

RAE Systems
2009 Annual Report

**Wireless
Intelligent
Connected**

Gas Detection





2010 Letter to Stockholders

To our Stockholders:

In 2009, we saw continued demand for our products from the energy, industrial safety and HazMat markets. Our completed suite of gas detection solutions for the oil and gas market drove our ongoing market position and prepared us for the economic recovery. Our eleven international language websites enable us to better meet the needs of our global customers.

I am proud of the RAE Systems global team for staying focused on our goals for 2009. We continued to build our wireless product portfolio, expand applications, leverage our installed base and pursue growth opportunities in international markets, especially in the Middle East and Australia. As a result of the global recession, we experienced increased price competition and gross margin pressure. For the full year 2009, we reported revenue of \$83.2 million, compared with 2008 revenue of \$95.4 million. Our investment in proprietary sensors, consumables and compliance products has been an asset that helped us weather these unique economic times. While the economy remains challenging, we believe our strategic actions provide us with a foundation for long-term growth.

Last year we expanded our wireless sensor product line with the addition of four exciting new offerings: **AreaRAE Inert**, **SolarRAE**, **RAELink3** and **MeshGuard**. **AreaRAE Inert** is a new instrument for oil refineries and chemical plants and is designed for use in limited oxygen environments such as oil refinery catalytic-reaction towers and purged flammable-liquid storage. **SolarRAE** is a remote power option for sensor systems used in fence line applications and for monitoring storage tank farms. **RAELink3** provides an open data bridge for our wirelessly enabled handheld products, as well as complementary third-party products such as chemical warfare agent detectors and airborne particle counters. This wireless modem with integrated GPS and Bluetooth radio technology works with our AreaRAE wireless platforms. We also expanded our **MeshGuard** family of wireless sensors to include carbon monoxide, hydrogen sulfide, flammability and sulfur dioxide in addition to controllers, repeaters and other accessories.

We once again demonstrated our focus on innovation. We secured additional sensor patents in China, the European Union, and the United States for a new gamma radiation detector/dosimeter. This new technology is already available in our GammaRAE II R product.

During 2009, we made key operating management changes at both our RAE Fushun and RAE Beijing operations. In 2010, we expect to continue our focus on cost controls by further reducing operating costs through the consolidation of certain of our Beijing and Shanghai operations.

As we look ahead, we are focused on continuing to develop new market applications for our products. We believe there are a number of international business opportunities to expand our market reach. We have new products planned and the people in place to capture the business, expand our market share, grow our installed base and provide long-term value to our shareholders.

I want to thank our customers, employees and stockholders for their continued support.

Sincerely,

A handwritten signature in black ink, reading "Robert I. Chen".

Robert I. Chen,
President and Chief Executive Officer

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form 10-K

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

For the fiscal year ended December 31, 2009

OR

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

For the transition period from to

Commission file number: 001-31783

RAE Systems Inc.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

3775 North First Street San Jose, California

(Address of principal executive offices)

77-0280662

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

95134

(Zip Code)

408-952-8200

(Registrant's telephone number, including area code)

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

Title of Each Class

Name of Each Exchange on Which Registered

Common Stock, \$0.001 par value per share

NYSE Alternext US

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐
No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes ☐ No ☒

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☐ No ☒

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☐

Accelerated filer ☒

Non-accelerated filer ☐

Smaller reporting
company ☐

(Do not check if a smaller reporting company)

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

As of June 30, 2009, the aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant was approximately \$82,032,601, based upon the closing sale price of \$1.38 on the NYSE Alternext US (formerly the American Stock Exchange) on June 30, 2009, the last business day of the registrant's most recently completed second fiscal quarter. As of the close of business on February 26, 2010, the number of shares of registrant's Common Stock outstanding was 59,438,328.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for its 2010 Annual Meeting of Stockholders are incorporated by reference into Part III

RAE SYSTEMS INC.
INDEX TO
ANNUAL REPORT ON FORM 10-K
FOR YEAR ENDED DECEMBER 31, 2009
TABLE OF CONTENTS

	<u>Page</u>
<u>PART I</u>	
<u>ITEM 1. BUSINESS</u>	2
<u>ITEM 1A. RISK FACTORS</u>	7
<u>ITEM 1B. UNRESOLVED STAFF COMMENTS</u>	15
<u>ITEM 2. PROPERTIES</u>	15
<u>ITEM 3. LEGAL PROCEEDINGS</u>	15
<u>ITEM 4. RESERVED</u>	16
<u>PART II</u>	
<u>ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES</u>	16
<u>ITEM 6. SELECTED FINANCIAL DATA</u>	18
<u>ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	20
<u>ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK</u>	32
<u>ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA</u>	33
<u>ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE</u>	34
<u>ITEM 9A. CONTROLS AND PROCEDURES</u>	34
<u>ITEM 9B. OTHER INFORMATION</u>	36
<u>PART III</u>	
<u>ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE</u>	36
<u>ITEM 11. EXECUTIVE COMPENSATION</u>	36
<u>ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS</u>	36
<u>ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE</u>	36
<u>ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES</u>	36
<u>PART IV</u>	
<u>ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES</u>	36
<u>SIGNATURES</u>	37
<u>EX-23.2</u>	
<u>EX-31.1</u>	
<u>EX-31.2</u>	
<u>EX-32.1</u>	
<u>EX-32.2</u>	

PART I

In addition to historical information, this Annual Report on Form 10-K contains forward-looking statements. These statements typically are preceded or accompanied by words like “believe,” “anticipate,” “expect,” “may,” “will,” “should,” “intend,” “plan,” “estimate,” “potential,” or “continue,” and other words of similar meaning. These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from those reflected in these forward-looking statements. Readers are cautioned not to place undue reliance on those forward-looking statements, which reflect management’s opinions only as of the date hereof. We undertake no obligation to revise or update or publicly release the results of any revisions or update to these forward-looking statements. Readers should carefully review the risk factors described herein and in other documents that we file from time to time with the Securities and Exchange Commission, including the Quarterly Reports on Form 10-Q that we file for the fiscal year 2010.

ITEM 1. BUSINESS

Overview

RAE Systems Inc. (referred to herein as the “Company”, “we”, or “our”) is a leading developer and manufacturer of rapidly-deployable, multi-sensor chemical and radiation detection monitors and wireless networks for application in five key markets: oil and gas, hazardous material management, industrial safety, civil defense and environmental remediation. We provide personal, portable and wireless sensor networks that enable our customers in more than 95 countries to identify safety and security threats in real-time. The Company was founded in 1991 and originally developed technologies for the detection of hazardous materials in environmental remediation and chemical spill clean-ups. We have a broad patent portfolio consisting of 14 issued U.S. patents, one patent issued in Japan, one issued and five pending EU patents, and five issued and 14 pending technology patents in China. These patents in gas and radiation detection technology are the basis for many of our products.

We offer a comprehensive portfolio of fixed and portable breathing zone single and multi-sensor chemical and radiation detection products, many with wireless integrated systems capability. Industrial applications include the detection of toxic industrial chemicals, volatile organic compounds and petrochemicals. Our products are deployed in oil and gas facilities, petrochemical and plastics plants, steel mills and in other types of manufacturing facilities. Our products enable the military and first responders such as firefighters, law enforcement and other emergency management personnel to detect and provide early warning of hazardous materials.

We have significant operations in the People’s Republic of China (“China”), including research and development and manufacturing operations in Shanghai. We own 96% of RAE-KLH (Beijing) Co., Limited, or RAE Beijing, a manufacturer and distributor of safety, environmental and personal protection monitors and equipment. We own a 70% interest in RAE Coal Mine Safety Instruments (Fushun) Co., Ltd., hereinafter referred to as RAE Fushun. RAE Fushun offers a range of portable and fixed use safety products, primarily to the China coal mining industry.

Additional information about the Company is available on our web site at www.raesystems.com. Information contained on or accessible through our web site is not part of this Annual Report or our other filings with the Securities and Exchange Commission (“SEC”). We make available, free of charge on our web site, access to our Annual Report on Form 10-K, our Quarterly Reports on Form 10-Q, our Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, as soon as reasonably practicable after we file them electronically with or furnish them to the SEC.

The public may also read and copy any materials we file with the SEC at the SEC’s Public Reference Room at 100 F Street, N.E., Room 1580, Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Rooms by calling the SEC at 1-800-SEC-0330. The SEC also maintains an internet web site that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. The SEC’s internet web site is located at <http://www.sec.gov>.

Industry Background

The market for our products has evolved from being strictly focused on environmental and industrial monitoring to encompassing energy exploration and production, mining and public safety. Demand for our products has grown in the fields of petrochemical production, environmental remediation, confined space entry, and OSHA industrial safety compliance monitoring. The application of our products in these established markets stems from the dependence of numerous key industries on sensors that provide vital information that can affect worker safety, products, processes and systems.

Sophisticated monitoring is important for emergency response personnel to detect harmful agents that could create a potentially lethal situation. We believe first responders need a suite of products that provide a practical, comprehensive solution to protect them from this danger. Many of the same equipment capabilities that are necessary to support first responders are also necessary to address other areas where there are increasing demands for chemical and radiation detection. For example, wireless detection systems have been deployed at many of the world's major spectator events for public venue protection.

RAE Systems now offers a full suite of gas detection solutions for the oil, gas, petrochemical, adhesives and polymers markets. All of these markets require the constant monitoring of both flammable and toxic hydrocarbons. In 2009, RAE Systems began offering a full suite of personal, portable, fixed and wireless gas detection monitors for these markets.

Products

We manufacture and sell sensors and measurement products, which may also be integrated with wireless technology. As an instrument manufacturer, we have differentiated ourselves from our competition by developing a broad array of specific chemical sensors, including an array of electrochemical, solid polymer, infrared and catalytic-bead gas sensors as well as photoionization detectors.

Sensor and Measurement Products

Our products are based on proprietary and patented gas, chemical and radiation sensors. We design and manufacture the following sensors:

- photoionization detectors for the measurement of volatile organic compounds, highly toxic chemical warfare agents and toxic industrial chemicals;
- catalytic bead pellistors for the detection and measurement of combustible gas;
- non-dispersive infrared sensors for the measurement of carbon dioxide and hydrocarbons;
- electro-chemical sensors for the measurement of oxygen and toxic gases such as ammonia, carbon monoxide, chlorine and hydrogen sulfide;
- solid polymer electrode sensors for the measurement of oxygen; and
- solid-state scintillation detectors for both neutron and gamma radiation.

Photoionization detectors use ultraviolet light to ionize gas molecules into charged particles. This produces a flow of electrical current proportional to the concentration of the charge. Our patented photoionization detector technology enables dependable, linear, part-per-billion range readings for many toxic gases and vapors. Photoionization detection is particularly suited to the detection of the highly toxic, long-chain, low vapor pressure volatile organic compounds associated with many toxic industrial chemicals. Our products that use this technology include: the MultiRAE Plus, AreaRAE, AreaRAE Inert, AreaRAE Steel, MiniRAE 3000, MiniRAE Lite, ppbRAE 3000 and UltraRAE 3000.

Integrated Wireless Products

We have developed wireless capabilities for many of our gas monitoring instruments that enable detection from remote locations. Our AreaRAE and MeshGuard products offer wireless-enabled gas detectors, which provide

[Table of Contents](#)

real-time transmission of monitoring information to a base station located up to two miles away from the detectors. The AreaRAE incorporates technologies such as global positioning system (GPS) receivers and geographic information system (GIS) capabilities to create awareness of hazardous conditions for decision makers located remotely in a central command and control location. In addition, both the AreaRAE and MeshGuard can interface with the Internet, making measurements available from virtually any location with Internet access.

Our AreaRAE Gamma combines a multi-gas and radiation detector equipped with a wireless radio frequency modem that allows the unit to communicate and transmit sensor and location information on a real-time basis to a remotely located base controller. AreaRAE Steel is a stainless steel version of the AreaRAE that meets the intrinsic safety requirements of the United States, Canada and the European Union (ATEX). All of the AreaRAE models are available in Rapid Deployment kits to enable swift deployment in the field.

Meshguard, introduced in October 2008, is a new family of wireless products designed to replace the “fixed” sensor systems that are deployed for oil and gas exploration. This family of products uses “mesh-radio” to create a self healing network where each sensor has both a radio receiver and transmitter. This architecture gives the MeshGuard sensor the ability to transmit radio data in and around metal structures that are generally difficult for clear radio transmission.

RAELink 3 provides the wireless network bridge to connect MultiRAE Plus, MiniRAE 3000, ppbRAE 3000 and UltraRAE 3000 to either the AreaRAE or MeshGuard networks.

Our wireless products include the AreaRAE, AreaRAE Steel, AreaRAE Gamma, MeshGuard and RAELink3.

Radiation Products

We have developed technology for gamma and neutron radiation detection. These technologies are incorporated into highly sensitive handheld instruments capable of detecting low levels of radiation on a real-time basis and dosimeters which are used in nuclear power plants to protect personnel from long-term radiation exposure. Our radiation products include GammaRAE II R, NeutronRAE II, AreaRAE Gamma, AreaRAE Steel Gama and DoseRAE. Our markets include nuclear power plants and first responders.

Sales, Marketing and Distribution

We sell our products in more than 95 countries and through an international network of direct sales personnel, representatives and distributors managed from our San Jose, California headquarters, our Beijing and Fushun, China operations, Hong Kong and our Copenhagen, Denmark European headquarters.

Currently, our predominant distribution channel is value added business-to-business or business-to-government distribution services companies that focus on the health, safety and security product markets. Many of our distributors are international companies with distribution rights in specific territories. We seek those distributors that have the greatest reach and broadest array of end-user customers. We monitor our distributors’ performance according to volume, payment schedule, training, services and other support programs.

Our wireless detection products, specifically the AreaRAE and MeshGuard suite of products and their peripherals, are largely sold through a direct sales channel in the United States and Europe. This channel was established because of the technical expertise required to advise and sell these complex monitoring systems.

Our marketing efforts are focused on increasing brand awareness and creating product preference through print advertising, direct mail, email marketing, web sites, trade shows and focused sales strategies. The primary responsibilities of our product managers is to create products and develop marketing programs targeted towards specific audiences in the areas of wireless systems, portable products, consumable products and government requirements.

Customers

We have significant numbers of instruments currently in service in more than 95 countries, with various government agencies and many of the world’s leading corporations. Our products are used in civilian and government atmospheric monitoring programs. Our end-user customers include many industrial companies that

[Table of Contents](#)

use hazardous chemicals as part of their manufacturing processes. We serve customers in five key markets: oil and gas, hazardous material management, industrial safety, civil defense and environmental remediation. Our products are used in confined space entry monitoring programs, public venue protection, first responders, law enforcement, all branches of the armed forces and numerous local, state and federal agencies and departments.

Research, Development and Engineering

As a stand-alone toxic gas and radiation instruments manufacturer, we continue to invest in sensor technology. We were among the first companies in our industry to deploy Reduction of Hazardous Substances (RoHS) compliant oxygen sensors. These oxygen sensors meet the RoHS requirements of China, the European Union and the State of California. The Company maintains research, development and engineering facilities in San Jose, CA, and in Shanghai and Beijing, China. Our primary R&D facility is located in Shanghai, where we also have a radiation calibration lab. This lab is an important facility for the Company to expand its future radiation detection product offerings.

We use modular product design processes and flexible rapid manufacturing. These investments have resulted in improved system performance as well as advanced scalability, thereby allowing rapid development and regional certification of new products.

The Company currently holds a total of 21 patents granted with 19 patents pending. These patents include:

- 14 United States patents granted;
- 5 China patents granted with 14 pending;
- 1 Europe patent granted with 5 pending; and
- 1 Japan patent granted.

Manufacturing

We lease a modern 61,000 square foot manufacturing facility with laboratory space in Shanghai, China, where the majority of our components and products are manufactured. We lease a 67,000 square foot office, manufacturing, integration and test site in San Jose, California, where we manufacture some of our more complex and sensitive sensors. Our manufacturing operations in Shanghai and California are ISO 9001 certified. We have limited manufacturing capabilities in our RAE Beijing operations, consisting of 106,000 square feet, of which 41,000 square feet are dedicated to manufacturing and the balance to sales, marketing and administrative functions. We own a 239,000 square foot facility in Fushun, China, of which 179,000 square feet are dedicated to manufacturing and the balance to sales, marketing and administrative functions.

Competition

The markets for gas detection monitoring devices and wireless gas monitoring systems are highly competitive. Our global gas detection competitors include Industrial Scientific Corporation, Mine Safety Appliances Company, Honeywell, Ion Science, Draeger Safety Inc., Gastec Corporation and Sperian Protection. In addition, China specific gas detection competitors include Ex-Saf, Cosmos, and local China companies with established distribution networks.

Competitors in the gas monitoring industry differentiate themselves on the basis of their sensor technology, product quality, language support, service offerings, sales capabilities, cost and time to market. An emerging differentiator is the ability to manage data for long term exposure records and incident management. We believe we compete strongly in each of these areas and consider ourselves an industry leader in the design, development, marketing and manufacture of toxic gas monitoring devices. In particular, we believe our ability to develop products that integrate different chemical detection techniques, such as photoionization detectors, electrochemical sensors for specific toxic chemicals and combustible gas detectors, along with communication technologies that allow wireless data transfer, provide us with a competitive advantage. In addition, we believe our single user interface, training and support materials are a valuable resource for our distributors and end-users, which make our products more attractive to customers.

[Table of Contents](#)

Many of our gas detection competitors have longer operating histories, larger customer bases, greater brand recognition and significantly greater financial and marketing resources. In addition, some of our competitors may be able to devote greater resources to marketing and promotional campaigns, adopt more aggressive pricing policies and/or devote more resources to technology and systems development.

We differentiate our radiation detection products on their intrinsic safety certifications and the dual nature of our products. Our GammaRAE II R combines both a detector and dosimeter. Our NeutronRAE combines both gamma radiation and neutron detectors. Our AreaRAE Gamma combines wireless gas detection and gamma radiation monitoring. Competitors in the radiation detection market include Canberra, Exporanium, ICx, MGP Polimaster Ltd., Santa Barbara Systems, Smiths Detection, ThermoFisher and TSA Limited.

Employees

As of December 31, 2009, we employed 1,259 people. Our employees are not covered by a collective bargaining agreement. We have never experienced an employee-related work stoppage and consider our employee relations to be good.

Executive Officers of the Registrant

The following table sets forth the names, ages and positions held by our executive officers.

Name	Age	Position
Robert I. Chen	62	President, Chief Executive Officer and Chairman of the Board
Randall Gausman	60	Vice President and Chief Financial Officer
Peter C. Hsi	59	Chief Technology Officer
Ming-Ching Tang	59	Executive Vice President Operations
Christopher Hameister	55	Vice President Asia-Pacific, Europe and Middle East Business Operations
William Jackson	50	Vice President Global Marketing
Bin Lu	37	Vice President and General Manager Beijing Business Operations
Fei-Zhou Shen	47	Vice President Corporate Development and Fushun Business Operations
Ryan Watson	37	Vice President Americas Sales

Robert I. Chen co-founded RAE Systems in 1991 and has served as President, Chief Executive Officer and a director since our inception. From 1981 to 1990, Mr. Chen served as President and Chief Executive Officer of Applied Optoelectronic Technology Corporation, a manufacturer of computer-aided test systems, a company he founded and subsequently sold to Hewlett-Packard. Mr. Chen currently serves on the board of directors of Shanghai Ericsson Simtek Electronics Company, Limited, a telecommunications and electronics company. Mr. Chen received a BS in electrical engineering from Taiwan National Cheng Kung University, an MS in electrical engineering from South Dakota School of Mines and Technology, an advanced engineering degree from Syracuse University and graduated from the Harvard Owner/President program.

Randall Gausman joined RAE Systems in October 2006 as Chief Financial Officer. From May 2006 until joining the Company, Mr. Gausman worked as an independent financial consultant. From April 2002 to May 2006, Mr. Gausman served as Chief Financial Officer of Tut Systems, Inc., which delivered industry leading content processing and distribution products for deploying next-generation video and IP services over broadband networks. Previously he served as co-founder and CFO of Zantaz, Inc. and a senior finance executive at American President Companies. Mr. Gausman holds both a BS and MBA from the University of Southern California, as well as a certificate in corporate finance from the University of Michigan School of Business Administration.

Dr. Peter C. Hsi co-founded RAE Systems in 1991 and has served as Chief Technology Officer and a director since our inception. Prior to co-founding RAE Systems, Dr. Hsi was the chief architect for semiconductor test

[Table of Contents](#)

systems at Applied Optoelectronic Technology Corporation. He was also the general manager for Shanghai Simax Technology Co. Ltd. Dr. Hsi has filed 21 patent applications, of which 16 have been granted and 5 are pending. Dr. Hsi received a BS in electrical engineering from the National Chiao-Tung University, and a MS and PhD in electrical engineering from Syracuse University.

Dr. Ming-Ching Tang joined RAE Systems in June 2007 as Vice President Manufacturing and was promoted to Executive Vice President Operations in August 2009. Prior to joining the Company, Dr. Tang was Senior Vice President of TDK China from 2004 to 2007, and was President of Trace Storage Technology, a thin film magnetic recording media company in Taiwan from 2001 to 2004. Prior to 2001, Dr. Tang held senior executive positions in hard drive technology development with Western Digital, Seagate Technology and IBM. Dr. Tang received a BS in mechanical engineering from National Taiwan University, an MS in mechanical engineering from Massachusetts Institute of Technology and a PhD in mechanical engineering from University of California, Berkeley.

Christopher Hameister has served as Vice President of Asia-Pacific, Europe, and Middle East Business Operations since January 2007. Previously, Mr. Hameister served as Vice President of Worldwide Sales with RAE Systems from July 2006 to January 2007. In the last 25 years, Mr. Hameister's experiences have all been with instrumentation companies, including seven years, prior to rejoining the company in July 2005, as Director of Marketing and Sales with RAE Systems and six years with Thermo Instruments as Business Operation Manager. Mr. Hameister holds a BS from the University of Adelaide, South Australia and a certificate in marketing from University of New South Wales.

William Jackson joined RAE Systems in July 2009 and serves as our Vice President Global Marketing. Before joining RAE Systems, Mr. Jackson was Vice President of Product Marketing at ARC International, a leading supplier of semiconductor intellectual property. Prior to ARC, Mr. Jackson held management, marketing and business development positions at Eastman Kodak, MIPS Technologies, Toshiba, Digital Equipment Corporation and RCA. Mr. Jackson holds a MBA from Boston University and a BS in electrical engineering from the University of Pittsburgh.

Bin Lu joined RAE Systems in July 2006 as Director of the Company's security business in China. He was promoted to Vice President and General Manager of RAE Beijing in September 2009. Prior to joining RAE Systems, Mr. Lu held management and engineering positions with several international technology companies. Mr. Lu holds both a BS and MS in computer science from Nankai University.

Fei-Zhou Shen joined RAE Systems in May 2001 and has served in various key roles including Vice President of Worldwide Manufacturing. Mr. Shen is currently Vice President Corporate Development and Fushun Business Operations. Mr. Shen has over 20 years of business experience serving in key business and strategic management roles. Mr. Shen has a BS in mechanical engineering from Shanghai Jiao-Tong University and a MS in mechanical engineering from the University of Idaho.

Ryan Watson joined RAE Systems in May 1999 as the Midwestern Regional Sales Manager. He has also served as Sales Director for the Eastern US and Canada and Central US Regional Sales Manager. He was promoted to Vice President of Americas Sales in March 2008. Mr. Watson has over 14 years of field experience selling into multiple market segments including industrial, first responder, government/military, oil-gas and petrochemical as well as environmental applications. Mr. Watson has a BS in human environmental sciences from the University of Missouri.

ITEM 1A. RISK FACTORS

You should carefully consider the risks described below before making a decision regarding an investment in our common stock. If any of the following risks actually occur, our business could be harmed, the trading price of our common stock could decline and you may lose all or part of your investment. You should also refer to the other information contained in this report, including our financial statements and the related notes.

[Table of Contents](#)

We have discovered potential violations of the Foreign Corrupt Practices Act, the resolution of which could have a material adverse impact on our financial condition and results of operations.

During fiscal year 2008, our internal audit department identified certain payments and gifts made by certain personnel in our China operations that may have violated the Foreign Corrupt Practices Act (“FCPA”). Following this discovery, the Audit Committee of our Board of Directors initiated an independent investigation. We have made a voluntary disclosure to the United States Department of Justice (“DOJ”) and the SEC regarding the results of our investigation. We have also implemented additional policies and controls with respect to compliance with the FCPA. The FCPA and related statutes and regulations provide for potential monetary penalties, criminal sanctions and in some cases debarment from doing business with the U.S. federal government in connection with FCPA violations. We are cooperating with the DOJ and the SEC in connection with their review of the matter and are actively engaged in settlement discussions. Although no assurances can be given as to whether the matter will settle or the amount of any settlement, the Company recorded an accrual of \$3.5 million in the third quarter of 2009 relating to the potential settlement of this matter. The timing and final outcome of this or any future government investigation cannot be predicted with certainty and any indictment, conviction or material fine, debarment or settlement arising out of these investigations could have a material adverse affect on our business, financial condition, results of operation and future prospects.

