

ECHELON CORP
Form 10-K
March 01, 2013

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, DC 20549
FORM 10-K
(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2012

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: 000-29748

ECHELON CORPORATION

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

550 Meridian Avenue

San Jose, California 95126

(Address of principal executive office and zip code)

(408) 938-5200

(Registrant's telephone number, including area code)

77-0203595

(I.R.S. Employer

Identification Number)

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

Title of each class	Name of each exchange on which registered
Common Stock, par value \$0.01 (The Nasdaq Global Market)	The NASDAQ Stock Market LLC

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 during

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the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes
x 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. x

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 x Non-accelerated filer o 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 x

As of June 30, 2012, the last business day of the registrant's most recently completed second fiscal quarter, there were 42,883,034 shares of the registrant's common stock outstanding, and the aggregate market value of such shares held by non-affiliates of the registrant (based on the per share closing sale price of \$3.48 of such shares on the Nasdaq Global Market on June 30, 2012) was approximately \$149.2 million. Shares of the registrant's common stock held by each executive officer and director and by each entity that owns 5% or more of the registrant's outstanding common stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

As of January 31, 2013, 43,052,102 shares of the registrant's common stock, \$0.01 par value per share, were issued and outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

Document	Parts Into Which Incorporated
Proxy Statement for the Annual Meeting of Stockholders to be held May 21, 2013 (Proxy Statement)	Part III

Table of Contents

ECHELON CORPORATION
FORM 10 K
FOR THE YEAR ENDED DECEMBER 31, 2012
INDEX

	Page
PART I	
Item 1. <u>Business</u>	<u>3</u>
Item 1A. <u>Risk Factors</u>	<u>11</u>
Item 1B. <u>Unresolved Staff Comments</u>	<u>24</u>
Item 2. <u>Properties</u>	<u>24</u>
Item 3. <u>Legal Proceedings</u>	<u>25</u>
Item 4. <u>Mine Safety Disclosures</u>	<u>25</u>
PART II	
Item 5. <u>Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	<u>25</u>
Item 6. <u>Selected Financial Data</u>	<u>28</u>
Item 7. <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	<u>29</u>
Item 7A. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	<u>46</u>
Item 8. <u>Financial Statements and Supplementary Data</u>	<u>46</u>
Item 9. <u>Changes in and Disagreements with Accountants on Accounting and Financial Disclosure</u>	<u>46</u>
Item 9A. <u>Controls and Procedures</u>	<u>46</u>
Item 9B. <u>Other Information</u>	<u>47</u>
PART III	
Item 10. <u>Directors, Executive Officers and Corporate Governance</u>	<u>48</u>
Item 11. <u>Executive Compensation</u>	<u>48</u>
Item 12. <u>Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	<u>48</u>
Item 13. <u>Certain Relationships and Related Transactions and Director Independence</u>	<u>48</u>
Item 14. <u>Principal Accounting Fees and Services</u>	<u>48</u>
PART IV	
Item 15. <u>Exhibits, Financial Statement Schedule</u>	<u>49</u>
<u>SIGNATURES</u>	<u>84</u>
<u>EXHIBIT INDEX</u>	<u>85</u>

Table of Contents

FORWARD-LOOKING INFORMATION

This report contains forward-looking statements within the meaning of the U.S. federal securities laws that involve risks and uncertainties. Certain statements contained in this report are not purely historical including, without limitation, statements regarding our expectations, beliefs, intentions, anticipations, commitments or strategies regarding the future that are forward-looking. These statements include those discussed in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, including "Critical Accounting Estimates," "Results of Operations," "Off-Balance-Sheet Arrangements and Other Critical Contractual Obligations," "Liquidity and Capital Resources," and "Recently Issued Accounting Standards," and elsewhere in this report.

In this report, the words "may," "could," "would," "might," "will," "should," "plan," "forecast," "anticipate," "believe," "expect," "estimate," "predict," "potential," "continue," "future," "moving toward" or the negative of these terms or other similar expressions also identify forward-looking statements. Our actual results could differ materially from those forward-looking statements contained in this report as a result of a number of risk factors including, but not limited to, those set forth in the section entitled "Factors That May Affect Future Results of Operations" and elsewhere in this report. You should carefully consider these risks, in addition to the other information in this report and in our other filings with the SEC. All forward-looking statements and reasons why results may differ included in this report are made as of the date of this report, and we assume no obligation to update any such forward-looking statement or reason why such results might differ.

PART I

ITEM 1. BUSINESS

General

Echelon Corporation develops, markets and supports an open standard, multi-application energy control networking platform. Echelon's vision from its inception more than 20 years ago is one of low-cost embedded monitoring and control technology in every electrical device in the world. Today Echelon's technology platform is embedded in more than 110 million devices and 35 million homes.

Energy control networking is distinct from data networking. Data networking focuses on getting data from one point to the other, and generally does not concern itself with the content of the data or with the decisions that need to be made based on the data. In contrast, energy control networking is built around knowledge of the data elements, with distributed intelligence and decisions made as close to the point of data collection as possible. Relative to pure data networks, energy control networks are designed to be more reliable, survivable, and real-time.

Our energy control networking platform consists of three tiers, or categories, of products: a device tier, a control node tier, and an enterprise tier. At the device tier, devices such as load controllers, lighting ballasts, meters and thermostats, embed our Free Topology (FT) or Power line (PL) smart transceivers enabling them to act as peers working together to collect data and take cooperative action. For example, our headquarters buildings in San Jose have lighting and heating ventilation and air conditioning devices that communicate together over a twisted pair network using Echelon's FT transceivers. These devices are managed by control nodes, in this case Echelon's Smart Servers. When these control nodes receive information that our local utility needs in order to shed electrical load, this information is published across the twisted pair network. The devices on the network then work together to reduce Echelon's energy consumption while preserving a safe and comfortable work environment.

At the control node tier, different control technologies and protocols are unified and supervised so that local decisions can be made at or near the devices. Examples of control nodes include our Edge Control Node (ECN), SmartServer and Data Concentrator. In general, devices and control nodes communicate using control protocols such as LONWORKS® technology (ISO/EN 14908), BACnet®, and Open Smart Grid Protocol (OSGP). OSGP is a family of

standards published by the European Telecommunications Standards Institute (ETSI) optimized for smart grid applications used in conjunction with LONWORKS technology. At the enterprise tier we tie the controls to enterprise information technology (IT) systems, so business rules can be provided to the control system and operational data can be archived for later analysis. Our Networked Energy System (NES) system software and LONWORKS Control Networks Software (LNS) are examples of enterprise layer products. Control nodes

Table of Contents

communicate with system software using the Internet protocols such as TCP/IP and web services. Thus, Echelon's technology sits at the intersection of two vast and critical worlds - control systems and Internet systems.

Our energy control networking platform will be important as the electric grid modernizes and transitions from a centralized and predictable system to a de-centralized and dynamic one. In the past, the grid has had predictable usage patterns, using centralized generation and scheduled meter reading with a limited need for information and control at the edge of the grid. Going forward, the grid must accommodate new distributed generation sources that often connect into the distribution part of the grid (such as solar and wind) and new sources of electricity consumption and supply (such as electric vehicles and distributed storage), while effectively managing demand peaks. This requires a greater amount of visibility, control, and automation at the edge of the grid, and therefore requires electric meters and other devices to serve as power quality sensors and controllers, not just as billing devices.

Energy consumers also benefit from Echelon's energy control networking platform. Commercial buildings can consume over 30% of the energy used on today's grid. Making buildings "smart" and more energy efficient presents several important opportunities for building owners by helping them reduce the amount of money they spend monthly on energy bills, improving occupant comfort, and reducing the building's carbon footprint. Another significant consumer of electricity is street lighting. Streetlights are among a city's most important assets, providing safer streets, parks, and city centers. They also consume a significant part of a city's electricity budget - as much as 40% in electricity bills plus significant resources for maintenance and operations. Cities today can benefit from smarter street lighting systems that reduce electricity use, costs, and carbon emissions while enhancing safety and environmental comfort. Smart outdoor lighting is an initial application for cities moving to a "smart cities" infrastructure.

Finally our platform will become increasingly important as the "Internet of Things" (IOT) becomes more prevalent. We estimate that as many as 50 billion devices that are not networked today could be connected by 2020 thereby greatly increasing the opportunity for our control networking platform. IOT applications will encompass vertical markets such as industrial and home automation, in addition to building automation, lighting control, and the smart grid.

Echelon offers, directly and through its partners worldwide, a wide range of products and services. We classify these products and services into two primary categories:

• Systems, such as our smart metering solutions, which are targeted for use by utilities. We previously referred to revenues from our Systems products and services as Utility revenues; and
• Sub-systems, which include our components, control nodes and development software, and which are sold typically to Original Equipment Manufacturers (OEMs) who build them into their smart grid, smart cities and smart buildings solutions. Revenues from our Sub-systems products and services were previously referred to as Commercial and Enel Project revenues.

This model allows Echelon to address a broad range of geographies and regulatory environments and allows our customers to balance time-to-market and cost requirements. As was the case with Enel in Italy, we believe that customers in Brazil, China, and elsewhere will use our Sub-systems for their smart grid applications.

