the case of SBIR awards, the U.S. Government has limited rights to the delivered data for five years after project completion, and unlimited rights after five years. Our rights to license and protect our technology are unaffected by the U.S. Government's rights to SBIR technical data.

Monitoring unauthorized use of our technology is difficult, and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States.

**There is a risk that some of our patent applications will not be granted.**

Although we have received our first *hyperfine WDM* and VLI patents, we have filed several other applications for U.S. and International patents relating to our *hyperfine WDM*, VLI and OPERA technologies, and there is a risk that some or all of the pending applications will not be granted. Although we believe our patent applications are valid, the failure of our pending applications to be granted would affect the competitive advantage we hope to gain by obtaining patent protection and could have a material adverse effect upon our business and results of operations.

**We may become involved in intellectual property disputes, which could subject us to significant liability, divert the time and attention of our management and prevent us from selling our products.**

We or our customers may be a party to litigation in the future to protect our intellectual property or to respond to allegations that we infringe on others' intellectual property. We have not performed any patent

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infringement clearance searches and are not in a position to assess the likelihood that any claims would be asserted. If any parties assert that our products infringe upon their proprietary rights, we would be forced to defend ourselves and possibly our customers against the alleged infringement. If we are unsuccessful in any intellectual property litigation, we could be subject to significant liability for damages and loss of our proprietary rights. Intellectual property litigation, regardless of its success, would likely be time consuming and expensive to resolve and would divert management's time and attention. In addition, we could be forced to do one or more of the following:

stop selling, incorporating or using our products that include the challenged intellectual property;

obtain from the owner of any infringed intellectual property right a license to sell or use the relevant technology, which license may not be available on reasonable terms, or at all; or

re-design those products that use the technology.

If we are forced to take any of these actions, our business could be seriously harmed.

**Because we currently are developing our optoelectronic products for the commercial market, it is difficult to evaluate our future business and prospects in this market.**

We traditionally have derived our revenues from awards from the U.S. Government. While we intend to enhance and expand our government business, we are continuing our work to develop new optoelectronic commercial products, including products based on our *hyperfine WDM* fiber optic communications technology, such as our optical encryptor. Because we have not begun significant commercial sales of these products, our commercial revenue and profit potential is unproven and our limited history in the commercial market makes it difficult to evaluate our business and prospects. We cannot accurately forecast our commercial revenue and we have limited historical financial data upon which to base production budgets. You should consider our business and prospects in light of the heightened risks and unexpected expenses and problems we may face as a company developing new commercial products for a rapidly changing industry.

**Our ability to expand into the commercial optical networking market may be adversely affected by unfavorable and uncertain conditions in the communications industry and the economy in general.**

One element of our strategy is to develop products targeted at the commercial optical networking market. The market for communications equipment, including optical components, has suffered a severe and prolonged downturn. Many of our potential customers in this market have experienced significant financial distress, and some have gone out of business. This has resulted in a significant consolidation in the commercial communications equipment industry, combined with a substantial reduction in overall demand. In addition, most of the potential customers we would like to reach have become more conservative about their future purchases, which has made our commercial business slow to materialize.

We expect the following factors to affect our ability to expand our commercial market business for an indeterminate period:

capital expenditures by many of our potential customers may be flat or reduced;

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increased competition resulting from reduced demand will put substantial downward pressures on the pricing of the products we are developing, which may reduce profit margins;

increased competition may enable commercial customers to insist on more favorable terms and conditions for sales, including extended payment terms or other financing assistance as a condition of procuring their business; and

the bankruptcies or weakened financial condition of several communications companies may adversely affect the commercial market for the optical networking products we are developing.

The result of any one or a combination of these factors could eliminate or reduce our ability to successfully enter and compete in this market.



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**Our optoelectronic products are complex, operate in demanding environments and have not yet been widely deployed. If our products contain defects that are undiscovered until full deployment we may incur significant and unexpected expenses, losses of sales and harm to our reputation.**

Optoelectronic products are complex and are designed to be deployed across complex networks. Because of the nature of the products, they can only be fully tested when completely deployed in large networks with high amounts of traffic. Our products have not yet been deployed and tested in a commercial environment, and when they are, customers may discover errors or defects in the hardware or the software, or products we develop may not operate as expected. If we are unable to fix defects or other problems that may be identified in full deployment, we would likely experience:

a loss of, or delay in, revenue and loss of market share;

a loss of existing customers;

difficulties in attracting new customers or achieving market acceptance;

diversion of development resources;

increased service and warranty costs;

legal actions by our customers; and

increased insurance costs.

Defects, integration issues or other performance problems could result in financial or other damages to our customers or could negatively affect market acceptance for the products we develop. Our customers could also seek damages for losses from us, which, if they were successful, could adversely affect our cash flow from operations. A product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly and would put a strain on our management and resources.

**If necessary licenses of third-party technology are not available to us or are very expensive, we may not be able to sell products of the same quality, and our cost of operations could increase.**

From time to time we may be required to license technology from third parties to sell or develop our products and product enhancements. These third-party licenses may not be available to us on commercially reasonable terms, if at all. Our inability to maintain or obtain any third-party license required to sell or develop our products and product enhancements could require us to obtain substitute technology of lower quality or performance standards or at greater cost. If we were required to use technology with lower performance standards or quality, customers may stop buying our products and this would cause our revenues to decline. Similarly, if our costs rise significantly, customers may choose less expensive alternative products, which would cause our revenues to decline.

**Changes in stock option accounting rules may adversely impact our operating results.**

Technology companies like ours have a history of using broad based employee stock option programs to hire, incentivize and retain our workforce in a competitive marketplace. Statement of Financial Accounting Standards No. 123, Accounting for Stock-Based Compensation, allows companies the choice of either using a fair value method of accounting for options which would result in expense recognition for all options granted, or using an intrinsic value method, as prescribed by Accounting Principles Board Opinion No. 25, Accounting for Stock Issued to Employees, or APB 25, with a pro forma disclosure of the impact on net income (loss) of using the fair value option expense recognition method. We have elected to apply APB 25 and accordingly we generally do not recognize any expense with respect to employee stock options as long as such options are granted at exercise prices equal to the fair value of our common stock on the date of grant.

In October 2004, the Financial Accounting Standards Board, or FASB, proposed that Statement 123R, Share Based Payment, which would require all companies to measure compensation cost for all share-based

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payments, including employee stock options, at fair value, would be effective for public companies for interim or annual periods beginning after June 15, 2005. We are currently evaluating the effect that the adoption of Statement 123R will have on our financial position and results of operations, but it is possible that our adoption of this standard may adversely affect our operating results in future periods.

### **We may lose our ability to benefit from government programs aimed at small businesses.**

We currently participate in certain government programs under the regulations promulgated by the U.S. Small Business Administration, or SBA, such as the Small Business Innovative Research, or SBIR, program and small business set-aside contracts and preferences. Qualification as a small business is determined under the criteria set forth in the SBA Small Business Size Standards regulation. These criteria include the classification of the product or service in the North American Industry Classification System, trailing three year averages of the number of employees or annual receipts, affiliates, and other applicable factors. The restriction of a particular project or program under small business limited competition rules is a unilateral decision that is made at the time of procurement by the responsible agency procurement authority. The restriction of a particular project or program to small businesses, as a small business set-aside, in one procurement cycle does not assure that it will be similarly restricted in follow-on or related procurements.

A significant portion of our revenue historically has resulted from our participation in these small business set-aside programs, and our award from the National Security Agency, which accounted for 67% of our revenues for the nine months ended September 26, 2004, is under the NSA Set-aside for Small Business, or NSETS, Program.

We anticipate that, in the future, due to the increases in the levels of our revenues and number of employees, we may begin to lose our ability to participate in some or all of these programs, including receiving new awards under the programs. We also anticipate that some follow-on or related procurements for programs that were originally awarded to us as small business set-asides may not be issued under the small business limited competition rules of the SBA.

### **The failure by Congress to timely approve budgets for the federal agencies we support could delay or reduce spending and cause us to lose revenue.**

On an annual basis, Congress must approve budgets that govern spending by each of the federal agencies we support. When Congress is unable to agree on budget priorities, and thus is unable to pass the annual budget on a timely basis, then Congress typically enacts a continuing resolution. A continuing resolution allows government agencies to operate at spending levels approved in the previous budget cycle. When government agencies must operate on the basis of a continuing resolution it may delay funding we expect to receive from clients on work we are already performing and would result in any new initiatives being delayed, and in some cases being cancelled.

## **Risks Related To This Offering**

**A limited number of shareholders are able to exert significant influence over matters requiring shareholder approval.**

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As of September 26, 2004, six private investors, all of whom are affiliated with some of our directors, collectively hold approximately 4.4 million shares, or 28.9%, of our total outstanding shares of common stock. Accordingly, these investors could seek to exercise significant control and influence of certain actions requiring the approval of the holders of shares of our common stock. This concentration of ownership may also delay or prevent a change in control of us or reduce the price other investors might be willing to pay for our common stock. In addition, the interests of this limited number of investors may conflict with the interests of other holders of our common stock.

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**There is currently only a limited public market for our common stock.**

Our common stock currently is quoted on the Nasdaq National Market and has been since March 31, 2004. Prior to that, since June 4, 2003, our common stock was listed on the American Stock Exchange. Prior to being listed on the American Stock Exchange, our common stock was traded on the OTC Bulletin Board. Historically, there has been only a limited float for our common stock and there may be difficulty in selling shares of our common stock.

**The market price of our common stock is subject to significant price fluctuations.**

The trading price of our common stock has historically been volatile and will likely continue to fluctuate significantly in the future. We believe this volatility has often been unrelated to our operating performance. Volatility in the market price of our common stock may prevent investors from being able to sell their common stock at or above the price such investors paid for their shares or at any price at all. In addition, in the event our operating results fall below the expectations of public market analysts and investors, the market price of our common stock would likely decline.

**Management will have broad discretion for the use of proceeds from this offering, including the ability to apply the proceeds to uses that do not increase our operating results or market value.**

We estimate that our net proceeds from this offering will be approximately \$77.7 million, after deducting underwriting discounts and commissions and estimated offering expenses. Our management will retain broad discretion in the use of the net proceeds of this offering and could spend the net proceeds in ways that do not yield a favorable return or to which certain shareholders object. You will not have the opportunity, as part of your investment decision, to assess whether the net proceeds are being used appropriately. The net proceeds may be used for corporate purposes that do not increase our operating results or market value.

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**FORWARD-LOOKING STATEMENTS**

Some of the statements contained, or incorporated by reference, in this prospectus discuss future expectations, contain projections of results of operations or financial condition or state other forward-looking information. Those statements are subject to known and unknown risks, uncertainties and other factors that could cause the actual results to differ materially from those contemplated by the statements. The forward-looking information is based on various factors and was derived using numerous assumptions. In some cases, you can identify these so-called forward-looking statements by words like may, will, should, expects, plans, anticipates, believes, estimates, predicts, continue or the negative of those words and other comparable words. You should be aware that those statements only reflect our predictions. Actual events or results may differ substantially. Statements regarding the following subjects are forward-looking by their nature:

our business strategy;

market trends and risks;

our estimates for future performance including, without limitation, revenue we expect to recognize from our backlog; and

our estimates regarding anticipated revenues and capital requirements.