Economic conditions could materially adversely affect our business.

The financial turmoil that first arose in the fall of 2008 has resulted in a tightening of the credit markets and a low level of liquidity in many financial markets. There could be a number of follow-on effects from the credit crisis on our business, including the insolvency of key suppliers or their inability to obtain credit to finance manufacturing of their products, resulting in product delays; inability of customers, including channel partners, to obtain credit to finance purchases of our products; and/or customer, including channel partner, insolvencies. Our operations and performance depend significantly on worldwide economic conditions. Uncertainty about current global economic conditions poses a risk as businesses and governments may postpone spending in response to tighter credit and/or negative financial news, which could have a material negative effect on demand for our products. Our operating results could also be adversely affected if the U.S. dollar strengthens against various foreign currencies.

Political events, war, terrorism, natural disasters, and other circumstances could materially adversely affect us.

War, terrorism, geopolitical uncertainties, and other business interruptions have caused and could cause damage or disruption to international commerce and the global economy, and thus could have a strong negative effect on us and our suppliers, logistics providers, manufacturing vendors, and customers, including channel partners. Our business operations are potentially subject to interruption by natural disasters, fire, power shortages, terrorist attacks and other hostile acts, and other events beyond our control. Such events could decrease demand for our products, make it difficult or impossible for us to make and deliver products to our customers, including channel partners, or to receive components from our suppliers, and create delays and inefficiencies in our supply chain.

Our future revenues are unpredictable, our operating results are likely to fluctuate from quarter-to-quarter, and if we fail to meet the expectations of securities analysts or investors, our stock price could decline significantly.

Our quarterly and annual operating results have fluctuated in the past and are likely to fluctuate significantly in the future due to a variety of factors, some of which are outside of our control. Accordingly, we believe that period-to-period comparisons of our results of operations are not meaningful and should not be relied upon as indications of future performance. Some of the factors that could cause our quarterly or annual operating results to fluctuate include significant shortfalls in revenue relative to our planned expenditures, changes in budget allocations by the federal government for homeland security purposes, changes in world-wide energy production and refining, market acceptance of our products, ongoing product development and production, competitive pressures and customer retention. It is likely that in some future quarters our operating results may fall below the expectations of investors. In this event, the trading price of our common stock could significantly decline.

Table of Contents

We may have difficulty achieving and sustaining profitability and may experience additional losses in the future. If we continue to report losses or are marginally profitable, the financial impact of future events may be magnified and may lead to a disproportionate impact on the trading price of our stock.

We recorded net losses of \$5.8 million, \$7.2 million and \$14.7 million for 2009, 2008 and 2007, respectively. In order to improve our profitability, we will need to continue to generate new sales while controlling our costs. As we plan on continuing the growth of our business while implementing cost control measures, we may not be able to successfully generate enough revenues to return to profitability. Any failure to increase our revenues and control costs as we pursue our planned growth would harm our profitability and would likely result in a negative effect on the market price of our stock. In addition, our financial results have historically bordered at or near profitability, and if we continue to perform at this level, the financial impact may be magnified and we may experience a disproportionate impact on our trading price as a result. If we continue to incur losses, any particular financial event could result in a relatively large change in our financial results or could be the difference between us having a profit or a loss for the particular quarter in which it occurs.

We may require additional capital in the future, which may not be available or may only be available on unfavorable terms.

Our future capital requirements depend on many factors, including potential future acquisitions and our ability to generate revenue and control costs. Should we have the need to raise additional capital, we might not be able to do so at all or on favorable terms. In the case of any future equity financings, dilution to our shareholders could result and, in any case, such securities may have rights, preferences and privileges that are senior to those of our common stock. If we are unable to obtain needed capital on favorable terms, or at all, our business and results of operations could be harmed and our liquidity could be adversely effected.

The market for gas and radiation detection monitoring devices is highly competitive, and if we cannot compete effectively, our business may be harmed.

The market for gas and radiation detection monitoring devices is highly competitive. Competitors in the gas and radiation monitoring industry differentiate themselves on the basis of their technology, quality of product and service offerings, cost and time to market. Our primary competitors in the gas detection market include Industrial Scientific Corporation, Mine Safety Appliances Company, Honeywell, Ion Science, Draeger Safety Inc., Gastec Corporation and Sperian Protection. Our competitors in the radiation market include Canberra, Exporanium, ICx, MGP Polimaster Ltd., Santa Barbara Systems, Smiths Detection, ThermoFisher and TSA Limited. Several of our competitors such as Mine Safety Appliances Company, Draeger Safety Inc. and Smiths have longer operating histories, larger customer bases, greater brand recognition and significantly greater financial and marketing resources than we do. In addition, some of our competitors may be able to:

- devote greater resources to marketing and promotional campaigns;
- adopt more aggressive pricing policies; or
- devote more resources to technology and systems development.

In light of these factors, we may be unable to compete successfully.

We may not be successful in the development or introduction of new products and services in a timely and effective manner and, consequently, we may not be able to remain competitive and the results of operations may suffer.

Our revenue growth is dependent on the timely introduction of new products to market. We may be unsuccessful in identifying new product and service opportunities or in developing or marketing new products and services in a timely or cost-effective manner. In developing new products, we may be required to make significant investments before we can determine the commercial viability of the new product. If we fail to accurately foresee our customers' needs and future activities, we may invest heavily in the research and development of products that do not lead to significant sales.

Table of Contents

We have expanded our current business of providing gas detection instruments to include radiation detection and wireless systems for local and remote security monitoring. While we perceive a large market for such products, the radiation detection and wireless systems markets are still evolving, and we have little basis to assess the demand for these products and services or to evaluate whether our products and services will be accepted by the market. If our radiation detection products and wireless products and services do not gain broad market acceptance or if we do not continue to maintain the necessary technology, our business and results of operations will be harmed.

In addition, compliance with safety regulations, specifically the need to obtain regulatory approvals in certain jurisdictions, could delay the introduction of new products by us. As a result, we may experience delays in realizing revenues from our new products.

The securities laws and regulations have and are likely to continue to have a significant effect on our costs.

The Sarbanes-Oxley Act of 2002 (the “Act”) and the rules promulgated by the SEC and the New York Stock Exchange in relation thereto require significant legal, financial and accounting compliance costs, and we expect these costs to continue indefinitely.

In the event we are unable to satisfy regulatory requirements relating to internal control over financial reporting or, if these controls are not effective, our business and financial results may suffer.

In designing and evaluating our internal control over financial reporting, we recognize that any internal control or procedure, no matter how well designed and operated, can provide only reasonable assurance of achieving desired control objectives. For example, a company’s operations may change over time as the result of new or discontinued lines of business and management must periodically modify a company’s internal controls and procedures to timely match these changes in its business. In addition, management is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures and company personnel are required to use judgment in their application. While we continue to improve upon our internal control over financial reporting so that it can provide reasonable assurance of achieving its control objectives, no system of internal controls can be designed to provide absolute assurance of effectiveness.

Material weaknesses in internal control over financial reporting may materially impact our reported financial results and the market price of our stock could significantly decline. Additionally, adverse publicity related to a material failure of internal control over financial reporting could have a negative impact on our reputation and business.

We are subject to risks and uncertainties of the government marketplace, including the risk that the government may not fund projects that our products are designed to address and that certain terms of our contracts with government agencies may subject us to adverse government actions or penalties.

Our business is dependent in part upon government funded projects. Decisions on what types of projects are to be funded by local, state and federal government agencies may have a material impact on our business. The Federal budget for the Department of Homeland Security, which we refer to as “Homeland Security” herein, is a source for funding for many of our customers either directly or through grants to state and local agencies. However, if the government does not fund projects that our products are designed to address, or funds such projects at levels lower than we expect, our business and results of operations will be harmed.

From time to time we enter into government contracts that contain provisions which subject us to laws and regulations that provide government clients with rights and remedies not typically found in commercial contracts. For example, a portion of our federal contracting has been done through our distributors who are on the Federal Supply Schedules from the United States General Services Administration (GSA). GSA Schedule contracts which we may enter into often include a clause known as the “Price Reductions” clause. The terms of that clause are similar but not identical to a “most favored customer” clause in commercial contracts. Under that clause, we may agree that the prices to the government under the GSA Schedules contract will maintain a constant relationship to the prices charged to certain commercial customers, i.e., when prices to those benchmark customers drop, our prices on our GSA Schedules contract must be adjusted accordingly. Although when we are party to these contracts we

[Table of Contents](#)

undertake extensive efforts to comply with the Price Reductions clause, it is possible that we may have an unreported discount offered to a “Basis of Award” customer and may have failed to honor the obligations of the Price Reductions clause. If that occurs, we could, under certain circumstances, be subject to an audit, an action in fraud, or other adverse government actions or penalties.

We may not be successful in promoting and developing our brand, which could prevent us from remaining competitive.

We believe that our future success will depend on our ability to maintain and strengthen the RAE brand, which will depend, in turn, largely on the success of our marketing efforts and ability to provide our customers with high-quality products. If we fail to successfully promote and maintain our brand, or incur excessive expenses in attempting to promote and maintain our brand, our business will be harmed.

We may face risks from our substantial international operations and sales.

We have significant operations in foreign countries, including manufacturing facilities, sales personnel and customer support operations. For the years ended December 31, 2009 and 2008, approximately 41% and 43% of our revenues, respectively, were from sales to customers located in Asia and approximately 17% and 16% of our revenues, respectively, were from sales to customers located in Europe. We have manufacturing facilities in China and in the United States. A significant portion of our products and components are manufactured at our facility in Shanghai, China.

Our international operations are subject to economic and other risks inherent in doing business in foreign countries, including the following:

- difficulties with staffing and managing international operations;
- transportation and supply chain disruptions and increased transportation expense as a result of epidemics, terrorist activity, acts of war or hostility, increased security and less developed infrastructure;
- economic slowdown and/or downturn in foreign markets;
- international currency fluctuations;
- political and economic uncertainty caused by epidemics, terrorism or acts of war or hostility;
- legislative and regulatory responses to terrorist activity such as increased restrictions on cross-border movement of products and technology;
- legislative, regulatory, police, or civil responses to epidemics or other outbreaks of infectious diseases such as quarantines, factory closures, or increased restrictions on transportation or travel;
- increased costs and complexities associated with complying with Section 404 of the Sarbanes-Oxley Act of 2002;
- general strikes or other disruptions in working conditions;
- labor shortages;
- political instability;
- changes in tariffs;
- generally longer periods to collect receivables;
- unexpected legislative or regulatory requirements;
- reduced protection for intellectual property rights in some countries;
- significant unexpected duties or taxes or other adverse tax consequences;
- difficulty in obtaining export licenses and other trade barriers; and

- ability to obtain credit and access to capital issues faced by our international customers.

The specific economic conditions in each country will impact our future international sales. For example, approximately half of our recognized revenue has been denominated in U.S. dollars. Significant downward fluctuations in currency exchange rates against the U.S. dollar could result in higher product prices and/or declining margins and increased manufacturing costs. If we do not effectively manage the risks associated with international operations and sales, our business, financial condition and operating results could suffer.

Like other companies operating or selling internationally, we are subject to the FCPA and other laws which prohibit improper payments or offers of payments to foreign governments and their officials and political parties by U.S. and other business entities for the purpose of obtaining or retaining business. We make sales in countries known to experience corruption. Our sales activities in such countries create the risk of unauthorized payments or offers of payments by one of our employees, consultants, sales agents or distributors which could be in violation of various laws including the FCPA, even though such parties are not always subject to our control. We have implemented new policies and procedures to prevent losses from such practices and to discourage such practices by our employees, consultants, sales agents and distributors and are continuing our efforts to improve such policies and procedures. Among other things, we have established ongoing training programs for our employees to ensure that they are aware of their responsibilities under the FCPA and similar laws. However, our existing safeguards and any improvements may prove to be less than effective and our employees, consultants, sales agents or distributors may engage in conduct for which we might be held responsible. Violations of the FCPA may result in severe criminal or civil sanctions, and we may be subject to other liabilities, which could negatively affect our business, financial condition and results of operations.

The loss of “Normal Trade Relations” status for China, changes in current tariff structures or adoption of other trade policies adverse to China could have an adverse effect on our business.

Our ability to import products from China at current tariff levels could be materially and adversely affected if the “normal trade relations” (“NTR”, formerly “most favored nation”) status the United States government has granted to China for trade and tariff purposes is terminated. As a result of its NTR status, China receives the same favorable tariff treatment that the United States extends to its other “normal” trading partners. China’s NTR status, coupled with its membership in the World Trade Organization, could eventually reduce barriers to manufacturing products in and exporting products from China. However, we cannot provide any assurance that China’s membership in the World Trade Organization or NTR status will not change. As a result of opposition to certain policies of the Chinese government and China’s growing trade surpluses with the United States, there has been, and in the future may be, opposition to NTR status for China. Also, the imposition of trade sanctions by the United States or the European Union against a class of products imported by us from, or the loss of NTR status with, China, could significantly increase our cost of products imported into the United States or Europe and harm our business. For example, in September 2009, the U.S. government imposed new tariffs on tires imported from China. Retaliatory actions by China could be harmful to our business. Because of the importance of our international sales and international sourcing of manufacturing to our business, our financial condition and results of operations could be significantly and adversely affected if any of the risks described above were to occur.

The government of China may change or even reverse its policies of promoting private industry and foreign investment, in which case our assets and operations may be at risk.

We currently manufacture and sell a significant portion of our components and products in China. Our existing and planned operations in China are subject to the general risks of doing business internationally and the specific risks related to the business, economic and political conditions in China, which include the possibility that the central government of China will change or even reverse its policies of promoting private industry and foreign investment in China. Many of the current reforms which support private business in China are unprecedented or experimental. Other political, economic and social factors, such as political changes, changes in the rates of economic growth, unemployment or inflation, or in the disparities of per capita wealth among citizens of China and between regions within China, could also lead to further readjustment of the government’s reform measures. It is not possible to predict whether the Chinese government will continue to be as supportive of private business in China, nor is it possible to predict how future reforms will affect our business.

Table of Contents

Any failure to adequately protect and enforce our intellectual property rights could harm our business.

We regard our intellectual property as critical to our success. We rely on a combination of patent, trademark, copyright, trade secret laws and non-disclosure agreements and confidentiality procedures to protect our proprietary rights. Notwithstanding these laws, we may be unsuccessful in protecting our intellectual property rights or in obtaining patents or registered trademarks for which we apply. Although processes are in place to protect our intellectual property rights, we cannot guarantee that these procedures are adequate to prevent misappropriation of our current technology or that our competitors will not develop technology that is similar to our own.

While there is no single patent or license to technology of material significance to the Company, our ability to compete is affected by our ability to protect our intellectual property rights in general. For example, we have a collection of patents related to our photoionization detector technology, the first of which expires in 2012, and our ability to compete may be affected by any competing similar or new technology. In addition, if we lose the licensing rights to a patented or other proprietary technology, we may need to stop selling products incorporating that technology and possibly other products, redesign our products or lose a competitive advantage. We cannot ensure that our future patent applications will be approved or that our current patents will not be challenged by third parties. Furthermore, we cannot ensure that, if challenged, our patents will be found to be valid and enforceable. Any litigation relating to our intellectual property rights could, regardless of the outcome, have a material adverse impact on our business and results of operations.

We may face intellectual property infringement claims that might be costly to resolve and affect our results of operations.

In connection with the enforcement of our own intellectual property rights, the acquisition of third-party intellectual property rights or disputes relating to the validity or alleged infringement of third-party rights, including patent rights, we have been, are currently and may in the future be subject to claims, negotiations or complex, protracted litigation. Intellectual property disputes and litigation are typically very costly and can be disruptive to our business operations by diverting the attention and energies of management and key technical personnel. Although we have successfully defended or resolved past litigation and disputes, we may not prevail in any ongoing or future litigation and disputes. We may incur significant costs in acquiring the necessary third party intellectual property rights for use in our products. Third party intellectual property disputes could subject us to significant liabilities, require us to enter into royalty and licensing arrangements on less favorable terms, prevent us from manufacturing or licensing certain of our products, cause severe disruptions to our operations or the markets in which we compete, or require us to satisfy indemnification commitments with our customers including contractual provisions under various license arrangements, any one of which could seriously harm our business. For example, for the last several years we have been involved in a dispute with Polimaster Ltd. which required us to incur substantial professional fees. Although we ultimately prevailed, it is uncertain whether we will be able to recover any of the amounts awarded to us.

Claims of this type, regardless of merit, can be time-consuming to defend, result in costly litigation, divert management's attention and resources or require us to enter into royalty or license agreements. The terms of any such license agreements may not be available on reasonable terms, if at all, and the assertion or prosecution of any infringement claims could significantly harm our business.

Some of our products may be subject to product liability claims which could be costly to resolve and affect our results of operations.

There can be no assurance that we will not be subject to third party claims in connection with our products or that any indemnification or insurance available to us will be adequate to protect us from liability. A product liability claim, product recall or other claim, as well as any claims for uninsured liabilities or in excess of insured liabilities, could have a material adverse effect on our business and results of operations.

[Table of Contents](#)

We sell a majority of our products through distributors, and if our distributors stop selling our products, our revenues would suffer.

We distribute our products in the Americas, Europe, Asia Pacific and the Middle East primarily through distributors. We are dependent upon these distributors to sell our products and to assist us in promoting and creating a demand for our products. Distributors are an important sales channel for our future growth. If one or more of our distributors were to experience financial difficulties or become unwilling to promote and sell our products for any reason, including any refusal to renew their commitment as our distributor, we might not be able to replace such lost revenue, and our business and results of operations could be materially harmed.

Because we purchase a significant portion of our component parts from a limited number of third party suppliers, we are subject to the risk that we may be unable to acquire quality components in a timely manner, which could result in delays of product shipments and damage our business and operating results.

We currently purchase component parts used in the manufacture of our products from a limited number of third party suppliers. We depend on these suppliers to meet our needs for various sensors, microprocessors and other material components. Moreover, we depend on the quality of the products supplied to us over which we have limited control. Should we encounter shortages and delays in obtaining components, we might not be able to supply products in a timely manner due to a lack of components, and our business could be adversely affected.

Future acquisitions that we undertake could be difficult to integrate, disrupt our business, dilute shareholder value or harm our results of operations.

In the last several years, we increased our ownership of RAE Beijing to 96%, acquired Aegison Corporation and Tianjin Securay Technology Co., Ltd. and formed RAE Fushun, of which we retain 70% ownership. In August 2007, we determined to discontinue the Aegison and Securay businesses. We may acquire or make additional investments in complementary businesses, technologies, services or products if appropriate opportunities arise. The process of integrating any acquired business, technology, service or product into our business and operations may result in unforeseen operating difficulties and expenditures. Integration of an acquired company also may consume much of our management's time and attention that would otherwise be available for ongoing development of our business. Moreover, the anticipated benefits of any acquisition may not be realized. Future acquisitions could result in dilutive issuances of equity securities or the incurrence of debt, contingent liabilities or expenses related to goodwill recognition and other intangible assets, any of which could harm our business.

Our ownership interest in Renex will cause us to incur losses that we would not otherwise incur.

We currently own approximately 40% of Renex Technology Ltd. ("Renex"), a wireless systems company. We are required to incorporate our share of its expenses as losses in our Consolidated Statements of Operations. If Renex does not begin to generate revenues at the level we anticipate or otherwise incurs greater losses, we could incur greater losses than we anticipate and our results of operations will suffer.

Our business could suffer if we lose the services of any of our executive officers.

Our future success depends to a significant extent on the continued service of our executive officers. We have no formal employment agreements with any of our executives other than the initial offer letter, if applicable. The loss of the services of any of our executive officers could harm our business. We do not have key person life insurance on any of our personnel.

Our officers and directors beneficially own approximately 32% of our common stock and, accordingly, may exert substantial influence over the Company.

Our executive officers and directors, in the aggregate, beneficially own approximately 32% of our common stock as of December 31, 2009. These stockholders acting together have the ability to substantially influence all matters requiring approval by our stockholders. These matters include the election and removal of the directors, amendment of our certificate of incorporation, and any merger, consolidation or sale of all or substantially all of our

[Table of Contents](#)

assets. In addition, they may dictate the management of our business and affairs. Furthermore, this concentration of ownership could have the effect of delaying, deferring or preventing a change in control, or impeding a merger or consolidation, takeover or other business combination and may substantially reduce the marketability of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

Our corporate headquarters and principal offices are located in a facility we lease in San Jose, California. The San Jose facility consists of approximately 67,000 square feet, which we have occupied since May 2005, and which includes research and development, sales and marketing, general and administrative and manufacturing operations. The lease expires in December 2017.

We lease manufacturing and research and development facilities in Shanghai, China. The lease on the manufacturing facility (44,000 square feet) expires in September 2011. The lease on the research and development/sensor laboratory (17,000 square feet) expires in October 2012.

In December 2008, we purchased the land use rights for 50 years to 5 acres of land in Shanghai. We plan to use this site to construct a new manufacturing and research and development facility, which would replace our current Shanghai facility.

In addition, RAE Beijing owns a manufacturing facility consisting of approximately 106,000 square feet, of which 41,000 square feet is dedicated to the manufacturing of RAE Beijing's products and the storage of the inventory.

In October 2008, we relocated our operations to a new owner occupied 239,000 square foot manufacturing facility in Fushun, China. Related offices, a research and development facility and living quarters totaling 152,000 square feet have not been completed at this time.

We maintain a sales office in Shatin, Hong Kong, from which we sell our products throughout Asia, excluding the People's Republic of China. The lease expires in April 2011. We also maintain sales and service centers in Copenhagen, Denmark, the United Kingdom, France and United Arab Emirates, from which we sell our products to Europe, Australia, New Zealand, the Middle East and Africa. The lease of the Copenhagen facility expires in September 2014.

ITEM 3. LEGAL PROCEEDINGS

Regulatory Compliance

During fiscal year 2008, our internal audit department identified certain payments and gifts made by certain personnel in our China operations that may have violated the FCPA. Following this discovery, the Audit Committee of our Board of Directors initiated an independent investigation. We have made a voluntary disclosure to the DOJ and the SEC regarding the results of our investigation. We have also implemented additional policies and controls with respect to compliance with the FCPA. The FCPA and related statutes and regulations provide for potential monetary penalties, criminal sanctions and in some cases debarment from doing business with the U.S. federal government in connection with FCPA violations. We are cooperating with the DOJ and the SEC in connection with their review of the matter and are actively engaged in settlement discussions. Although no assurances can be given as to whether the matter will settle or the amount of any settlement, the Company recorded an accrual of \$3.5 million in the third quarter 2009 relating to the potential settlement of this matter. The timing and final outcome of this or any future government investigation cannot be predicted with certainty and any indictment, conviction or material fine, debarment or settlement arising out of these investigations could have a material adverse affect on our business, financial condition, results of operation and future prospects.

Table of Contents

Polimaster Ltd., et al. v. RAE Systems Inc., United States District Court for the Northern District of California, Case No. 05-CV-01887-JF, United States Court of Appeals for the Ninth Circuit, Nos. 08-15708 and 09-15369.

Polimaster Ltd. and Na&Se Trading Company, Ltd. (“Polimaster”) filed a complaint against the Company on May 9, 2005, in the United States District Court for the Northern District of California in a case titled Polimaster Ltd., et al. v. RAE Systems Inc. (Case No. 05-CV-01887-JF). The complaint alleges, among other things, that the Company breached its contract with Polimaster and infringed upon Polimaster’s intellectual property rights. The dispute was subject to a contractual arbitration agreement, although the federal court retained jurisdiction over the matter pending completion of the arbitration. The arbitration was conducted in the spring of 2007.

In September 2007, a Final Award was issued in the arbitration. The arbitrator ruled that Polimaster failed to prove its claims and was not entitled to any relief; that the Company had proven its counterclaims and was awarded damages of approximately \$2.4 million; and that as the prevailing party, the Company was entitled to recover costs in the amount of \$46,000. On October 5, 2007, RAE Systems filed a motion to confirm the Final Award. On October 17, 2007, Polimaster filed an opposition to RAE Systems’ motion to confirm the Final Award and filed its own motion to vacate the Final Award. Both motions were heard on December 7, 2007, and the district court confirmed the Final Award in an order dated February 25, 2008. Polimaster appealed from the district court’s order confirming the arbitration award in Polimaster Ltd. et al. v. RAE Systems Inc., No. 08-15708. The appeal is currently pending in the United States Court of Appeals for the Ninth Circuit. Briefing on the appeal has been completed by both sides and the appeal was argued and submitted to the Ninth Circuit for decision on January 15, 2010.