With a broad range of energy applications and geographies to choose from, we apply our product and sales efforts to the highest growth opportunities. We target changing and fast growing geographies that require the smart grid monitoring and control that our energy control networking platform offers. Business drivers that compel the need for an energy control networking platform include energy supply constraints, the condition of existing distribution grids, theft levels, the use of renewable energy, electric vehicle (EV) integration into the grid, and the desire for air quality improvements and greenhouse emission reduction. In some geographies, strong government energy policies and resulting regulations that support and drive a timeline and budget for specific deployments also provide a good fit for our platform.

Echelon was incorporated in California in 1988 and reincorporated in Delaware in 1989. With our global headquarters in Silicon Valley in San Jose, California, and regional sales offices throughout North America, Europe and Asia, our products are available throughout the world.

Market Overview

Echelon targets the smart energy market, and specifically within that market, offers solutions for smart buildings, smart cities and smart grid with our energy control networking platform.

Table of Contents

Smart Buildings - Echelon's Sub-system products enable OEMs to build building automation, lighting control, elevator control, and access control systems for the smart building. We also sell some of our Sub-system products to integrators who use them alongside our OEM customers' products to architect energy-efficient grid-aware buildings that can respond to real-time grid events such as the need to quickly lower demand. Buildings around the world use our technology to provide a comfortable, safe, and productive environment, all while reducing energy consumption. Our technology enables interoperability between products and between the various building systems and allows a building owner or integrator to maintain an open procurement and vendor independent environment, thereby reducing life cycle costs.

Our product portfolio includes:

- Smart Transceivers - Free-topology twisted pair smart transceivers that can be embedded into building automation devices such as sensors, thermostats, motion detectors, air handlers, and chillers.

SmartServer Controller - A system manager and field controller that provides functionality for high-performance building networks and smart-energy applications and can serve as a standalone controller for smaller networks. The Echelon SmartServer connects control networks to IP-based applications using web services and other open protocols such as LONWORKS, BACnet (BACnet/IP) and Modbus (Modbus/IP) and provides important functions to facility management, enterprise resource planning, or service provider software.

LNS and OpenLNS Operating System - These development and integration tools allow building owners to change service providers as needed and leverage competitive bidding because all the necessary information about the network is maintained in the building owner's LNS database. With a community of software developers at leading building automation system (BAS) manufacturers, hundreds of plug-ins have been developed to help installers more easily commission, configure, monitor, control, diagnose or repair LONWORKS devices.

- Third Party Software - Third party energy management or grid analytics software and apps are available for the SmartServer in hosted or server-based configurations.

Smart Cities - Cities are responsible for a substantial portion of the energy used and greenhouse gases produced worldwide. As a result, sustainable cities are looking for ways to improve their infrastructures to become more environmentally friendly, increase the quality of life for their residents, and reduce costs. Since street lighting is a large energy consumer and is a highly visible service provided by the city, smart street lighting is often the starting point for a smart city. Echelon's sub-system products transform streetlights into intelligent, energy-efficient, remotely managed networks that deliver dependable lighting at lower cost than low-energy luminaires alone. Cities can schedule lights on or off and set dimming levels for individual or groups of lights and intelligently provide the right level of lighting needed by time of day, season, or weather conditions while reducing energy usage. Smart street lighting is often just the first step to a smarter city, with applications such as a bus lane control system or pollution monitoring subsequently added on top of the street lighting network.

Our product portfolio includes:

Smart Transceivers - Street light manufacturers can embed our Power line smart transceivers into their streetlight ballasts, drivers and generators. These components enable command, control, and monitoring of each light. They communicate with our SmartServer segment controller over existing power lines.

Outdoor Lighting Controller - In order to address the retrofit market and to reduce time to develop and deploy intelligent luminaires, Echelon also provides its own brand of outdoor lighting controllers - an add-on system level product that is co-located with existing dimmable ballasts and drivers within the luminaire fixture.

SmartServer Segment Controller - Our SmartServer Segment Controller is a controller and gateway for connecting streetlight segments to a city's service center. The SmartServer provides rules for operation, invoking on/off time and sequencing, dimming time and percentage, and other functions.

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PL/RF Bridge - Our PL/RF Bridge can be used to connect segments (groups) of streetlights to a SmartServer. The PL/RF Bridge uses a plug-and-play RF connection for simple, low-cost installation. Each virtual segment communicates with the SmartServer over existing power lines.

Third Party Software - Third-party system software integrates with a city's enterprise applications and manages the street lighting network using the SmartServer for control and communication. System software is available in hosted or server-based configurations.

Smart Grid - As energy demand and supply variability grows, utilities are modernizing their electric grids. Our smart grid Systems and Sub-systems products connect more than 35 million homes to the grid and allow utilities such as Enel (Italy), Vattenfall (Sweden and Finland), SEAS NVE (Denmark), E.ON (Sweden), and Duke Energy (US) to accurately collect billing data and vital health statistics with a high degree of field proven reliability. In addition to usage data required for billing the consumer, our products collect a large number of power quality metrics at the smart meter and from other devices such as

Table of Contents

distribution transformers. This data can be used in applications such as transformer monitoring, theft detection, and fault detection to guide preventive maintenance and to reduce energy loss.

Echelon's smart grid products consist of:

Smart Meters - Our smart meters are part of our NES Smart Metering Solution and provide revenue-grade payment capabilities such as load profiling, time-of-use, display of energy consumption and prepaid metering as well as advanced features such as an integrated remote connect/disconnect switch, the ability to provide remote upgrades and over 50 power quality measurements (PQMs). Once deployed, software embedded in the solutions enables changes that once required a truck roll (customer visit), such as a firmware upgrade or connect/disconnect, to be completed with the click of a mouse. Reducing the number of truck rolls enables utilities to achieve a return on their investment more quickly.

Edge Control Nodes (ECNs) or Data Concentrators - Located at the medium voltage/low voltage transformer, the ECNs or Data Concentrators connect smart meters and OSGP-based grid devices, such as load controllers or water and gas meter gateways to the wide area network (WAN). These products can accommodate hardware expansion and run multiple software applications, allowing utilities to add new functionalities efficiently.

NES System Software - NES System Software allows a utility to deploy, configure, audit, diagnose, and retrieve data from smart meters and other OSGP-based devices connected to the low voltage grid. The NES System Software communicates with a utility's middleware using a scalable, standards-based interface. Using standard Web services interfaces, the NES System Software integrates with the software and servers deployed at the data center as well as with leading meter data management (MDM) solutions. The NES System Software makes the operation of the integrated network transparent to a utility's application developers, allowing them to focus their expertise on issues important to the utility, such as outage avoidance, power quality management, and load shedding, among other things.

Element Manager - Our Element Manager is browser-based software employed at the data center that simplifies installation and commissioning of smart meters, other OSGP-based grid devices and Echelon Control Nodes and provides network analysis, graphed statistics, and automated network management.

Control Point Modules - Our Control Point Modules are Sub-system devices that enable OEMs to build OSGP compliant smart grid devices, such as smart meters, load controllers, and electric vehicle (EV) chargers. Devices that incorporate our Control Point Modules are completely and securely interoperable, end to end, with our NES Smart Metering System, creating the opportunity for the OEMs to sell their products and services to our global installed base of utility customers.

Go-To-Market (Sales) Strategy

Smart Buildings & Smart Cities - We sell our Sub-systems for the smart buildings and smart street lighting markets to OEMs directly and through distribution. These efforts are supported with worldwide sales, application engineering, technical, and industry experts working in the U.S. as well as China, Hong Kong, Japan, South Korea, Germany, Italy, the Netherlands, and the United Kingdom.

Echelon organizes its sales resources by region. Within a region, sales personnel work directly with large OEM customers such as Honeywell, Schneider, Siemens, Philips, Trane, and others, while also working with distribution partners like Avnet Memec and Itochu, and supporting regional system integrators on projects. We encourage our customers to work together. For instance, many smart outdoor lighting systems currently being planned for and installed in China will be managed by third party enterprise software that was initially developed for the European market.

Smart Grid - We market and sell our smart grid Systems to utilities, both directly and through VARs who offer additional products and services. In Europe and North America, we sell our complete flagship NES Smart Metering solution, which is used for metering and low voltage distribution automation applications.

Primary customers of our NES Smart Metering System are VARs such as Eltel Networks, One Nordic, EVB, Görlitz, ENERGOAUDITCONTROL, and Telvent Energia. Representative end-use customers served through our VARs include SEAS-NVE, Energi Midt, and NRGi in Denmark, Vattenfall and E.ON in Sweden, Linz in Austria, and Fortum in Finland. In the United States, we market to VARs and also directly to utilities. Duke Energy is our direct customer in the United States.

Strategic partnering for Sub-systems used in smart grid applications allows Echelon to reach markets otherwise unavailable to us. In markets such as Brazil and China, we partner with local suppliers to leverage their manufacturing and in-region expertise so they can build and market solutions based on Echelon Sub-systems. For example, Brazil meter manufacturer ELO Sistemas Eletronicos (ELO) has developed and is marketing electricity meters in Brazil and elsewhere in Latin America,

Table of Contents

becoming the first alternate source for Echelon smart meters on the market. In markets where alternative standards and approaches have been established, our sales teams go to market with components such as our PLC products and our PLC meshing modules. We have such an arrangement with our Chinese partner, Holley, a leading meter maker in China, to address the large and fast growing Chinese market. Our joint venture with Holley develops PLC based communications modules that conform to local standards, and markets them to the various provinces that are part of the China State Grid, the South Grid, and Off-Grid. We are targeting other regional markets with our Sub-systems strategy as well. The Sub-system strategy was initially implemented for the Enel project in Italy.