Important factors that could cause our actual results to be materially different from the forward-looking statements are disclosed under the heading Risk Factors and throughout this prospectus.

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**USE OF PROCEEDS**

We expect to receive net proceeds of approximately \$77.7 million from this offering, after deducting the underwriting discounts and commissions and estimated offering expenses. If the underwriters exercise their over-allotment option in full, our estimated net proceeds will be approximately \$86.6 million. We will not receive any proceeds from the sale of shares by the selling shareholders in this offering.

We intend to use the net proceeds of this offering to fund all or a portion of the costs of any acquisitions of complementary businesses we determine to pursue in the future, although there can be no assurance that we will be able to successfully identify or consummate any such acquisitions. We currently have no commitments or agreements and are not involved in any negotiations with respect to any specific acquisitions. To the extent that we do not use the net proceeds to consummate acquisitions, any remaining net proceeds will be used for working capital and general corporate purposes, including expansion of our business development activities and for research and development.

We have not yet determined the amount of net proceeds to be used specifically for each of the foregoing purposes. Accordingly, our management will have significant flexibility in applying the net proceeds of the offering. Pending such decisions, we may invest the net proceeds of this offering in interest-bearing investment-grade instruments or bank deposits.

**Table of Contents****PRICE RANGE OF COMMON STOCK**

Our common stock has traded on the Nasdaq National Market under the symbol KEYW since March 31, 2004. Prior to that, from June 4, 2003, our common stock traded on the American Stock Exchange under the symbol EYW. Prior to that, our common stock traded on the OTC Bulletin Board. The following table sets forth the range of high and low intra-day sales prices reported for our common stock on each of those markets for the periods indicated.

	Price Range	
	High	Low
<b>Fiscal Year Ended December 29, 2002:</b>		
First Quarter	\$ 8.25	\$ 3.60
Second Quarter	6.40	3.15
Third Quarter	4.25	2.15
Fourth Quarter	3.56	1.50
<b>Fiscal Year Ended December 28, 2003:</b>		
First Quarter	\$ 3.90	\$ 2.55
Second Quarter	5.85	2.85
Third Quarter	6.28	4.31
Fourth Quarter	10.45	5.55
<b>Fiscal Year Ending December 26, 2004:</b>		
First Quarter	\$ 9.86	\$ 7.30
Second Quarter	9.79	7.61
Third Quarter	12.22	7.80
Fourth Quarter (through November 22, 2004)	19.97	10.49

On November 22, 2004, the last reported sale price for our common stock on the Nasdaq National Market was \$17.98 per share. As of September 30, 2004, there were 318 shareholders of record of our common stock.



**Table of Contents****CAPITALIZATION**

The following table sets forth our cash, cash equivalents and capitalization as of September 26, 2004 on an actual basis, and as adjusted to give effect to the issuance and sale of 5,000,000 shares of common stock offered by us hereby and our receipt of our estimated net proceeds from this offering. You should read this table in conjunction with Selected Consolidated Financial Data, Use of Proceeds, Management's Discussion and Analysis of Financial Condition and Results of Operations and our consolidated financial statements and notes to our consolidated financial statements incorporated by reference in this prospectus.

	As of Sept. 26, 2004	
	Actual	As Adjusted
(In thousands)		
Cash and cash equivalents	\$ 18,730	\$ 96,445
Long-term debt:		
Capital lease	\$ 32	\$ 32
Shareholders' equity:		
Common stock, no par value per share; 50,000,000 shares authorized; 15,210,066 shares issued and outstanding, actual; 20,210,066 shares issued and outstanding, as adjusted	50,603	128,318
Additional paid-in capital	2,000	2,000
Accumulated deficit	(12,878)	(12,878)
Total shareholders' equity	39,725	117,440
Total capitalization	\$ 39,757	\$ 117,472

Shares outstanding as of September 26, 2004 excludes 2,357,048 shares of common stock issuable upon the exercise of stock options outstanding under our stock option plans and individual stock option awards at a weighted average exercise price of \$3.91 per share, and 1,849,272 shares of common stock reserved for future issuance under our stock option plans and bonus plans, and 30,000 shares of common stock issuable upon the exercise of warrants at a weighted average exercise price of \$8.50 per share.

**Table of Contents****SELECTED CONSOLIDATED FINANCIAL DATA****(In thousands, except per share data)**

The following table sets forth the selected consolidated statement of operations data and consolidated balance sheet data for each of the periods indicated. The selected financial data for fiscal years 1999, 2000, 2001, 2002 and 2003 are derived from our audited financial statements and related notes. The selected financial data as of September 26, 2004 and for the nine months ended September 28, 2003 and September 26, 2004 are derived from our unaudited consolidated financial statements. Such unaudited financial statements include all adjustments, consisting of normal recurring adjustments, which we consider necessary for a fair presentation of our financial position and results of operations for these periods. Operating results for the nine months ended September 26, 2004 are not necessarily indicative of results that may be expected for the full fiscal year. You should not assume that the results below indicate results that we will achieve in the future. The selected financial data presented below should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations, and our consolidated financial statements and related notes incorporated by reference into this prospectus.

	Fiscal Year Ended					Nine Months Ended	
	Dec. 26, 1999	Dec. 31, 2000	Dec. 30, 2001	Dec. 29, 2002	Dec. 28, 2003	Sept. 28, 2003	Sept. 26, 2004
<b>Consolidated Statement of Operations Data:</b>							
Revenues	\$ 4,813	\$ 3,255	\$ 2,642	\$ 4,506	\$ 16,286	\$ 11,220	\$ 51,502
Costs of goods sold and services provided	2,524	1,626	1,342	2,594	10,389	7,042	41,663
Selling, general and administrative expenses	1,693	2,041	2,460	2,667	4,905	3,418	7,622
Research and development	495	771	2,417	1,395	403	338	671
Amortization of other intangible assets					381	295	348
Operating income (loss)	101	(1,183)	(3,577)	(2,150)	208	127	1,198
Interest income (expense), net	(56)	(8)	8	(24)	(69)	(61)	183
Income (loss) before income taxes	45	(1,191)	(3,569)	(2,174)	139	66	1,381
Benefit (provision) for income taxes							
Net income (loss)	45	(1,191)	(3,569)	(2,174)	139	66	1,381
Beneficial conversion feature of convertible preferred stock		(1,250)	(750)				
Net income (loss) attributable to common shareholders	\$ 45	\$ (2,441)	\$ (4,319)	\$ (2,174)	\$ 139	\$ 66	\$ 1,381
Net income (loss) per share - basic	\$ 0.01	\$ (0.52)	\$ (0.67)	\$ (0.29)	\$ 0.02	\$ 0.01	\$ 0.09
Net income (loss) per share - diluted	\$ 0.01	\$ (0.52)	\$ (0.67)	\$ (0.29)	\$ 0.01	\$ 0.01	\$ 0.08
Shares used in per share calculations - basic	4,398	4,717	6,494	7,411	8,706	8,393	15,208
Shares used in per share calculations - diluted	4,398	4,717	6,494	7,411	9,798	9,304	16,505
<b>As of</b>							
	Dec. 26, 1999	Dec. 31, 2000	Dec. 30, 2001	Dec. 29, 2002	Dec. 28, 2003	Sept. 26, 2004	
<b>Consolidated Balance Sheet Data:</b>							
Working capital		\$ 384	\$ 736	\$ 112	\$ 222	\$ 32,971	\$ 22,119
Total assets		1,609	1,619	1,553	2,343	39,726	47,766

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Total debt	444	23	191	745	104	44
Shareholders' equity	610	1,091	645	358	36,745	39,725

**Table of Contents****UNAUDITED PRO FORMA SELECTED CONSOLIDATED FINANCIAL INFORMATION****(In thousands, except per share data)**

The following unaudited pro forma selected consolidated financial information gives effect to our acquisitions of Computer Science Innovations, Inc. and Performance Group, Inc. as if they had occurred immediately prior to the periods indicated. This information is only a summary and should be read together with our, Computer Science Innovations, Inc. s, and Performance Group, Inc. s historical financial statements incorporated by reference into this prospectus. The selected pro forma financial data for fiscal year 2003 is derived from our, Computer Science Innovations, Inc. s, and Performance Group, Inc. s audited financial statements and related notes. The selected financial data for the nine months ended September 26, 2004 are derived from our, Computer Science Innovations, Inc. s, and Performance Group, Inc. s unaudited consolidated financial statements. Such financial statements include all adjustments, consisting of normal recurring adjustments, which we consider necessary for a fair presentation of our financial position and results of operations for these periods. Pro forma operating results for the nine months ended September 26, 2004 are not necessarily indicative of results that may be expected for the full fiscal year. You should not assume that the results below indicate results that we will achieve in the future. The selected pro forma financial data presented below should be read in conjunction with our consolidated financial statements and the notes to our consolidated financial statements, the financial statements of Computer Science Innovations, Inc. and Performance Group, Inc., and Management s Discussion and Analysis of Financial Condition and Results of Operations included elsewhere or incorporated by reference into this prospectus.

**Fiscal Year Ended December 28, 2003**

	<b>Historical</b>			<b>Pro Forma Adjustments</b>	<b>Pro Forma</b>
	<b>Essex</b>	<b>CSI(1)(2)</b>	<b>PGI</b>		
Revenues	\$ 16,286	\$ 8,171	\$ 4,502	\$	\$ 28,959
Operating income	208	1,091	863	(858)(3)	1,304
Net income	\$ 139	\$ 689	\$ 885	\$ (468)(4)	\$ 1,245
Basic income per common share	\$ 0.02				\$ 0.14
Diluted income per common share	\$ 0.01				\$ 0.13

- (1) CSI had income tax expense of \$406. Neither Essex nor PGI had income tax in the periods presented.
- (2) Historical data presented here was derived from the March 31, 2004 audited financial statements as well as unaudited internal financial information for the three-month periods ended March 31, 2003 and 2004.
- (3) Represents primarily amortization of other intangibles attributable to these acquisitions.
- (4) Represents amortization of other intangibles, offset by the reduction in CSI s income tax expense.

**Nine Months Ended September 26, 2004**

	<b>Historical</b>			<b>Pro Forma Adjustments</b>	<b>Pro Forma</b>
	<b>Essex</b>	<b>CSI(1)(2)</b>	<b>PGI(3)</b>		
Revenues	\$ 51,502	\$ 2,128	\$ 2,631	\$	\$ 56,261
Operating income (loss)	1,198	(169)	495	(258)(4)	1,266
Net income (loss)	\$ 1,381	\$ (126)	\$ 503	\$ (306)(5)	\$ 1,452
Basic income per common share	\$ 0.09				\$ 0.10
Diluted income per common share	\$ 0.08				\$ 0.09

- (1) CSI had income tax benefit of \$42. Neither Essex nor PGI had income tax expense in the periods presented.