When district court confirmed the Final Award in favor of RAE Systems, it did not enter judgment, an omission the district court described as a non-substantive clerical error. On September 9, 2008, the court of appeal granted leave for the district court to correct this clerical error. On January 23, 2009, the district court entered judgment in favor of RAE Systems and against Polimaster, and included in the judgment post-arbitration/pre-judgment interest and post-judgment interest. Polimaster has appealed the inclusion of these two interest components in the judgment, in Polimaster Ltd. et al. v. RAE Systems Inc., No. 09-15369, and briefing on the appeal has been completed by both sides and the appeal was argued and submitted to the Ninth Circuit for decision on January 15, 2010.

On May 14, 2009, Polimaster and RAE Systems entered a First Amended And Restated Stipulation And Order Re Stay Of Execution Of Judgment In Favor Of RAE Systems Inc. (the “stipulation”), pursuant to which Polimaster wire transferred \$1.4 million to the client trust account of RAE Systems’ counsel McLeod, Witham & Flynn LLP, and agreed to wire transfer an additional \$116,224.25 per month until the entire amount deposited equals the amount of the judgment (approximately \$2.8 million) plus accrued interest at the judgment rate of 0.43 percent per annum. Pursuant to the stipulation, the amounts transferred by Polimaster are being maintained in the client trust account of McLeod, Witham & Flynn LLP, and shall not be distributed to RAE Systems or Polimaster, until the Ninth Circuit has ruled on Polimaster’s appeal (Nos. 08-15708 and 09-15369). McLeod, Witham & Flynn LLP shall release the funds in the account to RAE Systems and/or Polimaster within seven days of the Ninth Circuit’s final ruling on the appeal, in accordance with the Ninth Circuit’s decision. Polimaster is currently in compliance with the payment schedule provided in the stipulation. If RAE Systems is successful on appeal, it is expected that the Company would receive approximately \$1.6 million, net of attorneys’ fees and expenses.

ITEM 4. RESERVED

PART II

ITEM 5. MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock traded on the American Stock Exchange (“AMEX”) under the trading symbol “RAE” beginning on August 29, 2003. Effective October 1, 2008, the AMEX was acquired by NYSE Euronext, the holding company created by the combination of NYSE Group, Inc. and Euronext N.V. in April 2007. Since October 1, 2008, our common stock has traded on the NYSE Alternext US (“NYSE-Alt”). The following table sets forth, for the

[Table of Contents](#)

periods indicated, the high and low sales prices for our common stock as derived from publicly reported AMEX and NYSE-Alt daily trading data. The quotations do not reflect adjustments for retail mark-ups, mark-downs, or commissions and may not necessarily represent actual transactions.

	2009		2008	
	High	Low	High	Low
First Quarter	\$ 1.00	\$ 0.28	\$ 2.81	\$ 1.07
Second Quarter	\$ 1.70	\$ 0.42	\$ 1.92	\$ 1.30
Third Quarter	\$ 2.23	\$ 1.00	\$ 2.18	\$ 1.03
Fourth Quarter	\$ 1.48	\$ 0.65	\$ 1.72	\$ 0.38

As of December 31, 2009, there were 272 shareholders of record who held shares of our common stock.

We have never declared or paid dividends on our common stock. We do not have any plans to pay dividends in the foreseeable future so that we may reinvest our earnings in the development of our business. The payment of dividends in the future will be at the discretion of the Board of Directors.

PERFORMANCE GRAPH

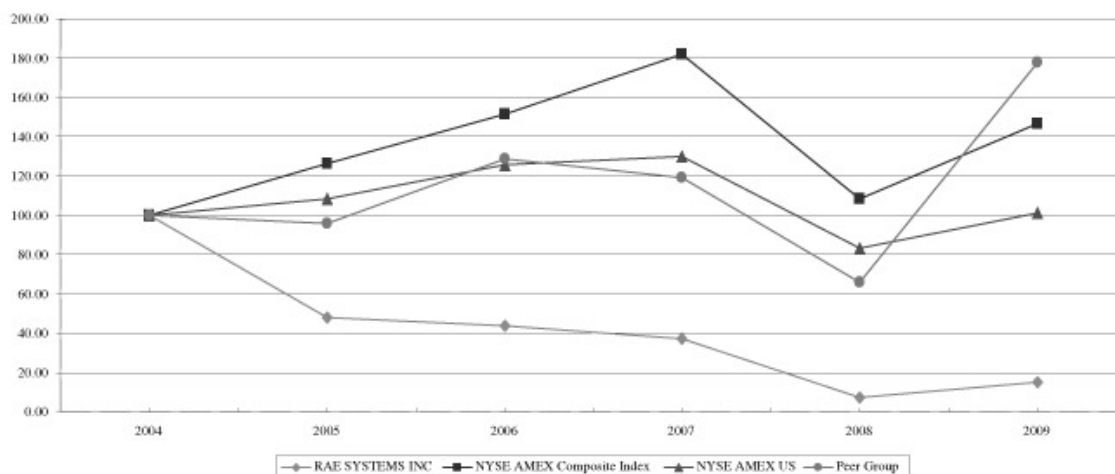
The following chart presents a comparative analysis of the performance of our common stock relative to the NYSE AMEX Composite Index and NYSE AMEX stock index for SIC codes 3800-3899, Measuring Instruments. This analysis assumes a \$100 investment in our underlying common stock and these indices on December 31, 2004 through December 31, 2009. This analysis does not purport to be a representation of the actual market performance of our stock or these indices. This chart has been provided for informational purposes to assist the reader in evaluating the market performance of our common stock compared to other market participants.

Notwithstanding anything to the contrary set forth in our previous filings under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, which might incorporate future filings made by us under those statutes, the following Stock Performance Graph will not be deemed incorporated by reference into any future filings made by us under those statutes.

COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN*

Among RAE Systems Inc., the NYSE AMEX Composite Index, the NYSE Amex Stock Market (U.S. Companies), and a Peer Group of NYSE AMEX stocks for SIC codes 3800 — 3899 Measuring Instruments (photo, med & optical goods)

Comparison of 5 Year Cumulative Total Return
Assumes Initial Investment of \$100
December 2009



* \$100 invested on 12/31/04 in stock or index-including reinvestment of dividends.

Fiscal year ending December 31,

	2004	2005	2006	2007	2008	2009
RAE Systems, Inc.	100.00	48.09	43.84	36.99	7.40	15.07
NYSE AMEX Composite Index	100.00	126.17	151.23	181.81	108.34	146.73
NYSE AMEX Stock Market (US Companies)	100.00	108.14	125.58	130.13	82.95	101.45
Peer Group	100.00	96.08	129.00	119.31	66.01	177.59

Effective October, 2008, the AMEX was acquired by NYSE Euronext, the holding company created by the combination of NYSE Group, Inc. and Euronext N.V. in April 2007. Since October 1, 2008, our common stock has traded on the NYSE Alternext US ("NYSE-Alt").

ITEM 6. SELECTED FINANCIAL DATA

The selected consolidated financial data set forth below should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations", the Consolidated Financial Statements of RAE Systems Inc. and Notes thereto, and other financial information included elsewhere in this Form 10-K. Historical results are not necessarily indicative of results that may be expected for future periods.

[Table of Contents](#)

	2007		2006		2005	
	2009	2008	(1)(2)(3)	(4)(5)(6)(7)	(8)	
(In thousands, except share and per share data)						
Operating Data:						
Net sales	\$ 83,172	\$ 95,383	\$ 90,836	\$ 67,721	\$ 60,293	
Gross profit	\$ 40,979	\$ 48,215	\$ 46,408	\$ 35,523	\$ 35,603	
Operating loss from continuing operations	\$ (7,323)	\$ (6,089)	\$ (4,171)	\$ (2,871)	\$ (1,588)	
Loss from continuing operations	\$ (6,714)	\$ (7,383)	\$ (10,536)	\$ (1,418)	\$ (821)	
Basic loss per share from continuing operations	\$ (0.10)	\$ (0.12)	\$ (0.18)	\$ (0.03)	\$ (0.01)	
Diluted loss per share from continuing operations	\$ (0.10)	\$ (0.12)	\$ (0.18)	\$ (0.03)	\$ (0.01)	
Weighted-average common shares:						
Basic outstanding shares	59,366,850	59,204,262	58,852,172	58,424,970	57,687,714	
Diluted outstanding shares	59,366,850	59,204,262	58,852,172	58,424,970	57,687,714	
Balance Sheet Data:						
Working capital	\$ 31,676	\$ 37,146	\$ 40,850	\$ 36,641	\$ 41,366	
Total assets	\$ 78,874	\$ 81,175	\$ 85,343	\$ 89,753	\$ 76,264	
Long-term liabilities	\$ 7,822	\$ 8,358	\$ 10,442	\$ 5,441	\$ 2,962	
Total RAE Systems Inc. shareholders' equity	\$ 39,029	\$ 43,216	\$ 46,356	\$ 56,179	\$ 54,573	

The following information summarizes events that affect comparability of the information reflected in selected financial data:

- (1) In January 2007, the Company entered into an agreement to purchase the intellectual properties of Tianjin Securay Technology Ltd. Co. for approximately \$1.5 million. Including transactions entered into during fiscal 2006, the total purchase price was \$2.0 million in cash.
- (2) In August 2007, the Board of Directors approved the discontinuation of the Company's DVR business. Impairment expenses recognized in fiscal 2007 totaled \$4.2 million.
- (3) In December 2007, the Company sold its headquarters building in San Jose, California for \$12.7 million and leased back the facility for a period of 10 years. The Company recognized a gain on sale of \$0.4 million in 2007 and recorded a deferred gain of \$6.3 million. The deferred gain will be recognized in income straight-line over the life of the leaseback beginning in January 2008.
- (4) RAE Fushun joint venture was formed in December 2006. The fair value of assets acquired and liabilities assumed were included in the consolidated balance sheet as of December 31, 2006. There were no operating activities recorded in 2006.
- (5) The Company purchased an additional 32% ownership in RAE Beijing in July 2006. The Company has consolidated RAE Beijing since 2004. With the purchase in July 2006, minority shareholder's interest was reduced to 4%.
- (6) In July 2006, the Company purchased Aegison Corporation. The fair value of assets acquired and liabilities assumed were included in the consolidated balance sheet as of December 31, 2006.
- (7) As of December 31, 2006, the Company was in the process of acquiring Securay. The Company recorded \$820,000 of acquisition in progress as of December 31, 2006.
- (8) During the second quarter of 2005, the Company abandoned its leased facility in Sunnyvale California and moved to a new headquarters and U.S. manufacturing facility. As a result, the Company took a before-tax charge of approximately \$2.0 million for abandonment of its lease in the second quarter of 2005.

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

The following Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements. In some cases, readers can identify forward-looking statements by terminology such as "may," "will," "should," "could," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential," or "continue." These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from those stated herein. Factors that might cause or contribute to such differences include, but are not limited to, those discussed in Item 1A, "Risk Factors" as well as in Item 1, "Business" and Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in this Annual Report on Form 10-K. You should carefully review these risks and also review the risks described in other documents we file from time-to-time with the Securities and Exchange Commission, including the Quarterly Reports on Form 10-Q that we will file in fiscal year 2010. You are cautioned not to place undue reliance on these forward-looking statements, and we expressly assume no obligations to update the forward-looking statements in this report that occur after the date hereof.

Overview

We are a leader in delivering innovative sensor solutions to serve industrial, energy, environmental and government safety markets worldwide. In addition, we offer a full line of portable single and multi-sensor chemical and radiation detection products. The market for our products has evolved from being strictly focused on environmental and industrial monitoring to now encompassing the public safety and energy markets. We have expanded our presence to include the broader global energy exploration and refining safety equipment market. With the formation of RAE Fushun, we are serving the coal mine safety equipment market in China.

In 2006, we made two significant business investments in China. First in July 2006, we increased our ownership in RAE Beijing to 96%. RAE Beijing produces, sells and distributes safety and security solutions for the chemical, oil and gas, metals and energy sectors in China. Second, in December 2006, we formed RAE Fushun, a joint venture with Fushun Anyi, a former state owned company serving the coal mine safety market. This joint venture was formed to capitalize on China's growing reliance on coal based energy. RAE Fushun manufactures and sells coal mine safety equipment. RAE Systems owns 70% of the joint venture.

In China, our focus is on growing the environmental protection market and the industrial sector, including oil and gas, petrochemicals, steel, telecommunications and coal mining. A major priority will be to introduce new products for the coal mine safety market through RAE Fushun. We believe this market will provide us a number of new business opportunities, as China continues to modernize its coal mining industry.

We offer a complete line of products to meet the requirements of the various markets we serve. Products range from breathing zone single sensor products for specific toxic chemicals (ToxiRAE 3) to belt worn multi-gas monitors (QRAE 2) to handheld instruments (MiniRAE 3000, ppbRAE 3000 and UltraRAE) to measure total and specific volatile organic compounds, to wireless monitors for industrial and public safety applications (AreaRAE Steel).

We have expanded our wireless product offering with the introduction of MeshGuard, a single-gas, mesh radio-based monitor designed to replace single-gas fixed monitors in industrial environments that include steel mills, oil and gas exploration and chemical processing. We continue to improve our product offerings through advances in sensors and wireless networking technologies, including the RAELink 3 a wireless modem with integrated GPS and Bluetooth radio technology that provides a data bridge for our products and complementary products such as chemical warfare agents and particle counters. We updated several of our fixed gas monitors to meet the needs of the China market. We received an additional sensor patent for a new gamma radiation detector/dosimeter, and this was deployed in our GammaRAE II R product.

In all of our markets we will continue to explore and develop strategic value added partnerships, to leverage our product and market expertise.

Critical Accounting Policies

The preparation of financial statements in conformity with United States generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. On an on-going basis, we evaluate the estimates, including those related to our allowance for doubtful accounts, valuation of long-lived assets, goodwill and intangible assets, valuation of deferred tax assets, contingencies, inventory valuation, warranty accrual and stock-based compensation expense. In conjunction with acquisitions, we allocate investment costs based on the fair value of the assets acquired and liabilities assumed. We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ significantly from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect our more significant judgments or estimates used in the preparation of our consolidated financial statements.

Revenue Recognition

We recognize revenue when persuasive evidence of an arrangement exists, delivery has occurred, the fee is fixed or determinable, and collectability is reasonably assured. A provision for estimated product returns is established at the time of sale based upon historical return rates adjusted for current economic conditions. Historically, we have experienced an insignificant amount of sales returns. We generally recognize revenue when goods are shipped to our distributors in accordance with standard contract terms that pass title of all goods upon delivery to a common carrier (FOB factory) and provide for sales returns under standard product warranty provisions. For non-standard contract terms where title to goods passes at time of delivery (FOB destination), revenue is recognized after we have established proof of delivery. Revenues relating to services performed under our extended warranty program represent less than 5% of net revenues in each of 2009, 2008 and 2007 and are recognized as earned based upon contract terms, generally ratable over the term of service. We record project installation work in Asia using the percentage-of-completion method. Installation revenue represents less than 7% of net revenue in 2009, 2008 and 2007. Net revenues include amounts billed to customers in sales transactions for shipping and handling. Shipping fees represent less than 1% of net revenues in each of 2009, 2008 and 2007. Shipping costs are included in cost of goods sold.

Accounts Receivable, Trade Notes Receivable and Allowance for Doubtful Accounts

We grant credit to our customers after undertaking an investigation of credit risk for all significant amounts. An allowance for doubtful accounts is provided for estimated credit losses at a level deemed appropriate to adequately provide for known and inherent risks related to such amounts. The allowance is based on reviews of loss, adjustments history, current economic conditions and other factors that deserve recognition in estimating potential losses. We generally do not require collateral for sales on credit. While management uses the best information available in making our determination, the ultimate recovery of recorded accounts receivable is also dependent upon future economic and other conditions that may be beyond management's control. If there was a deterioration of a major customer's credit-worthiness or if actual defaults were higher than what have been experienced historically, additional allowances would be required.

We are not able to predict changes in the financial stability of our customers. Any material change in the financial status of any one or a group of customers could have a material adverse effect on our results of operations and financial condition.

Trade notes receivables are presented to us from some of our customers in China as a payment against the outstanding trade receivables. These notes receivables are bank guarantee promissory notes which are non-interest bearing and generally mature within 6 months.

Inventories

Inventories are stated at the lower of cost, using the first-in, first-out method, or market. We are exposed to a number of economic and industry factors that could result in portions of our inventory becoming either obsolete or in excess of anticipated usage, or saleable only for amounts that are less than their carrying amounts. These factors include, but are not limited to, technological changes in the market, competitive pressures in products and prices, and the availability of key components from our suppliers. We have established inventory reserves when conditions exist that suggest that our inventory may be in excess of anticipated demand or is obsolete based upon assumptions about future demand for our products and market conditions. When recorded, reserves are intended to reduce the carrying value of the inventory to its net realizable value. If actual demand for specified products deteriorates, or market conditions are less favorable than those projected, additional reserves may be required.

Goodwill and Other Intangible Assets

We test goodwill and other intangible assets for possible impairment on an annual basis and at any other time if events occur or circumstances indicate that the carrying amount may not be recoverable. The recoverability is measured at the reporting unit level by comparing the reporting unit's carrying amount, including goodwill, to the fair value of the reporting unit, which is measured based upon, among other factors, market capitalization as well as forecasted operating results. We have one reporting unit. If the recorded value of the assets, including goodwill and other intangible assets, and liabilities ("net book value") of the reporting unit exceeds its fair value, an impairment loss may exist. Further, to the extent our consolidated net book value is greater than our market capitalization, all, or a significant portion of any goodwill may be impaired.

We experienced a significant decline in market capitalization during the fourth quarter of 2008. This decline in market capitalization was driven largely by deteriorating macroeconomic conditions that contributed to a decline in our forecasted operating results and business. As a result, we recognized a non-cash impairment charge of approximately \$3.3 million for the three-month period and year ended December 31, 2008 to write-off the entire carrying value of goodwill.

Long-lived Assets

We test long-lived asset groups for recoverability when events occur or circumstances indicate that their carrying amounts may not be recoverable. Recoverability is assessed based on the carrying amounts of the asset and its fair value which is generally determined based on the sum of the undiscounted cash flows expected to result from the use and the eventual disposal of the asset, as well as specific appraisals in certain instances. An impairment loss is recognized when the carrying amount is not recoverable and exceeds fair value.

Stock-Based Compensation Expense

We estimate the fair value of each option award on the date of grant using a Black-Scholes-Merton ("BSM") valuation model and a single option award approach. Accordingly, stock-based compensation cost is measured at grant date based on the fair value of the award and recognized in expense over the requisite service period, which is generally the vesting period.

We make the following estimates and assumptions in determining fair value:

Expected Term — Our expected term represents the weighted-average period that our stock-based awards are expected to be outstanding. We have used the historical exercise patterns of previously granted options in relation to the Company's stock price to estimate expected exercise patterns.

Expected Volatility — The Company's expected volatilities are based on historical volatility of the Company's stock, adjusted where determined by management for unusual and non-representative stock price activity not expected to recur. Management determined the historical stock price volatility for period from April 11, 2002, the commencement of public trading of the common stock, through December 31, 2002, was not likely to be representative of the future and excluded this period. Management also applies mean reversion techniques to the historical stock prices, which results in an emphasis on recent activity over the distant past, when determining the expected volatility rate to be included in the Black-Scholes-Merton valuation model.

[Table of Contents](#)

Expected Dividend — The Black-Scholes-Merton valuation model calls for a single expected dividend yield as an input. The Company currently pays no dividends and does not expect to pay dividends in the foreseeable future.

Risk-Free Interest Rate — The Company bases the risk-free interest rate on the implied yield currently available on United States Treasury zero-coupon issues with an equivalent remaining term.

Estimated Forfeitures — To estimate forfeitures, we apply our historical rate of option forfeitures. Estimated forfeiture rates are true-up to actual forfeiture results as the stock-based awards vest.

Business Combinations

In accordance with the authoritative accounting guidance, we allocate the purchase price of acquired companies to the tangible and intangible assets acquired and liabilities assumed based on their estimated fair values. We engage third-party appraisal firms to assist management in determining the fair values of certain assets acquired and liabilities assumed. Such a valuation requires management to make significant estimates and assumptions, especially with respect to intangible assets.

Management makes estimates of fair value based upon assumptions believed to be reasonable. These estimates are based on historical experience and information obtained from the management of the acquired companies and is inherently uncertain. Critical estimates in valuing certain of the intangible assets include but are not limited to: future expected cash flows from customer contracts, acquired developed technologies and pending patents; expected costs to develop the in-process research and development into commercially viable products and estimating cash flows from the projects when completed; the acquired company's brand awareness and market position, as well as assumptions about the period of time the acquired brand will continue to be used in the combined company's product portfolio; and discount rates. Unanticipated events and circumstances may occur which may affect the accuracy or validity of such assumptions, estimates or actual results.

Income Taxes

We are subject to income taxes in the United States and numerous foreign jurisdictions. Significant judgment is required in evaluating our tax positions and determining our provision for income taxes.

Our effective tax rates differ from the statutory rate primarily due to foreign earnings taxed at lower rates, foreign losses not benefited, stock compensation expenses, under ASC 718, "Stock Compensation," which are not deductible for tax purposes and changes in our valuation allowances. Our future effective tax rates could be adversely affected by earnings being lower than anticipated in countries where we have lower statutory rates and higher than anticipated in countries where we have higher statutory rates, by changes in the valuation of our deferred tax assets or liabilities, or by changes in tax laws, regulations, accounting principles, or interpretations thereof. We regularly assess the likelihood of adverse outcomes resulting from tax examinations to determine the adequacy of our provision for income taxes.

Significant judgment is also required in determining any valuation allowance recorded against deferred tax assets. In assessing the need for a valuation allowance, we consider all available evidence including past operating results, estimates of future taxable income, and the feasibility of tax planning strategies. In the event that we change our determination as to the amount of deferred tax assets that can be realized, we will adjust our valuation allowance with a corresponding impact to the provision for income taxes in the period in which such determination is made.

RESULTS OF OPERATIONS

Net Sales

			Percentage				Percentage	
	2009	2008	Change	Change	2008	2007	Change	Change
				(In thousands)				
Net sales	\$ 83,172	\$ 95,383	\$ (12,211)	(13)%	\$ 95,383	\$ 90,836	\$ 4,547	5%

Net sales during 2009 decreased \$12.2 million, or 13%, from \$95.4 million in 2008. The decrease was primarily the result of a decrease in net sales of \$3.5 million, or 9%, in Americas, \$7.7 million, or 19%, in Asia and

[Table of Contents](#)

\$1.0 million, or 6%, in Europe. The decrease is primarily attributable to the negative impact of the worldwide economic downturn during the first half of 2009 and disruption of our sales activity in China due to management changes at our Fushun and Beijing operations. We believe these two factors negatively impacted our sales by approximately \$6.2 million in the first nine months of 2009. Additionally, the decrease in 2009 resulted from the impact of two significant non-recurring orders in 2008 totaling approximately \$5.6 million: one from the United States National Guard and another from the Beijing International Airport. Approximately \$0.5 million of the decrease was due to unfavorable exchange rate fluctuations.

Net sales during 2008 increased \$4.5 million, or 5%, from \$90.8 million in 2007. The increase was primarily the result of an increase in net sales of \$1.4 million and \$3.8 million in the Americas and Europe, respectively, offset by a decrease of net sales in Asia by \$0.7 million. The increase from 2007 to 2008 consisted primarily of two large non-recurring orders in 2008 totaling approximately \$5.6 million: one from the United States National Guard and another from the Beijing International Airport. Additional increases in net sales of approximately \$4.2 million were due to the appreciation of the Renminbi ("RMB") and Euro against the U.S. dollar from 2007 to 2008. The increase was partially offset by an economic slow down in China following the Beijing Olympics, in the second half of 2008.

Cost of Sales and Gross Profit

			Percentage				Percentage	
	2009	2008	Change	Change	2008	2007	Change	Change
				(In thousands)				
Cost of sales	\$ 42,193	\$ 47,168	\$ (4,975)	(11)%	\$ 47,168	\$ 44,428	\$ 2,740	6%
Gross profit	\$ 40,979	\$ 48,215	\$ (7,236)	(15)%	\$ 48,215	\$ 46,408	\$ 1,807	4%
Gross margin	49%	51%			51%	51%		

Cost of sales consists of direct material, labor and overhead. Cost of sales in 2009 decreased \$5.0 million or 11% from \$47.2 million in 2008. The decrease in cost of sales was primarily the result of a decrease in net sales from \$95.4 million in 2008 to \$83.2 million in 2009. The gross margin change to 49% in 2009 from 51% in 2008 was primarily the result of the year-over-year decline in revenue, particularly in the Americas and Europe, regions where we generally sell higher margin products.