Product Development

Our future success depends in large part on our ability to enhance existing products, reduce product cost, and develop new products that maintain technological competitiveness. We have made and intend to continue to make substantial investments in product development.

Our strategy is to focus our product innovation efforts on unique areas where we can add value, and to partner aggressively in other areas. We focus on areas where we have leading technical expertise, including designing reliable silicon, software and systems for constrained environments, power-line communications, system architecture for supporting smart energy, multi-protocol processing for control and enterprise networks, and interoperating with a range of other vendors' products. We partner with other companies that have specific skills outside our core expertise, such as low-cost technology or RF technologies.

Our total expenses for product development were \$30.0 million for 2012, \$34.8 million for 2011, and \$34.8 million for 2010. Included in these totals were stock-based compensation expenses of \$2.3 million, \$3.9 million, and \$4.2 million, for the years ended December 31, 2012, 2011, and 2010, respectively. In addition, during 2011 and 2010, we received payments of \$1.5 million and \$4.5 million, respectively, from a third party that were used to offset our product development expenses. Without those offsetting payments, our product development expenses would have been \$36.3 million and \$39.3 million in 2011 and 2010, respectively.

To date, we have not capitalized any software development costs from our development efforts.

Marketing

Our marketing efforts focus on two key elements: awareness and demand generation/sales enablement. From an awareness perspective, we seek to generate visibility and credibility of our brand, the products and solutions that we offer, and the capabilities and benefits that they bring. Our marketing program comprises press releases, advertising, collateral such as brochures, published technical and thought-leadership papers, newsletters, and customer case studies describing the benefits our customers are seeing from implementing our solutions. We also participate in industry trade shows, speak at industry conferences and are continually enhancing our global websites. Marketing also focuses on making it easier for our sales teams and our partners to sell our solutions. We do this through a variety of demand generation and sales enablement activities such as webinars/seminars, direct mail, lead-generation from our participation at industry exhibitions and conferences, and the production of focused selling tools such as sales playbooks, competitive analyses, and sales presentations and training. We have also formed and actively participate in two associations directly focused on the adoption of our products, LONMARK® International and the Energy Services Network Association (ESNA), and participate in other relevant industry organizations.

We focus our sales team using a systematic pipeline management process, whereby prospects are identified, qualified, and tracked, with the expectation that a portion of these opportunities are ultimately closed.

Training and Support

We offer a variety of technical training courses covering our products and technology. These courses are designed to provide hands-on, in-depth and practical experience that can be used immediately by our customers to build products and systems based on our offerings. In some instances these classes are licensed to third parties in foreign markets who present them in the local language. Additionally, we offer a variety of computer-based training courses that can be taken over the Internet. We also offer telephone, e-mail, and on-site technical support to our customers on a term contract or per-incident basis. The goal of these support services is to resolve customers' technical problems on a timely basis, ensure that our products will be used properly, and shorten the time required for our customers to develop products that use our technology. Lastly, we offer a variety of post-contract support (PCS) packages for our NES System Software and Element Manager products, which we market as Software Investment Protection (SIP). These SIP packages range from providing simple bug fixes to providing software upgrades and enhancements.

Table of Contents

Principal Customers

During the three years ended December 31, 2012, we had four customers that accounted for a significant portion of our revenues: EBV Elektronik and Avnet Europe Comm VA (“EBV/Avnet”), the primary distributors of our Sub-systems products in Europe; Duke Energy (“Duke”), a U.S. utility company; and Telvent Energia (“Telvent”) and Eltel Networks (“Eltel”), value added resellers of our Systems products. For the years ended December 31, 2012, 2011, and 2010, the percentages of our revenues attributable to sales made to these customers were as follows:

	Year ended 31 December					
	2012	%	2011	%	2010	%
Telvent	29.7	%	15.7	%	2.8	%
Duke	13.7	%	27.2	%	6.3	%
Eltel	8.1	%	11.5	%	28.5	%
EBV/Avnet	8.1	%	9.5	%	12.8	%
Total	59.6	%	63.9	%	50.4	%

Our international sales include both export sales and sales by international subsidiaries and accounted for 75.4% of our total revenues for 2012, 62.8% of our total revenues for 2011, and 78.1% of our total revenues for 2010.

Geographic Information

We operate in three main geographic areas: the Americas; Europe, Middle East and Africa (“EMEA”); and Asia Pacific / Japan (“APJ”). Each geographic area provides products and services to our customers located in the respective region. Our long-lived assets include property and equipment, goodwill, purchased technology, and deposits on our leased facilities. Long-lived assets are attributed to geographic areas based on the country where the assets are located. As of December 31, 2012 and 2011, long-lived assets of approximately \$27.7 million and \$33.2 million, respectively, were domiciled in the United States. Long-lived assets for all other locations are not material to the consolidated financial statements.

Revenues are attributed to geographic areas based on the country where the customer is domiciled. Summary revenue information by geography for the years ended December 31, 2012, 2011, and 2010 is as follows (in thousands):

	Year ended 31 December		
	2012	2011	2010
Americas	35,466	60,706	26,769
EMEA	84,189	80,248	73,543
APJ	14,362	15,533	10,725
Total	134,017	156,487	111,037

Manufacturing

Our manufacturing strategy is to outsource production to third parties where it reduces our costs and to limit our internal manufacturing to such tasks as quality inspection, system integration, custom configuration, testing, and order fulfillment. We maintain manufacturing agreements with Cypress related to the Neuron® Chip. We also maintain manufacturing agreements with STMicroelectronics for production of our power line transceiver, with Cypress for production of our free topology transceiver, with Open-Silicon for production of our Neuron 5000 microprocessor.

For most of our products requiring assembly, we use third party contract electronic manufacturers (CEMs), including Jabil and TYCO. These CEMs procure material and assemble, test, and inspect the final products to our specifications.

Working Capital

As of December 31, 2012, we had working capital, defined as current assets less current liabilities, of \$72.7 million, which was a decrease of approximately \$2.2 million compared to working capital of \$74.9 million as of December 31, 2011.

8

Table of Contents

As of December 31, 2012, we had cash, cash equivalents, and short-term investments of \$61.9 million, which was an increase of approximately \$3.2 million compared to a balance of \$58.7 million as of December 31, 2011. Cash provided by operating activities in 2012 of \$5.4 million was primarily the result of changes in operating assets and liabilities of \$5.0 million.

Competition

We believe the markets for our products are becoming more competitive and price competition is becoming more intense. This is noted especially in our Sub-systems markets, where we have seen a loss in market share in recent times. We believe that increased competition is resulting from lesser sales opportunities due to adverse effects of macro economic conditions. In addition, competition in our markets involves rapidly changing technologies, evolving industry standards, frequent new product introductions, and changes in customer requirements. To maintain and improve our competitive position, we must keep pace with the evolving needs of our customers and continue to develop and introduce new products, features and services in a timely and efficient manner. The principal competitive factors that affect the markets for our products include:

- the price and features of our products such as adaptability, scalability, functionality, ease of use, and the ability to integrate with other products;
- our ability to anticipate changes in customer requirements and to develop new or improved products that meet these requirements in a timely manner;
- our product reputation, quality, performance, and conformance with established industry standards;
- our customer service and support;
- warranties, indemnities, and other contractual terms; and
- customer relationships and market awareness.

In each of our markets, our competitors include both small companies as well as some of the largest companies in the electronics industry operating either alone or together with trade associations and partners. Our key competitors in the Smart Buildings and Smart Cities markets include companies such as Digi, STMicroelectronics, Maxim, Texas Instruments, and Siemens. Key competitors in the Smart Grid market include ESCO, Elster, Enel, GE, IBM, Iskraemeco, Itron, Kamstrup, Landis+Gyr (a subsidiary of Toshiba), Siemens, and Silver Spring Networks. Key industry standard and trade group competitors include BACnet, Konnex, DALI, DeviceNet, HART, Profibus, ZigBee and the ZWave Alliance in Smart Buildings and Smart Cities markets and DLMS in the Smart Grid market.

Additionally, while our product implementations are proprietary to Echelon and are often protected by unique, patented implementations, key technologies such as LONWORKS and OSGP are open, meaning that many of our basic control networking patents are broadly licensed without royalties or license fees. For instance, all of the network management commands required to develop software that competes with our LNS software are published as are the messages used by NES field devices. As a result, our customers are capable of developing hardware and software solutions that compete with many of our products.

Government Regulation

Many of our products and the industries in which they are used are subject to U.S. and foreign regulation as well as local, industry-specific codes and requirements. For example, the power line medium, which is the communications medium used by some of our products, is subject to special regulations in North America, Europe and Japan. In general, these regulations limit the ability of companies to use power lines as a communication medium. In addition, some of our competitors have attempted to use regulatory actions to reduce the market opportunity for our products or to increase the market opportunity for their own products. We have resisted these efforts and will continue to oppose

competitors' efforts to use regulation to impede competition in the markets for our products. Our business may also be affected by other regulatory factors, including public utility commission or similar approvals, the outcome and timing of which may be affected by matters unrelated to smart grid deployment. This could lead to an extension of the sales cycle or even cancellation of a customer's order.