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- (2) CSI was acquired by Essex on April 30, 2004. Historical represents only the four months prior to acquisition (January 1, 2004 to April 30, 2004).
- (3) PGI was acquired by Essex on June 25, 2004. Historical represents the six months prior to acquisition (January 1, 2004 to June 25, 2004).
- (4) Represents primarily amortization of other intangibles attributable to these acquisitions.
- (5) Represents amortization of other intangibles and the reduction in CSI's income tax benefit.

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

The following discussion of our financial condition and results of operations should be read together with our consolidated financial statements and the notes to those statements incorporated by reference into this prospectus. This discussion contains forward-looking statements that involve risks and uncertainties. See **Forward-Looking Statements**. For additional information regarding some of the risks and uncertainties that affect our business and the industry in which we operate and that apply to an investment in our common stock, please see **Risk Factors** beginning on page 7.

**Overview**

Essex provides advanced signal, image, and information processing solutions primarily for U.S. Government intelligence and defense customers. We create our solutions by combining our services and expertise with hardware, software, and proprietary and patented technology to meet our customers' requirements. Within the intelligence and defense communities we have established and maintained long-standing and successful customer relationships. We are also developing next generation signal, image and information processing solutions under classified U.S. Government research and development awards. We have been able to develop our current proprietary technology using a combination of government funding and our own internal funding and we believe this combination will allow us to continue to enhance and expand our technology and services for future market needs.

Most of our revenues are derived from awards from the U.S. Government, where we are either the prime contractor or a subcontractor, depending on the award. Awards with the U.S. Government, primarily the military and intelligence agencies and other departments and agencies of the Department of Defense, accounted for approximately 97%, or \$4.4 million of our revenues, and 98%, or \$15.9 million of our revenues, for the fiscal years ended December 29, 2002 and December 28, 2003, respectively. For the nine months ended September 26, 2004, revenues derived from U.S. Government programs were \$50.2 million, or 98% of our revenues.

On certain projects, our customers require us to purchase and provide the hardware portion of the total system solution, which entails our purchasing hardware from third party vendors and reselling it to our customers. We show the revenue and costs from purchased hardware separately since this revenue carries significantly lower margins than our products and services revenue. The purchased hardware revenue is highly variable from quarter to quarter.

Our most significant expenses are cost of goods sold and services provided, which consist primarily of direct labor and associated costs for program personnel and direct expenses incurred to complete projects, including the cost of materials and equipment and subcontract efforts. Our ability to accurately predict personnel requirements, salaries and other costs, as well as to manage personnel levels and successfully redeploy personnel, can have a significant impact on our cost of goods sold and services provided. Utilizing our own employees to complete projects results in higher gross margins as compared to our enlisting subcontracted employees for the same work. As a result, we seek to maximize our internal labor content on our awards. Selling, general and administrative expenses consist primarily of costs associated with our management, finance and administrative groups and business development expenses which include bid and proposal efforts, and occupancy, travel and other corporate costs. We have revenue from some awards on which our U.S. Government customers pay us to perform research and development on their behalf. We also spend funds on internal research and development, which are separately classified as such in the financial statements. We are in a net operating loss carry forward position, and currently do not anticipate paying taxes until 2006.

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On March 1, 2003, we acquired 100% of the common stock of Sensys Development Laboratories, Inc., or SDL. The assigned value of the consideration and related expenses was approximately \$4.4 million. SDL provides both system and software engineering technical support to U.S. Government customers and prime contractors supporting government programs. SDL has an established workforce with specialized experience and credentials. For its fiscal year ended September 30, 2002, SDL had revenues of \$3.1 million.

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On April 30, 2004, we acquired 100% of the common stock of Computer Science Innovations, Inc., or CSI, which is headquartered in Melbourne, Florida, for approximately \$8.1 million in cash. CSI has proprietary techniques, algorithms and tools that are used to build custom cognitive engines for a broad range of intelligence, defense and commercial customers and applications. Cognitive engines are software that includes predictive models and classifiers, and they have applications in the areas of fraud and anomaly detection, image and signal recognition, information integration, knowledge management, network information assurance, semantic processing and waveform analysis. CSI had revenue of approximately \$7.6 million in its fiscal year ended March 31, 2004.

On June 25, 2004, we acquired substantially all of the assets of Performance Group, Inc., or PGI, with main offices in Fredericksburg, Virginia, for approximately \$5.8 million in cash and \$362,000 in assumed liabilities. PGI provides services and systems in the areas of GIS, image processing and analysis, spatial data development, environmental consulting, visualization, and IT solutions to government and private sector clients. PGI had revenue of approximately \$4.5 million in calendar year 2003.

## **Critical Accounting Policies and Estimates**

The preparation of financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. On an ongoing basis, we re-evaluate our estimates, including those related to revenue recognition, research and development, intangible assets and contingencies. We base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. We believe the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our financial statements.

### ***Revenue Recognition.***

We enter into three types of U.S. Government agreements:

**Time and material.** On time and material agreements, revenue is recognized to the extent of billable rates multiplied by hours delivered, plus other direct costs.

**Cost plus fixed fee.** We recognize revenue on cost plus fixed fee arrangements to the extent costs are incurred plus a proportionate amount of fee earned. We must determine that the costs incurred are proper and that the ultimate costs incurred will not overrun the expected funding on the project and still deliver the scope of work proposed. Even though cost plus fixed fee arrangements generally do not require that we expend costs in excess of the award value, such expenditures may be required in order to achieve customer satisfaction and receive additional work. In addition, since the reimbursable costs include both direct and indirect costs, we must determine that the indirect costs are properly accounted and allocated in accordance with reasonable cost allocation methods.

**Fixed price.** On fixed price services agreements, we must determine that the costs incurred provide a proportionate amount of progress on the work and that the ultimate costs incurred will not overrun the funding on the award and the required hours will be delivered. On fixed price product orders, revenue is not recorded until we determine that the goods have been delivered and accepted by the customer.





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We use historical technical performance experience where applicable to evaluate progress on fixed price and cost plus fixed fee jobs. We use historical government audit experience in the indirect cost area to evaluate the propriety and expected recovery of our indirect costs on cost plus fixed fee agreements. The following table sets forth the percentage of revenues under each type of agreement for the fiscal years 2002 and 2003, and for the nine months ended September 26, 2004:

	Percentage of Revenues by Type		
	Fiscal Year Ended		Nine Months Ended
	Dec. 29, 2002	Dec. 28, 2003	Sept. 26, 2004
Time and material	4.7%	56.9%	87.1%
Cost plus fixed fee	67.5	27.5	10.3
Fixed price	27.8	15.6	2.6
Total	100.0%	100.0%	100.0%

**Research and Development.**

Research and development costs are expensed as incurred. Such costs include direct labor and materials as well as a reasonable allocation of indirect costs. However, no selling, general, and administrative costs are included. Equipment which has alternative future uses is capitalized and charged to expense over its estimated useful life.

**Goodwill and Other Intangible Assets.**

Business acquisitions typically result in the recording of goodwill and other intangible assets, which affect the amount of future period amortization expense and possible impairment expense that we will incur. We have adopted Statement of Financial Accounting Standards, or SFAS, No. 142 which requires that we, on an annual basis, calculate the fair value of the reporting units that contain the goodwill and compare that to the carrying value of the reporting unit to determine if impairment exists. Impairment testing must take place more often if circumstances or events indicate a change in the impairment status. Management judgment is required in calculating the fair value of the reporting units. Because of the integral technologies and operations of the acquisitions to date, we have only one corporate-wide reporting entity to which this test applies.

**Table of Contents****Results of Operations**

The following table sets forth, for each period indicated, items in the statement of our operations expressed as a percentage of total revenue.

	Fiscal Year Ended			Nine Months Ended	
	Dec. 30, 2001	Dec. 29, 2002	Dec. 28, 2003	Sept. 28, 2003	Sept. 26, 2004
Revenues:					
Service and products	100.0%	100.0%	100.0%	100.0%	74.8%
Purchased hardware					25.2
Total	100.0	100.0	100.0	100.0	100.0
Costs of goods sold and services provided	50.8	57.6	63.8	62.8	80.9
Gross margin	49.2	42.4	36.2	37.2	19.1
Selling, general and administrative expenses	93.1	59.2	30.1	30.5	14.8
Research and development	91.5	30.9	2.5	3.0	1.3
Amortization of other intangible assets			2.3	2.6	0.7
Operating (loss) income	(135.4)	(47.7)	1.3	1.1	2.3
Interest income (expense), net	0.3	(0.5)	(0.4)	(0.5)	0.4
(Loss) income before income taxes	(135.1)	(48.2)	0.9	0.6	2.7
Benefit (provision) for income taxes					
Net (loss) income	(135.1)	(48.2)	0.9	0.6	2.7
Beneficial conversion feature of convertible preferred stock	(28.4)				
Net (loss) income attributable to common shareholders	(163.5)%	(48.2)%	0.9%	0.6%	2.7%

The following table sets forth, for each component of our revenues, the related cost of goods sold and services provided expressed as a percentage of the related revenues for the period indicated.

	Nine Months Ended
	Sept. 26, 2004
Cost of goods sold and services provided:	
Services and products	75.0%
Purchased hardware	98.3%

**Nine Months Ended September 26, 2004 Compared to Nine Months Ended September 28, 2003**

*Revenues.* Total revenues were \$51.5 million and \$11.2 million in the first nine months of fiscal 2004 and 2003, respectively. The key factors for the higher revenue were the increased activity on the October 2003 \$57.1 million multi-year award and the January 2004 two-year award for software and systems engineering and the delivery of custom systems to national priority programs. Revenues from these two awards in the first nine months of 2004 were \$34.2 million and \$2.4 million, respectively. Of these revenues, \$13.0 million was for purchased hardware. There was no comparable purchased hardware revenue in the first nine months of 2003.

*Cost of Goods Sold and Services Provided.* Total cost of goods sold and services provided increased \$34.7 million to \$41.7 million for the first nine months of 2004 from \$7.0 million for the comparable period in 2003. As a percentage of total revenues, total cost of goods sold and services provided was approximately 80.9% for the first nine months of 2004, compared to approximately 62.8% for the comparable period in fiscal 2003. For services and products revenue, cost of goods sold and services provided was 75.0% for the first nine months of 2004 as compared to 62.8% for the comparable period in 2003. The increase in cost of goods sold and services provided in 2004 reflects increased volume and revenue for the period. The increase in cost of goods sold and services provided as a percentage of revenue in 2004 reflects the change in the mix of work, primarily related to

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the two awards received in October 2003 and January 2004. Specifically, upon award and ramp up, a majority of the revenues under those awards relate to subcontracts and purchased hardware which are lower margin. Over time, we anticipate a gradual shift of a portion of this work to our staff. For purchased hardware revenues, cost of goods sold and services provided was 98.3% in the first nine months, and there were no comparable purchases in the first nine months of 2003.