Cost of sales in 2008 increased \$2.7 million or 6% from \$44.4 million in 2007. The increase in cost of sales was primarily the result of an increase in net sales from \$90.8 million in 2007 to \$95.4 million in 2008. Gross margin in 2008 remained consistent with 2007 at 51%.

Sales and Marketing Expense

			Percentage				Percentage	
	2009	2008	Change	Change	2008	2007	Change	Change
				(In thousands)				
Sales and marketing	\$ 18,824	\$ 21,427	\$ (2,603)	(12)%	\$ 21,427	\$ 25,434	\$ (4,007)	(16)%
Percentage of net sales	23%	22%			22%	28%		

Sales and marketing expenses in 2009 decreased \$2.6 million, or 12%, from \$21.4 million in 2008. The decrease was primarily due to reduced headcount, travel by employees and participation at trade shows.

Sales and marketing expenses in 2008 decreased \$4.0 million or 16% from \$25.4 million in 2007. The decrease was primarily due to company-wide cost-control initiatives and a ten percent workforce reduction in the Americas, at the end of the first quarter of 2008. Additional savings were realized by decreases in office expenses, advertising and trade show expenses, travel and entertainment expenses, consultant expenses and project expenses.

[Table of Contents](#)

Research and Development Expense

	Percentage							Percentage
	2009	2008	Change	Change	2008	2007	Change	Change
	(In thousands)							
Research and development	\$ 6,354	\$ 6,665	\$ (311)	(5)%	\$ 6,665	\$ 7,973	\$ (1,308)	(16)%
Percentage of net sales	8%	7%			7%	9%		

Research and development expenses in 2009 decreased \$0.3 million, or 5%, from \$6.7 million in 2008. The decrease was primarily the result of a business tax exemption from the PRC granted to RAE Shanghai for engineering services provided by RAE Shanghai to RAE Asia and lower project related expenses, partially offset by an increase in payroll expenses due to an increase in headcount.

Research and development expenses in 2008 decreased \$1.3 million or 16% from \$8.0 million in 2007. The decrease was primarily due to a \$0.7 million decrease in amortization expense as certain intangible assets were fully amortized and a \$0.7 million decrease in project expenses due to completion of certain R&D projects in 2008.

General and Administrative Expense

	Percentage							Percentage
	2009	2008	Change	Change	2008	2007	Change	Change
	(In thousands)							
General and administrative	\$ 23,124	\$ 22,864	\$ 260	1%	\$ 22,864	\$ 17,767	\$ 5,097	29%
Percentage of net sales	28%	24%			24%	20%		

General and administrative expenses in 2009 increased \$0.3 million from \$22.9 million in 2008. While general and administrative expenses were relatively constant during 2009 and 2008, management accrued \$3.5 million as its estimate to settle the outstanding joint investigation into the Company's alleged violations of the FCPA and increased bad debt expense associated with doubtful accounts receivable of \$0.8 million, which was offset by lower professional fees of \$4.5 million, consisting primarily of legal fees.

General and administrative expenses in 2008 increased \$5.1 million or 29% from \$17.8 in 2007. The increase was primarily due to a net increase of \$2.5 million in professional service expenses. The charge was comprised of a \$4.0 million increase related to the previously disclosed FCPA investigation and related remediation plans conducted under the supervision of the Audit Committee of the Board of Directors, offset by a decrease in legal costs associated with the conclusion of the Polimaster arbitration in 2007. Bad debt expenses increased by \$1.4 million due to an increase in accounts receivable reserves at RAE Fushun and RAE Beijing.

Impairment of Goodwill

	Percentage							Percentage
	2009	2008	Change	Change	2008	2007	Change	Change
	(In thousands)							
Impairment of goodwill	\$ —	\$ 3,348	\$ (3,348)	100%	\$ —	\$ —	\$ —	0%
Percentage of net sales	0%	4%			0%	0%		

We experienced a significant decline in market capitalization during the fourth quarter of 2008. This decline in market capitalization was driven largely by deteriorating macroeconomic conditions that contributed to a decline in our forecasted operating results and business. As a result, we recognized a non-cash impairment charge of approximately \$3.3 million for the three-month period and year ended December 31, 2008 to write-off the entire carrying value of goodwill.

[Table of Contents](#)

Gain/loss on Abandonment of Lease

				Percentage				Percentage
	2009	2008	Change	Change	2008	2007	Change	Change
				(In thousands)				
(Gain) loss on abandonment of lease	\$ —	\$ —	\$ —	—	\$ —	\$ (595)	\$ 595	100%
Percentage of net sales	0%	0%			0%	(1)%		

Other Income (Expense)

				Percentage				Percentage
	2009	2008	Change	Change	2008	2007	Change	Change
				(In thousands)				
Interest income	\$ 48	\$ 173	\$ (125)	(72)%	\$ 173	\$ 162	\$ 11	7%
Interest expense	(402)	(397)	(5)	1%	(397)	(705)	308	-44%
Other, net	188	(575)	763	(133)%	(575)	58	(633)	-1091%
Equity in loss of unconsolidated affiliate	(109)	43	(152)	(353)%	43	3	40	1333%
Total other income (expense)	\$ (275)	\$ (756)	\$ 481	(64)%	\$ (756)	\$ (482)	\$ (274)	57%

For 2009, Total other expenses decreased by \$0.5 million, or 64%, from \$0.8 million in 2008. The decrease in interest income was primarily due to lower interest rates and decreased cash in interest earning accounts. The change of \$0.8 million income in net other during 2009 was primarily from foreign exchange gains in Asia and Europe. The expense increase of \$0.2 million in Equity in loss of unconsolidated affiliates represents the Company's share in the unconsolidated losses of its investments in various businesses.

For 2008, total other expenses increased \$0.3 million or 57% from \$0.5 million in 2007. The increase was primarily due to increases in foreign exchange losses from balances and payments in Euro and RMB, offset by decreases in interest expenses as we repaid our outstanding loan balance using funds from sale of the San Jose building.

Income Tax (Benefit) Expense

				Percentage				Percentage
	2009	2008	Change	Change	2008	2007	Change	Change
				(In thousands)				
Income tax (benefit) expense	\$ (884)	\$ 538	\$ (1,422)	(264)%	\$ 538	\$ 5,883	\$ (5,345)	(91)%
Effective tax rate	12%	(8)%			(8)%	(126)%		

Income tax expense decreased \$1.4 million from an income tax expense of \$0.5 million in 2008. Our effective tax rate was 12% in 2009 and (8)% in 2008. The tax rate for years 2009 and 2008 differed from United States statutory rate due to the realization of certain deferred tax assets (DTAs), foreign earnings taxed at lower rates, foreign losses not benefited and non-deductible stock compensation deductions.

In November 2009, the Worker, Homeownership, and Business Assistance Act of 2009 was enacted. Under this law, companies may elect to increase the carryback period for the net operating loss of a tax year ending after December 31, 2007 and beginning before January 1, 2010 to 3, 4 or 5 years. Accordingly, we have elected to carry our 2008 net operating loss back to 2003, which will result in a refund of approximately \$659,000.

We currently have significant deferred tax assets resulting from anticipated net operating losses and other deductible temporary differences, which will reduce taxable income in future periods. We continue to maintain a full valuation allowance for all deferred assets except for \$0.9 million related to certain of our foreign entities. Based on our current projections, we believe it is "more likely than not" we will not be able realize our deferred tax assets with the exception of the \$0.9 million foreign deferred tax assets. ASC 740, "Income Taxes," requires a valuation allowance be established when it is "more likely than not" that all or a portion of deferred tax assets will not be realized and that it is difficult to conclude that a valuation allowance is not needed when there is negative

[Table of Contents](#)

evidence such as cumulative losses in recent years. Therefore, cumulative losses weighed heavily in the overall assessment. We believe that sufficient uncertainty exists with regard to the realizability of these tax assets such that a valuation allowance is necessary. Factors considered in providing a valuation allowance include the lack of a significant history of consistent profits, the current and believed to be continued weakness in the overall market thereby potentially impacting our ability to sustain or grow revenues and earnings, and the length of carryback and carryforward periods. We considered expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies. Based on the absence of sufficient positive objective verifiable evidence at December 31, 2009, we have placed a valuation on our deferred tax assets except for \$0.9 million of foreign deferred tax assets. We expect to record a valuation allowance on future tax benefits until we can sustain an appropriate level of profitability and until such time, we would not expect to recognize any significant tax benefits in our future results of operations.

Our effective tax rate was a (8)% tax expense in 2008 and (126)% tax in 2007. The tax rate for 2008 and 2007 differed from the United States statutory rate due to the change in the realization of our deferred tax assets, foreign earnings taxed at lower rates, foreign losses not benefited, and non-deductible stock compensation deductions.

Net Loss Attributable to the Noncontrolling Interest

			Percentage				Percentage	
	2009	2008	Change	Change	2008	2007	Change	Change
				(In thousands)				
Net loss (income) attributable to the noncontrolling interest	\$ 955	\$ 220	\$ 735	334%	\$ 220	\$ (6)	\$ 226	(3767)%

The noncontrolling interest in the losses of consolidated subsidiaries for 2009 increased \$735,000 from a loss of \$220,000 in 2008. The increase in the loss attributable to the noncontrolling interest was mainly due to the increased loss generated by RAE Fushun and RAE Beijing.

Net loss attributable to the noncontrolling interest for 2008 increased \$226,000 from income of \$6,000 in 2007. The increase in loss attributable to the noncontrolling interest was mainly due to the increased loss generated by RAE Fushun, offset by increased profitability at RAE France in 2008.

Gain (loss) From Discontinued Operations

			Percentage				Percentage	
	2009	2008	Change	Change	2008	2007	Change	Change
				(In thousands)				
Gain (loss) from discontinued operations before income taxes	\$ —	\$ 11	\$ (11)	(100)%	\$ 11	\$ (4,939)	\$ 4,950	(100)%
Income tax benefit	—	—	—	0%	—	(785)	785	(100)%
Gain (loss) from discontinued operations	\$ —	\$ 11	\$ (11)	(100)%	\$ 11	\$ (4,154)	\$ 4,165	(100)%

On August 24, 2007, the Board of Directors approved the discontinuation of our mobile DVR business in order to reduce expenses and concentrate resources on our gas and radiation detection business. Our mobile DVR business was acquired through the purchases of Aegison and Securay. See “Note 2. Business Combinations and Dispositions” of the Notes to Consolidated Financial Statements for details. On August 28, 2007, we notified our DVR customers, terminated all personnel not reassigned to continuing operations and suspended the related production and sales activities. Because the DVR business operates at a substantial loss, management intended to liquidate the tangible assets, mainly inventories of component parts. Accordingly, the value of these assets had been adjusted to reflect the anticipated disposals.

As a result of discontinuing the DVR business, management impaired the remaining value of the intangible assets and goodwill acquired in the purchases of Aegison in July 2006 and Securay in January 2007. Impairment expense recognized in fiscal 2007 totaled \$4.2 million.

[Table of Contents](#)

In accordance with the authoritative accounting guidance, the financial results of the DVR business are reported as discontinued operations for all periods presented. The financial results included in discontinued operations were as follows:

Liquidity and Capital Resources

To date, we have financed our operations primarily through operating revenues, proceeds from the issuance of equity securities and short-term bank borrowings. In 2007, we also sold and leased back our corporate headquarters in San Jose, California. As of December 31, 2009, we had \$18.5 million in cash and cash equivalents compared with \$14.8 million on December 31, 2008. The \$3.7 million year-over-year increase in company cash was due in part to our global initiatives to reduce worldwide inventory levels.

On December 31, 2009, we had \$31.7 million in working capital (current assets less current liabilities) and a current ratio (ratio of current assets to current liabilities) of 2.2 to 1.0 compared to working capital of \$37.1 million and a current ratio of 2.5 to 1.0 on December 31, 2008. Of the \$5.4 million reduction in working capital, \$3.5 million is attributable to the proposed FCPA settlement discussed in Note 7 to the Consolidated Financial Statements.

In the United States, we had a \$10.0 million revolving credit agreement as of December 31, 2009, and a \$15.0 million revolving credit agreement as of December 31, 2008. This credit facility is renewed annually and currently expires on May 15, 2010. Available credit is based on a percentage of specific qualifying assets and the total facility is collateralized by a blanket security interest over the Company's assets in the United States. We are required to comply with certain reporting and financial requirements in addition to the ongoing requirement to submit monthly financial information. We must also maintain a compensating balance with the lending bank of at least \$2.0 million at all times, which is included in Restricted cash on the Consolidated Balance Sheets. While we intend to pursue renewal, there is no assurance we will be successful in securing a renewed agreement on this line of credit for any time period after May 15, 2010. As of December 31, 2009 and December 31, 2008, \$1.8 million was outstanding against the revolving credit agreements in the United States.

During the fourth quarter of 2009, the Company obtained an amendment to the financial covenants of its revolving credit agreement, as a result of non-compliance. The amended financial covenants under the revolving credit agreement 1) require us to maintain specified trailing two-quarter minimum earnings before interest, depreciation, amortization and non-cash stock compensation expenses and 2) limits the size of potential monetary penalties under the FCPA to \$3.5 million. We were in compliance with these covenants as of December 31, 2009.

In China, we had two unsecured revolving lines of credit as of December 31, 2009 and December 31, 2008, each in the amount of RMB 20 million or approximately \$2.9 million. Borrowings under these lines of credit are available to provide working capital and are generally at the current market rate for fixed rate loans of the amount and duration requested, up to one year. The continuing credit facilities are renewed annually. As of December 31, 2009 and December 31, 2008, RMB 15 million, or approximately \$2.2 million, and RMB 5 million, or approximately \$0.7 million, respectively, was outstanding against loan agreements in China.

In November 2009, we borrowed RMB 10.0 million, or approximately \$1.5 million, for a term of 18 months to provide working capital for our 70% owned subsidiary in Fushun, China ("RAE Fushun"). Loan repayment is guaranteed by an unrelated third party, to whom RAE Fushun granted a lien over its wholly owned plant and associated land rights. As a condition of the loan, the lending bank required a deposit of approximately \$0.1 million from the guarantor. This deposit was funded by RAE Fushun from the loan proceeds and is included in Restricted Cash on the Consolidated Balance Sheets.

We believe our existing balances of cash and cash equivalents, together with cash generated from product sales, will be sufficient to meet our cash needs for working capital, debt service and capital expenditures for at least the next twelve months. Our future capital requirements will depend on many factors that are difficult to predict, including the size, timing and structure of any future acquisitions, future capital investments, the ultimate resolution of potential FCPA violations and future results of operations. Any future financing we may require may be unavailable on favorable terms, if at all. Any difficulty in obtaining additional financial resources could force us to curtail our operations or could prevent us from pursuing our growth strategy. Any future funding may dilute the ownership of our shareholders.

[Table of Contents](#)

Our Consolidated Statements of Cash Flows for 2009, 2008 and 2007 may be summarized as follows:

	Year Ended December 31,		
	2009	2008	2007
	(In thousands)		
Net cash provided by (used in):			
Operating activities	\$ 7,657	\$ 3,178	\$ (9,979)
Investing activities	(5,000)	(3,351)	10,023
Financing activities	954	(1,391)	(2,684)
Effect of exchange rate changes on cash and cash equivalents	72	503	427
Net increase (decrease) in cash and cash equivalents	<u>\$ 3,683</u>	<u>\$ (1,061)</u>	<u>\$ (2,213)</u>

Operating Activities

For the year ended December 31, 2009, net cash provided by operating activities of \$7.6 million was due to the following:

- Non-cash charges included in our net loss of \$6.7 million totaled \$5.6 million. Our principal non-cash expenses were as follows: \$3.2 million depreciation and amortization; \$1.9 million provision for doubtful accounts; and \$1.3 million stock-based compensation. These non-cash expenses were partially offset by \$0.6 million in gains on disposal of property and equipment; \$0.4 million in deferred income tax benefits; and other net losses of \$0.2 million.
- The net change in operating assets and liabilities which generated cash flow of \$8.7 million. Cash was primarily provided by the managed reduction of \$5.6 million in inventories. Additional cash flow was contributed by increases to accounts payable and accrued liabilities and a reduction in prepaid expenses of \$1.1 million, \$2.2 million and \$1.4 million, respectively. Cash was applied to reduce accounts payable to affiliate by \$0.3 million. The net change in other operating assets and liabilities used cash totaling \$1.3 million.

For the year ended December 31 2008, net cash provided by operating activities of \$3.2 million was due to the following:

- Non-cash charges included in our net loss of \$7.4 million totaled \$7.8 million. Our principal non-cash expenses were as follows: \$3.3 million reduction in goodwill; \$3.3 million depreciation and amortization; \$1.6 million stock-based compensation; and \$1.3 million provision for doubtful accounts. These non-cash expenses were partially offset by \$0.6 million in gains on disposal of property and equipment; \$1.2 million in deferred income tax benefits; and other net gains of \$0.1 million.
- The net reduction in working capital of \$2.8 million attributable to changes in operating assets and liabilities. The decrease in working capital resulted primarily from a \$1.2 million decline in accounts receivable and a \$1.1 million decline in trade notes receivable. Other operating accounts provided net cash of \$0.5 million.

For the year ended December 31, 2007, net cash used by operating activities was \$10.0 million which was due to the following:

- Cash was used mainly to support an increase of \$9.5 million in working capital primarily consisting of an increase of \$5.7 million in accounts receivable and \$1.8 million in inventories primarily related to increased sales. The remaining \$2.0 million was primarily comprised of changes in deferred revenue, deposits and other current operating accounts.
- The positive effect of the non-cash adjustments was due to depreciation and amortization of long lived assets of \$3.7 million, deferred taxes of \$4.0 million, stock based compensation expense of \$1.9 million and provision for doubtful accounts of \$1.9 million.

Investing Activities

As disclosed above in the discussion of banking relationships, during 2009 we agreed to maintain restricted cash arrangements of \$2.1 million. Other 2009 investing activities primarily consisted of ongoing construction and outfitting activities at our new facility in Fushun, China and payment for land use rights and pre-construction site improvements in Shanghai. In December 2008, we purchased the land use rights for 50 years to 5 acres of land in Shanghai. We plan to use this site to construct a new manufacturing and research and development facility, which will replace our current Shanghai facility. Construction began during the first quarter of 2010. Upon completion, we intend to vacate our existing leased facility. Based on discussions with Shanghai government officials, our landlord, we believe we will be able to terminate the lease without penalty. Negotiations for project and long-term financing arrangements are ongoing. However, no assurance can be given that we will be able to arrange financing terms acceptable to us or that we will not be subject to lease termination penalties.

During 2008, cash used in investing activities was primarily used to complete and occupy the manufacturing facility in Fushun, China. The total project in Fushun also includes administrative offices, a research and development facility and living quarters. The estimated cost to complete the project is approximately \$2.3 million. However, we have not committed to a timeline for the remaining construction.

During 2007, the increase in cash due to investing activities of \$10.0 million was primarily due to the net proceeds from the sale and leaseback of our San Jose headquarters building for approximately \$12.4 million and the sale of investments in securities for \$3.2 million, partially offset by approximately \$4.0 million used for the acquisition of property and equipment and \$1.6 million used for business acquisitions. During 2007, we began to construct RAE Fushun's new manufacturing and administrative facility in China.

Financing Activities

The cash provided by financing activities of \$1.0 million in 2009 was primarily from bank borrowings (net of payments made) of \$2.9 million. As disclosed above in the discussion of banking relationships, \$1.5 million was borrowed by RAE Fushun for working capital. In addition, we borrowed \$1.4 million to fund the purchase of land use rights in Shanghai for the construction of a new manufacturing facility as discussed in investing activities above.

We also made principal payments totaling \$1.9 million to reduce the notes payable to related parties for the acquisition of RAE Beijing. These payments were made from general working capital. The next scheduled principal payment is in July 2010.

Cash used in financing activities of \$1.4 million in 2008 was primarily applied to payments on related party notes totaling \$1.2 million and payments on bank lines of credit of \$0.2 million, net of amounts borrowed. The bank lines of credit provide working capital for our operations in the United States and China.

The cash provided by financing activities was \$2.7 million in 2007 and was primarily from bank borrowings (net of repayment) of \$2.6 million, which was used to repay a related party note of \$5.0 million and the repurchase of restricted stock awards of \$0.3 million.

[Table of Contents](#)
Commitments and Contingencies
Summary of Obligations

The following table quantifies our known contractual obligations in tabular form as of December 31, 2009. These obligations impact our short and long-term liquidity and capital resource needs. Certain of these contractual obligations are reflected in the Consolidated Balance Sheets, while others are disclosed as future obligations.

	<u>Total</u>	<u>Less than 1 Year</u>	<u>1-3 Years (In thousands)</u>	<u>3-5 Years</u>	<u>After 5 Years</u>
Contractual Obligations					
Amounts reflected in Consolidated Balance Sheets:					
Long-term debt(1)	\$ 1,463	\$ —	\$ 1,463	\$ —	\$ —
Notes payable to related parties(2)	733	370	363	—	—
Deferred gain on sale of real estate(3)	5,079	635	1,270	1,270	1,904
Deferred revenue	1,218	603	542	73	—
Deferred tax liabilities, non-current	156	—	—	—	156
Other long-term liabilities	781	—	542	55	184
Other cash obligations not reflected in Consolidated Balance Sheets:					
Operating lease obligations(4)	10,683	1,733	2,816	2,644	3,490
Open purchase orders(4)(5)	4,484	4,484	—	—	—
Total	<u>\$ 24,597</u>	<u>\$ 7,825</u>	<u>\$ 6,996</u>	<u>\$ 4,042</u>	<u>\$ 5,734</u>

-
- (1) For further discussion surrounding long-term debt, refer to “Note 6. Bank Debt” to the Consolidated Financial Statements.
- (2) For further discussion surrounding notes payable-related parties, refer to “Note 10. Related Party Transactions” to the Consolidated Financial Statements.
- (3) For further discussion surrounding deferred gain on sale of real estate, refer to “Note 3. Balance Sheet Details” to the Consolidated Financial Statements.
- (4) For further discussion surrounding purchase and lease obligations, refer to “Note 7. Commitments and Contingencies” to the Consolidated Financial statements.
- (5) Represents estimated cancelable open purchase orders to purchase inventory and other goods and services in the normal course of business to meet operational requirements.

Guarantees

We are permitted under Delaware law and required under our Certificate of Incorporation and Bylaws to indemnify our officers and directors for certain events or occurrences, subject to certain limits, while the director or officer is or was serving at our request in such capacity. The term of the indemnification period is for the officer’s or director’s lifetime. The maximum amount of potential future indemnification is unlimited; however, we have a Director and Officer Insurance Policy that reduces exposure and enables us to recover a portion of any future amounts paid. To date we have not incurred any losses under these agreements.

In our sales agreements, we typically agree to indemnify our customers for any expenses or liability resulting from claimed infringements of patents, trademarks or copyrights of third parties. The terms of these indemnification agreements are generally perpetual any time after execution of the agreement. The maximum amount of potential future indemnification is unlimited. To date, we have not paid any amounts to settle claims or defend lawsuits.

We sell the majority of our products with a 12 to 24 month repair or replacement warranty from the date of shipment. We provide an accrual for estimated future warranty costs based upon the historical relationship of warranty costs to sales. The estimated future warranty obligations related to product sales are recorded in the period in which the related revenue is recognized.

Uncertain Tax Positions

As of December 31, 2009, the liability for uncertain tax positions, including associated interest and penalties, was approximately \$1.5 million. This liability represents an estimate of tax positions that the Company has taken in its tax returns which may ultimately not be sustained upon examination by the tax authorities. Since the ultimate amount and timing of any future cash settlements cannot be predicted with reasonable certainty, this estimated liability has been excluded from the contractual obligations table.

Recent Accounting Pronouncements

In December 2007, the FASB issued authoritative guidance which applies to business combinations. The new guidance changes the accounting for acquisition transaction costs by requiring them to be expensed in the period incurred, and also changes the accounting for contingent consideration, acquired contingencies and restructuring costs related to an acquisition. The new guidance was effective for the Company beginning January 1, 2009, and will change the Company's accounting treatment for business combinations on a prospective basis.

In June 2009, the FASB issued authoritative guidance for determining whether an entity is a variable interest entity ("VIE") and requires an enterprise to perform an analysis to determine whether the enterprise's variable interest or interests give it a controlling financial interest in a VIE. Under this guidance, an enterprise has a controlling financial interest when it has a) the power to direct the activities of a VIE that most significantly impact the entity's economic performance and b) the obligation to absorb losses of the entity or the right to receive benefits from the entity that could potentially be significant to the VIE. The guidance also requires an enterprise to assess whether it has an implicit financial responsibility to ensure that a VIE operates as designed when determining whether it has power to direct the activities of the VIE that most significantly impact the entity's economic performance. The guidance is effective for the Company January 1, 2010, and requires ongoing assessments of whether an enterprise is the primary beneficiary of a VIE as well as certain enhanced disclosures. The Company is currently evaluating the potential impact, if any, of the adoption of this guidance on its consolidated financial statements.