In addition, the market for our products may experience a movement towards standards-based protocols driven by governmental action, such as smart grid standards being considered in the U.S. by the National Institute of Standards and Technology (NIST), and the EU 441 mandate, which directs European standards organizations to create standards for smart metering interoperability. To the extent that we do not adopt such protocols or do not succeed in achieving adoption of OSGP and other protocols we use as standards or de facto standards, sales of our products may be adversely affected. The adoption of voluntary standards or the passage of governmental regulations that are incompatible with our products or technology could limit the market opportunity for our products, which could harm our revenues, results of operations, and financial condition.

Table of Contents

For example, we believe that the market for smart meters in Germany has been delayed and may be negatively impacted due to uncertainty related to regulations of the German Federal Office for Information Security (BSI).

Proprietary Rights

We own numerous patents, trademarks, and logos. As of February 28, 2013, we had received 109 United States patents, and had 3 patent applications pending. Some of these patents have also been granted in selected foreign countries. Many of the specific patents that are fundamental to LONWORKS technology have been licensed to our customers with no license fee or royalties. At present, the principal value of the remaining patents relates to our specific implementation of our products and designs.

We hold several trademarks in the United States, many of which are registered, including Echelon, LonBuilder®, LonTalk®, LONWORKS, Neuron, LON, LonPoint®, LonMaker, 3120®, 3150®, LNS, LonManager®, Digital Home®, and NodeBuilder®. We have also registered some of our trademarks and logos in foreign countries.

Employees

As of February 28, 2013, we had 223 employees worldwide, of which 85 were in product development, 59 were in sales and marketing, 37 were in general and administrative, 33 were in operations, and 9 were in customer support and training. About 135 employees are located at our headquarters in California and 21 employees are located in other offices throughout the United States. Our remaining employees are located in thirteen countries worldwide, with the largest concentrations in Germany, China, Hong Kong, the Netherlands, and the United Kingdom. We expect that the number of employees will reduce during 2013 due to the recently announced restructuring action in February 2013. None of our employees are represented by a labor union. We have not experienced any work stoppages and we believe relations with our employees are good.

Where to Find More Information

We make our public filings with the Securities and Exchange Commission, or SEC, including our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and all exhibits and amendments to these reports, available free of charge at our website, www.echelon.com, as soon as reasonably practicable after we file such material with the SEC. These materials are located in the “Investor Relations” portion of our Web site under the link “SEC Filings.” The inclusion of our Web site address in this report does not include or incorporate by reference into this report any information on our Web site. Copies of our public filings may also be obtained from the SEC Web site at www.sec.gov.

Executive Officers of the Registrant

Ronald Sege, age 55, has been our President and Chief Executive Officer and a member of our board of directors since August 2010. He has been Chairman of the Board of Directors since October 2011. Prior to joining Echelon, he was President and Chief Operating Officer of 3COM Corporation from 2008 to 2010. He held the position of President and CEO of Tropos Networks from 2004 to 2008, and was the President and CEO of Ellacoya Networks from 2001 to 2004. Earlier in Mr. Sege's career, he was Executive Vice President at Lycos from 1998 to 2001 and he spent 10 years at 3COM holding various Executive Vice President and Vice President positions. Mr. Sege received his BA in Economics from Pomona College and earned an M.B.A. from the Harvard Business School.

William R. Slakey, age 54, has been our Executive Vice President & Chief Financial Officer since November 2011. Mr. Slakey joined our company from LiveOps Inc., where he served as Chief Financial Officer. He has also held the position of Chief Financial Officer at Extreme Networks and Handspring, Inc., as well as at several private companies including SnapTrack and Tropos Networks. Previously, Mr. Slakey held senior finance and investor relations positions at 3Com and Apple. Mr. Slakey holds a B.A. in Economics from the University of California and an M.B.A. from the Harvard Business School.

Michael T. Anderson, age 43, has been our Senior Vice President and General Manager, Grid Modernization, since February 2013. Previously he served as our Senior Vice President, Worldwide Markets from January 2012 to January 2013, and as our Senior Vice President of Utilities Sales & Market Development from November 2009 to December

2011. Mr. Anderson joined our company from Telcordia Technologies, where he was President of the Next Generation software division, focused on telecommunications companies globally. From 2001 to 2004, he was Vice President of Marketing & Business Development for ADC Software division. Prior to joining ADC, Mr. Anderson served as President & CEO of two startup technology companies, Big Planet and Telismart, which were both sold under his leadership. Prior to these assignments, he was

Table of Contents

Vice President of Product Development for GST Telecom, a company that was acquired by Time Warner. Mr. Anderson started his career with AT&T in 1992. He holds a B.A. from the University of Washington.

Anders B. Axelsson, age 53, has been our Senior Vice President, Strategic Accounts and Business Development since January 2012. He served as our Senior Vice President of Commercial Sales & Market Development from June 2003 to December 2011. Prior to joining our company, he was Chief Executive Officer of PowerFile, Inc. From 1999 to 2001, he was President/General Manager of Snap Appliances, Inc. Between 1992 and 1999, he worked for Measurex, which was later acquired by Honeywell, and served in several positions, including Vice President of Engineering and Marketing and President/Managing Director for Europe. Mr. Axelsson started his career with ABB in 1981 where he worked for 11 years in various sales, marketing, and engineering management positions. He holds a B.S. in Electrical Engineering from ED Technical Institute in Jonkpoing, Sweden and is a graduate of the Executive Program at the University of Michigan.

Kathleen Bloch, age 56, has been our Senior Vice President and General Counsel since February 2003. Prior to joining our company, Ms. Bloch was a partner in the law firm of Wilson Sonsini Goodrich & Rosati, P.C., where she practiced from 1996 to 2003. Prior to joining Wilson Sonsini Goodrich & Rosati, she was a partner with the San Francisco and Los Angeles offices of Sheppard Mullin Richter & Hampton. Ms. Bloch received a B.S. degree in Business Administration from the University of Southern California and her law degree from Stanford Law School. Russell Harris, age 51, joined us in September 2001 as our Senior Vice President of Operations. Prior to joining our company, he served as the Vice President of Operations for NetDynamics from 1996 until its acquisition by Sun Microsystems in 1998. From 1998 to 1999, Mr. Harris served in a management transition role for Sun Microsystems. From 1991 to 1996, Mr. Harris was the Director of Operations at Silicon Graphics, Inc. From 1985 through 1991, he held various positions at Convergent Technologies and Unisys Corporation. His last position at Unisys was as Director of IT for Worldwide Operations. Mr. Harris earned B.S. and M.S. degrees in Industrial Engineering from Stanford University.

Robert Hon, age 58, has been our Senior Vice President of Engineering since April 2011. Prior to joining our company, he served as Executive Vice President of Engineering at ConSentry Networks. Prior to ConSentry Networks, he was the Vice President of Engineering at Network Physics. Prior to Network Physics, Mr. Hon was the Vice President of Engineering at Packeteer. He has also held senior management positions at Cadence Design Systems and Apple, and he was on the faculty of Columbia University. Mr. Hon received a B.S. in Engineering and Applied Science from Yale University and earned both an M.S. and Ph.D in Computer Science from Carnegie-Mellon University.

Varun Nagaraj, age 47, has been our Senior Vice President and General Manager, Internet of Things, since February 2013. Previously he served as our Senior Vice President, Product Management and Marketing from January 2011 to January 2013. Prior to joining our company, Mr. Nagaraj was the CEO of NetContinuum. Prior to NetContinuum, he served as Executive Vice President of Marketing and Customer Operations for Ellacoya. Prior to Ellacoya, he was Vice President of Product Management and Marketing at Extreme Networks. Mr. Nagaraj was previously a Partner at PRTM, a leading management consulting company focused on product and operations strategy. He started his career at HP. He received a B.S.E.E. from IIT Bombay, an M.S. in Computer Engineering from North Carolina State University, and an M.B.A. from Boston University.

ITEM 1A. RISK FACTORS

Interested persons should carefully consider the risks described below in evaluating our company. Additional risks and uncertainties not presently known to us, or that we currently consider immaterial, may also impair our business operations. If any of the following risks actually occur, our business, financial condition or results of operations could be materially adversely affected. In that case, the trading price of our common stock would likely decline. Before deciding to purchase, hold or sell our common stock, you should carefully consider the risks described in this section. This section should be read in conjunction with the consolidated financial statements and accompanying notes thereto, and Management's Discussion and Analysis of Financial Condition and Results of Operations included in this Annual Report on Form 10-K.

Our Systems revenues may not meet expectations, which could cause volatility in the price of our stock.

We and our partners sell our smart metering and distribution automation products to utilities. For several reasons, sales cycles with utility companies can be extended and unpredictable. Utilities generally have complex budgeting, purchasing, and regulatory processes that govern their capital spending, and their spending is likely to be adversely impacted by continuation of challenging economic conditions. In addition, in many instances, a utility may require one or more field trials of a smart grid

Table of Contents

system (such as one based on our NES Smart Grid System or our smart grid subsystem products) before moving to a volume deployment. There is also generally an extended development and integration effort required in order to incorporate a new technology into a utility's existing infrastructure. A number of other factors may also need to be addressed before the utility decides to engage in a full-scale deployment of our NES Smart Grid System, including:

- the continuing limited investment in the smart grid markets;
- economic factors affecting the individual utility, in particular, and the area in which it operates, in general;
- regulatory factors, including public utility commission or similar approvals, the outcome and timing of which may be affected by matters unrelated to smart grid deployment; standards compliance; or internal utility requirements that may affect the smart metering system or the timing of its deployment;
- the time it takes for utilities to evaluate multiple competing bids, negotiate terms, and award contracts for large scale metering system deployments;
- the deployment schedule for projects undertaken by our utility or systems integrator customers; and
- delays in installing, operating, and evaluating the results of a smart grid field trial that is based on our NES Smart Grid System.