*Selling, General and Administrative Expenses.* Selling, general and administrative expenses increased \$4.2 million to \$7.6 million for the first nine months of 2004 from \$3.4 million for the comparable period in 2003. Selling, general and administrative expenses have increased to support the higher volume of business as well as including the selling, general and administrative expenses of the acquired businesses.

*Research and Development Expenses.* Research and development expenses increased \$333,000 to \$671,000 in the first nine months of 2004 compared to \$338,000 in the comparable period in 2003. We incurred the majority of our research and development on efforts related to optical communications technology, and have incurred research and development expenses since May 2004 in the newly-acquired CSI operation.

*Amortization of Other Intangible Assets.* During the nine months ended September 26, 2004, amortization of other intangible assets was \$348,000, which was primarily related to the CSI and PGI acquisitions. There was \$295,000 of amortization costs in the comparable period in 2003 relating to the SDL acquisition. The amortization of other intangibles related to the SDL acquisition was substantially complete in the first quarter of 2004.

*Net Interest Income (Expense).* Net interest income was \$183,000 in the first nine months of 2004 compared to net interest expense of \$61,000 in the comparable period in 2003. The net interest income reflects the temporary investment of the proceeds from our December 2003 stock offering.

*Net Income.* Net income was \$1.4 million and \$66,000 in the first nine month periods of 2004 and 2003, respectively. We are in a net operating loss carryforward position for book and tax purposes. No provision for or benefit from income taxes was recognized in the first nine months of 2004 or 2003 due to the net operating loss carryforwards. We adjusted our income tax valuation reserves accordingly during these periods.

## **Fiscal Year Ended December 28, 2003 Compared to the Fiscal Year Ended December 29, 2002**

*Revenues.* Our revenues were \$16.3 million and \$4.5 million in fiscal 2003 and 2002, respectively. Revenues in fiscal 2003 include \$5.8 million for ten months of operations from SDL, which we acquired in March 2003. Excluding SDL, revenues in 2003 were \$10.5 million or \$6.0 million higher than 2002 due to several factors. A key factor was the increased activity on the U.S. Government Missile Defense Agency program for design of a next generation advanced optoelectronics radar processor, or AOP, demonstration unit. This program generated revenues of \$3.3 million in fiscal 2003 compared to revenues of \$2.1 million in 2002 as we did not begin this program until May 2002. Our November 2002 \$30 million award contributed \$3.5 million of revenues in fiscal 2003 and \$32,000 of revenues in fiscal 2002. Additionally, in fiscal 2003 we sold \$1.1 million of products and equipment, including the sale of ten *hyperfine WDM* family devices, consisting of five prototype demultiplexers and five of the new flat-top *hyperfine WDM* devices for use in building advanced optical code division multiple access systems, for \$460,000 to several government and intermediate customers. We had only \$107,000 of such products and equipment sales in fiscal 2002.

*Cost of Goods Sold and Services Provided.* Our cost of goods sold and services provided increased by \$7.8 million to \$10.4 million in fiscal 2003 from \$2.6 million in fiscal 2002. As a percentage of revenues, cost of goods sold and services provided was 63.8% for fiscal 2003,

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compared to 57.6% for fiscal 2002. In fiscal 2003, due to the SDL acquisition and communications sales referenced previously, there was a significant increase in the direct labor and associated costs for work performed at our customers' facilities. We receive a lower markup on work performed at customer facilities. Overall, the higher volume during 2003 contributed a larger amount of gross profit, though at a lower gross profit percentage.

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*Selling, General and Administrative Expenses.* Selling, general and administrative expenses increased \$2.2 million to \$4.9 million for fiscal 2003 from \$2.7 million for fiscal 2002. The increase was due to increased business development and higher management costs in the government contracts area, and to the recurring costs of the acquired company related to its operations.

*Research and Development Expenses.* Research and development expenses declined by \$992,000 to \$403,000 for fiscal 2003 from \$1.4 million in fiscal 2002. We incurred the majority of our research and development expenses on efforts related to development of our optical communications technology.

*Amortization of Other Intangible Assets.* During fiscal 2003, amortization of other intangible assets was \$381,000, all of which was related to the SDL acquisition. The remaining balance of \$50,000 of other intangible assets was fully amortized during the first and second quarters of 2004. We had no amortization cost in fiscal 2002.

*Net Interest Expense.* Net interest expense was \$69,000 and \$24,000 in fiscal 2003 and 2002, respectively. The increase in net interest expense reflects an increase in our debt and costs related to our accounts receivable facility prior to the completion of our follow-on public offering in mid December 2003.

*Net Income (Loss).* Net income was \$140,000 and net loss was \$2.2 million in fiscal 2003 and 2002, respectively. We are in a net operating loss carry forward position for book and tax purposes. Our provision for income taxes in 2003 was zero due to our net operating loss carry forwards.

## **Fiscal Year Ended December 29, 2002 Compared to the Fiscal Year Ended December 30, 2001**

*Revenues.* Our revenues increased to \$4.5 million in fiscal 2002 from \$2.6 million in fiscal 2001. Our revenue growth was primarily due to an increase of \$2.1 million in revenue we derived from the U.S. Government Missile Defense Agency program for design of a next generation AOP demonstration unit, including procurement of necessary materials and equipment. This initial phase commenced May 2002 and was substantially completed by December 2002.

*Cost of Goods Sold and Services Provided.* Our cost of goods sold and services provided increased by \$1.3 million to \$2.6 million for fiscal 2002 from \$1.3 million for fiscal 2001. As a percentage of revenues, cost of goods sold and services provided was 57.6% in fiscal 2002 compared to 50.8% in fiscal 2001. In fiscal 2001, the major component of cost of goods sold and services provided was direct labor and associated costs. In fiscal 2002, due to our new AOP program, we experienced a significant increase in the direct materials and equipment component of cost of goods sold and services provided. We receive a higher markup on direct labor than direct material and equipment costs.

*Selling, General and Administrative Expenses.* Our selling, general and administrative expenses increased by \$208,000 to \$2.7 million in fiscal 2002 from \$2.5 million in fiscal 2001. Selling, general and administrative expenses increased slightly in fiscal 2002, particularly our marketing expenses related to our new optoelectronics and communications devices. In fiscal 2002, we also incurred higher expenses related to our efforts to raise additional financing.

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*Research and Development Expenses.* Our research and development expenses decreased in fiscal 2002 to \$1.4 million from \$2.4 million in fiscal 2001. The initial *hyperfine WDM* development in 2001 required significant expenditure to outside vendors for materials and non-recurring engineering services.

*Amortization of Other Intangible Assets.* We had no expense associated with the amortization of intangible assets in either of fiscal 2002 or 2001.

*Net Interest Income (Expense).* We had net interest expense of \$24,000 in fiscal 2002 compared to net interest income of \$8,000 in fiscal 2001. In fiscal 2001, interest income, primarily from the temporary investment of funds from private placements of our common stock, offset \$18,000 in interest expense. In 2002, we had less cash available for temporary investment.



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*Net Loss.* Our net loss was \$2.2 million and \$3.6 million in fiscal 2002 and 2001, respectively. Our fiscal 2002 net loss declined primarily due to the decline in research and development expenses and increased revenues covering a greater portion of fixed expenses.

*Beneficial Conversion Expense.* We recognized a \$750,000 charge in fiscal 2001 from the beneficial conversion feature of convertible preferred stock. As proceeds were received from the sale of preferred stock in 2001 and 2000, we recognized the pro rata beneficial conversion feature on the convertible preferred stock as a deemed dividend for purposes of computing net loss attributable to common shareholders and per share amounts. The total recorded was \$750,000 in 2001 and \$1.3 million in 2000. This imputed amount had no effect on our net loss from operations or cash flows. These expenses resulted in a net loss attributable to common shareholders of \$4.3 million and \$2.4 million in fiscal 2001 and 2000, respectively.

## **Backlog**

Our awards with the U.S. Government generally extend over multiple years. Funded backlog generally consists of the sum of all awards amounts of work for which funding has been approved and awards granted, less the value of work performed under such awards. Since the U.S. Government operates under annual appropriations, our customers typically fund awards on an incremental basis, generally for periods of one year or less. In many cases, our awards include unexercised options. Accordingly, a significant amount of our backlog is unfunded. We include in unfunded backlog the total value of signed contracts, less funding to date. Unfunded backlog includes awards options based upon expected performance levels for those options. Unfunded backlog does not include any estimate of future potential delivery orders that might be awarded under indefinite delivery indefinite quantity contracts. We have recently revised our definition of unfunded backlog and the amounts presented are consistent with this new definition. The effect of our change reduced backlog by \$13.3 million and \$19.0 million at September 26, 2004 and December 28, 2003, respectively.

As of September 26, 2004, we had total backlog, funded and unfunded, of approximately \$73.0 million as compared with \$93.8 million at December 28, 2003. Of these amounts, funded backlog was \$26.2 million and unfunded backlog was \$46.8 million at September 26, 2004 compared to \$15.0 million and \$78.8 million, respectively, at fiscal year end 2003. Unfunded backlog as of September 26, 2004 includes the remaining balance of approximately \$23.5 million on our \$30 million, ten-year award through 2011 to provide communications systems support to the intelligence community. Unfunded backlog at September 26, 2004 also includes the remaining balance of approximately \$11.4 million on our \$57.1 million multi-year award for software and systems engineering that we received in October 2003. In October 2004, the ceiling on this award was increased to \$235.6 million, subject to final price negotiations to be completed by December 31, 2004. Backlog at September 26, 2004 does not include the \$178.5 million increase in the ceiling of this award.

We currently expect to recognize revenue during the last three months of fiscal 2004 from approximately 23% of our total backlog as of September 26, 2004. We cannot guarantee that we will recognize any revenue from our backlog. The federal government has the prerogative to cancel any awards or delivery order at any time. Backlog varies considerably from time to time as current awards or delivery orders are executed and new awards or delivery orders under existing awards are won.

## **Net Operating Loss Carry Forward**

We are in a net operating loss carry forward position. No provision or benefit from income taxes was recognized in fiscal 2003 or 2002 or for the nine months ended September 26, 2004. We adjusted our valuation reserve accordingly during these periods.

**Liquidity and Capital Resources**

Our primary liquidity and capital resource needs are to finance the costs of our operations and to make capital expenditures. As described under the caption Use of Proceeds, we expect our net proceeds of this offering to be approximately \$77.7 million. Based upon our current level of operations, even without the net

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proceeds of this offering, we expect that our cash flow from operations and amounts of cash on hand will be adequate to meet our anticipated needs for at least the next twelve months. A significant part of our business strategy is to pursue one or more significant strategic acquisitions, and we may use all or a substantial portion of the net proceeds of this offering for such acquisitions and may need to incur debt or sell additional equity to finance such acquisitions.

During the first nine months of 2004, net cash provided by operating activities was \$1.9 million. Cash provided from net income and non cash depreciation, amortization and other charges of approximately \$2.2 million was offset by an increase in accounts receivable and prepaids net of the change in accounts payable and accrued items of \$300,000. The increase in accounts receivable during the first nine months of 2004 was due to the increase in sales and does not reflect any significant change in payment cycle.