In October 2009, the FASB issued authoritative guidance on revenue recognition that will become effective for the Company beginning January 1, 2011, with earlier adoption permitted. Under the new guidance on arrangements that include software elements, tangible products that have software components that are essential to the functionality of the tangible product will no longer be within the scope of the software revenue recognition guidance, and software-enabled products will now be subject to other relevant revenue recognition guidance. Additionally, the FASB issued authoritative guidance on revenue arrangements with multiple deliverables that are outside the scope of the software revenue recognition guidance. Under the new guidance, when vendor specific objective or third party evidence for deliverables in an arrangement cannot be determined, a best estimate of the selling price is required to separate deliverables and allocate arrangement consideration using the relative selling price method. The new guidance includes new disclosure requirements on how the application of the relative selling price method affects the timing and amount of revenue recognition. The Company is currently assessing the potential effect, if any, on its financial statements.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Concentration of Credit Risk

Currently, we have cash and cash equivalents deposited with major financial institutions in the countries where we conduct business. Our deposits may exceed the amount of insurance available to cover such deposits. To date, we

[Table of Contents](#)

have not experienced any losses of deposits of cash and cash equivalents. Management regularly reviews our deposit balances and the credit worthiness of the financial institutions which hold our deposits.

Interest Rate Risk

As of December 31, 2009, we had cash and cash equivalents of \$18.5 million and restricted cash of \$2.1 million. The Company had no other significant interest bearing assets. Over time changes to interest rates may reduce or increase our interest income, but the impact on our net income (loss) or the fair value of our interest bearing assets is not expected to be significant.

Our borrowings in China are at fixed interest rates or at rates fixed for 12 months. The outstanding balance under our line of credit in the United States bears interest at the floating prime bank lending rate plus 100 basis points subject to a minimum total rate of 5%. As the prime rate as of December 31, 2009 was 3.25%, our cost of funds in the United States will not increase until the prime rate rises by more than 75 basis points. On an outstanding balance of \$1.8 million, the loan balance in the United States on December 31, 2009, annual interest expense would increase by \$1,800 for each basis point thereafter.

Foreign Currency Exchange Rate Risk

For the year ended December 31, 2009, a substantial portion of our recognized revenue was denominated in U.S. dollars generated primarily from customers in the Americas (42%). Revenue generated from our European operations (17%) was primarily in Euros; revenue generated by our Asia operations (41%) was primarily in RMB. We manufacture a majority of our component parts at our manufacturing facility in Shanghai, China. Since January 2009, our operations in China have been affected by currency fluctuations due to an approximate 0.3% appreciation of the RMB relative to the U.S. dollar.

Our strategy has been and will continue to be to increase our overseas manufacturing and research and development activities to capitalize on lower cost capacity and efficiencies in supply-chain management. In 2004 and 2006, we made a strategic investment with the acquisition of a 96% interest in RAE Beijing, a Beijing-based manufacturer and distributor of environmental safety and security equipment, and the formation of RAE Fushun in late 2006 to capitalize on increases in demand for safety equipment in the mining and energy sectors in China. There has been continued speculation in the financial press that China's currency, the RMB, will be subject to a further market adjustment relative to the U.S. dollar and other currencies. If, for example, there was a hypothetical 10% change in the RMB relative to the U.S. dollar, the effect on our loss would have been approximately \$1.1 million for fiscal 2009. If the currencies in all other countries in Europe and Asia where we have operations were to change in unison with the RMB by a hypothetical 10% relative to the U.S. dollar, the effect on our loss would have been approximately \$0.7 million for fiscal 2009. The difference of \$0.4 million is attributable to the impact of foreign currencies outside of China.

To the extent that we have international sales denominated in U.S. dollars, any fluctuation in the value of the U.S. dollar relative to foreign currencies could affect our competitive position in the international markets. Although we continue to monitor our exposure to currency fluctuations and, when appropriate, may use financial hedging techniques in the future to minimize the effect of these fluctuations, we cannot be certain that exchange rate fluctuations will not adversely affect our financial results in the future.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Our consolidated financial statements included in this report beginning on page F-1 are incorporated herein by reference.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of Disclosure Controls and Procedures

RAE Systems, Inc. (the “Company”) maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports the Company files or submits under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission’s rules and forms, and that such information is accumulated and communicated to the Company’s management, including its Chief Executive Officer (“CEO”) and Chief Financial Officer (“CFO”), as appropriate, to allow timely decisions regarding required financial disclosure.

In connection with the preparation of this Annual Report on Form 10-K, the Company carried out an evaluation under the supervision and with the participation of the Company’s management, including the CEO and CFO, as of December 31, 2009 of the effectiveness of the design and operation of the Company’s disclosure controls and procedures, as such term is defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act. Based upon this evaluation, the CEO and CFO concluded that as of December 31, 2009 the Company’s disclosure controls and procedures were effective.

Management’s Report on Internal Control over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. The Company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with generally accepted accounting principles in the United States.

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

Management has conducted an assessment, including testing, of the effectiveness of the Company’s internal control over financial reporting as of December 31, 2009. In making its assessment of internal control over financial reporting, management used the criteria in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”).

Based on our assessment, which was conducted according to the COSO criteria, we have concluded that our internal control over financial reporting was effective as of December 31, 2009.

The effectiveness of the Company’s internal control over financial reporting as of December 31, 2009 has been audited by Deloitte & Touche LLP, an independent registered public accounting firm, as stated in their report which appears herein.

Changes in Internal Control Over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) during our fourth quarter of fiscal 2009 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of RAE Systems Inc.:

We have audited the internal control over financial reporting of RAE Systems Inc. and subsidiaries (collectively the “Company”) as of December 31, 2009, based on the criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management’s Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2009, based on the criteria established in *Internal Control — Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2009 of the Company and our report dated March 11, 2010 expressed an unqualified opinion on those financial statements.

/s/ Deloitte & Touche LLP

San Jose, California
March 11, 2010

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item with respect to the Company's executive officers is incorporated herein by reference from the information contained in Item 1 of Part I of this Report under the caption "Executive Officers of the Registrant." The remaining information required by this item is incorporated herein by reference from the information to be contained in the Company's 2010 Proxy Statement to be filed with the U.S. Securities and Exchange Commission ("SEC") in connection with the solicitation of proxies for the Company's 2010 Annual Meeting of Shareholders ("2010 Proxy Statement"). The 2010 Proxy Statement will be filed with the SEC within 120 days after the end of the fiscal year to which this report relates.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference from the information to be contained in the Company's 2010 Proxy Statement.

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

The information required by this item is incorporated herein by reference from the information to be contained in the Company's 2010 Proxy Statement.

**ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR
INDEPENDENCE**

The information required by this item is incorporated herein by reference from the information to be contained in the Company's 2010 Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated herein by reference from the information to be contained in the Company's 2010 Proxy Statement.

PART IV.

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(a) (1) *Financial Statements*

See the index of the Consolidated Financial Statements of this Form 10-K.

(2) *Financial Statement Schedules*

Schedules are not provided because of the absence of conditions under which they are required or because the required information is given in the financial statements or the notes thereto.

(3) *Exhibits*

See Index to Exhibits on page 38 herein.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized on March 12, 2010.

RAE SYSTEMS INC.

By: /s/ Robert I. Chen

Robert I. Chen

President and Chief Executive Officer

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Robert I. Chen and Randall Gausman, and each of them, as such person's true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for such person and in such person's name, place and stead, in any and all capacities, to sign any and all amendments to this report on Form 10-K, and to file same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their or his or her substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

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

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Robert I. Chen</u> Robert I. Chen	President, Chief Executive Officer and Chairman of the Board (Principal Executive Officer)	March 12, 2010
<u>/s/ Randall Gausman</u> Randall Gausman	Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	March 12, 2010
<u>/s/ Peter C. Hsi</u> Peter C. Hsi	Chief Technology Officer and Director	March 12, 2010
<u>/s/ Lyle D. Feisel</u> Lyle D. Feisel	Director	March 12, 2010
<u>/s/ Sigrun Hjelmqvist</u> Sigrun Hjelmqvist	Director	March 12, 2010
<u>/s/ Keh Shew Lu</u> Keh Shew Lu	Director	March 12, 2010

/s/ James W. Power

Director

March 12,
2010

James W. Power

/s/ Susan Wang

Director

March 12,
2010

Susan Wang

INDEX TO EXHIBITS

Exhibit	
Number	Description of Document
3.1	Certificate of Incorporation of Registrant(1)
3.2	Amended and Restated Bylaws of Registrant(3)
4.1	Specimen certificate representing the common stock of Registrant(1)
10.0	Form of Indemnity Agreement between the Registrant and the Registrant's directors and officers(1)
10.1	RAE Systems Inc. 2007 Equity Incentive Plan(2)
10.2	RAE Systems Inc. 2002 Stock Option Plan(1)
10.3	RAE Systems Inc. 1993 Stock Plan(1)
10.4	Form of Stock Option Agreement under the Registrant's 2007 Equity Incentive Plan(9)
10.5	Lease Agreement by and between Inland American/Stephens (N First) Ventures, LLC and RAE Systems Inc., dated December 20, 2007(9)
10.6	Purchase and Sale Agreement by and between D.R. Stephens & Company, LLC and RAE Systems Inc., dated November 9, 2007(9)
10.7	Manufacturing Building Lease Agreement by and between Shanghai China Academic Science High Tech Industrial Park Development Co., Ltd. and RAE Systems(Asia), Ltd., incorporated in Hong Kong, dated September 15, 2001(1)
10.8	Lease Agreement by and between Shanghai Institute of Metallurgy Research, Chinese Academy of Sciences and WARAE Instrument(Shanghai) Incorporated, incorporated in Jiading, Shanghai, dated January 8, 1999(1)
10.9	Form of Share Transfer Agreement by and between RAE-KLH shareholders and RAE Systems Asia (Hong Kong) Ltd.(4)
10.10	Separation Agreement and General Release of Claims by and between Donald W. Morgan and the Registrant dated August 8, 2006(5)
10.11	RAE System's Inc. Management Incentive Plan(6)
10.12	Employment Offer Letter by and between Randall Gausman and the Registrant dated October 17, 2006(7)
10.13	Loan and Security Agreement dated as of March 14, 2007 between Silicon Valley Bank and the Registrant(8)
10.14	Joint Venture Agreement by and between Liaoning Coal Industry Group Co., Ltd. and RAE Systems (Asia), Ltd. dated December 10, 2006(8)
10.15	Separation Agreement and General Release of Claims by and between Rudy Mui and the Registrant dated March 4, 2008(9)
10.16	Form of Indemnity Agreement between RAE Systems Inc. and each of its directors and executive officers(10)
21.1	Subsidiaries of the Registrant(9)
23.2	Consent of Deloitte & Touche LLP(11)
24.1	Power of Attorney(11) (included on signature page)
31.1	Certifications of Robert I. Chen, President and Chief Executive Officer of Registrant, pursuant to Rule 13a-14 adopted under the Securities Exchange Act of 1934, as amended, and Section 302 of the Sarbanes-Oxley Act of 2002(11)
31.2	Certifications of Randall Gausman, Vice President and Chief Financial Officer of Registrant, pursuant to Rule 13a-14 adopted under the Securities Exchange Act of 1934, as amended, and Section 302 of the Sarbanes-Oxley Act of 2002(11)
32.1	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002(11)
32.2	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002(11)

(1) Previously filed as an exhibit to the Registrant's quarterly report on Form 10-Q, for the quarter ended March 31, 2002 and incorporated herein by reference.

- (2) Previously filed as an exhibit to the Registrant's current report on Form 8-K on June 19, 2007 and incorporated herein by reference.

[Table of Contents](#)

- (3) Previously filed as an exhibit to the Registrant's current report on Form 8-K on December 21, 2007 and incorporated herein by reference.
- (4) Previously filed on August 8, 2006 as an exhibit to the Registrant's quarterly report on Form 10-Q for the quarter ended June 30, 2006 and incorporated herein by reference.
- (5) Previously filed as an exhibit to the Registrant's current report on Form 8-K on August 8, 2006 and incorporated herein by reference.
- (6) Previously filed as an exhibit to the Registrant's current report on Form 8-K on August 16, 2006 and incorporated herein by reference.
- (7) Previously filed as an exhibit to the Registrant's current report on Form 8-K on October 18, 2006 and incorporated herein by reference.
- (8) Previously filed as an exhibit to the Registrant's annual report on Form 10-K for the year ended December 31, 2006 and incorporated herein by reference.
- (9) Previously filed as an exhibit to the Registrant's annual report on Form 10-K for the year ended December 31, 2007 and incorporated herein by reference.
- (10) Previously filed as an exhibit to the Registrant's quarterly report on Form 10-Q for the quarter ended June 30, 2009 and incorporated herein by reference.
- (11) Filed herewith.

RAE Systems Inc.
Consolidated Financial Statements
As of December 31, 2009 and 2008

Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm

<u>Consolidated balance sheets</u>	F-2
<u>Consolidated statements of operations</u>	F-3
<u>Consolidated statements of shareholders' equity and comprehensive loss</u>	F-4
<u>Consolidated statements of cash flows</u>	F-5
<u>Notes to consolidated financial statements</u>	F-6
	F-7

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of RAE Systems Inc.

We have audited the accompanying consolidated balance sheets of RAE Systems Inc. and subsidiaries (collectively the “Company”) as of December 31, 2009 and 2008, and the related consolidated statements of operations, shareholders’ equity and comprehensive loss, and cash flows for each of the three years in the period ended December 31, 2009. These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2009 and 2008, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2009, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company’s internal control over financial reporting as of December 31, 2009, based on the criteria established in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated March 11, 2010 expressed an unqualified opinion on the Company’s internal control over financial reporting.

/s/ Deloitte & Touche LLP

San Jose, California
March 11, 2010

RAE SYSTEMS INC.
CONSOLIDATED BALANCE SHEETS

	December 31,	December 31,
	2009	2008
	(In thousands, except share	
	and par value data)	
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 18,528	\$ 14,845
Restricted cash	2,146	—
Trade notes receivable	2,039	1,870
Accounts receivable, net of allowances of \$5,380 and \$3,472, respectively	19,428	20,961
Accounts receivable from affiliate	322	100
Inventories	12,068	17,604
Prepaid expenses and other current assets	3,983	4,991
Income taxes receivable	659	895
Total current assets	59,173	61,266
Property and equipment, net	15,590	14,976
Intangible assets, net	2,428	3,342
Investments in unconsolidated affiliates	358	467
Other assets	1,325	1,124
Total assets	\$ 78,874	\$ 81,175
LIABILITIES AND SHAREHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 6,454	\$ 6,387
Accounts payable to affiliate	92	382
Payable to Fushun shareholder	—	64
Bank lines of credit	4,026	2,584
Accrued liabilities	15,753	12,318
Notes payable to related parties, current	370	1,329
Income taxes payable	199	425
Deferred revenue, current	603	631
Total current liabilities	27,497	24,120
Deferred revenue, non-current	615	685
Deferred tax liabilities, non-current	156	83
Long-term debt	1,463	—
Deferred gain on sale of real estate	4,444	5,079
Other long-term liabilities	781	1,292
Notes payable to related parties, non-current	363	1,219
Total liabilities	35,319	32,478
COMMITMENTS AND CONTINGENCIES (NOTE 7)		
SHAREHOLDERS' EQUITY:		
Common stock, \$0.001 par value, 200,000,000 shares authorized; 59,438,328 and 59,443,914 shares issued and outstanding, respectively	59	59
Additional paid-in capital	63,832	62,549
Accumulated other comprehensive income	6,844	6,555
Accumulated deficit	(31,706)	(25,947)
Total RAE Systems Inc. shareholders' equity	39,029	43,216
Noncontrolling interest	4,526	5,481
Total shareholders' equity	43,555	48,697
Total liabilities and shareholders' equity	\$ 78,874	\$ 81,175

See accompanying notes to consolidated financial statements.

RAE SYSTEMS INC.
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,		
	2009	2008	2007
	(In thousands, except per share data)		
Net sales	\$ 83,172	\$ 95,383	\$ 90,836
Cost of sales	<u>42,193</u>	<u>47,168</u>	<u>44,428</u>
Gross profit	<u>40,979</u>	<u>48,215</u>	<u>46,408</u>
Operating expenses:			
Sales and marketing	18,824	21,427	25,434
Research and development	6,354	6,665	7,973
General and administrative	23,124	22,864	17,767
Impairment of goodwill	—	3,348	—
Gain on abandonment of lease	<u>—</u>	<u>—</u>	<u>(595)</u>
Total operating expenses	<u>48,302</u>	<u>54,304</u>	<u>50,579</u>
Operating loss from continuing operations	(7,323)	(6,089)	(4,171)
Other income (expense):			
Interest income	48	173	162
Interest expense	(402)	(397)	(705)
Other, net	188	(575)	58
Equity in (loss) gain of unconsolidated affiliates	<u>(109)</u>	<u>43</u>	<u>3</u>
Loss from continuing operations before income taxes	(7,598)	(6,845)	(4,653)
Income tax (benefit) expense	<u>(884)</u>	<u>538</u>	<u>5,883</u>
Loss from continuing operations	(6,714)	(7,383)	(10,536)
Gain (loss) from discontinued operations, net of tax	<u>—</u>	<u>11</u>	<u>(4,154)</u>
Net loss	(6,714)	(7,372)	(14,690)
Net loss (income) attributable to the noncontrolling interest	<u>955</u>	<u>220</u>	<u>(6)</u>
Net loss attributable to RAE Systems Inc.	<u>\$ (5,759)</u>	<u>\$ (7,152)</u>	<u>\$ (14,696)</u>
Net loss per share — basic and diluted			
Continuing operations	\$ (0.10)	\$ (0.12)	\$ (0.18)
Discontinued operations	<u>—</u>	<u>—</u>	<u>(0.07)</u>
Net loss per share — basic and diluted	<u>\$ (0.10)</u>	<u>\$ (0.12)</u>	<u>\$ (0.25)</u>
Weighted average common shares outstanding — Basic and Diluted	59,367	59,204	58,852

See accompanying notes to consolidated financial statements.

RAE SYSTEMS, INC.

CONSOLIDATED STATEMENTS OF SHAREHOLDERS' EQUITY AND COMPREHENSIVE LOSS

	Accumulated							
	Common Stock		Additional	Other	Comprehensive	Accumulated	Noncontrolling	Total
	Shares	Amount	Capital	(In thousands, except share data)				
December 31, 2006	59,274,596	\$ 59	\$ 58,828	\$ 1,245	\$ (3,953)	\$ 4,495	\$ 60,674	
Cumulative effect of adopting FIN 48 — adjustment to accumulated deficit	—	—	—	—	(146)	—	(146)	
Components of comprehensive loss:								
Net loss	—	—	—	—	(14,696)	6	(14,690)	
Foreign currency translation adjustments	—	—	—	2,889	—	884	3,773	
Unrealized loss on investment, net of tax	—	—	—	1	—	—	1	
Total comprehensive loss							(10,916)	
Exercise of stock options	32,291	—	72	—	—	—	72	
Repurchase of restricted common stock	(134,907)	—	(335)	—	—	—	(335)	
Stock-based compensation expense	—	—	2,553	—	—	—	2,553	
Investment in unconsolidated entity	—	—	(1)	—	—	—	(1)	
Tax benefit from stock options	—	—	(160)	—	—	—	(160)	
December 31, 2007	59,171,980	59	60,957	4,135	(18,795)	5,385	51,741	
Components of comprehensive loss:								
Net loss	—	—	—	—	(7,152)	(220)	(7,372)	
Foreign currency translation adjustments	—	—	—	2,420	—	316	2,736	
Total comprehensive loss							(4,636)	
Exercise of stock options	149,458	—	43	—	—	—	43	
Repurchase of restricted common stock	(27,524)	—	(44)	—	—	—	(44)	
Stock issued for services	150,000	—	210	—	—	—	210	
Stock-based compensation expense	—	—	1,383	—	—	—	1,383	
December 31, 2008	59,443,914	59	62,549	6,555	(25,947)	5,481	48,697	
Components of comprehensive loss:								
Net loss	—	—	—	—	(5,759)	(955)	(6,714)	
Foreign currency translation adjustments	—	—	—	289	—	—	289	
Total comprehensive loss							(6,425)	
Repurchase of restricted common stock	(5,586)	—	(7)	—	—	—	(7)	
Stock-based compensation expense	—	—	1,290	—	—	—	1,290	
December 31, 2009	59,438,328	\$ 59	\$ 63,832	\$ 6,844	\$ (31,706)	\$ 4,526	\$ 43,555	

See accompanying notes to consolidated financial statements.

RAE SYSTEMS INC.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,		
	2009	2008	2007
	(In thousands)		
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net loss	\$ (6,714)	\$ (7,372)	\$ (14,690)
Gain (loss) from discontinued operations	—	11	(4,154)
Loss from continuing operations	(6,714)	(7,383)	(10,536)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	3,215	3,344	3,715
Provision for doubtful accounts	1,904	1,275	1,948
Gain on disposal of property and equipment	(572)	(586)	(285)
Stock-based compensation expense	1,290	1,593	1,871
Equity in loss (gain) of unconsolidated affiliates	109	(43)	(3)
Deferred income tax (benefit) expense	(380)	(1,221)	3,999
Gain on abandonment of lease	—	—	(595)
Amortization of discount on notes payable to related parties	85	52	79
Impairment of intangible assets	—	—	609
Impairment of goodwill	—	3,348	—
Changes in operating assets and liabilities:			
Accounts receivable	(221)	1,174	(5,719)
Accounts receivable from affiliate	(221)	(77)	25
Trade notes receivable	(154)	1,056	(689)
Inventories	5,645	661	(1,831)
Prepaid expenses and other current assets	1,389	(1,361)	(46)
Income taxes receivable	237	1,167	—
Other assets	(174)	557	(1,004)
Accounts payable	1,053	(1,036)	(1,473)
Accounts payable to affiliate	(290)	(52)	35
Accrued liabilities	2,252	356	1,876
Income taxes payable	(240)	(287)	541
Deferred revenue	(98)	314	(977)
Other liabilities	(458)	320	(117)
Net cash provided by (used in) operating activities of continuing operations	7,657	3,171	(8,577)
Net cash provided by (used in) operating activities of discontinued operations	—	7	(1,402)
Net cash provided by (used in) operating activities	7,657	3,178	(9,979)
CASH FLOWS FROM INVESTING ACTIVITIES:			
Proceeds from sales and maturities of investments	—	—	3,248
Business acquisitions, net of cash acquired	—	—	(1,618)
Changes in restricted cash	(2,146)	—	—
Acquisition of property and equipment	(2,959)	(3,501)	(4,014)
Proceeds from sale of net assets	105	150	12,407
Net cash (used in) provided by investing activities	(5,000)	(3,351)	10,023
CASH FLOWS FROM FINANCING ACTIVITIES:			
Proceeds from the exercise of stock options	—	43	72
Repurchases of common stock	(7)	(44)	(335)
Borrowings from bank lines of credit	5,555	4,961	12,156
Payments on bank lines of credit	(2,649)	(5,195)	(9,600)
Payments on payables to related parties	(1,945)	(1,156)	(4,977)
Net cash provided by (used in) financing activities	954	(1,391)	(2,684)
Effect of exchange rate changes on cash and cash equivalents	72	503	427
Increase (decrease) in cash and cash equivalents	3,683	(1,061)	(2,213)
Cash and cash equivalents at beginning of period	14,845	15,906	18,119
Cash and cash equivalents at end of period	\$ 18,528	\$ 14,845	\$ 15,906
Supplemental disclosure of cash flow information:			
Cash paid for taxes, net	\$ (10)	\$ 687	\$ 1,133
Cash paid for interest	750	333	422
Non-cash investing and financing activities:			
Unpaid property and equipment	1,274	1,100	589

See accompanying notes to consolidated financial statements.

RAE SYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

Note 1. Summary of Significant Accounting Policies

The Company

Founded in 1991, RAE Systems Inc. (the “Company” or “RAE Systems”), a Delaware company, develops and manufactures rapidly-deployable, multi-sensor chemical and radiation detection monitors and networks for oil and gas, hazardous material management, industrial safety, civil defense and environmental remediation applications. The Company’s products are based on proprietary sensor technology, and include personal, breathing zone, portable, wireless and fixed chemical detection monitors and radiation detectors.

As a result of an independent investigation conducted by the Audit Committee of the Board of Directors during fiscal year 2008, the Company made a voluntary disclosure to the United States Department of Justice (“DOJ”) and the United States Securities and Exchange Commission (“SEC”) that the company may have violated United States Foreign Corrupt Practices Act (“FCPA”). The Company is cooperating with the DOJ and the SEC in connection with their review of the matter and is actively engaged in settlement discussions. Although no assurances can be given as to whether the matter will settle or the amount of any settlement, the Company accrued \$3.5 million in the third quarter of 2009 for the potential settlement of this matter.