As a result, we can often spend several years working either directly or through a reseller to make a sale to a utility. At the end of that lengthy sales process, particularly in view of increasing competition in the Smart Grid market and continuing economic challenges, there is no guarantee that we will be selected by the utility.

In addition, shipment of Systems products and some Sub-systems components used in smart grid products to a particular jurisdiction or customer is generally dependent on either obtaining regulatory approval for the NES meter or other products, including modifications to those products, from a third party for the relevant jurisdiction, or satisfying the customer's internal testing requirements, or both. This certification approval process is often referred to as homologation. Further, shipment of Systems products into some jurisdictions requires our contract manufacturers to pass certain tests and meet various standards related to the production of our NES meters. Failure to receive any such approval on a timely basis or at all, or failure to maintain any such approval, would have a material adverse impact on our ability to ship our Systems products, and would therefore have an adverse effect on our results of operations and our financial condition.

Once a utility decides to move forward with a large-scale deployment of a smart grid project that is based on our NES Smart Grid System, the timing of and our ability to recognize revenue on our Systems product shipments will depend on several factors. These factors, some of which may not be under our control, include shipment schedules that may be delayed or subject to modification, other contractual provisions, such as customer acceptance of all or any part of the NES Smart Grid System, our ability to manufacture and deliver quality products according to expected schedules, customer cancellation rights and customer financial standing.

In addition, the revenue recognition rules relating to products such as our NES Smart Grid System may also require us to defer some of our Systems revenues until certain conditions are met in a future period. For example, in 2011, we began shipping hardware products to a customer for which we had not yet delivered a final version of the related firmware. As a result, we were not able to recognize the revenue associated with that hardware until two quarters later, when the firmware was delivered because payment for the hardware was contingent upon delivery of the firmware. As a consequence of these long sales cycles, unpredictable delay factors, and revenue recognition policies, our ability to predict the amount of Systems revenues that we may expect to recognize in any given fiscal quarter is likely to be limited. As Systems revenues account for a substantial percentage of our overall revenues, we are likely to have increasing difficulty in projecting our overall financial results. Our inability to accurately forecast future revenues is likely to cause our stock price to be volatile.

Sales of our products may fail to meet our financial targets, which would harm our results of operations.

If we are unable to receive orders for, ship, and recognize revenue for our products in a timely manner and in line with our targets (and often in the same year), our financial results will be harmed. We have invested and intend to continue to invest significant resources in the development and sales of our products, particularly our Systems products, such as our Smart Grid portfolio of products. Our long-term financial goals include expectations for a reasonable return on

these investments, particularly for our Systems products. To date the revenues generated from sales of these Systems products have not consistently yielded gross margins in line with our long term goals for this product line on a sustained basis, although our

Table of Contents

operating expenses have increased significantly. Our Systems products also continue to experience downward pricing pressures due to intense competition. In addition, as we sell more Sub-systems products for the Smart Grid in our target markets, we may also experience downward pricing pressures that would reduce our gross margins for those products. In recent times, we have noted that our market share in the Sub-systems business has reduced due to increased competition, reduced levels of investment in our LONWORKS product line, and pricing pressures faced around the world.

In order to achieve our financial targets, we must meet the following objectives:

- Increase acceptance of our products in our target markets in order to increase our revenues;

- Increase gross margin from our Systems revenues by continuing to reduce the cost of manufacturing our Systems products, while at the same time managing manufacturing cost pressures associated with commodity prices and foreign exchange fluctuations;

- Manage our operating expenses to a reasonable percentage of revenues; and

- Manage the manufacturing transition to reduced-cost Systems products.

Because a significant portion of our operating expenses are fixed, if we cannot achieve our revenue targets, our use of cash balances would increase, our losses would increase, and/or we would be required to take additional actions necessary to reduce expenses. We cannot assure you that we will meet any or all of these objectives to the extent necessary to achieve our financial goals and, if we fail to achieve our goals, our results of operations are likely to be harmed.

We face operational and other risks associated with our international operations.

Risks inherent in our international business activities include the following:

- timing of and costs associated with localizing products for foreign countries and lack of acceptance of non-local products in foreign countries;

- inherent challenges in managing international operations;

- the burdens of complying with a wide variety of foreign laws; the applicability of foreign laws that could affect our business or revenues, such as laws that purport to require that we return payments that we received from insolvent customers in certain circumstances; and unexpected changes in regulatory requirements, tariffs, and other trade barriers;

- inherent cultural differences that could make it more difficult to sell our products or could result in allegations that sales activities have violated the U.S. Foreign Corrupt Practices Act or similar laws that prohibit improper payments in connection with efforts to obtain business;

- the imposition of tariffs or other trade barriers on the importation of our products;

- potentially adverse tax consequences, including restrictions on repatriation of earnings;

- economic and political conditions in the countries where we do business;

- differing vacation and holiday patterns in other countries, particularly in Europe;

- increased costs of labor, particularly in China;

- labor actions generally affecting individual countries, regions, or any of our customers, which could result in reduced demand for, or could delay delivery or acceptance of, our products; and

- international terrorism.

Any of these factors could have a material adverse effect on our revenues, results of operations, and our financial condition.

Table of Contents

Adverse changes in general economic or political conditions in any of the major countries in which we do business could adversely affect our business or operating results.

Our business can be affected by a number of factors that are beyond our control, such as general geopolitical, economic, and business conditions. The ongoing economic slowdown, particularly in Europe, where we have sold many NES Smart Grid products, and the uncertainty over its breadth, depth and duration continue to have a negative effect on our business.

In addition, there could be a number of follow-on effects from the credit crisis on our business, such as the insolvency of certain of our key customers, which could impair our distribution channels or result in the inability of our customers to obtain credit to finance purchases of our products.

This uncertainty about future economic and political conditions continues to make it difficult for us to forecast operating results and to make decisions about future investments. We continue to see the effects of the economic slowdown on both our Systems and Sub-systems revenues, particularly in locations where government support for energy-related projects has ended or will end in the near future. More particularly, the smart grid markets continue to be sluggish in many parts of the world that we have targeted.

If economic activity in the U.S. and other countries' economies remains weak, many customers may continue to delay, reduce, or even eliminate their purchases of networking technology products. This could result in reductions in sales of our products, longer sales cycles, slower adoption of our technologies, increased price competition, and increased exposure to excess and obsolete inventory. For example, distributors could decide to reduce inventories of our products. Also, the inability to obtain credit could cause a utility to postpone its decision to move forward with a large scale deployment of our Systems products. If conditions in the global economy, U.S. economy or other key vertical or geographic markets we serve remain uncertain or continue to be weak, we would experience material negative impacts on our business, financial condition, results of operations, cash flow, capital resources, and liquidity.

Because the markets for our products are highly competitive, we may lose sales to our competitors, which would harm our revenues and results of operations.

Competition in our markets is intense and involves rapidly changing technologies, evolving industry standards, frequent new product introductions, rapid changes in customer or regulatory requirements, and localized market requirements. Competition in the Systems and Sub-systems business for the Smart Grid has increased as the smart metering industry faces very slow growth and ongoing consolidation, particularly in Europe where the financial crisis has continued. In each of our existing and new target markets, we compete with a wide array of manufacturers, vendors, strategic alliances, systems developers and other businesses.

The principal competitive factors that affect the markets for our products include the following:

- our ability to anticipate changes in customer or regulatory requirements and to develop, or improve our products to meet these requirements in a timely manner;
- the price and features of our products such as adaptability, scalability, functionality, ease of use, and the ability to integrate with other products;
- our product reputation, quality, performance, and conformance with established industry standards;
- our ability to expand our product line to address our customers' requirements;
- our ability to meet a customer's required delivery schedules;
- our customer service and support;
- warranties, indemnities, and other contractual terms; and
- customer relationships and market awareness.

Competitors for our Systems products include ESCO, Elster, Enel, GE, IBM, Iskraemeco, Itron, Kamstrup, Landis+Gyr (a subsidiary of Toshiba), Siemens, and Silver Spring Networks, which directly or through IT integrators such as IBM or telecommunications companies such as Telenor, offer metering systems that compete with our Systems offerings.

Table of Contents

For our Sub-systems products, our competitors include some of the largest companies in the electronics industry, operating either alone or together with trade associations and partners. Key company competitors include companies such as Digi, STMicroelectronics, Maxim, Texas Instruments, and Siemens. Key industry standard and trade group competitors include BACnet, DALI, and Konnex in the buildings industry; DeviceNet, HART, and Profibus in the industrial control market; DLMS in the utility industry; Echonet, ZigBee and the Z-Wave alliance in the home control market; and the Train Control Network (TCN) in the rail transportation market. Each of these standards and/or alliances is backed by one or more competitors. For example, the ZigBee alliance includes over 300 member companies with promoter members, such as Ember, Emerson, Freescale, Itron, Kroger, Landis+Gyr (a subsidiary of Toshiba), Philips, Reliant Energy, Schneider Electric, STMicroelectronics, Tendril, and Texas Instruments. Many of our competitors, alone or together with their trade associations and partners, have significantly greater financial, technical, marketing, service and other resources, significantly greater name recognition, and broader product offerings. In addition, the utility metering market is experiencing a trend towards consolidation. As a result, these competitors may be able to devote greater resources to the development, marketing, and sale of their products, and may be able to respond more quickly to changes in customer requirements or product technology. If we are unable to compete effectively in any of the markets we serve, our revenues, results of operations, and financial position would be harmed.