During the first nine months of 2004, net cash used in investing activities was \$15.2 million, of which \$14.1 million was for the acquisition of CSI and substantially all of the assets of PGI. We also expended \$1.0 million for property, equipment and leasehold improvements to support our growing work force. Our working capital at September 26, 2004 decreased to \$22.1 million from \$33.0 million at fiscal year end 2003. The decrease was primarily a result of the acquisitions of CSI and the assets of PGI for cash.

During the first nine month period of fiscal 2004, net cash provided by financing activities of \$156,000 resulted primarily from the sale of common stock upon the exercise of the over-allotment option for our December 2003 public offering and proceeds from the exercise of stock options.

**Contractual Obligations and Commitments**

The following table shows our contractual cash obligations due in the three months ending December 26, 2004 and in each of fiscal 2005 through 2011. We have no contractual cash obligations due after 2011.

	Three Months					
	Ending					
	December 26, 2004	Fiscal 2005	Fiscal 2006	Fiscal 2007	Fiscal 2008	Fiscal 2009 - 2011
	(In thousands)					
Operating leases (1)	\$ 323	\$ 2,610	\$ 2,655	\$ 2,558	\$ 1,752	\$ 4,000
Capital leases	3	12	13	13	5	
Obligation to landlord (2)	1,700					
<b>Total</b>	<b>\$ 2,026</b>	<b>\$ 2,622</b>	<b>\$ 2,668</b>	<b>\$ 2,571</b>	<b>\$ 1,757</b>	<b>\$ 4,000</b>

(1) Includes new lease for office and facility space ending in 2011.

(2) Represents cash commitment to finance special security leasehold improvements which will be repaid by the landlord to us over forty months after completion of construction.

**Quantitative and Qualitative Disclosure About Market Risk**

Our exposure to market risk relates to changes in interest rates on short-term investment of the remaining proceeds of our stock offerings. Presently, such investments earn approximately 1%. Based upon our investments during the first nine months of 2004, a hypothetical one percentage point increase in interest rates would have increased interest income by about \$10,000 for every \$1 million invested and would have increased our annual cash flow by a comparable amount.

**New Accounting Pronouncements**

In October 2004, the Financial Accounting Standards Board, or FASB, proposed that Statement 123R, Share Based Payment, which would require all companies to measure compensation cost for all share-based payments, including employee stock options, at fair value, would be effective for public companies for interim or annual periods beginning after June 15, 2005. We are currently evaluating the effect that the adoption of Statement 123R will have on our financial position and results of operations.

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### BUSINESS

#### Overview

Essex provides advanced signal, image, and information processing solutions primarily for U.S. Government intelligence and defense customers. We create our solutions by combining our services and expertise with hardware, software, and proprietary and patented technology to meet our customers' requirements. Within the intelligence and defense communities we have established and maintained long-standing and successful customer relationships. We are also developing next generation signal, image and information processing solutions under classified U.S. Government research and development contracts. We have been able to develop our current proprietary technology using a combination of government funding and our own internal funding and we believe this combination will allow us to continue to enhance and expand our technology and services for future market needs.

While we have primarily marketed our services and products to the intelligence and defense markets, we believe we are also well positioned to apply our solutions to growth areas within the commercial market. Historically, our proprietary technology and products, although critical to our solutions offerings, have not accounted for a significant portion of our revenues on a standalone basis.

Achieving information superiority, or the ability to collect, process and disseminate information while denying our adversaries capabilities to do the same, is a primary objective for the intelligence and defense communities. Our services and products facilitate the technology transformation necessary for our intelligence and defense customers to achieve information superiority. We provide advanced processing solutions using optical, optoelectronic, and software technology within the following three business areas:

#### *Signal Processing.*

**Integrated signal processing solutions.** We offer fully integrated, turn-key systems for processing signals using a variety of commercial-off-the-shelf and customized hardware and software components for our signals intelligence customers.

**Advanced optical signal processors.** We offer high resolution, ultra-wideband signal processors for electronic warfare and signals intelligence applications. These analog signal processors provide significant improvements over digital devices in processing speed and capacity while substantially reducing the size, weight and power requirements of a system.

**Radar signal processors.** We offer advanced optical processing products, which are used as high performance radar signal processing subsystems for advanced ballistic missile defense.

**Communications and networks.** We offer services and products that support analysis and transmission of communications in a variety of formats. We also offer an optical encryption product for secure high speed communications over optical links. We utilize our optoelectronic and signal processing expertise and products to build highly secure, advanced networks that can provide wavelength provisioning and bandwidth on demand.

#### *Image Processing.*

**3-D imaging.** We offer services and products that utilize optoelectronic processing and synthetic aperture radar, or SAR, imagery technology to provide high resolution 3-D images. Applications for these solutions include cloud, foliage and ground penetration, change detection, utility monitoring, and mineral exploration.

**Geographic information solutions.** We offer geographic information solutions, or GIS, and plug-in software tools that allow users to integrate, compare, and manipulate datasets and images within third party commercial GIS systems. Our tools can also provide users web-access to these systems.

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### ***Information Processing.***

**Cognitive processing.** We offer software products and services for the analysis and processing of information that is in the form of signals, images, and native language to discover new patterns, relationships, and commonalities within large and complex data environments.

**Critical information technology infrastructure services.** We offer information technology, project management, systems integration and engineering services which facilitate the modernization of the intelligence community's critical voice and video systems and associated infrastructure.

Our current customers include the National Security Agency, the National Reconnaissance Office, the National Geospatial-Intelligence Agency, other intelligence agencies, the Missile Defense Agency, the Defense Advanced Research Project Agency, the U.S. Army, Navy, and Air Force and other defense elements. Many of our advanced processing solutions are used in critical national defense programs. As of September 26, 2004, 164 of our 246 employees have government security clearances, with 127 holding Top Secret/Sensitive Compartmented Information clearances, or TS/SCI, which are security clearances at the highest levels.

We have enhanced our internally developed, core optoelectronic processing technology and solutions with selective acquisitions of complementary technologies and capabilities. We acquired Sensys Development Laboratories, Inc., or SDL, in March 2003; Computer Science Innovations, Inc., or CSI, in April 2004; and substantially all of the assets of Performance Group, Inc., or PGI, in June 2004. SDL's systems and software engineering capabilities, combined with our core capabilities, enabled us to win a \$57.1 million, 4.3-year award with the National Security Agency in October 2003. In September 2004, 18 months after closing the SDL acquisition, we opened a 50,000-square foot leased secure facility in Annapolis Junction, Maryland related to on-going work on this award. In October 2004, we signed an expansion of this award to a new ceiling of \$235.6 million subject to final price negotiations to be completed by December 31, 2004. We believe CSI and PGI bring highly complementary capabilities and technology to our core signal, image, and information processing business areas.

For fiscal 2002 and 2003, we generated revenue of \$4.5 and \$16.3 million respectively. For the nine months ended September 26, 2004, we generated revenues of \$51.5 million. Over 97% of our revenue in each of these periods was derived from our customers in the intelligence and defense community.

### **Industry Overview**

While we primarily serve the intelligence and defense markets, we also believe significant opportunities exist for us to expand into commercial markets.

#### ***Intelligence and Defense Market.***

The total defense budget, as submitted in the President's 2005 Budget to Congress, is projected to grow from \$375.3 billion in government fiscal year 2004 to \$487.7 billion in government fiscal year 2009. The President's 2005 Budget submission supports the defense transformation process, in which information superiority is a primary objective, by including nearly \$75 billion for procurement and nearly \$70 billion for research, development, test and evaluation. The intelligence budget has been classified except for government fiscal years 1997 and 1998.

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According to the Congressional Research Service, the intelligence budget for those two years was \$26.6 and \$26.7 billion, respectively. Since then, the global threat of terrorism, wars in Iraq and Afghanistan, the demands of homeland security, the needs of the intelligence community and renewed focus on modernizing Department of Defense infrastructures under the information superiority transformation program have led to increased spending.



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The U.S. Government is one of the largest purchasers of optoelectronic, signal processing and other information technology services and products. We believe we are well positioned within the intelligence and defense market to capitalize on the following trends:

**Advanced encryption.** According to the General Accounting Office, the National Security Agency has budgeted to spend \$4.8 billion between fiscal years 2004 and 2009 for the Department of Defense to protect classified networks and sensitive information, and to develop enhanced encryption capabilities. We believe the need for advanced encryption is driven by the increased demand and use of high speed optical communications operating at transmissions rates of up to 10 gigabits-per second.

**Emphasis on photonics.** According to the Director of the Defense Advanced Research Project Agency, or DARPA, photonics, which is the use of light to process and transport information, is one of three core technologies of the U.S. military. Photonics technology is used in signal processing to analyze high speed communications, radar signals, and complex image data sets, and is superior to alternate signal and image processing because it allows signals to be processed at higher speeds than digital technologies.

**Increased focus on missile defense.** The Missile Defense Agency is developing a layered defense to intercept ballistic missiles that requires several enabling technologies including optoelectronic processors, sensors, radars and communication networks. The Missile Defense Agency's budget provides funding of more than \$9.2 billion in government fiscal year 2005.

**SAR imagery.** Militant groups and terrorists that are agile and grouped in smaller forces have become adept at hiding, either under camouflage, foliage, rugged terrain or underground, and using evasive tactics to avoid detection. As a result, we believe the need has increased for advanced imaging systems that can identify the presence of targets and provide accurate 3-D images.

**Geographic information solutions.** Daratech, an independent market research firm, estimated the 2003 market for GIS systems and solutions to be \$1.75 billion, which represents growth of 8% from 2002. We believe there is growing market interest in the integration of imagery data, new data sets, such as SAR imagery, and web enablement.

**Cognitive computing.** In 2004, DARPA cited cognitive computing as one of eight strategic areas of focus for research and transition to operational use. We believe the need to mine and find common threads in enormous quantities of communications and data is increasing.

### *Commercial Market Potential.*

A 2003 study by the University of California, Berkeley, estimated that the volume of information being processed and stored worldwide has been increasing by 30% per year, and that total information flow was approximately 18 million terabytes in 2002. This significant increase in information processing load has underscored the need for improved solutions for the processing, transport, distribution, and protection of large bandwidth environments. These large volumes of data have also created the need for business intelligence, which includes a range of technologies and services for gathering, storing, analyzing, and providing access to data to help businesses make better decisions, similar to those serving the information superiority market. We believe new solutions utilizing cognitive processors, optical technology, object recognition, data mining and data synthesis technology and capabilities will be useful in addressing the processing demands of the commercial market's massive data sets.