Principles of Consolidation

The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States (“US GAAP”) and include the Company and its subsidiaries. All intercompany balances and transactions have been eliminated. The ownership of other interest holders of consolidated subsidiaries is reflected as noncontrolling interest. The presentation requirements for noncontrolling (minority) interests follows authoritative guidance promulgated by the Financial Accounting Standards Board (“FASB”) which became effective January 1, 2009, for all periods presented. Certain prior year amounts have been reclassified to conform to the current year presentation and management considers the amounts to not be material.

Use of Estimates

The preparation of financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosures of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. The Company bases its estimates on historical experience and on various other assumptions that are believed to be reasonable based on available information. Actual results may differ materially from these estimates and assumptions.

Revenue Recognition

The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery has occurred, the fee is fixed or determinable, and collectability is reasonably assured. A provision for estimated product returns is established at the time of sale based upon historical return rates adjusted for current economic conditions. Historically, the Company has experienced an insignificant amount of sales returns. The Company generally recognizes revenue upon shipment to its distributors in accordance with standard contract terms that pass title of all goods upon delivery to a common carrier (Free on board, “FOB”) and provides for sales returns under standard product warranty provisions. For non-standard contract terms where title to goods passes upon delivery to the customer (FOB destination), revenue is recognized after the Company has established proof of delivery. Revenues related to services performed under the Company’s extended warranty program are recognized as earned based upon contract terms, generally ratably over the term of service. The Company records project installation work in Asia using the percentage-of-completion method. Net sales also include amounts billed to customers for shipping and handling. The Company’s shipping costs are included in cost of sales.

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Cash and Cash Equivalents

The Company considers all highly liquid investments with original or remaining maturities of three months or less at time of purchase to be cash equivalents.

Allowance for Doubtful Accounts

The Company grants credit to its customers after undertaking an investigation of credit risk for all significant amounts. The allowance for doubtful accounts is based on the Company's assessment of the collectability of customer accounts. The Company regularly reviews the allowance by considering factors such as historical experience, credit quality, the age of the accounts receivable balances, current economic conditions, and known troubled accounts. The Company generally does not require collateral for sales on credit. When the Company becomes aware that a specific customer is unable to meet its financial obligations, the Company records a specific allowance to reflect the level of credit risk in the customer's outstanding receivable balance. In addition, the Company records allowances based on certain percentages of aged receivable balances. The Company classifies bad debt expenses as general and administrative expenses in the Consolidated Statements of Operations.

The Company is not able to predict changes in the financial stability of its customers. Any material change in the financial status of any one or a group of customers could have a material adverse effect on the Company's results of operations and financial condition. Although such losses have been within management's expectations to date, there can be no assurance that such allowances will continue to be adequate. The Company sells products through its direct sales force and distributors. No customer accounted for more than 10% of consolidated net sales for any period presented.

Trade Notes Receivable

Trade notes receivable are bank guaranteed promissory notes which are non-interest bearing and generally mature within six months. From time to time certain customers in China present these notes in payment of outstanding accounts receivable.

Concentration of Credit Risk

Financial instruments which potentially subject the Company to a concentration of credit risk consist principally of cash and cash equivalents, trade notes receivable and accounts receivable. The Company places its domestic and foreign cash and cash equivalents with large, creditworthy financial institutions, primarily in the United States and the People's Republic of China. U.S. cash balances are insured by the Federal Deposit Insurance Company up to \$250,000 per bank. As of December 31, 2009 and 2008, the Company had deposits in excess of insured limits of approximately \$5.7 million and \$1.0 million, respectively. The Company also had deposits at several foreign financial institutions, which are not insured, that summed to approximately \$14.6 million and \$13.3 million as of December 31, 2009 and 2008, respectively.

Inventories

Inventories are stated at the lower of standard cost, which approximates actual cost computed on a first-in, first-out basis, or market. The Company establishes inventory provisions when conditions exist that suggest its inventory may be in excess of anticipated demand or is obsolete based upon assumptions about future demand for its products and market conditions. When recorded, write-downs are intended to reduce the carrying value of the inventory to its net realizable value. If actual demand for specified products deteriorates, or market conditions are less favorable than those projected, additional reserves may be required

RAE SYSTEMS INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)*****Property and Equipment***

Property and equipment are stated at cost, less accumulated depreciation. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, as follows:

Buildings	20 to 25 years
Equipment	3 to 10 years
Furniture and fixtures	3 to 7 years
Computers and software	3 to 7 years
Automobiles	3 to 5 years
Building improvements	Lesser of useful life or remaining lease term

Warranty Repairs

From date of shipment, the Company provides a 12 to 24 month repair or replacement warranty for the majority of its products. Based primarily on the historical relationship of actual warranty costs to sales, the Company accrues a reserve for estimated future warranty costs at the time revenue is recognized. The estimated warranty obligation is affected by product failure rates, the length of the warranty period, materials usage to repair or replace defective products, and service delivery costs incurred in correcting product failures. In addition, from time to time, specific warranty accruals may be made if unforeseen technical problems arise. If the Company's actual experience relative to these factors is significantly different than estimated, the Company may be required to adjust its provision in future periods.

Research and Development

Research and development costs are expensed as incurred.

Advertising Costs

The Company expenses all advertising costs as incurred. For the years ended December 31, 2009, 2008 and 2007, advertising expense was \$190,000, \$311,000 and \$547,000, respectively.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of taxes payable or refundable for the current year and deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the Company's consolidated financial statements or tax returns. The measurement of current and deferred taxes is based on provisions of the enacted tax law.

The Company records deferred tax assets if the realization of such assets is more likely than not to occur. Otherwise, a valuation allowance is established for the deferred tax assets which may not be realized.

The Company is subject to income tax audits by the respective tax authorities in all of the jurisdictions in which it operates. The determination of tax liabilities in each of these jurisdictions requires the interpretation and application of complex and sometimes uncertain tax laws and regulations. The recognition and measurement of current taxes payable or refundable and deferred tax assets and liabilities requires that the Company make certain estimates and judgments. Changes to these estimates or a change in judgment may have a material impact on the Company's tax provision in a future period.

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Goodwill and Other Intangible Assets

Goodwill is tested for impairment on an annual basis in the fourth quarter and between annual tests if events occur or circumstances indicate that the carrying amount of goodwill may not be recoverable. Impairment losses, if any, are recorded in the Consolidated Statements of Operations as “Impairment of goodwill”.

Purchased intangible assets other than goodwill are amortized over their estimated useful lives unless these lives are determined to be indefinite. Purchased intangibles are carried at cost, less accumulated amortization. Amortization is generally computed using either the straight-line method or an accelerated method based on the pattern of expected usage over the estimated useful lives of the respective assets, currently 1.5 to 6 years.

Long-Lived Assets

The Company evaluates the recoverability of long-lived assets with finite lives periodically and whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The carrying amount of a long-lived asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. If the carrying amount of a long-lived asset is deemed not recoverable, an impairment loss is recognized for the difference between the carrying amount of the asset and its fair value, generally the present value of estimated future cash flows.

Fair Values of Financial Instruments

The following methods and assumptions were used by the Company in estimating its fair value disclosures for financial instruments:

- *Cash and Cash Equivalents, Accounts Receivable, Trade Notes Receivables, Accounts Receivable from Affiliate, Accounts Payable, Accrued Expenses, Inventory Purchase Obligations :*

The carrying amount reported in the consolidated balance sheets for these items approximates fair value because of the short maturity of these instruments. In addition, for inventory purchase obligations, the carrying value approximates fair value based on market rates for comparable products.

- *Notes Payable to Related Parties:*

The carrying amount of notes payable to related parties approximates fair value as the Company has discounted these non-interest bearing notes payable at an interest rate commensurate with commercial borrowing rates available to the Company in China. As of December 31, 2009 and 2008, the fair values of the Company’s financial instruments approximate their historical carrying amount.

Translation of Foreign Currencies

Assets and liabilities of non-U.S. subsidiaries that operate in a local currency environment, where that local currency is the functional currency, are translated into U.S. dollars at exchange rates in effect at the balance sheet date; with the resulting translation adjustments directly recorded to a separate component of accumulated other comprehensive income. Income and expense accounts are translated at average exchange rates during the year. Gains and losses from foreign currency transactions are recorded in Other income (expense), net on the Consolidated Statements of Operations. The functional currency is the local currency for all non-U.S. subsidiaries.

Stock-Based Compensation Expense

The Company estimates the fair value of each option award on the date of grant using a Black-Scholes-Merton (“BSM”) valuation model and a single option award approach. Accordingly, stock-based compensation cost is measured at grant date based on the fair value of the award and recognized in expense over the requisite service period, which is generally the vesting period.

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Net Loss Per Share

Basic loss per share includes no dilution and is computed by dividing loss available to common shareholders by the weighted-average number of common shares outstanding for the period. Diluted earnings per common share reflects the potential dilution of common stock equivalents, such as options and warrants, to the extent the impact is dilutive. As the Company incurred net losses for the years ended December 31, 2009, 2008 and 2007, the effect of potentially dilutive securities on diluted net loss per share computations was anti-dilutive. The weighted-average number of anti-dilutive shares excluded from the diluted net loss per common share calculation for 2009, 2008 and 2007 was 5,106,797, 3,813,874 and 3,505,491, respectively.

Retained Earnings

In accordance with the Company Law of the People's Republic of China, the Company's China subsidiaries may be required to appropriate a portion of net income as determined under accounting principles generally accepted in China ("PRC GAAP") to non-distributable reserves which include a general reserve, an enterprise expansion reserve and a staff welfare and bonus reserve. While the reserves restrict a portion of retained earnings from distribution to shareholders, the reserves are not withdrawn from the business and remain available for use in operations.

Wholly-owned China subsidiaries are not required to make appropriations to the enterprise expansion reserve; however, the China subsidiaries are required to appropriate not less than 10% of their net income determined under PRC GAAP to the general reserve. Appropriations to the general reserve are limited to 50% of each China subsidiary's registered capital. Appropriations to the staff welfare and bonus reserve are determined by the board of directors. The total appropriation of retained earnings to the Company's statutory reserves totaled \$2.7 million and \$2.7 million at December 31, 2009 and 2008, respectively.

Variable Interest Entities

S.A.R.L. RAE France ("RAE France") has been identified by management as a variable interest entity. The Company is the primary beneficiary through its ownership of RAE Europe ApS. RAE France distributes and sells RAE products exclusively in France. RAE France had total sales of \$2.4 million, \$2.7 million and \$1.8 million in 2009, 2008 and 2007, respectively, and total assets of \$1.1 million as of December 31, 2009 and 2008. The Company has consolidated RAE France since December 2004.

Segment Reporting

FASB Accounting Standards Codification ("ASC") Topic 280, "*Segment Reporting*," establishes standards for public business enterprises to report information about operating segments in their annual financial statements and requires that those enterprises report selected information about operating segments in subsequent interim financial reports issued to shareholders. It also established standards for related disclosure about products and services, geographic areas, and major customers. Operating segments are components of an enterprise, which are evaluated regularly by the chief operating decision-maker in deciding how to allocate and assess resources and performance. The Company's chief operating decision-makers are the Chief Executive Officer and the Chief Financial Officer. Although the Company's operating segments consist of entities geographically based in the Americas, Asia and Europe, the Company operates in a single reporting segment worldwide in the sale of portable and wireless chemical and radiation detection products and related services. Accordingly, the Company operated as one reportable segment during the years ended December 31, 2009, 2008 and 2007.

Recent Accounting Pronouncements

In December 2007, the FASB issued authoritative guidance which applies to business combinations. The new guidance changes the accounting for acquisition transaction costs by requiring them to be expensed in the period

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

incurred, and also changes the accounting for contingent consideration, acquired contingencies and restructuring costs related to an acquisition. The new guidance was effective for the Company beginning January 1, 2009, and will change the Company's accounting treatment for business combinations on a prospective basis.

In June 2009, the FASB issued authoritative guidance for determining whether an entity is a variable interest entity ("VIE") and requires an enterprise to perform an analysis to determine whether the enterprise's variable interest or interests give it a controlling financial interest in a VIE. Under this guidance, an enterprise has a controlling financial interest when it has a) the power to direct the activities of a VIE that most significantly impact the entity's economic performance and b) the obligation to absorb losses of the entity or the right to receive benefits from the entity that could potentially be significant to the VIE. The guidance also requires an enterprise to assess whether it has an implicit financial responsibility to ensure that a VIE operates as designed when determining whether it has power to direct the activities of the VIE that most significantly impact the entity's economic performance. The guidance is effective for the Company January 1, 2010, and requires ongoing assessments of whether an enterprise is the primary beneficiary of a VIE as well as certain enhanced disclosures. The Company is currently evaluating the potential impact, if any, of the adoption of this guidance on its consolidated financial statements.

In October 2009, the FASB issued authoritative guidance on revenue recognition that will become effective for the Company beginning January 1, 2011, with earlier adoption permitted. Under the new guidance on arrangements that include software elements, tangible products that have software components that are essential to the functionality of the tangible product will no longer be within the scope of the software revenue recognition guidance, and software-enabled products will now be subject to other relevant revenue recognition guidance. Additionally, the FASB issued authoritative guidance on revenue arrangements with multiple deliverables that are outside the scope of the software revenue recognition guidance. Under the new guidance, when vendor specific objective or third party evidence for deliverables in an arrangement cannot be determined, a best estimate of the selling price is required to separate deliverables and allocate arrangement consideration using the relative fair value method. The new guidance includes new disclosure requirements on how the application of the relative fair value method affects the timing and amount of revenue recognition. The Company is currently assessing the potential effect, if any, on its financial statements.

Note 2. Business Combinations and Dispositions

Aegison Corporation and Tianjin Securay Technology Ltd. Co.

In July 2006, the Company purchased the assets, including two pending patents, of Santa Clara, California based Aegison Corporation ("Aegison"), a supplier of fixed and mobile digital video surveillance systems for approximately \$2.0 million in cash and direct transaction costs of \$142,000. In January 2007, RAE Asia entered into an agreement to purchase the intellectual property of Tianjin Securay Technology Ltd. Co. ("Securay") for Renminbi 12 million (approximately \$1.5 million). This transaction, together with the purchase agreements entered in 2006, completed the purchase of Securay. Including transactions entered into during 2006, the total purchase price was \$2.0 million in cash. The acquisition of Aegison and Securay made up the company's mobile digital video recording ("DVR") business

On August 24, 2007, the Board of Directors approved the discontinuation of the Company's DVR business in order to reduce expenses and concentrate resources on the gas and radiation detection business. On August 28, 2007 the Company notified its DVR customers, terminated all personnel not reassigned to continuing operations and suspended the related production and sales activities. The Company retained the acquired intellectual property; however, because the DVR business had operated at a substantial loss, during 2007 management liquidated the tangible assets, mainly inventories of component parts, and impaired the remaining value of the intangible assets and goodwill.

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

In accordance with the existing authoritative guidance, the financial results of the DVR business are reported as discontinued operations for all periods presented. The financial results included in discontinued operations were as follows:

	Year Ended December 31,		
	2009	2008	2007
	(In thousands)		
Net sales	\$ —	\$ 3	\$ 319
Gain (loss) from discontinued operations before income taxes	—	11	(4,939)
Income tax benefit	—	—	(785)
Gain (loss) from discontinued operations	<u>\$ —</u>	<u>\$ 11</u>	<u>\$ (4,154)</u>

There were no assets or liabilities related to the disposal group as of December 31, 2009 and 2008.

Note 3. Balance Sheet Details

Allowance for Doubtful Accounts:

The components of the allowance for doubtful accounts were as follows:

	Year Ended December 31,		
	2009	2008	2007
	(In thousands)		
Allowance for doubtful accounts at beginning of year	\$ 3,472	\$ 2,060	\$ 843
Charges to expense	2,164	1,345	1,948
Write-offs of uncollectible accounts, net of recoveries	(260)	(70)	(833)
Foreign currency translation effects	4	137	102
Allowance for doubtful accounts at end of year	<u>\$ 5,380</u>	<u>\$ 3,472</u>	<u>\$ 2,060</u>

Inventories:

Inventories are stated at the lower of cost or market and include material, labor and manufacturing overhead costs. The components of inventories were as follows:

	December 31,	December 31,
	2009	2008
	(In thousands)	
Raw materials	\$ 5,655	\$ 8,213
Work-in-progress	2,557	2,910
Finished goods	3,856	6,481
Total inventories	<u>\$ 12,068</u>	<u>\$ 17,604</u>

The Company recorded write-downs to inventory of \$777,000, \$580,000 and \$442,000 during 2009, 2008 and 2007, respectively. The inventory write-downs were predominantly the result of changes in forecasted customer demand and technological changes in the Company's products and included primarily raw material and finished goods. The major elements of the written down raw material consists of components and items that had not entered into production. The finished goods inventory includes the cost of raw material inputs, labor, and overhead.

RAE SYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
Prepaid Expenses and Other Current Assets:

The components of prepaid expenses and other current assets were as follows:

	December 31, 2009	December 31, 2008
	(In thousands)	
Supplier advances and deposits	\$ 1,330	\$ 977
Amounts receivable from employees	81	661
Prepaid insurance	275	437
Deferred tax assets, current	934	577
Other current assets	1,363	2,339
Total prepaid expenses and other current assets	<u>\$ 3,983</u>	<u>\$ 4,991</u>

Property and Equipment, net:

The components of property and equipment were as follows:

	December 31, 2009	December 31, 2008
	(In thousands)	
Buildings and improvements	\$ 11,945	\$ 10,327
Equipment	4,788	5,070
Computer equipment	4,996	4,971
Automobiles	1,385	1,590
Furniture and fixtures	444	434
Construction in progress	3,468	2,457
	27,026	24,849
Less: Accumulated depreciation	(11,436)	(9,873)
Total property and equipment, net	<u>\$ 15,590</u>	<u>\$ 14,976</u>

Construction in progress in 2009 and 2008 primarily represented the cost to build offices and manufacturing facilities in Fushun, China. The new manufacturing facilities were placed into service during October 2008. RAE plans to complete the remaining office, research and development and dormitory buildings in stages over the next 12 to 24 months. Also, in December 2008, the Company invested approximately \$1.2 million for land use rights in Shanghai, China to construct a new manufacturing, engineering and administrative facility. During the second quarter of 2009, the Company entered into an agreement for pre-construction land improvements of approximately \$263,000. The Company began construction of the facility during the first quarter of 2010. Upon completion, the Company intends to vacate its existing leased facility in Shanghai. Based on discussions with Shanghai government officials, the landlord of the existing Company facility, the Company believes that it will be able to terminate the lease without penalty. No assurance can be given that the Company will be able to arrange financing terms acceptable to the Company and that it would not be subject to lease termination penalties.

In December 2007, the Company sold its headquarters building in San Jose, California for \$12.7 million and leased back the facility for a period of 10 years. The Company recognized a gain on the sale of \$0.4 million in 2007 which was based on the difference between the net gain on the sale of the building of \$6.7 million and net present value of the future lease payments of \$6.3 million. The net present value of the future lease payments is recorded as a deferred gain which will be recognized in income on a straight-line basis over the life of the lease beginning in January 2008. The deferred gain recognized in income during 2009 and 2008 totaled \$0.6 million and \$0.6 million, respectively. The lease is classified as an operating lease. As of December 31, 2009 and 2008, the current portion of

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

the deferred gain of \$0.6 million and \$0.6 million, respectively, was included in Accrued liabilities on the Consolidated Balance Sheets.

Depreciation expense for the years ended December 31, 2009, 2008 and 2007 was \$2.3 million, \$2.2 million and \$2.3 million, respectively.

Accrued Liabilities:

Accrued liabilities as of December 31, 2009 and 2008 are summarized as follows:

	December 31, 2009	December 31, 2008
	(In thousands)	
Compensation and related benefits	\$ 3,764	\$ 2,445
Accrued commissions	1,265	2,010
Accrued FCPA settlement (see Note 8)	3,500	—
Customer deposits	941	1,792
Accrued professional fees	426	755
Other	5,857	5,316
Total accrued liabilities	<u>\$ 15,753</u>	<u>\$ 12,318</u>

Note 4. Goodwill and Intangible Assets

Goodwill represents the excess of purchase price and related costs over the value assigned to the net tangible and identifiable intangible assets. The following table presents the changes in goodwill during 2007 and 2008, when goodwill was impaired:

	(In thousands)
Balance as of December 31, 2006	\$ 3,760
Acquisitions:	
Securay	646
Purchase price adjustment — Aegison	(19)
Impairment charges due to discontinued operations	(1,443)
Currency translation adjustment	199
Balance as of December 31, 2007	3,143
Currency translation adjustment	205
Impairment charges	(3,348)
Balance as of December 31, 2008	<u>\$ —</u>

The Company evaluates goodwill for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. The recoverability of goodwill is measured at the reporting unit level by comparing the reporting unit's carrying amount, including goodwill, to the fair value of the reporting unit, which is measured based upon, among other factors, market capitalization as well as forecasted operating results. The Company has one reporting unit. If the recorded value of the assets, including goodwill, and liabilities ("net book value") of the reporting unit exceeds its fair value, an impairment loss may exist. Further, to the extent the net book value of the Company as a whole is greater than its market capitalization, all, or a significant portion of its goodwill may be considered impaired.

The Company experienced a significant decline in market capitalization during the fourth quarter of 2008. This decline in market capitalization was driven largely by deteriorating macroeconomic conditions that contributed to a

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

decline in the Company's forecasted operating results and business uncertainties associated with the current FCPA investigation.

Pursuant to the authoritative guidance, the measurement of impairment of goodwill consists of two steps. In the first step, the fair value of the Company is compared to its carrying value. Management completed a valuation of the Company, which incorporated existing market-based considerations as well as operating information based on current results and projections, and concluded the estimated fair value of the Company was less than its net book value. As a result, the Company performed the second step to determine the implied fair value of the Company's goodwill, and to compare it to the carrying value of the Company's goodwill. This second step includes estimating the value of the tangible and intangible assets and liabilities of the Company as if it had been acquired in a business combination to determine the implied fair value of goodwill. The result of this assessment indicated that the implied fair value of goodwill was zero. As a result, the Company recognized a non-cash impairment charge of approximately \$3.3 million for the three-month period and year ended December 31, 2008 to write-off the entire carrying value of its goodwill.

As a result of discontinuing the DVR business during the third quarter of 2007, the Company impaired the goodwill acquired in the purchases of Aegison and Securay. See "Note 2. Business Combinations and Dispositions" for more detail. There was no other impairment of goodwill in 2007 as a result of the required annual impairment test.

The following table presents details of the Company's intangible assets other than goodwill:

	December 31, 2009			December 31, 2008		
	Gross Carrying	Accumulated	Net Carrying	Gross Carrying	Accumulated	Net Carrying
	Amount	Amortization	Amount	Amount	Amortization	Amount
	(In thousands)					
Customer list	\$ 5,456	\$ (3,376)	\$ 2,080	\$ 5,438	\$ (2,636)	\$ 2,802
Trade name	1,356	(1,008)	348	1,352	(812)	540
Total intangible assets, net	\$ 6,812	\$ (4,384)	\$ 2,428	\$ 6,790	\$ (3,448)	\$ 3,342

All of the Company's purchased intangible assets other than goodwill are subject to amortization. Amortization expense for the years ended December 31, 2009, 2008 and 2007, was \$0.9 million, \$1.2 million and \$1.4 million, respectively.

During 2008, the Company increased the value of the customer list from the acquisition of RAE Fushun by \$435,000 and recognized a corresponding deferred tax liability. During 2007, the Company recorded impairment of \$609,000 for certain patents held by RAE Beijing related to the discontinuation of a related product in the fourth quarter of 2007. An impairment analysis was performed for this intangible asset which determined that the carrying value was not recoverable.

As a result of discontinuing the DVR business during the third quarter of 2007, the Company impaired the remaining balance of the intangible assets acquired in the purchases of Aegison and Securay. An impairment charge of \$1.6 million was recognized during the quarter ended September 30, 2007 and is included in the net loss from discontinued operations reported in the Company's Consolidated Statements of Operations.