We are dependent on our outsourcing arrangements.

We are dependent on third-party providers for the manufacturing of most of our products requiring assembly. We also rely on third parties, including our joint venture with Holley Metering in China, for portions of our development activities. Many of these third-party providers are located in markets that are subject to political risk, intellectual property misappropriation, corruption, infrastructure problems and natural disasters in addition to country specific privacy and data security risks, given current legal and regulatory environments. The failure of these service providers to meet their obligations and adequately deploy business continuity plans in the event of a crisis and/or the development of significant disagreements, natural or man-made disasters or other factors that materially disrupt our ongoing relationship with these providers could negatively affect our operations.

If we are not able to develop or enhance our products in a timely manner, our revenues will suffer.

Due to the nature of development efforts in general, we often experience delays in the introduction of new or improved products beyond our original projected shipping date for such products. Historically, when these delays have occurred, we experienced an increase in our development costs and a delay in our ability to generate revenues from these new products. In addition, such delays could cause us to incur penalties if our deliveries are delayed, could otherwise impair our relationship with any of our customers that were relying on the timely delivery of our products in order to complete their own products or projects, or could cause the customer to cancel orders or to seek alternate sources of supply or other remedies. We believe that similar new product introduction delays in the future could also increase our costs and delay our revenues.

For System products we are sometimes required to modify products to meet local rules and regulations. We may not be able to increase the price of such products to reflect the costs of such modifications, given competitive markets. In addition, given the long term nature of development activities, we may be required to undertake such modifications prior to receiving firm commitments or orders from our customers.

We are working with our Chinese joint venture to develop smart metering products. As we expand our development activities in China or elsewhere, our development activities will be exposed to risks, such as protection of intellectual property, investment risk, and labor costs and other matters. We could also be adversely affected by delays or cost increases experienced by third parties that are developing products on our behalf.

Because we depend on a limited number of key suppliers and in certain cases, a sole supplier, the failure of any key supplier to produce timely and compliant products could result in a failure to ship products, or could subject us to higher prices, which would harm our results of operations and financial position.

Our future success will depend significantly on our ability to timely manufacture our products cost effectively, in sufficient volumes, and in accordance with quality standards. For most of our products requiring assembly, we rely on a limited number of contract electronic manufacturers (CEMs), principally Jabil and TYCO. These CEMs procure material and assemble, test, and inspect the final products to our specifications. This strategy involves certain risks, including reduced control over quality, costs, delivery schedules, availability of materials, components, finished products, and manufacturing yields. As a result of these and other risks, our CEMs could demand price increases for manufacturing our products. The Jabil and TYCO factories, where our products are manufactured, are located in China. The Chinese government maintains programs, whereby labor rates

Table of Contents

for the manufacture of our products will increase over time. In addition, our agreements with our CEMs make us responsible for components and subassemblies purchased by the CEMs when based on our forecasts or purchase orders. Accordingly, we will be at risk for any excess and obsolete inventory purchased by our CEMs. Further, as TYCO transitions its operations to Bel-Fuse in Dongguan, we would depend on the smoothness of the transition of the ownership to maintain our supply of key materials to our Sub-systems business. Lastly, CEMs can experience turnover, instability, and lapses in manufacturing or component quality, exposing us to additional risks as well as missed commitments to our customers.

We also maintain manufacturing agreements with a limited number of semiconductor manufacturers for the production of key products. The Neuron Chip is an important component that we and our customers use in control network devices. In addition to those sold by Echelon, the Neuron Chip is currently manufactured and distributed only by Cypress Semiconductor. As a result, we or our customers may experience longer lead times and higher pricing for these parts, which could result in reduced orders for our products from these same customers. In addition, Cypress Semiconductor could decide to reduce or cease production of the Neuron chip in the future.

We also have sole source relationships with third party foundries for the production of certain other key products, including STMicroelectronics, who produces our power line smart transceivers, and Open-Silicon, which is the foundry for our new Neuron 5000 processor. In addition, we currently purchase several key products and components from sole or limited source suppliers with which we do not maintain signed agreements that would obligate them to supply to us on negotiated terms. Any sole source relationship could make us vulnerable to price increases, particularly where we do not maintain long-term supply agreements with the supplier, or to supply disruptions that would result if the supplier issued an end of life notice with respect to a key product.

We are continuing to review the impact that the ongoing worldwide financial crisis is having on our suppliers. Some of these suppliers are large, well-capitalized companies, while others are smaller and more highly leveraged. In order to mitigate these risks, we may take actions such as increasing our inventory levels and/or adding additional sources of supply. Such actions may increase our costs and increase the risk of excess and obsolete inventories. Even if we undertake such actions, there can be no assurance that we will be able to prevent any disruption in the supply of goods and services we receive from these suppliers.

We may also elect to change any of these key suppliers or to move manufacturing to our Chinese joint venture. As part of such a transition, we may be required to purchase certain raw material and in-process inventory from the existing supplier and resell it to the new source. In addition, if any of our key suppliers were to stop manufacturing our products or supplying us with our key components, it could be expensive and time consuming to find a replacement. Also, as our Systems business grows, we will be required to expand our business with our key suppliers or find additional sources of supply. There is no guarantee that we would be able to find acceptable alternative or additional sources. Additional risks that we face if we must transition between CEMs include:

- moving raw material, in-process inventory, and capital equipment between locations, some of which may be in different parts of the world;
- reestablishing acceptable manufacturing processes with a new work force; and
- exposure to excess or obsolete inventory held by contract manufacturers for use in our products.

The failure of any key manufacturer to produce a sufficient number of products on time, at agreed quality levels, and fully compliant with our product, assembly and test specifications could result in our failure to ship products, which would adversely affect our revenues and gross profit, and could result in claims against us by our customers, which could harm our results of operations and financial position.

Our joint venture in China may not meet investment, product development, sales and other expectations.

In 2012 we formed a joint venture in Hangzhou, China with Holley Metering, a Chinese company with which we have been developing smart energy products for the Chinese market, as well as certain products for the rest of the world. Operations at the joint venture could expose us to risks inherent in such activities, such as protection of our intellectual property, economic and political stability, labor matters, language and cultural differences, including cultural differences that could be construed as violations of U.S. or other anti-bribery laws; and the need to manage product development, operations and sales activities that are located a long distance from our headquarters. The

management of new product development activities, the sharing or transfer of technological capabilities to the joint venture and/ or the establishment of new manufacturing facilities associated with new products in particular, will expose us to risks. For example, it is possible that the product offerings from the joint

Table of Contents

venture will not be completed on time, will not receive necessary governmental approvals, will not perform as planned, will not meet sales targets or otherwise will not meet market demands. In addition, from time to time in the future, our joint venture partner may have economic or business interests or goals that are different from ours. Although our company currently has a 51% interest in the joint venture, the venture's governing documents call for our partner's approval on certain key matters, so we cannot provide assurance that the joint venture will be able to satisfy our corporate objectives. In addition, the joint venture documents will require us to make equity contributions from time to time up to specified amounts. If the joint venture business does not progress according to our plans and anticipated timing, our investment in the joint venture may not be considered successful. If we are unable to obtain additional funds when needed, our business could suffer.

We currently expect that our combined cash, cash equivalent, and short-term investment balances will decline during 2013.

As our cash balances decline, customers or potential customers may become less interested in doing business with our company, or we may not satisfy the financial criteria they have established for their suppliers. In addition, from time to time we may also decide to use a portion of our cash balances to settle alleged warranty issues that may arise with our customers or, as noted in the section regarding Legal Actions, in connection with litigation. We may do so even if we do not believe we have liability to our customers or in connection with such litigation, in order to limit our risk, reduce outlays to third party providers, and for administrative convenience. In the future, to the extent that our revenues grow, we may experience higher levels of inventory and accounts receivable, which will also use our cash balances. In addition, to the extent we plan to make alternate uses of our facilities, we may incur additional cash expenditures. In addition, our cash reserves may be used to strategically acquire or invest in other companies, products, or technologies that are complementary to our business. Lastly, our combined cash, cash equivalents, and short-term investment balances could be negatively affected by the various risks and uncertainties that we face. For example, any continued weakening of economic conditions or changes in our planned cash outlay could negatively affect our existing cash reserves.

While we do not currently depend on access to the credit markets to finance our operations, there can be no assurance that the current state of the financial markets would not impair our ability to obtain financing in the future, including, but not limited to, our ability to draw on funds under our existing credit facilities or our ability to incur indebtedness or sell equity if that became necessary or desirable. In addition, if we do not meet our revenue targets, our use of our cash balances would increase due to the fact that a significant portion of our operating expenses are fixed. If we were not able to obtain additional financing when needed, or on acceptable terms, our ability to invest in additional research and development resources and sales and marketing resources could be adversely affected, which could hinder our ability to sell competitive products into our markets on a timely basis and harm our business.