**Business intelligence.** We believe that as companies increasingly discover the possibilities and benefits of business intelligence, demand for access to multiple data sources, better analytic techniques and data integration will increase due to the need to effectively manage increasingly complex data environments. IDC, an independent market research firm, estimates that the worldwide market for business intelligence tools will be \$4.1 billion in 2004 and will increase to \$4.9 billion in 2008, representing a compound annual growth rate of 4.3%. Additionally, data mining software, a segment within the broader business intelligence tools market, is expected

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by IDC to grow from \$541 million in 2004 to \$687 million in 2008, representing a compound annual growth rate of 6.2%.

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**Expected communications industry spending and growth in bandwidth demand.** The Telecommunications Industry Association's 2004 forecast for U.S. spending on communications equipment projects an increase from \$14.4 billion in 2004 to \$18.5 billion in 2007, a compound annual growth rate of 8.7%. Spending is being driven by increasing usage of bandwidth for bundled services, data transport, digital video and voice-over-internet-protocol, or VoIP. Additionally, IDC estimates that the number of Internet users worldwide will grow from 787.5 million in 2004 to 1.1 billion in 2007, a compound annual growth rate of 11.0%

## Competitive Strengths

We believe the following competitive strengths will allow us to take advantage of the trends in our industry:

**Signal, image, and cognitive processing expertise.** We have significant experience in building signal and image processing solutions, using optoelectronic processors, and developing cognitive processing software for the intelligence community.

**Intelligence community experience and relationships.** We have significant intelligence community expertise and a lengthy track record with the intelligence community.

**Skilled employees with high level security clearances.** As of September 26, 2004, 164 of our 246 employees had government security clearances, with 127 of these employees holding TS/SCI clearances.

**Established sole source awards relationships.** Many of our awards are sole source awards, which are awarded without competitive bidding, based on unique capabilities and urgent and compelling needs.

**Experienced management team and expert advisory boards.** Our senior executives have an average of over 20 years of executive and senior management experience in supporting the U.S. Government intelligence and defense communities. In addition, our Technical and National Programs Advisory Board members listed below have extensive experience and relationships within the intelligence, defense and commercial markets:

*U.S. Army Lieutenant General Claudia Kennedy (retired).* General Kennedy served for 32 years in the Army culminating in her appointment as Deputy Chief of Staff of Intelligence.

*U.S. Air Force Lieutenant General Kenneth Minihan (retired).* General Minihan served 33 years in the Air Force in various capacities including Director of the National Security Agency/Central Security Service.

*U.S. Navy Rear Admiral Don McDowell (retired).* Rear Admiral McDowell commanded the worldwide 10,000-person Naval Security Group.

*Dr. Paul Green.* Dr. Green is a co-inventor and co-developer of key communications technologies in use in optical and cellular communications.

*Sam Greenholtz.* Mr. Greenholtz is a retired senior optical networking architecture engineer for Verizon where he was responsible for technical evaluation of optical networking products.

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*Joe Houston.* Mr. Houston is the former President of the International Society of Optical Engineering and has 39 years of engineering expertise and technical management experience.

**Intellectual property.** Our innovative use of optoelectronic and signal processing technology has produced 14 patents and 18 patents pending, covering optical communications devices and 3-D image synthesis.

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### **Strategy**

Our objective is to continue to grow our business as a provider of signal, image, and information processing services and products to U. S. Government customers and to leverage our intellectual property and capabilities in this field to both government and commercial customers. Key elements of our strategy include:

**Leverage technology to expand U.S. Government business.** We intend to leverage our high technology services and products to further penetrate the intelligence and defense communities and to expand our participation in other growth areas of the U.S. Government such as homeland security.

**Build on research and development efforts.** We intend to continue to utilize company and customer funded research and development to develop technologies and products that have significant potential in both the government and commercial markets.

**Accelerate business development efforts.** We intend to capitalize on the investments we have made in our business development function, together with our capabilities, relationships and facilities, to effectively compete for additional large procurements.

**Pursue strategic acquisitions.** We intend to continue to pursue strategic acquisitions that cost-effectively add new customers, specific federal agency knowledge, complementary technology, or technological expertise to accelerate our access to existing or new markets.

**Build product channel partnerships.** In commercializing our technologies, we intend to pursue strategic relationships with market leaders in related areas of signal, image, and information processing, as well as communications.

### **Services and Products**

We support our customers' goal of achieving information superiority through our combination of the skills and knowledge of a services company with the technology and innovation of a product oriented company. Based on the core competencies that we have developed both internally and through acquisitions, we provide advanced processing solutions using optical, optoelectronic and software technology within the following three business areas:

#### ***Signal Processing.***

*Integrated signal processing solutions.* We provide software and systems engineering services to the intelligence community. We significantly expanded our systems engineering capabilities by acquiring Sensys Development Laboratories, Inc., or SDL, in March 2003. SDL's skill and experience were highly complementary to our core competencies in image and signal processing technology. In October 2003, we were awarded a defense related award for \$57.1 million over a three-month base period plus four option years for software and systems engineering and delivery of custom systems to national priority programs. We believe that the knowledge and capability of the SDL team, combined with our core capabilities, enabled us to win this large award. We are the prime contractor and there are numerous team members and subcontractors who work on this program. In the second quarter of 2004, in support of this award, we leased over 50,000 square feet of space that currently houses a Sensitive Compartmented Information Facility, or SCIF, with both office and production space. Our SCIF has been certified by our intelligence customer to allow us to perform highly classified work within our leased facility.

*Advanced optical signal processors.* In addition to radar analysis, our customers use our advanced optical processors, or AOPs, for cellular phone signal analysis, wideband electronic intelligence analysis, and encryption system exploitation.

*Radar signal processors.* We design and develop AOPs, which are high performance radar signal processors that can be applied to radar signal analysis to provide advanced ballistic missile defense in a cost-effective, low-size, low-weight and low-power package. In missile defense, the missile target must be identified, along with other items that make it harder to identify the missile, so that the missile target can be isolated and destroyed.

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In May 2002, we received a five-year \$25.0 million indefinite delivery, indefinite quantity, or IDIQ, award from the Naval Air Warfare Center to use our signal processing technology to enhance Department of Defense radar programs. Working for the Missile Defense Agency under this award, we have designed and fabricated a prototype AOP. We are awaiting the opportunity to test the device at the Massachusetts Institute of Technology's Lincoln Laboratory facility and subsequently a field demonstration. These tests were originally scheduled to occur in 2004 but have been deferred until 2005 due to operational priorities that forced scheduling changes. The laboratory and field tests are among the final steps prior to production of the AOP for Department of Defense applications.

*Communications and networks.* Our patented *hyperfine WDM* technology is the core technology behind our solutions for the defense and intelligence communication markets and opportunities in the commercial markets. Originally developed for military applications and now being applied to commercial communications applications to create wavelength rich solutions, our *hyperfine WDM* technology is characterized by simple and small packaging, high channel density, low insertion loss, superior filter shape, low sensitivity to temperature changes, and the fact that it is a passive optical technology and therefore does not require power to operate. To date, our sales of *hyperfine WDM* technology have been limited to prototype and early production units for military applications. In July 2003, we commenced a project with a key government agency to apply *hyperfine WDM* to achieve privacy in an all-optical network and an award to create a technology roadmap for optical components. In connection with DARPA, we also have been applying our communications technology to improve processor performance and security in next generation supercomputer performance.

### ***Image Processing.***

*3-D imaging.* We design, develop, manufacture and support products that feature optoelectronic processing and synthetic aperture radar, or SAR, imagery technology to provide 3-D images. These technologies are primarily used today for military imaging that penetrates clouds, foliage and the ground, as well as for change detection and facility inspection. They can also be used in commercial applications, such as utility monitoring, mineral exploration and other special purpose inspections. We believe we are positioned to apply these technologies to major government programs for customers that are increasingly focusing on military imaging.

*Geographic information solutions.* Our GIS and Environmental Services Group, which was created from our June 2004 acquisition of Performance Group, Inc., provides extensive software tools that allow users to integrate, compare and manipulate datasets and images within third party commercial GIS systems. Once this information is collected, there are many potential user applications in the areas of asset management, planning, security, emergency operations, and environmental assessment. We are exploring combining our GIS solutions with our proprietary 3-D imaging technology, to address new defense, intelligence and commercial applications.

### ***Information Processing.***

*Cognitive processing.* With our acquisition of Computer Science Innovations, Inc., or CSI, in April 2004, we now have proprietary techniques, algorithms and tools that are used to build custom cognitive engines for a broad range of intelligence, defense and commercial customers and applications. Cognitive engines are software that includes predictive models and classifiers, and they have applications in the areas of fraud and anomaly detection, image and signal recognition, information fusion, knowledge management, network information assurance, semantic processing and waveform analysis. CSI has been developing cognitive engines for government and commercial customers since 1983.

*Critical information technology infrastructure services.* We provide information technology services that facilitate the modernization, project management, integration and engineering analysis of the intelligence community's critical voice and video systems and associated infrastructure. In 2003, we received a telecommunication services award with a total value of over \$30.0 million over ten years. We believe our technology

infrastructure group has the potential for significant growth as the intelligence and defense communities focus on upgrading their communications infrastructure.



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### **Customers**

Our current customers include the National Security Agency, the National Reconnaissance Office, the National Geospatial-Intelligence Agency, other intelligence agencies, the Missile Defense Agency, the Defense Advanced Research Project Agency, the U.S. Army, Navy, and Air Force and other defense elements. Many of our advanced processing solutions are used in critical national defense programs. Our commercial customers include Boeing Corporation and Applied Signal Technologies.

### **Employees**

As of September 26, 2004 we had 246 employees. Of our 246 employees, 164 had government security clearances, with 127 employees holding TS/SCI, which are security clearances at the highest levels. We believe we are successful in recruiting and retaining our employees by offering a competitive salary, benefits, growth prospects and the opportunity to perform mission critical services in a classified environment.

### **Intellectual Property**

We have 14 issued patents and 18 patents pending covering the core intellectual property for our products. Our patent portfolio is divided into four technology groups: *hyperfine WDM*, OPERA™, ImSyn™ and Virtual Lens Imaging.

#### ***Hyperfine WDM***

The first *hyperfine WDM* patent, entitled Optical Tapped Delay Line, was awarded to Essex on August 19, 2003 as U.S. Patent No. 6,608,721 and will expire on June 20, 2020. It includes 46 claims covering use of the device as a receiver and demultiplexer for wavelength division multiplexing fiber optic networks. Related international patents are still pending. On January 22, 2002, we filed U.S. and international patents for use of *hyperfine WDM* technology as an add drop multiplexer and as an optical-code division multiple access, or OCDMA, system. On July 21, 2002, we filed U.S. and international patents for several other *hyperfine WDM* optical signal processing architectures. On November 19, 2003, we filed U.S. and international patents for use of *hyperfine WDM* as an encryptor for fiber optic and free-space communications.

#### ***OPERA™***

We filed a patent application for our OPERA™ technology in the U.S. and in certain other countries on January 19, 2001, U.S. Patent Pending No. 09/766,151. OPERA™ is an optoelectronic system for wireless communications that eliminates interfering signals using optical correlation combined with multi-user detection algorithms.