RAE SYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Based on the carrying amount of intangible assets as of December 31, 2009, the estimated future amortization is as follows *(in thousands)* :

Years Ended December 31,	
2010	\$ 904
2011	638
2012	372
2013	281
2014	161
Thereafter	72
Total amortization	<u>\$ 2,428</u>

Note 5. Income Taxes

The Company's loss from continuing operations before income taxes consisted of the following:

	Year Ended December 31,		
	2009	2008	2007
	(In thousands)		
United States	\$ (4,526)	\$ (4,934)	\$ (5,973)
Foreign	<u>(3,072)</u>	<u>(1,911)</u>	<u>1,320</u>
Loss from continuing operations before income taxes	<u>\$ (7,598)</u>	<u>\$ (6,845)</u>	<u>\$ (4,653)</u>

The Company's income tax (benefit) expense consisted of the following:

	Year Ended December 31,		
	2009	2008	2007
	(In thousands)		
Current:			
Federal	\$ (1,072)	\$ (91)	\$ 819
State	23	18	53
Foreign	<u>545</u>	<u>1,832</u>	<u>1,012</u>
	<u>(504)</u>	<u>1,759</u>	<u>1,884</u>
Deferred:			
Federal	—	—	2,917
State	—	(48)	862
Foreign	<u>(380)</u>	<u>(1,173)</u>	<u>220</u>
	<u>(380)</u>	<u>(1,221)</u>	<u>3,999</u>
Total income tax (benefit) expense	<u>\$ (884)</u>	<u>\$ 538</u>	<u>\$ 5,883</u>

RAE SYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

A reconciliation of the Company's income tax (benefit) expense at the federal statutory rate to the income tax (benefit) expense at the effective tax rate is as follows:

	Year Ended December 31,		
	2009	2008	2007
	(In thousands)		
Federal income tax benefit at statutory rate	\$ (2,584)	\$ (2,327)	\$ (1,582)
State income tax expense (benefit), net of federal benefit	13	18	(486)
Foreign tax expense (benefit)	326	1,116	(53)
Nondeductible expenses	1,281	90	132
Subpart F	—	320	—
Contingencies released	(799)	—	—
Net operating loss carryback	65	—	—
Other	870	363	561
Change in valuation allowance	(56)	958	7,311
Total income tax (benefit) expense	<u>\$ (884)</u>	<u>\$ 538</u>	<u>\$ 5,883</u>

The components of the Company's net deferred taxes consisted of the following:

	December 31,	December 31,
	2009	2008
	(In thousands)	
Deferred tax assets:		
Fixed assets	\$ 90	\$ 30
Other temporary differences	477	547
Other accruals	3,380	4,468
Capitalized research and development	76	233
Unrealized foreign losses & temporary differences	3,789	2,722
Federal and state tax credits	611	423
Stock-based compensation	2,208	2,034
Valuation allowance	(9,332)	(9,389)
Total deferred tax assets	<u>1,299</u>	<u>1,068</u>
Deferred tax liabilities:		
Intangibles	(376)	(574)
Total deferred tax liabilities	<u>(376)</u>	<u>(574)</u>
Net deferred tax assets	<u>\$ 923</u>	<u>\$ 494</u>

The above amounts are recorded on the Consolidated Balance Sheet per following:

	December 31	Dec. 31
	2009	2008
Prepaid expenses and other current assets	\$ 934	\$ 577
Other assets	\$ 145	\$ —
Deferred tax liabilities, non-current	\$ (156)	\$ (83)

In assessing the recoverability of its deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will not be realized. The ultimate realization of the deferred tax

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

assets is dependent on the generation of future taxable income during the periods in which those temporary differences become deductible. Management considers the scheduled reversal of deferred tax liabilities, historical and projected future taxable income, and tax planning strategies in making this assessment.

U.S. income taxes were provided for certain earnings of non-U.S. subsidiaries. The Company does not plan to repatriate the remaining undistributed earnings of non-U.S. subsidiaries as of December 31, 2009.

Under the Tax Reform Act of 1986, the amount of and benefits from net operating loss carryforwards may be impaired or limited in certain circumstances. Events which cause limitations in the amount of net operating loss and credit carryforwards that the Company may utilize in any one year include, but are not limited to, a cumulative ownership change of more than 50%, as defined, over a three year period. The Company has approximately \$2.5 million and \$3 million of federal and California net operating losses which are scheduled to expire in 2027 and 2029, respectively.

In November 2009, the Worker, Homeownership, and Business Assistance Act of 2009 was enacted. Under this law, companies may elect to increase the carryback period for the net operating loss of a tax year ending after December 31, 2007 and beginning before January 1, 2010 to 3, 4 or 5 years. Accordingly, the Company has elected to carry its 2008 net operating loss back to 2003, which will result in a refund of approximately \$659,000.

In July 2008, the Housing and Economic Recovery Act of 2008 was enacted. Under this law, companies can elect to accelerate a portion of their unused alternative minimum tax credit and credit for increased research activities in lieu of the 50-percent “bonus” depreciation enacted in February 2008. The Company has determined it would not receive any significant benefit from this election. As of December 31, 2009, the Company has federal research and development credit carryforwards of approximately \$200,000, which are scheduled to expire in 2022 if not utilized.

The California 2008-2009 Budget Bill, enacted on September 30, 2008, resulted in two temporary changes to the Company’s California income tax. First, the bill suspends the use of net operating loss carryovers for two years, 2008 and 2009. Second, the bill limits the use of research and development credit carryovers to no more than 50% of the tax liability before credits. As of December 31, 2009, the Company had research and development credit carryforwards of approximately \$0.2 million for California income tax purposes. The California credits are not subject to expiration under current California tax law.

The Company has been granted a tax holiday for its subsidiary in Fushun, China whereby the Company is entitled to a full exemption from China income tax in the first year of positive accumulated earnings and a 50% reduction from the statutory rate for the following three years. The statutory rate in China is 25%. For tax purposes, RAE Fushun reached cumulative profitability as of December 31, 2008 and declared its first year of exemption from corporate income tax in China. The tax savings to the Company was approximately \$511,000. Taxable income will be subject to tax at 12.5% for 2009 through 2011. The Company does not anticipate any tax liability for 2009.

In 2006, the Internal Revenue Service completed its examination of the Company’s federal income tax returns for the years ended December 31, 2003 and 2004. Based on the results of the examination, the Company paid \$391,000 to the IRS in April 2006. In 2006, the tax authority in Denmark, Skat, completed the audit of the Company’s subsidiary in Denmark for the year ended December 31, 2004 without any adjustment. Subsequent periods remain subject to examination; however, no audits are currently in process.

The Company’s valuation allowance was determined in accordance with the authoritative accounting guidance, which requires an assessment of both positive and negative evidence when determining whether it is more likely than not that deferred tax assets are recoverable, with such assessment being required on a jurisdiction by jurisdiction basis. Management believes that sufficient uncertainty exists with regard to the realizability of its tax assets with the exception of \$0.9 million of foreign deferred tax assets, such that a valuation allowance is necessary. Factors considered in providing a valuation allowance include the lack of a significant history of consistent profits, the current weakness in the overall market, and the uncertainty of when economic fundamentals will stabilize,

RAE SYSTEMS INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

thereby potentially impacting the Company's ability to sustain or grow revenues and earnings, and the length of carryback and carryforward periods.

Based on the absence of sufficient positive objective verifiable evidence at December 31, 2009, the Company concluded that it was appropriate to establish a full valuation allowance for its net federal and state deferred tax assets. Throughout fiscal year 2009, the Company had a valuation allowance for future tax benefits related to certain foreign net operating losses. As a result, the valuation allowance for deferred tax assets decreased by \$0.1 million from \$9.4 million at January 1, 2009, to approximately \$9.3 million at December 31, 2009. The Company expects to provide a full valuation allowance on future tax benefits until it can sustain a level of profitability that demonstrates its ability to utilize these assets. The amount of the deferred tax asset valuation allowance, however, could be reduced in future periods to the extent that future taxable income is realized.

Prior to 2009, exposures were settled primarily through the settlement of audits within each individual tax jurisdiction or the closing of a statute of limitation. Exposures can also be affected by changes in applicable tax law or other factors, which may cause management to believe a revision of past estimates is appropriate. Management believes that an appropriate liability has been established for income tax exposure; however, actual amounts may differ materially from these estimates.

The impact of an uncertain tax position that is more likely than not of being sustained upon audit by the relevant taxing authority must be recognized at the largest amount that is more likely than not to be sustained. No portion of an uncertain tax position will be recognized if the position has less than a 50% likelihood of being sustained. Also, interest expense is recognized on the full amount of deferred benefits for uncertain tax positions. As of December 31, 2009 and 2008, the Company has recorded tax contingency reserves of approximately \$1.5 million and \$1.4 million, respectively. These balances include accrued interest and penalties of \$0.3 million and \$0.3 million, respectively, at December 31, 2009 and 2008. The tax contingency reserves are included as a component of Income taxes payable on the Consolidated Balance Sheets.

On December 31, 2009, the Company had \$1.5 million of unrecognized tax benefits, \$0.5 million of which would affect its effective tax rate if recognized. The Company does not anticipate any material changes to its uncertain tax positions in the next 12 months.

A reconciliation of the beginning and ending balance of unrecognized tax benefits ("UTB") is as follows:

	(In thousands)
Balance at January 1, 2008	\$ 1,193
Positions taken related to prior years	—
Positions taken during the current year	(64)
Reduction to UTB due to settlement with tax authorities	(12)
Balance at January 1, 2009	1,117
Positions taken related to prior years	—
Positions taken during the current year	(6)
Reduction to UTB due to settlement with tax authorities	102
Balance at December 31, 2009	<u>\$ 1,213</u>

The Company recognizes interest and penalties associated with uncertain tax positions in its income tax expense. At December 31, 2008 and 2009, the provision for interest and penalties was \$0.3 million and \$0.3 million, respectively. The ultimate amount and timing of any future cash settlements cannot be predicted with reasonable certainty.

We conduct business globally and, as a result, one or more of our subsidiaries file income tax returns in the U.S. federal jurisdiction and various state and foreign jurisdictions. In the normal course of business, we are subject

RAE SYSTEMS INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)**

to examination by taxing authorities throughout the world, including such major jurisdictions as China, Hong Kong, Denmark, UK, France, and the United States. We are no longer subject to U.S. federal, or non-U.S. income tax examinations for years before 2003.

In many cases the Company's uncertain tax positions are related to tax years that remain subject to examination by tax authorities. The following describes the open tax years, by major tax jurisdiction, as of December 31, 2009:

United States — Federal	2003 - present
United States — State	2004 - present
China	2005 - present
Hong Kong	2004 - present
Denmark	2007 - present

Note 6. Bank Debt

The Company maintains credit facilities to support its operations in the United States and China.

In the United States, the Company has a \$10.0 million revolving credit agreement as of December 31, 2009. The credit facility is renewed annually and currently expires on May 15, 2010. Available credit is based on a percentage of specific qualifying assets and the total facility is collateralized by a blanket security interest in the Company's assets in the United States. The Company is required to comply with certain reporting requirements in addition to the ongoing requirement to submit quarterly financial statements. Interest accrues at the floating prime bank lending rate plus 100 basis points subject to a minimum total rate of 5%. In addition, the Company pays 30 basis points annually of the average unused portion of the facility and is required to maintain a compensating balance of at least \$2.0 million at all times. The compensating balance is included in Restricted cash on the Consolidated Balance Sheets. As of December 31, 2009 and December 31, 2008, \$1.8 million was outstanding against the revolving credit agreement. There is no assurance that the Company will be successful in securing a renewed agreement on this line of credit for any period after May 15, 2010.

During the fourth quarter of 2009, the Company obtained an amendment to the financial covenants of its revolving credit agreement, as a result of non-compliance. The amended financial covenants under the revolving credit agreement 1) require the Company to maintain specified trailing two-quarter minimum earnings before interest, depreciation, amortization and non-cash stock compensation expenses and 2) limits the size of potential monetary penalties under the FCPA to \$3.5 million. The Company was in compliance with these covenants as of December 31, 2009.

In China, the Company maintains unsecured revolving lines of credit to provide working capital. Borrowings under these lines of credit are generally at the current market rate for fixed rate loans of the amount and duration requested, up to one year. The lines of credit are renewed annually in May and September, respectively. The

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

following table presents the Company's total lines of credit in China for working capital and balances drawn against each as of December 31, 2009 and December 31, 2008 (*in millions*):

	Chinese Renminbi			U.S. Dollars			Interest
	Amount	Total		Amount	Total		
	Amount	Available	Line	Amount	Available	Line	
	Oustanding	for Use	of Credit	Oustanding	for Use	of Credit	
December 31, 2009:							
Due October 12, 2010	15.0	5.0	20.0	2.2	0.7	2.9	5.04%
No balance outstanding	—	20.0	20.0	—	2.9	2.9	n/a
	15.0	25.0	40.0	2.2	3.6	5.8	
December 31, 2008:							
Due April 30, 2009	5.0	15.0	20.0	0.7	2.2	2.9	6.33%
No balance outstanding	—	20.0	20.0	—	2.9	2.9	n/a
	5.0	35.0	40.0	0.7	5.1	5.8	

Term Loan

On November 9, 2009, the Company borrowed RMB 10.0 million or approximately \$1.5 million to provide working capital for its 70% owned subsidiary in Fushun, China ("RAE Fushun"). The loan is due on April 26, 2011 and bears interest at a fixed rate of 8.1% for 12 months. The interest rate will be reset once in November 2010 at 1.5 times the People's Bank of China benchmark rate. Loan repayment is guaranteed by an unrelated third party, to whom RAE Fushun has granted a lien over its wholly owned plant and associated land rights. As a condition of the loan, the lending bank required a deposit of approximately \$0.1 million from the guarantor. This deposit was funded by RAE Fushun from the loan proceeds and is included in Restricted cash on the Consolidated Balance Sheets.

Note 7. Commitments and Contingencies

Legal Proceedings

Regulatory Compliance

During fiscal year 2008, the Company's internal audit department identified certain payments and gifts made by certain personnel in the Company's China operations that may have violated the FCPA. Following this discovery, the Audit Committee of the Board of Directors initiated an independent investigation. The Company has made a voluntary disclosure to the DOJ and the SEC regarding the results of its investigation. The Company has also implemented additional policies and controls with respect to compliance with the FCPA. The FCPA and related statutes and regulations provide for potential monetary penalties, criminal sanctions and in some cases debarment from doing business with the U.S. federal government in connection with violations. The Company is cooperating with the DOJ and the SEC in connection with their review of the matter and is actively engaged in settlement discussions. Although no assurances can be given as to whether the matter will settle or the amount of any settlement, the Company recorded an accrual of \$3.5 million in the third quarter 2009 relating to the potential settlement of this matter. The timing and final outcome of this or any future government investigation cannot be predicted with certainty and any indictment, conviction or material fine, debarment or settlement arising out of these investigations could have a material adverse affect on the Company's business, financial condition, results of operation and future prospects.

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Legal proceedings

Polimaster Ltd. et al. v. RAE Systems Inc., United States District Court for the Northern District of California, Case No. 05-CV-01887-JF, United States Court of Appeals for the Ninth Circuit, Nos. 08-15708 and 09-15369

Polimaster Ltd. and Na&Se Trading Company, Ltd. (“Polimaster”) filed a complaint against the Company on May 9, 2005, in the United States District Court for the Northern District of California in a case titled Polimaster Ltd., et al. v. RAE Systems Inc. (Case No. 05-CV-01887-JF). The complaint alleges, among other things, that the Company breached its contract with Polimaster and infringed upon Polimaster’s intellectual property rights. The dispute is subject to a contractual arbitration agreement, although the federal court has retained jurisdiction over the matter pending completion of the arbitration. The arbitration was conducted in the spring of 2007.

In September 2007, a Final Award was issued in the arbitration. The arbitrator ruled that Polimaster failed to prove its claims and was not entitled to any relief; that the Company had proven its counterclaims and was awarded damages of approximately \$2.4 million; and that as the prevailing party, the Company was entitled to recover costs in the amount of \$46,000. On October 5, 2007, RAE Systems filed a motion to confirm the Final Award. On October 17, 2007, Polimaster filed an opposition to RAE Systems’ motion to confirm the Final Award and filed its own motion to vacate the Final Award. Both motions were heard on December 7, 2007, and the district court confirmed the Final Award by an order dated February 25, 2008. Polimaster appealed from the district court’s order confirming the arbitration award in Polimaster Ltd. et al. v. RAE Systems Inc., No. 08-15708. The appeal is currently pending in the United States Court of Appeals for the Ninth Circuit. Briefing on the appeal has been completed by both sides and the appeal was argued and submitted to the Ninth Circuit for decision on January 15, 2010.

When the district court confirmed the Final Award in favor of RAE Systems it did not enter judgment, an omission the district court described as a non-substantive clerical error. On September 9, 2008, the court of appeal granted leave for the district court to correct this clerical error. On January 23, 2009, the district court entered judgment in favor of RAE Systems and against Polimaster, and included in the judgment post-arbitration/pre-judgment interest and post-judgment interest. Polimaster has appealed the inclusion of these two interest components in the judgment, in Polimaster Ltd. et al. v. RAE Systems Inc., No. 09-15369, and briefing on the appeal has been completed by both sides and the appeal was argued and submitted to the Ninth Circuit for decision on January 15, 2010.

On May 14, 2009, Polimaster and RAE Systems entered a First Amended And Restated Stipulation And Order Re Stay Of Execution Of Judgment In Favor Of RAE Systems Inc. (the “stipulation”), pursuant to which Polimaster wire transferred \$1.4 million to the client trust account of RAE Systems’ counsel McLeod, Witham & Flynn LLP, and agreed to wire transfer an additional \$116,224.25 per month until the entire amount deposited equals the amount of the judgment (approximately \$2.8 million) plus accrued interest at the judgment rate of 0.43 percent per annum. Pursuant to the stipulation, the amounts transferred by Polimaster are being maintained in the client trust account of McLeod, Witham & Flynn LLP, and shall not be distributed to RAE Systems or Polimaster, until the Ninth Circuit has ruled on Polimaster’s appeal (Nos. 08-15708 and 09-15369). McLeod, Witham & Flynn LLP shall release the funds in the account to RAE Systems and/or Polimaster within seven days of the Ninth Circuit’s final ruling on the appeal, in accordance with the Ninth Circuit’s decision. Polimaster is currently in compliance with the payment schedule provided in the stipulation. If RAE Systems is successful on appeal, it is expected that the Company would receive approximately \$1.6 million, net of attorneys’ fees and expenses. The timing of a final ruling on the appeal is not currently determinable.

Notwithstanding the Polimaster proceeding described above, from time to time, the Company is engaged in various legal proceedings incidental to its normal business activities. Although the results of litigation and claims cannot be predicted with certainty, the Company believes the final outcome of such matters will not have a material adverse effect on its consolidated financial position, results of operations or cash flows.

RAE SYSTEMS INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)*****Leases***

The Company and its subsidiaries lease certain manufacturing, warehousing and other facilities under operating leases. The leases generally provide for the lessee to pay taxes, maintenance, insurance and certain other operating costs of the leased property. Total rent expense for the years ended December 31, 2009, 2008 and 2007 was \$1,480,000, \$1,760,000 and \$1,109,000, respectively. Future minimum annual payments under non-cancellable leases were as follows as of December 31, 2009 (*in thousands*) :

Years Ended December 31,

2010	\$ 1,733
2011	1,477
2012	1,339
2013	1,337
2014	1,307
Thereafter	3,490
Total minimum lease payments	<u>\$ 10,683</u>

In December 2004, the Company moved into its current corporate headquarters in San Jose, California and abandoned a leased facility in Sunnyvale, California. During the second quarter of 2005, the Company accrued a restructuring reserve of approximately \$2.0 million for the remaining lease term of the former headquarters in Sunnyvale. The discount rate used was 4.85% and the liability was not reduced for any anticipated future sublease income. In March 2007, due to improved conditions for office rentals, the Company revised the estimated loss on abandonment of the lease and reduced operating expense by \$595,000. During the second quarter of 2007, a sublease was executed with rents commencing in June 2007. Both the master lease and the sublease expired in October 2009. Rent payments for 2009, 2008 and 2007 were \$439,000, \$490,000 and \$396,000, respectively, for the Sunnyvale building with sublease income of \$136,000 \$176,000 and \$97,000 in 2009, 2008 and 2007, respectively.

Purchase obligations

Although open purchase orders are considered enforceable and legally binding, the terms generally allow the Company the option to cancel, reschedule and adjust requirements based on business needs prior to the delivery of goods or performance of services. Obligations to purchase inventory and other commitments are generally expected to be fulfilled within one year and were estimated at \$4.5 million at December 31, 2009.

During 2007 the Company began to construct RAE Fushun's new manufacturing and administrative facility in China. The Company occupied the factory buildings in October 2008. The estimated cost to complete this project in 2010 and beyond is \$0.4 million and is not deemed to be a contractual obligation as the underlying contract does not specify a financial commitment.

During the first quarter of 2010, the Company began to construct a new manufacturing and engineering facility in Shanghai, China. The estimated cost to complete this project is approximately \$5.3 million with the work scheduled to be completed as soon as year end. This project is not deemed to be a contractual obligation as the underlying contract does not specify a financial commitment. Upon completion of construction, the Company would vacate its existing leased facility in Shanghai. Based on discussions with Shanghai government officials, the landlord of the existing Company facility, the Company believes that it will be able to terminate the lease without penalty. However, no assurance can be given at this time that the Company will not be subject to a lease termination penalty.

RAE SYSTEMS INC.**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)*****Guarantees***

The Company is permitted under Delaware law and required under our Certificate of Incorporation and Bylaws to indemnify its officers and directors for certain events or occurrences, subject to certain limits, while the officer is or was serving at the Company's request in such capacity. The term of the indemnification period is for the officer's or director's lifetime. The maximum amount of potential future indemnification is unlimited; however, the Company has a Director and Officer Insurance Policy that limits its exposure and enables it to recover a portion of any future amounts paid. To date the Company has not incurred any losses under these agreements.

The Company typically agrees to indemnify its customers for any expenses or liability resulting from claimed infringements of patents, trademarks or copyrights of third parties. The terms of these indemnification agreements are generally perpetual any time after execution of the agreement. The maximum amount of potential future indemnification is unlimited. To date, the Company has not paid any amounts to settle claims or defend lawsuits.

Product Warranties

The Company sells the majority of its products with a 12 to 24 month repair or replacement warranty from the date of shipment. The Company provides an accrual for estimated future warranty costs based upon the historical relationship of warranty costs to sales. The estimated future warranty obligations related to product sales are recorded in the period in which the related revenue is recognized under accrued liabilities on the Consolidated Balance Sheets. The following table presents changes in the Company's warranty reserve during 2009 and 2008:

	Year Ended December 31,	
	2009	2008
	(In thousands)	
Balance at beginning of year	\$ 707	\$ 884
Provision for warranty	1,429	844
Utilization of reserve	(1,212)	(1,041)
Foreign currency translation effects	2	20
Balance at end of year	<u>\$ 926</u>	<u>\$ 707</u>

Note 8. Employee Benefit Plan

The Company sponsors the RAE Systems 401(k) Plan (the "Plan"), a defined contribution plan which provides retirement benefits for its eligible employees through tax deferred salary deductions. The Plan allows employees to contribute up to 60% of their annual compensation subject to statutory maximum levels. The Plan is available to all employees in the United States who have reached the age of 21. The Plan provides for employer matching contributions of 25% on each employee's elective contributions for the first 6.0% of eligible compensation contributed. Company contributions vest at the rate of 25% per annum over the first 4 years of service. Employer matching contributions to the Plan totaled \$122,000, \$113,000 and \$129,000 for the years ended December 31, 2009, 2008 and 2007, respectively.

Note 9. Stock-Based Compensation***Stock Option Plans***

In June 2007, the Company's shareholders approved the 2007 Equity Incentive Plan (the "2007 Plan") to replace the Company's 2002 Stock Option Plan (the "2002 Plan"). The 2007 Plan authorizes the grant of options to employees, directors and consultants to purchase shares of the Company's common stock.

Four million shares of the Company's common stock are authorized for issuance under the 2007 Plan. The maximum number of shares that may be issued under the 2007 Plan will be increased from time to time by shares

RAE SYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

subject to options granted under the 2002 Plan that expire or are terminated and by shares acquired under the 2002 Plan that are forfeited or repurchased by the Company for the option holder's purchase price. However, no more than 1.5 million additional shares may be authorized for issuance under the 2007 Plan as a result of these adjustments. Through December 31, 2009, 1,250,376 shares have been added to the 2007 Plan due to qualifying adjustments from the 2002 Plan.

Incentive options may be granted at not less than 100% of the fair market value per share and non-statutory options may be granted at not less than 85% of the fair market value per share of the underlying stock at the date of grant as determined by the Board of Directors or committee thereof, except for options granted to a person owning greater than 10% of the outstanding stock, for which the exercise price must not be less than 110% of the fair market value. Options granted under the Plans generally vest 25% after one year with the remainder vesting pro-rata monthly over the following three years. If not exercised, options generally expire ten years after the date of grant.

The total intrinsic value of options exercised during 2009 and 2008 was zero and \$179,000, respectively. In connection with these exercises, no tax benefit was realized as the Company has a full valuation allowance on its deferred tax assets. As of December 31, 2009, the unrecognized future estimated compensation expense related to stock options and net of expected forfeitures was \$1.8 million. That cost is expected to be recorded over an estimated amortization period of 2.8 years.