The loss of or significant curtailment of purchases by any of our key customers would adversely affect our results of operations and financial condition.

While we generate revenue from numerous customers worldwide, our sales are currently concentrated within a relatively small group of customers. During the year ended December 31, 2012, a large percentage of our revenue, approximately 60%, came from sales to our top four customers. These customers have a variety of suppliers to choose from and therefore can make substantial demands on us, including demands on product pricing and on contractual terms, which often result in the allocation of risk to us as the supplier. In addition, if upon its expiration, or upon completion of the related project installation, a large customer contract is not replaced with new business of similar magnitude, our revenue and gross margin would be adversely affected. Our ability to maintain strong, long-term relationships with our key customers is essential to our future performance.

Customers in any of our target market sectors could also experience unexpected reductions in demand for their products and consequently reduce their purchases of our products, resulting in either the loss of a significant customer or a decrease in the level of sales to a significant customer. If any of our key customers are unable to obtain the necessary capital to operate their business, they may be unable to satisfy their payment obligations to us. The loss of or significant curtailment of purchases by any one or more of our key customers would adversely affect our results of

operations and financial condition.

Because we may incur penalties, be liable for damages, or otherwise subject to adverse contractual provisions with respect to sales of our Systems products, we could incur unanticipated liabilities or suffer other negative impacts to our business or operating results.

The agreements governing the sales of our NES Smart Grid System products may expose us to penalties, damages, order cancellations, and other liabilities, or may require us to post bonds or other collateral, in the event of, among other things, late deliveries, late or improper installations or operations, failure to meet product specifications or other product failures, failure to

Table of Contents

achieve performance specifications, indemnities, or other compliance issues. Even in the absence of such contractual provisions, we may agree, or may be required by law, to assume certain liabilities for the benefit of our customers. In addition, the contractual provisions governing sales of our Systems or other products could give our customers cancellation rights, even in the absence of a material failure by our company, such as upon the failure of conditions that are outside of our control. Such liabilities or rights could have an adverse effect on our financial condition and operating results.

Voluntary and/or industry standards and governmental regulatory actions in our markets could limit our ability to sell our products.

Standards bodies, which are formal and informal associations that attempt to set voluntary, non-governmental product standards, are influential in many of our target markets. We participate in many voluntary and/or industry standards organizations around the world in order to help prevent the adoption of exclusionary standards as well as to promote standards for our products. However, we do not have the resources to participate in all standards processes that may affect our markets and our efforts to influence the direction of those standards bodies in which we do participate may not be successful. Many of our competitors have significantly more resources focused on standards activities and may influence those standards in a way that would be disadvantageous to our products.

Many of our products and the industries in which they are used are subject to U.S. and foreign regulation. For example, the power line medium, which is the communications medium used by some of our products, is subject to special regulations in North America, Europe and Japan. In general, these regulations limit the ability of companies to use power lines as a communication medium. In addition, some of our competitors have attempted to use regulatory actions to reduce the market opportunity for our products or to increase the market opportunity for their own products.

In addition, the markets for our Systems and Sub-systems products may experience a movement towards standards based protocols driven by governmental action, such as those being considered in the U.S. by NIST and in Europe by those related to the EU 441 mandate. We are also attempting to gain widespread adoption for our Open Smart Grid Protocol, which is used by smart meters and other devices within our NES Smart Grid System. To the extent that we do not adopt such protocols or do not succeed in achieving adoption of our own protocols as standards or de facto standards, sales of our Systems and Sub-systems products may be adversely affected. Moreover, if our own protocols are adopted as standards, we run the risk that we could lose business to competing implementations.

The adoption of voluntary and/or industry standards or the passage of governmental regulations, for example by state utility commissions or national regulatory bodies such as FERC in the United States and PTB or BSI in Germany, that are incompatible with our products or technology could limit the market opportunity for our products, which could harm our revenues, results of operations, and financial condition.

The sales cycle for our Sub-systems products is lengthy and unpredictable.

The sales cycle between initial Sub-systems customer contact and execution of a contract or license agreement with a customer or purchaser of our products, can vary widely. Initially, we must educate our customers about the potential applications of and cost savings associated with our products. If we are successful in this effort, OEMs typically conduct extensive and lengthy product evaluations before making a decision to design our products into their offerings. Once the OEM decides to incorporate our products, volume purchases of our products are generally delayed until the OEM's product development, system integration, and product introduction periods have been completed. In addition, changes in our customers' budgets, or the priority they assign to control network development, could also affect the sales cycle.

We generally have little or no control over these factors, any of which could prevent or substantially delay our ability to complete a transaction and could adversely affect the timing of our revenues and results of operations.

Because our products use components or materials that may be subject to price fluctuations, shortages, interruptions of supply, or discontinuation, we may be unable to ship our products in a timely fashion, which would adversely affect our revenues, harm our reputation and negatively impact our results of operations.

We may be vulnerable to price increases for products, components, or materials, such as silver, copper, and cobalt. We generally do not enter into forward contracts or other methods of hedging against supply risk for these items. In addition, we have in the past and may in the future occasionally experience shortages or interruptions in supply for certain of these items, including products or components that have been or will be discontinued, which can cause us to delay shipments beyond targeted or announced dates. Such shortages or interruptions could result from events outside our control, as was the case with the earthquake and tsunami in Japan in March 2011. To help address these issues, we may decide from time to time to purchase

Table of Contents

quantities of these items that are in excess of our estimated requirements. As a result, we could be forced to increase our excess and obsolete inventory reserves to provide for these excess quantities, which could harm our operating results. In addition, if a component or other product goes out of production, we may be required to requalify substitute components or products, or even redesign our products to incorporate an alternative component or product.

If we experience any shortage of products or components of acceptable quality, or any interruption in the supply of these products or components, or if we are not able to procure them from alternate sources at acceptable prices and within a reasonable period of time, our revenues, gross profits or both could decrease. In addition, under the terms of some of our contracts with our customers, we may also be subject to penalties if we fail to deliver our products on time.

We are subject to numerous governmental regulations concerning the manufacturing and use of our products. We must stay in compliance with all such regulations and any future regulations. Any failure to comply with such regulations, and the unanticipated costs of complying with future regulations, may adversely affect our business, financial condition, and results of operations.

We manufacture and sell products that contain electronic components that may contain materials that are subject to government regulation in the locations in which our products are manufactured and assembled, as well as the locations where we sell our products. Since we operate on a global basis, maintaining compliance with regulations concerning the materials used in our products is a complex process that requires continual monitoring of regulations and ongoing compliance procedures. For example, in 2012 the European Union issued recast regulations regarding the “Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment: (RoHS)”. The adoption of any unanticipated new regulations that significantly impact the various components we use or require that we use more expensive components would have a material adverse impact on our business, financial condition and results of operations.

Our manufacturing processes, including the processes used by our suppliers, are also subject to numerous governmental regulations that cover both the use of various materials as well as environmental concerns. Since we and our suppliers operate on a global basis, maintaining compliance with regulations concerning our production processes is also a complex process that requires continual monitoring of regulations and ongoing compliance procedures. For example, environmental issues such as pollution and climate change have seen significant legislative and regulatory interest on a global basis. Changes in these areas could directly increase the cost of energy, which may have an impact on the way we or our suppliers manufacture products or use energy to produce our products. In addition, any new regulations or laws in the environmental area might increase the cost of raw materials we use in our products. We are currently unable to predict how any such changes will impact us and if any such impact could be material to our business. Any new law or regulation that significantly increases our costs of manufacturing or causes us or our suppliers to significantly alter the way that our products are manufactured would have a material adverse effect on our business, financial condition and results of operations.

Liabilities resulting from defects in or misuse of our products, whether or not covered by insurance, may delay our revenues and increase our liabilities and expenses.

Our products may contain or may be alleged to contain errors or failures, including those relating to actual or potential security breaches. In addition, our customers or their installation partners may improperly install or implement our products, which could delay completion of a deployment or hinder our ability to win a subsequent award.

Furthermore, because of the low cost and interoperable nature of our Sub-systems products, LONWORKS technology could be used in a manner for which it was not intended.

Even if we determine that an alleged error or failure in our products does not exist, we may incur significant expense and shipments and revenue may be delayed while we analyze the alleged error or failure. If errors or failures are found in our products, we may not be able to successfully correct them in a timely manner, or at all, and our reputation may suffer. Such errors or failures could delay our product shipments and divert our engineering resources while we attempt to correct them. In addition, we could decide to extend the warranty period, or incur other costs outside of our normal warranty coverage, to help address any known errors or failures in our products and mitigate the impact on our customers. This could delay our revenues and increase our expenses.

To address these issues, the agreements we maintain with our customers may contain provisions intended to limit our exposure to potential errors and omissions claims as well as any liabilities arising from them. However, our customer contracts may not effectively protect us against the liabilities and expenses associated with errors or failures attributable to our products.

Table of Contents

Defects in our products may also cause us to be liable for losses in the event of property damage, harm or death to persons, claims against our directors or officers, and the like. Such liabilities could harm our reputation, expose our company to liability, and adversely affect our operating results and financial position.

To help reduce our exposure to these types of liabilities, we currently maintain property, general commercial liability, errors and omissions, directors and officers, and other lines of insurance. However, it is possible that such insurance may not be available in the future or, if available, may be insufficient in amount to cover any particular claim, or we might not carry insurance that covers a specific claim. In addition, we believe that the premiums for the types of insurance we carry will continue to fluctuate from period to period. Significant cost increases could also result in increased premiums or reduced coverage limits. Consequently, if we elect to reduce our coverage, or if we do not carry insurance for a particular type of claim, we will face increased exposure to these types of claims.