#### ***ImSyn™***

We hold four U.S. patents on our ImSyn™ technology. Three of these patents cover the optoelectronic architecture and applications including accelerating image reconstructions for SAR and Magnetic Resonance Imaging, or MRI. The fourth patent covers the sensing and reconstruction techniques of the Virtual Lens Microscope™, or VLM, technology which is part of our VLI technology family. This technology family can be applied to semiconductor inspection, foliage and ground penetration imaging, biomedical imaging, and non-destructive testing.

The first issued ImSyn™ patent (U.S. Patent No. 5,079,555), Sequential Image Synthesizer, includes 20 claims and expires January 7, 2009. The corresponding Canadian patent (No. 2,058,209), expires November 25, 2011. The corresponding European patent for a subset of the claims (No. 0543064) is in force in the United Kingdom and Germany, and will expire on November 21, 2011. Our patent in Japan (Patent No. 3113338) for the same claims as the U.S. patent will expire on October 29, 2011.

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The second issued ImSyn™ patent (U.S. Patent No. 5,384,573), Image Synthesis Using Time Sequential Holography, includes 157 claims and expires on January 24, 2012. In France, the United Kingdom, Germany and Italy, Patent EP0617797B1 has been awarded for a subset of the claims in the U.S. patent and this patent expires December 17, 2012.

The third ImSyn™ U.S. Patent No. 5,736,958, Image Synthesis Using Time Sequential Holography, with 8 claims expires April 7, 2015. The fourth issued ImSyn patent (U.S. Patent No. 5,751,243), Image Synthesis Using Time Sequential Holography, with 21 claims expires May 11, 2015.

## ***Virtual Lens Imaging***

The ImSyn™ U.S. Patent No. 5,751,243 discloses the Virtual Lens Microscope, a 2-D and 3-D sensing and reconstruction technique called the Synthetic Aperture Microscope. On May 11, 2004, we were awarded the second VLI patent, U.S. patent 6,735,346 entitled Efficient Fourier Transform Algorithm For Non-Uniform Data, that discloses algorithms and methods for faster 2-D and 3-D image reconstruction of synthetic aperture data. On April 28, 2004, we filed U.S. and international patent applications entitled Sub-aperture Sidelobe and Alias Mitigation Techniques that discloses algorithms and methods for improving the reconstruction of synthetic aperture 2-D and 3-D image data.

## **Competition**

We have sold our services and products primarily to the intelligence and defense communities. The level of security clearances required for this work limits the range of competitors against whom we compete for both services and products. In addition, the number of competitors is limited even further by the level of technical expertise required for both product and service deliveries to our government customers. We compete either as prime contractor or as a subcontractor, depending on the requirement and scope of the project.

Our larger competitors for U.S. Government business include Lockheed Martin Corporation and divisions of large defense contractors such as Boeing Support Services. These competitors may be able to compete more effectively for very large scale government awards. These competitors also may be able to provide customers with different or greater capabilities or benefits than we can provide in areas such as technical qualification, past performance on larger scale contracts, geographic presence, price, and the availability of key professional personnel. Our competitors also have established or may establish relationships among themselves or with third parties, including through mergers and acquisitions, to increase their ability to address customers' needs. Accordingly, it is possible that new competitors or alliances among competitors may emerge against whom it will be difficult for us to compete.

Competition in the communications market for network communications equipment is intense and has historically been dominated by such large companies as Alcatel, Ciena, Cisco Systems, JDS Uniphase, Lucent Technologies, NEC and Nortel Networks. Competitors for high speed encryption technology include General Dynamics, L3 Communications, Viasat and Safenet. Because of our proprietary optical encryption solution, these companies are also potential channel partners. Some of these companies, as well as emerging companies, are currently developing products that may compete in the areas that our technology is designed to address. We also may face competition from other large communications companies who may enter our markets. Many of these possible competitors have longer operating histories, greater name recognition, larger customer bases and greater financial, technical and business development resources than we do and may be able to undertake more extensive marketing efforts and adopt more aggressive pricing policies than we can. In addition, additional competitors with significant market presence and financial resources may enter our markets, which are rapidly evolving, further intensifying competition.

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In the commercial market, we are still positioning our optical products and technology. Our commercial products will be sold as part of an integrated solution. We intend to sell our products through well established channels within the commercial industry in order to successfully introduce our technology and products into the

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market. Our products are based on patented technology, available only through us, which we believe have significant performance advantages over alternative products in the same market space, including simple and small packaging, high channel density, low insertion loss, superior filter shape, low sensitivity to temperature changes, and the fact that it is a passive optical technology and therefore does not require power to operate.

## **Backlog**

Our awards with the U.S. Government generally extend over multiple years. Funded backlog generally consists of the sum of all awards amounts of work for which funding has been approved and awards granted, less the value of work performed under such awards. Since the U.S. Government operates under annual appropriations, our customers typically fund awards on an incremental basis, generally for periods of one year or less. In many cases, our awards include unexercised options. Accordingly, a significant amount of our backlog is unfunded. We include in unfunded backlog the total value of signed contracts, less funding to date. Unfunded backlog includes awards options based upon expected performance levels for those options. Unfunded backlog does not include any estimate of future potential delivery orders that might be awarded under indefinite delivery indefinite quantity contracts. We have recently revised our definition of unfunded backlog and the amounts presented are consistent with this new definition. The effect of our change reduced backlog by \$13.3 million and \$19.0 million at September 26, 2004 and December 28, 2003, respectively.

As of September 26, 2004, we had total backlog, funded and unfunded, of approximately \$73.0 million as compared with \$93.8 million at December 28, 2003. Of these amounts, funded backlog was \$26.2 million and unfunded backlog was \$46.8 million at September 26, 2004 compared to \$15.0 million and \$78.8 million, respectively, at fiscal year end 2003. Unfunded backlog as of September 26, 2004 includes the remaining balance of approximately \$23.5 million on our \$30 million, ten-year award through 2011 to provide communications systems support to the intelligence community. Unfunded backlog at September 26, 2004 also includes the remaining balance of approximately \$11.4 million on our \$57.1 million multi-year award for software and systems engineering that we received in October 2003. In October 2004, the ceiling on this award was increased to \$235.6 million, subject to final price negotiations to be completed by December 31, 2004. Backlog at September 26, 2004 does not include the \$178.5 million increase in the ceiling of this award.

We currently expect to recognize revenue during the last three months of fiscal 2004 from approximately 23% of our total backlog as of September 26, 2004. We cannot guarantee that we will recognize any revenue from our backlog. The federal government has the prerogative to cancel any awards or delivery order at any time. Backlog varies considerably from time to time as current awards or delivery orders are executed and new awards or delivery orders under existing awards are won.

## **Legal Proceedings**

We currently are not a party to any material legal proceedings.

**Table of Contents****Properties**

We lease the locations listed in the table below. We believe that our present and proposed facilities are adequate for our current business needs.

<u>Location</u>	<u>Square Feet</u>	<u>Expiration Date</u>
9020 Junction Drive (Warehouse)	14,630	April 30, 2011
Annapolis Junction, MD 20701		
9020 Junction Drive (Office/SCIF)	37,384	April 30, 2011
Annapolis Junction, MD 20701		
9140 Guilford Road	8,691	(1)
Columbia, MD 21046		
135 National Business Parkway	7,421	(1)
Suite 214		
Annapolis Junction, MD 20701		
9150 Guilford Road	17,655	(1)
Columbia, MD 21046		
2300 Fall Hill Avenue	3,686	March 31, 2005
Suite 260		
Fredericksburg, VA 22401		
1235 Evans Road	20,000	May 31, 2007
Melbourne, FL 32904		
9633 South 48th Street	3,331	September 30, 2007
Suites 235-240		
Phoenix, AZ 85044		
6708 Alexander Bell Drive	39,203	January 14, 2012
Columbia, MD 21046		

(1) These leases will terminate upon move-in to the Alexander Bell Drive location, currently projected for March 2005.

**Table of Contents****SELLING SHAREHOLDERS**

The following table and accompanying notes set forth information regarding the beneficial ownership of our common stock, as of September 26, 2004, by the selling shareholders in this offering, including the shareholders who have granted the underwriters the option to purchase additional shares to cover over-allotments.

Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission and includes voting or investment power with respect to securities. Shares of our common stock subject to options or warrants that are currently exercisable or exercisable within 60 days of the date of this table are deemed outstanding and beneficially owned by the person holding such options or warrants. These shares, however, are not considered outstanding when computing the percentage ownership of any other person.

Name of Beneficial Owner	Shares of Common Stock Beneficially Owned Prior to the Offering		Shares of Common Stock Offered (1)	Shares of Common Stock Beneficially Owned After the Offering(1)		Shares of Common Stock Offered Pursuant to Over-Allotment Option (2)
	Number	Percent		Number	Percent	
	GEF Management Corporation ( GEF )	2,342,257(3)	15.4%	17,634	1,342,257	6.6%
Global Environment Strategic Technology Partners, LP ( GESTP )	2,342,257(3)	15.4	864,166	1,342,257	6.6	
Global Environment Capital Company, LLC ( GECC )	2,342,257(3)	15.4	118,200	1,342,257	6.6	
Global Environment Technology Managers, LLC ( GEFTM )	2,342,257(3)	15.4		1,342,257	6.6	182,366
John G. Hannon	2,049,498(4)	13.5		2,049,498	10.1	100,000

- (1) Assumes no exercise of the underwriters' over-allotment option.
- (2) Assumes exercise of the underwriters' over-allotment option in full, in which case Essex will also sell an additional 567,634 shares. If the underwriters exercise their over-allotment option only in part, Essex and each of these shareholders will sell additional shares in the same proportion as if the option had been exercised in full.
- (3) Consists of (i) 582,472 shares of common stock held by GEF, (ii) 864,166 shares held by GESTP, (iii) 118,200 shares held by GECC, (iv) 749,919 shares held by GEFTM, and (v) 27,500 shares held by H. Jeffrey Leonard. The business address of each of the foregoing entities is 1225 Eye Street, N.W., Suite 900, Washington, DC 20005. H. Jeffrey Leonard, one of our directors, is (i) the president of GEF, (ii) the president of the managing member of the general partner of GESTP, (iii) the president of the managing member of GECC and (iv) the president of the managing member of GEFTM. Mr. Leonard beneficially owns the shares held by each of these selling shareholders.
- (4) Consists of 610,525 shares held by Mr. Hannon, and a total of 1,438,973 shares beneficially owned by The Hannon Family LLC, for which Mr. Hannon serves as managing member. Mr. Hannon may be deemed to have beneficial ownership of the shares held by The Hannon Family LLC. Mr. Hannon is one of our directors. Mr. Hannon and the Hannon Family LLC's address is c/o Essex Corporation, 9150 Guilford Road, Columbia, Maryland 21046.