The following is a summary of stock option activity (*in thousands, except weighted-average amounts*):

	Options Outstanding	
	Number	Weighted-Average
	of Shares	Exercise Price
Balance as of December 31, 2006	3,139	\$ 3.22
Granted	855	2.73
Exercised	(32)	2.25
Canceled	(239)	4.18
Balance as of December 31, 2007	3,723	3.05
Granted	1,299	1.51
Exercised	(149)	0.29
Canceled	(680)	3.83
Balance as of December 31, 2008	4,193	2.55
Granted	1,870	1.03
Exercised	—	—
Canceled	(670)	2.96
Balance as of December 31, 2009	<u>5,393</u>	1.97

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes significant ranges of outstanding and exercisable options as of December 31, 2009:

Options Outstanding					Options Exercisable			
Weighted					Weighted			
Average					Average			
Remaining					Remaining			
Contractual					Contractual			
Life					Life			
Exercise					Exercise			
Value					Value			
('000)					('000)			
Range of	Number	Contractual	Average	Intrinsic	Number	Contractual	Average	Intrinsic
of	of	Life	Exercise	Value	of	Life	Exercise	Value
Exercise Prices	Shares	(In Years)	Price	('000)	Shares	(In Years)	Price	('000)
\$0.00 - 0.50	120,877	1.51	\$ 0.08	\$ 123	120,877		\$ 0.08	\$ 123
0.51 - 1.00	1,197,936	8.86	0.95	180	251,466		0.84	\$ 65
1.01 - 1.50	2,018,282	6.98	1.26	23	863,270		1.22	\$ 19
1.51 - 2.00	200,000	8.28	1.87	—	83,333		1.87	—
2.01 - 2.50	259,167	7.65	2.26	—	147,760		2.26	—
2.51 - 3.00	445,000	7.25	2.88	—	301,558		2.87	—
3.01 - 4.00	804,324	6.03	3.62	—	723,488		3.60	—
4.01 - 5.00	152,500	4.38	4.81	—	152,500		4.81	—
5.01 - 6.00	170,000	4.24	5.30	—	170,000		5.30	—
6.01 - 7.00	25,000	4.87	6.43	—	25,000		6.43	—
	<u>5,393,086</u>	<u>7.07</u>	<u>1.97</u>	<u>\$ 326</u>	<u>2,839,252</u>	<u>5.78</u>	<u>2.48</u>	<u>\$ 207</u>

The aggregate intrinsic value in the table above represents the total pretax intrinsic value, based on the excess of the Company's closing stock price of \$1.10 as of December 31, 2009 over the options holders' exercise price, which would have been received by the option holders had all option holders exercised their options as of that date. The total number of in-the-money options exercisable as of December 31, 2009, was 800,000. As of December 31, 2009, the stock options outstanding included 4,953,177 options which were either vested or are expected to vest, with a weighted-average exercise price of \$2.04, an aggregate intrinsic value of \$302,000 and a remaining contractual term of 6.93 years.

In May 2008, the Company granted an aggregate of 150,000 shares of common stock to non-employee directors under the 2007 Plan. The weighted-average grant date fair value of these awards is \$1.40. The shares are not subject to vesting and compensation expenses of \$210,000 was recognized on date of grant. As of December 31, 2009, no unvested grants of restricted stock were outstanding under the 2007 Plan.

Non-Plan Stock Options

In 2002, the Company granted certain of its Directors non-plan options to purchase 400,000 shares of restricted stock at a weighted average exercise price of \$0.99 per share. The options vested 25% after one year with the remainder vesting pro-rata monthly over the following three years. From 2002 to 2006, the Company issued 300,000 shares of common stock due to the exercise of such options. There have been no further grants, exercises or cancellations through December 31, 2009. As such, total outstanding non-plan stock options at December 31, 2009 were 100,000 at a weighted average exercise price of \$1.06. The vested options are exercisable over ten years from date of grant. During 2009, no stock-based compensation expense related to non-plan stock options remained to be recorded.

RAE SYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The following table summarizes the outstanding and exercisable non-plan stock options as of December 31, 2009:

Range of Exercise Prices	Options Outstanding				Options Exercisable			
	Weighted				Weighted			
	Average				Average			
	Remaining	Weighted	Aggregate		Remaining	Weighted	Aggregate	
Number	Contractual	Average	Intrinsic	Number	Contractual	Average	Intrinsic	
of	Life	Exercise	Value	of	Life	Exercise	Value	
Exercise Prices	Shares	(In Years)	Price	('000)	Shares	(In Years)	Price	('000)
\$1.06	100,000	2.41	\$ 1.06	\$ 5	100,000	2.41	\$ 1.06	\$ 5

Non-Plan Restricted Stock

In 2006, the Company granted 536,000 shares of restricted stock to four individuals as an inducement to join the Company. Twenty five percent of this restricted stock or 134,000 shares vested in July 2007 with the remainder vesting pro-rata quarterly over the following three years. In August 2007, concurrent with discontinuing the Company's DVR business, the Company terminated two of these individuals. As a result, the remainder of their restricted stock awards or 203,571 shares vested immediately and a charge of \$596,000 was included in the loss from discontinued operations. See "Note 3. Discontinued Operations" for more detail.

The fair market value of the Company's common shares on the dates the awards were granted represents unrecognized deferred stock compensation which is being amortized on a straight-line basis over the vesting period of the underlying stock awards. As of December 31, 2009, \$50,000 of estimated stock-based compensation expense related to restricted stock awards remains to be recorded. That cost is expected to be recorded over an amortization period of 0.5 years.

The following is a summary of activity for the non-plan awards (*in thousands, except per share amounts*):

	Restricted Stock Awards	
	Weighted-Average	
	Number	Grant-Dated
	of Shares	Fair Value
Balance as of December 31, 2006	536	\$ 2.81
Granted	—	—
Vested	(354)	2.81
Forfeited	—	—
Balance as of December 31, 2007	182	2.81
Granted	—	—
Vested	(73)	2.81
Forfeited	—	—
Balance as of December 31, 2008	109	2.81
Granted	—	—
Vested	(62)	2.81
Forfeited	—	—
Balance as of December 31, 2009	47	2.81

Stock-Based Compensation Expense

The fair value of each option award is estimated on the date of grant using the Black-Scholes-Merton valuation method. Accordingly, stock-based compensation cost is measured at grant date based on the fair value of the award and recognized in expense over the requisite service, which is generally the vesting period. The impact on the

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Company's results from continuing operations of recording stock-based compensation by function for the years ended December 31, 2009, 2008 and 2007 was as follows:

	Year Ended December 31,		
	2009	2008	2007
	(In thousands)		
Cost of sales	\$ 80	\$ 66	\$ 50
Sales and marketing	(43)	61	114
Research and development	143	348	453
General and administrative	1,110	1,118	1,254
Total	<u>\$ 1,290</u>	<u>\$ 1,593</u>	<u>\$ 1,871</u>

In addition, the Company recorded the following stock-based compensation expenses from discontinued operations for the year ended December 31, 2007:

	Year Ended	
	December 31,	
	2007	
	(In thousands)	
Sales and marketing	\$ 628	
Research and development	53	
Total	<u>\$ 681</u>	

No stock-based compensation expense from discontinued operations was recorded during fiscal 2008 or 2009.

Valuation Assumptions

The Company estimates the fair value of each stock option on the date of grant using a Black-Scholes-Merton valuation model and a single option award approach. The fair value of each option grant is amortized on a straight-line basis over the requisite service period of the award, which is generally the vesting period. The weighted-average assumptions applied are summarized below:

	Year Ended December 31,		
	2009	2008	2007
Expected volatility	85%	60-65%	65%
Expected dividend yield	0.0%	0.0%	0.0%
Risk-free interest rate	2.0-3.0%	2.7-3.6%	4.8%
Expected term in years	6.0	5.5-6.0	5.5
Weighted-average grant date fair value	\$ 0.73	\$ 0.89	\$ 1.66

Expected Volatility — The Company's expected volatilities are based on historical volatility of the Company's stock, adjusted by management for unusual and non-representative stock price activity not expected to recur. Management determined the historical stock price volatility for period from April 11, 2002, the commencement of public trading of the common stock, through December 31, 2002, was not likely to be representative of the future and excluded this period. Management also applies mean reversion techniques to the historical stock prices, which results in an emphasis on recent activity over the distant past, when determining the expected volatility rate to be included in the Black-Scholes-Merton valuation model.

Expected Dividend — The BSM valuation model calls for a single expected dividend yield as an input. The Company has not paid a dividend in the past and does not anticipate paying a dividend in the near future.

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Risk-Free Interest Rate — The Company bases the risk-free interest rate on the implied yield currently available on U.S. Treasury zero-coupon issues with an equivalent remaining term. When the expected term of the Company's stock-based award does not correspond with the terms for which interest rates are quoted, the Company performs a straight-line interpolation between available maturities.

Expected Term — The Company's expected term represents the weighted-average period that the Company's stock-based awards are expected to be outstanding. The Company uses the historical exercise patterns of previously granted options in relation to the Company's stock price to estimate expected exercise patterns.

Estimated Forfeitures — To estimate forfeitures, the Company applies its historical rate of option forfeitures. Estimated forfeiture rates are trued-up to actual forfeiture results as the stock-based awards vest.

Note 10. Related Party Transactions

The Company accounts for its 40% ownership in Renex Technologies Ltd. ("Renex"), a Hong Kong company, following the equity method. The Company's total investment in Renex at December 31, 2009 and 2008 was \$339,000 and \$448,000, respectively. The Company recorded a loss of \$109,000 on its equity interest in Renex for the year ended December 31, 2009 and gains of \$43,000 and \$3,000 for the years ended December 31, 2008 and 2007, respectively.

The Company pays a 7.5% royalty to Renex for modems incorporated into certain RAE Systems products. In 2009, 2008 and 2007, the Company made royalty payments amounting to zero, zero and \$84,000, respectively. The Company also paid \$95,000, \$181,000 and \$149,000 to Renex for research projects in 2009, 2008 and 2007, respectively.

In conjunction with the original and subsequent additional investment in RAE Beijing, unsecured notes payable were established for the previous RAE Beijing shareholders as part of the purchase price agreement in May 2004 and July 2006. As of December 31, 2009 and December 31, 2008, \$370,000 and \$1,329,000, respectively, was included in current notes payable to related parties and \$363,000 and \$1,219,000, respectively, was included in long term notes payable to related parties.

The notes issued in conjunction with the original RAE Beijing purchase in May 2004 were non-interest bearing and were recorded at net present value using a discount rate of 5.5%. In conjunction with the additional investment in RAE Beijing in July 2006, 11.0 million shares of preferred stock were issued to four shareholders of RAE Beijing. In accordance with the authoritative accounting guidance, these preferred shares were classified as liabilities and were recorded as long-term notes payable to related parties. Although, these preferred shares bear a dividend yield rate of 3% per annum, the notes payable were discounted using a market interest rate of 6.48%.

Scheduled payments of principal and accrued interest under the notes from 2010 through maturity in 2011 are \$370,000 and \$363,000, respectively.

In addition to its 40% ownership in Renex, the Company has investments in three distributors of RAE Systems products, RAE Australia, RAE Benelux and RAE Spain. The Company owns 19%, 10% and 19% of RAE Australia, RAE Benelux and RAE Spain, respectively. These investments are accounted for under the cost method.

The Liaoning Coal Industry Group, Ltd. ("Liaoning Group") owns a 30% interest in RAE Fushun and has also been a supplier to RAE Fushun.

RAE SYSTEMS INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

Transactions and balances with the Company's related parties were as follows:

Year Ended December 31,				December 31,	
2009	2008	2007		2009	2008
(In thousands)					
Sales:			Accounts receivable:		
Renex	\$ 509	\$ 282	\$ 228	Renex	\$ 322 \$ 100
RAE Australia	714	—	—	RAE Australia	59 —
RAE Benelux	2,698	2,287	1,596	RAE Benelux	253 411
RAE Spain	429	604	442	RAE Spain	119 192
	<u>\$ 4,350</u>	<u>\$ 3,173</u>	<u>\$ 2,266</u>		<u>\$ 753 \$ 703</u>
Purchases:			Accounts payable:		
Liaoning Group	\$ —	\$ 20	\$ 4,448	Liaoning Group	\$ 14 \$ 72
Renex	256	677	675	Renex	92 382
	<u>\$ 256</u>	<u>\$ 697</u>	<u>\$ 5,123</u>		<u>\$ 106 \$ 454</u>

The Company's Director of Information Systems, Lien Chen, is the wife of our Chief Executive Officer, Robert Chen. Ms. Chen was paid a salary and bonus of \$128,000, \$111,000 and \$96,000 for 2009, 2008 and 2007, respectively. Ms. Chen also receives standard employee benefits offered to all other full-time U.S. employees. Ms. Chen does not report to Robert Chen and compensation decisions regarding Ms. Chen are performed in the same manner as other U.S. employees, with Robert Chen the final approval signatory on compensation recommendations.

Note 11. Fair Value Measurements

The Company uses the following methods and assumptions in estimating the fair value of financial assets and liabilities:

Cash and cash equivalents and bank line of credit: The carrying amounts reported in the consolidated balance sheets approximate fair value due to the short-term maturity of these instruments.

Notes payable to related parties: The fair value was determined by discounting these non-interest bearing notes payable at an interest rate commensurate with commercial borrowing rates available to the Company in China.

Intangible assets, net: The fair value is evaluated whenever events or changes in circumstances indicate that the carrying value of the asset may not be recoverable.

The existing authoritative guidance requires that assets and liabilities carried at fair value be classified and disclosed in one of the following three categories:

Level 1: Quoted market prices in active markets for identical assets or liabilities.

Level 2: Observable market based inputs or unobservable inputs that are corroborated by market data.

Level 3: Unobservable inputs that are not corroborated by market data.

RAE SYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)

The carrying amounts and fair values of the Company's financial assets and liabilities were as follows:

Category	December 31, 2009		December 31, 2008	
	Carrying		Carrying	
	Amounts	Fair Value	Amounts	Fair Value
		(In thousands)		
Cash and cash equivalents				
Level 1	\$ 18,528	\$ 18,528	\$ 14,845	\$ 14,845
Bank lines of credit	4,026	4,026	2,584	2,584
Notes payable to related parties	733	733	2,548	2,548

Note 12. Geographic Information

The Company operates primarily in three geographic regions: Americas, Asia and Europe. The following tables present net sales and identifiable long-lived assets by geographic region:

	Year Ended December 31,					
	2009	%	2008	%	2007	%
			(In thousands)			
Net sales:						
Americas	\$ 34,935	42	\$ 38,467	40	\$ 37,011	41
Asia	33,749	41	41,422	44	42,107	46
Europe	14,488	17	15,494	16	11,718	13
Total net sales	<u>\$ 83,172</u>	<u>100</u>	<u>\$ 95,383</u>	<u>100</u>	<u>\$ 90,836</u>	<u>100</u>

	December 31,		December 31,	
	2009	%	2008	%
		(In thousands)		
Property and equipment, net				
Americas	\$ 317	2	\$ 533	4
Asia	15,103	97	14,228	95
Europe	170	1	215	1
Total property and equipment, net	<u>\$ 15,590</u>	<u>100</u>	<u>\$ 14,976</u>	<u>100</u>

Net sales in China were \$28.0 million or 34%, \$38.1 million or 40% and \$39.1 million or 43% of total net sales in 2009, 2008 and 2007 respectively. China held \$15.1 million or 97% and \$14.2 million or 95% of total net property and equipment as of December 31, 2009 and 2008, respectively.

The majority of the Company's net sales in Americas and Asia are to customers domiciled in the United States and the People's Republic of China, respectively. The Company performs credit evaluations of its customers' financial condition when considered necessary and generally does not require cash collateral from its customers. These evaluations require significant judgment and are based on a variety of factors including, but not limited to, current economic trends, historical payments, bad debt write-off experience, and financial review of the customer.

RAE SYSTEMS INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS — (Continued)
Note 13. Quarterly Information (Unaudited)

The summarized quarterly financial data presented below reflect all adjustments, which, in the opinion of management, are of a normal and recurring nature necessary to present fairly the results of operations for the periods presented.

	First	Second	Third	Fourth	
	Quarter	Quarter	Quarter	Quarter	2009
	(In thousands, except per share data)				
Net sales	\$ 19,113	\$ 19,907	\$ 19,909	\$ 24,243	\$ 83,172
Gross profit	9,330	9,868	10,273	11,508	40,979
Operating loss from continuing operations	(1,060)	(2,057)	(3,914)	(292)	(7,323)
Income (loss) from continuing operations	(1,283)	(2,553)	(3,664)	786	(6,714)
Income (loss) from discontinued operations, net of tax	—	—	—	—	—
Net income (loss) attributable to RAE Systems Inc.	(988)	(2,250)	(3,489)	968	(5,759)
Basic net income (loss) per common share:					
Continuing operations	\$ (0.02)	\$ (0.03)	\$ (0.06)	\$ 0.01	\$ (0.10)
Discontinued operations	\$ —	\$ —	\$ —	\$ —	\$ —
Basic net income (loss) per common share	<u>\$ (0.02)</u>	<u>\$ (0.03)</u>	<u>\$ (0.06)</u>	<u>\$ 0.01</u>	<u>\$ (0.10)</u>
Diluted net income (loss) per common share:					
Continuing operations	\$ (0.02)	\$ (0.03)	\$ (0.06)	\$ 0.01	\$ (0.10)
Discontinued operations	—	—	—	—	—
Diluted net income (loss) per common share	<u>\$ (0.02)</u>	<u>\$ (0.03)</u>	<u>\$ (0.06)</u>	<u>\$ 0.01</u>	<u>\$ (0.10)</u>

	First	Second	Third	Fourth	
	Quarter	Quarter	Quarter	Quarter	2008
Net sales	\$ 17,869	\$ 24,647	\$ 28,845	\$ 24,022	\$ 95,383
Gross profit	8,855	13,091	15,775	10,494	48,215
Operating income (loss) from continuing operations	(2,557)	498	1,379	(5,409)	(6,089)
Income (loss) from continuing operations	(2,346)	(472)	558	(5,123)	(7,383)
Loss from discontinued operations, net of tax	10	5	(4)	—	11
Net income (loss) attributable to RAE Systems Inc.	(2,336)	(467)	554	(4,903)	(7,152)
Basic net income (loss) per common share:					
Continuing operations	\$ (0.04)	\$ (0.01)	\$ 0.01	\$ (0.08)	\$ (0.12)
Discontinued operations	—	—	—	—	—
Basic net loss per common share	<u>\$ (0.04)</u>	<u>\$ (0.01)</u>	<u>\$ 0.01</u>	<u>\$ (0.08)</u>	<u>\$ (0.12)</u>

Diluted net income (loss) per common share:										
Continuing operations	\$	(0.04)	\$	(0.01)	\$	0.01	\$	(0.08)	\$	(0.12)
Discontinued operations		<u>—</u>		<u>—</u>		<u>—</u>		<u>—</u>		<u>—</u>
Diluted net loss per common share	\$	<u>(0.04)</u>	\$	<u>(0.01)</u>	\$	<u>0.01</u>	\$	<u>(0.08)</u>	\$	<u>(0.12)</u>

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-149760, 333-137748, 333-105368, 333-88684, 333-85720 and 333-32678 on Form S-8 of our reports dated March 11, 2010, relating to the consolidated financial statements of RAE Systems Inc. and the effectiveness of RAE Systems Inc.'s internal control over financial reporting, appearing in the Annual Report on Form 10-K of RAE Systems Inc. for the year ended December 31, 2009.

/s/ Deloitte & Touche LLP

San Jose, California

March 11, 2010

CERTIFICATIONS

I, Robert I. Chen, certify that:

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

Date: March 12, 2010

/s/ Robert I. Chen

Robert I. Chen President,

Chief Executive Officer and Chairman of the Board

CERTIFICATIONS

I, Randall Gausman, certify that:

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

Date: March 12, 2010

/s/ Randall Gausman

Randall Gausman

Vice President and Chief Financial Officer

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of RAE Systems Inc. (the "Company") on Form 10-K for the year ended December 31, 2009, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Robert I. Chen, President, Chief Executive Officer and Chairman of the Board of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 ("Section 906"), that:

- (1) The Report fully complies with the requirements of section 13(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 12, 2010

/s/ Robert I. Chen

Robert I. Chen President,

Chief Executive Officer and Chairman of the Board

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of RAE Systems Inc. (the "Company") on Form 10-K for the year ended December 31, 2009, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Randall Gausman, Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 ("Section 906"), that:

- (1) The Report fully complies with the requirements of section 13(a) of the Securities Exchange Act of 1934 (15 U.S.C. 78m); and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 12, 2010

/s/ Randall Gausman

Randall Gausman

Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.

Created by Morningstar® Document Research™

<http://documentresearch.morningstar.com>

Source: RAE SYSTEMS INC, 10-K, March 12, 2010



Stockholder Information

Stock Exchange

New York Stock Exchange (NYSE AMEX)
Ticker Symbol: RAE

Form 10-K

The company files an annual report with the Securities and Exchange Commission on form 10-K, pursuant to the Securities Exchange Act of 1934. Stockholders may obtain a copy of this report without cost by writing to the company.

Stockholder Inquiries

For more information about the company, stockholders may write to the Investor Relations Department at the company or call 408-952-8449. Inquiries regarding stock certificates, transfer requirements, address changes and related matters should be directed to the company's transfer agent at the address listed on this page

Transfer Agent

Interwest Transfer Company

1981 East Murray Holladay Road, Suite 100
Salt Lake City, UT 84117 USA
Phone: 801-272-9294

Annual Meeting of Stockholders

The annual meeting will be held at 9:00am (PDT), on June 11, 2010.

The location will be:

Hilton Santa Clara

4949 Great America Parkway
Santa Clara, CA 95054 USA

World Headquarters

3775 North First Street
San Jose, CA 95134 USA
Phone: 408-952-8200
Fax: 408-952-8480
investorrelations@raesystems.com

Asia

RAE-KLH (Beijing) Co. Ltd.

No. 7 Fengxian Middle Road Yongfeng Industrial Park Haiding, Beijing, 100094 P.R. China
Phone: 86-010-5885-8788
Fax: 86-010-5871-7568

RAE Systems (Asia) Ltd.

Units 1516-18, 15/F Delta House
3 On Yui Street, Shatin N.T., Hong Kong
Phone: 852-2669-0828
Fax: 852-2669-0803

RAE Systems Shanghai Incorporated

No. 788 Zhaoxian Road
Jiading, Shanghai 201821 P.R. China
Phone: 86-21-6952-2616
Fax: 86-21-6952-2602

RAE Coal Mine Safety Instruments (Fushun) Co., Ltd

3 Binhe Road
Fushun Economic Development Zone
Liaoning Province, China
Phone: 86-413-7591158
Fax: 86-413-7676559

Europe

RAE Systems Europe ApS

Kirstinehøj 23 A
DK-2770 Kastrup
Denmark
Phone: +45 86 52 51 55
Fax: +45 86 52 51 77

Executive Officers

Robert I. Chen

President, Chief Executive Officer and Chairman of the Board

Randall Gausman

Vice President and Chief Financial Officer

Peter C. Hsi

Chief Technology Officer

William Jackson

Vice President, Global Marketing

Ming-Ching Tang

Executive Vice President, Operations

Ryan Watson

Vice President, Americas Sales

Christopher Hameister

Vice President, Asia-Pacific, Europe and Middle East Business Operations

Fei-Zhou Shen

Vice President, Corporate Development and Fushun Business Operations

Board of Directors

Robert I. Chen, Chairman, Director

Lyle D. Feisel, Director

Sigrun Hjelmquist, Director

Peter Hsi, Director

Keh-Shew Lu, Director

James W. Power, Director

Susan Wang, Director

Auditors

Deloitte & Touche

50 W. San Fernando Street, Suite 200
San Jose, CA 95113 USA

RAE Systems

2009 Annual Report

About RAE Systems

RAE Systems is a leading global provider of rapidly deployable sensor network solutions that enable real-time safety and security threat detection. RAE Systems' products are used in over 95 countries by many of the world's leading corporations and government agencies.

Corporate Headquarters

RAE Systems Inc.

3775 North First Street
San Jose, CA 95134 USA
877 723 2878 (toll-free)
+1 408 952 8200
raesales@raesystems.com
www.raesystems.com

Worldwide Sales Offices

Asia Pacific

+852 2669 0828
www.raesystems.com.hk

China

+86 10 5885 8788
www.raesystems.cn

Europe

+45 86 52 51 55
www.raesystems.eu

Middle East

+971 4 887 5562

www.raesystems.com

Copyright © 2010 RAE Systems Inc. All rights reserved.



Protection Through Detection