**Table of Contents****UNDERWRITING**

Subject to the terms and conditions of the underwriting agreement among us, the selling shareholders and the underwriters, the underwriters have agreed severally to purchase from us and some of the selling shareholders the following number of shares of common stock at the offering price less the underwriting discounts set forth on the cover page of this prospectus:

<u>Underwriter</u>	<u>Number of Shares</u>
A.G. Edwards & Sons, Inc.	3,510,000
C.E. Unterberg, Towbin	1,890,000
Adams Harkness, Inc.	50,000
Allen & Company LLC	50,000
Dominick & Dominick LLC	50,000
Ferris, Baker Watts, Incorporated	50,000
Harris Nesbitt Corp.	50,000
Janney Montgomery Scott LLC	50,000
KeyBanc Capital Markets, A Division of McDonald Investments Inc.	50,000
Morgan Keegan & Company, Inc.	50,000
Needham & Company, Inc.	50,000
RBC Capital Markets Corporation	50,000
Stifel, Nicolaus & Company, Incorporated	50,000
SunTrust Capital Markets, Inc.	50,000
<b>Total</b>	<b>6,000,000</b>

The underwriting agreement provides that the obligations of the underwriters are subject to certain conditions and that the underwriters will purchase all such shares of common stock if any of the shares are purchased. The underwriters are obligated to take and pay for all of the shares of common stock offered hereby, other than those covered by the over-allotment option described below, if any are taken.

The underwriters have advised us and the selling shareholders that they propose to offer the shares of common stock to the public at the offering price set forth on the cover page of this prospectus and to certain dealers at such price less a concession not in excess of \$0.52 per share. The underwriters may allow, and such dealers may re-allow, a concession not in excess of \$0.10 per share to certain other dealers. After the offering, the offering price and other selling terms may be changed by the underwriters.

Pursuant to the underwriting agreement, we and some of the selling shareholders have granted to the underwriters an option, exercisable for 30 days after the date of this prospectus, to purchase up to 567,634 additional shares of common stock from us and 332,366 additional shares of common stock from the selling shareholders, at the offering price, less the underwriting discounts and commissions set forth on the cover page of this prospectus, solely to cover over-allotments.

To the extent the underwriters exercise such option, each underwriter will become obligated, subject to certain conditions, to purchase approximately the same percentage of such additional shares as the number set forth next to such underwriter's name in the preceding table bears to the total number of shares in the table, and we and the applicable selling shareholders will be obligated, pursuant to the option, to sell such shares to the underwriters.



We, our directors, senior executive officers and certain shareholders, including the selling shareholders, have agreed that during the 90 days after the date of this prospectus, subject to limited exceptions, they will not, without the prior written consent of A.G. Edwards & Sons, Inc., directly or indirectly, issue, sell, offer, agree to sell, grant any option or contract for the sale of, pledge, make any short sale of, maintain any short position with

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respect to, establish or maintain a put equivalent position (within the meaning of Rule 16a-1(h) under the Exchange Act) with respect to, enter into any swap, derivative transaction or other arrangement (whether any such transaction is to be settled by delivery of common stock, other securities, cash or other consideration) that transfers to another, in whole or in part, any of the economic consequences of ownership, or otherwise dispose of, any shares of our common stock (or any securities convertible into, exercisable for or exchangeable for our common stock or any interest therein or any capital stock of our subsidiary). These lock-up agreements will cover approximately 4,342,000 shares of our outstanding common stock in the aggregate. A.G. Edwards may, in its sole discretion, allow any of these parties to dispose of common stock or other securities prior to the expiration of the 90-day period. There are, however, no agreements between A.G. Edwards and the parties that would allow them to do so as of the date of this prospectus.

The following table summarizes the discounts to be paid to the underwriters by us and the selling shareholders in connection with this offering. The amounts are shown assuming both no exercise and full exercise of the underwriters' option to purchase additional shares of common stock.

	Per Share	Total	
		No Exercise	Full Exercise
Underwriting discounts paid by us	\$ 0.88	\$ 4,400,000	\$ 4,899,518
Underwriting discounts paid by selling shareholders	0.88	880,000	1,172,482
<b>Total</b>		<b>\$ 5,280,000</b>	<b>\$ 6,072,000</b>

We expect to incur expenses of approximately \$385,000 in connection with this offering.

We and the selling shareholders have agreed to indemnify the underwriters against certain liabilities, including liabilities under the Securities Act.

Until the distribution of the common stock is completed, rules of the Securities and Exchange Commission may limit the ability of the underwriters and certain selling group members to bid for and purchase the common stock. As an exception to these rules, the underwriters are permitted to engage in certain transactions that stabilize, maintain or otherwise affect the price of the common stock.

In connection with this offering, the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934.

Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum.

Over-allotment transactions involve sales by the underwriters of the shares of common stock in excess of the number of shares the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by the underwriters is not greater

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than the number of shares they may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriters may close out any short position by either exercising their over-allotment option and/or purchasing shares of common stock in the open market.

Syndicate covering transactions involve purchases of the shares of common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of the shares of common stock to close out the short position, the underwriters will consider, among other things, the price of shares of common stock available for purchase in the open market as compared to the price at which they may purchase shares of common stock through the over-allotment

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option. If the underwriters sell more shares of common stock than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares of common stock in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the shares of common stock in the open market after pricing that could adversely affect investors who purchase in the offering.

Penalty bids permit the representatives to reclaim a selling concession from a syndicate member when the shares of common stock originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

Similar to other purchase transactions, the underwriters' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of the shares of common stock or preventing or retarding a decline in the market price of the shares of common stock. As a result, the price of the shares of common stock may be higher than the price that might otherwise exist in the open market.

The underwriters will deliver a prospectus to all purchasers of shares of common stock in the short sales. The purchasers of shares of common stock in short sales are entitled to the same remedies under the federal securities laws as any other purchaser of shares of common stock covered by this prospectus.

In connection with this offering, some of the underwriters or their affiliates may engage in passive market making transactions in our common stock on the Nasdaq National Market immediately prior to the commencement of sales in this offering, in accordance with Rule 103 of Regulation M under the Securities Exchange Act of 1934. Rule 103 generally provides that:

a passive market maker may not effect transactions or display bids for our common stock in excess of the highest independent bid price by persons who are not passive market makers;

net purchases by a passive market maker on each day are generally limited to 30% of the passive market maker's average daily trading volume in our common stock during a specified two-month prior period or 200 shares, whichever is greater, and must be discontinued when that limit is reached; and

passive market making bids must be identified as such.

Passive market making may stabilize or maintain the market price of our common stock at a level above that which might otherwise prevail and, if commenced, may be discontinued at any time.

The underwriters are not obligated to engage in any of the transactions described above. If they do engage in any of these transactions, they may discontinue them at any time.

Our common stock is quoted on the Nasdaq National Market under the trading symbol KEYW.

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**LEGAL MATTERS**

The validity of the issuance of our common stock offered by this prospectus will be passed upon for us by Morrison & Foerster LLP, New York, New York. Certain legal matters relating to the offering will be passed upon for the underwriters by Wilmer Cutler Pickering Hale and Dorr LLP, Washington, D.C.

**EXPERTS**

The consolidated financial statements of Essex Corporation as of December 28, 2003, and December 29, 2002, and for each of the fiscal years in the three year period ended December 28, 2003, have been incorporated by reference in this prospectus and in the registration statement of which this prospectus is a part in reliance upon the report of Stegman & Company, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The financial statements of Computer Science Innovations, Inc. as of March 31, 2004 and for the year then ended, have been incorporated by reference in this prospectus and in the registration statement of which this prospectus is a part in reliance upon the report of Gallogly, Fernandez & Riley, LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

The financial statements of Computer Science Innovations, Inc. as of March 31, 2003, and for the year then ended incorporated by reference in this prospectus have been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report, which is incorporated by reference herein, and have been so incorporated in reliance upon the report of such firm given upon their authority as experts in accounting and auditing.

The financial statements of Performance Group, Inc. as of December 26, 2003 and December 27, 2002 and for each of the fiscal years in the two year period ended December 26, 2003 have been incorporated by reference in this prospectus and in the registration statement of which this prospectus is a part in reliance upon the report of Stegman & Company, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

**WHERE YOU CAN FIND MORE INFORMATION**

We have filed a registration statement on Form S-3, of which this prospectus is a part, with the Securities and Exchange Commission under the Securities Act with respect to the shares of common stock offered hereby. This prospectus does not contain all of the information included in the registration statement. Statements in this prospectus concerning the provisions of any document filed as an exhibit to the registration statement are not necessarily complete. You should refer to the copies of these documents filed as exhibits to the registration statement for a more complete understanding of the matter involved. Each statement concerning these documents is qualified in its entirety by such reference.

We are subject to the informational requirements of the Exchange Act and, accordingly, file reports, proxy statements and other information with the SEC. The SEC maintains a website that contains reports, proxy statements and other information regarding us. The address of the SEC

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website is <http://www.sec.gov>. Copies of our reports, proxy statements and other information also may be inspected and copied at the public reference facilities maintained by the SEC at 450 Fifth Street, N.W., Washington, D.C., and in New York, New York and Chicago, Illinois. Please call the SEC at 1-800-732-0330 for further information on the public reference rooms.

You should rely only on the information provided in this prospectus or a prospectus supplement or amendment. We have not authorized anyone to provide you with different information. We are not making an

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offer of these securities in any state where the offer is not permitted. Also, this prospectus does not offer to sell any securities other than the securities covered by this prospectus. You should not assume that the information in this prospectus or a prospectus supplement or amendment is accurate as of any date other than the date on the front of the document.

The SEC allows us to incorporate by reference the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be a part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any other future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities and Exchange Act of 1934, as amended (other than current reports furnished on Form 8-K under Items 2.02 and 7.01):

1. Our Annual Report on Form 10-K for the year ended December 28, 2003;
2. Our Quarterly Report on Form 10-Q for the three months ended March 28, 2004;
3. Our Quarterly Report on Form 10-Q for the six months ended June 27, 2004;
4. Our Quarterly Report on Form 10-Q for the nine months ended September 26, 2004;
5. Our Amended Current Reports on Form 8-K/A filed June 25, 2004 and September 3, 2004;
6. Our Current Reports on Form 8-K filed February 9, 2004, March 10, 2004, March 29, 2004, April 22, 2004, May 3, 2004, May 4, 2004, June 7, 2004, July 6, 2004, July 21, 2004, August 10, 2004, November 4, 2004, and November 5, 2004;
7. The description our common stock which is contained in our registration statement on Form 8-A filed on June 3, 2003 pursuant to Section 12 of the Securities Exchange Act of 1934, as amended; and
8. Our Definitive Proxy Statement on Schedule 14A filed on June 14, 2004.

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You should only rely on the information contained in this prospectus. We have not authorized any person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not making an offer to distribute or sell securities in any jurisdiction where the distribution or sale is not permitted. You should assume that the information appearing in this prospectus is accurate as of the date on the front cover of this prospectus only. Our business, financial condition, results of operations and prospects may have changed since that date.

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6,000,000 Shares

Essex Corporation

Common Stock

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PROSPECTUS

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A.G. EDWARDS

C.E. UNTERBERG, TOWBIN

November 23, 2004

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