We are exposed to credit risk and payment delinquencies on our accounts receivable, and this risk has been heightened during the ongoing decline in economic conditions.

We only recognize revenue when we believe collectability is reasonably assured. However, only a relatively small percentage of our outstanding accounts receivables are covered by collateral, credit insurance, or acceptable third-party guarantees. In addition, our standard terms and conditions require payment within a specified number of days following shipment of product, or in some cases, after the customer's acceptance of our products. While we have procedures to monitor and limit exposure to credit risk on our receivables, there can be no assurance such procedures will effectively limit our credit risk and avoid losses. Additionally, when one of our resellers makes a sale to a utility, we face further credit risk, and we may defer revenue, due to the fact that the reseller may not be able to pay us until it receives payment from the utility. This risk could become more magnified during a particular fiscal period if the resellers facing credit issues represent a significant portion of our accounts receivable during that period. As economic conditions change and worsen, certain of our direct or indirect customers may face liquidity concerns and may be unable to satisfy their payment obligations to us or our resellers on a timely basis or at all, which would have a material adverse effect on our financial condition and results of operations. Our revenues are highly concentrated with 60% of our revenues during 2012 being attributable to four customers and 57% of our December 31, 2012 accounts receivable balance being attributable to these same customers. This concentration risk further increases our credit exposure.

We have limited ability to protect our intellectual property rights.

Our success depends significantly upon our intellectual property rights, which can vary significantly from jurisdiction to jurisdiction. We rely on a combination of patent, copyright, trademark and trade secret laws, non-disclosure agreements and other contractual provisions to establish, maintain and protect these intellectual property rights, all of which afford only limited protection, particularly in those countries that lack robust or accessible enforcement mechanisms. For example, we have formed a joint venture with Holley Metering to develop and sell certain products in China and rest-of-world markets, and the intellectual property mechanisms available in China are generally less stringent than those found in the U.S. We have also outsourced certain development activities to third parties. If any of our patents fail to protect our technology, or if we do not obtain patents in certain countries, our competitors may find it easier to offer equivalent or superior technology. In addition, our trade secrets or other intellectual property that we license to third parties could be used improperly or otherwise in violation of the license terms.

We have also registered or applied for registration for certain trademarks, and will continue to evaluate the registration of additional trademarks as appropriate. If we fail to properly register or maintain our trademarks, or to otherwise take all necessary steps to protect our trademarks, the value associated with the trademarks may diminish. In addition, if we fail to protect our trade secrets or other intellectual property rights, we may not be able to compete as effectively in our markets.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or services or use information that we regard as proprietary, or it may not be economically feasible to enforce them. Any of our patents, trademarks, copyrights, trade secrets, or intellectual property rights could be challenged, invalidated or circumvented. In addition, we cannot assure you that we have taken or will take all necessary steps to protect our intellectual property rights. Third parties may also independently develop similar technology without breach of our trade secrets or other proprietary rights. In addition, the laws of some foreign countries, including

several in which we operate or sell our products, do not protect proprietary rights to as great an extent as do the laws of the United States, and it may take longer to receive a remedy from a court outside of the United States. Also, some of our products are licensed under shrink-wrap license agreements that are not signed by licensees and therefore may not be binding under the laws of certain jurisdictions.

Table of Contents

From time to time, litigation may be necessary to defend and enforce our proprietary rights. As a result, we could incur substantial costs and divert management resources, which could harm our business, regardless of the final outcome. Despite our efforts to safeguard and maintain our proprietary rights both in the United States and abroad, we may be unsuccessful in doing so. Also, the steps that we take to safeguard and maintain our proprietary rights may be inadequate to deter third parties from infringing, misusing, misappropriating, or independently developing our technology or intellectual property rights, or to prevent an unauthorized third party from misappropriating our products or technology.

Our executive officers and technical personnel are critical to our business.

Our success depends substantially on the performance of our executive officers and key employees. Due to the specialized technical nature of our business, we are particularly dependent on our Chief Executive Officer and other executive officers, as well as our technical personnel. Our future success will depend on our ability to attract, integrate, motivate and retain qualified executive, managerial, technical, sales, and operations personnel, particularly given the overall economic climate and the emphasis on reducing expenses at our company.

Competition for qualified personnel in our business areas is intense, and we may not be able to continue to retain qualified executive officers and key personnel and attract new officers and personnel when necessary. Our product development and marketing functions are largely based in Silicon Valley, which is a highly competitive marketplace. It may be particularly difficult to recruit, relocate and retain qualified personnel in this geographic area. Moreover, the cost of living, including the cost of housing, in Silicon Valley is known to be high. Because we are legally prohibited from making loans to executive officers, we will not be able to assist potential key personnel as they acquire housing or incur other costs that might be associated with joining our company. In addition, if we lose the services of any of our key personnel and are not able to find suitable replacements in a timely manner, our business could be disrupted, other key personnel may decide to leave, and we may incur increased operating expenses in finding and compensating their replacements.

As we move product development capabilities to our joint venture in China and other low cost locations around the world, we would also face risks associated with long distance management of such personnel.

If we do not maintain adequate distribution channels, our revenues will be harmed.

We market our Systems products directly, as well as through selected VARs and integration partners. We believe that a significant portion of our Systems sales will be made through our VARs and integration partners, rather than directly by us. To date, our VARs and integration partners have greater experience in overseeing projects for utilities. As a result, if our relationships with our VARs and integration partners are not successful, or if we are not able to create similar distribution channels for our Systems products with other companies in other geographic areas, revenues from sales of our Systems products may not meet our financial targets, which will harm our operating results and financial condition.

Historically, significant portions of our Sub-systems revenues have been derived from sales to distributors, including EBV, the primary independent distributor of our products to OEMs in Europe. In April 2011, our distributor agreement with EBV was assigned from EBV to Avnet Europe Comm VA, a limited partnership organized under the laws of Belgium (“Avnet”). Both EBV and Avnet are indirect subsidiaries of Avnet, Inc., a New York corporation, which is a distributor of electronic parts, enterprise computing and storage products and embedded subsystems. At the time of the assignment, the term of our distributor agreement with Avnet was extended and will now expire in June 2014. If our distributor relationship with Avnet is not successful, our business, revenues, and financial results will suffer.

Agreements with our other distributor partners are generally renewed on an annual basis. If any of these agreements are not renewed, we would be required to locate another distributor or add our own distribution capability to meet the needs of our end-use customers. Any replacement distribution channel could prove less effective than our current arrangements. In addition, if any of our distributor partners fail to dedicate sufficient resources to market and sell our products, our revenues would suffer. Furthermore, if our distributor partners were to significantly reduce their inventory levels for our products, we could expect a decrease in service levels to our end-use customers.

We may be unable to promote and expand acceptance of our open, interoperable control systems over competing protocols, standards, or technologies.

LONWORKS technology is open, meaning that many of our technology patents are broadly licensed without royalties or license fees. As a result, our Sub-systems customers are able to develop hardware and software solutions that compete with some of our products. Because some of our customers are OEMs that develop and market their own control systems, these

Table of Contents

customers, in particular, could develop competing products based on our open technology. For instance, we have published all of the network management commands required to develop software that competes with our LNS software.

In addition, many of our Sub-systems competitors are dedicated to promoting closed or proprietary systems, technologies, software and network protocols or product standards that differ from or are incompatible with ours. We also face strong competition from large trade associations that promote alternative technologies and standards for particular vertical applications or for use in specific countries. These include BACnet, DALI, and KNX in the buildings market; DeviceNet, HART, and ProfiBus in the industrial controls market; TCN in the rail transportation market; DLMS in the electric metering market; and Echonet, ZigBee, and Z-Wave in the home control market. Our technologies, protocols, or standards may not be successful or we may not be able to compete with new or enhanced products or standards introduced by our Sub-systems product line competitors, which would have a material adverse effect on our revenues, results of operations, and financial condition.

We face currency risks associated with our international operations.

We have operations located in eleven countries and our products are sold in many more countries around the world. Revenues from international sales, which include both export sales and sales by international subsidiaries, accounted for about 75.4%, 62.8% and 78.1%, of our total revenues for the years ended December 31, 2012, 2011, and 2010, respectively. We expect that international sales will continue to constitute a significant portion of our total net revenues. Given our high dependency on sales of our products into Europe, the ongoing escalation in the financial crisis in that region could adversely affect our financial results significantly.

Changes in the value of currencies in which we conduct our business relative to the U.S. dollar have caused and could continue to cause fluctuations in our reported financial results. The three primary areas where we are exposed to foreign currency fluctuations are revenues, cost of goods sold, and operating expenses.

In general, we sell our products to foreign customers primarily in U.S. dollars. As such, fluctuations in exchange rates have had, and could continue to have, an impact on revenues. If the value of the dollar rises, our products will become more expensive to our foreign customers, which could result in their decision to postpone or cancel a planned purchase.

With respect to the relatively minimal amount of our revenues generated in foreign currencies, our historical foreign currency exposure has been related primarily to the Japanese Yen and has not been material to our consolidated results of operations. However, in the future, we expect that some foreign utilities may require us to price our Systems products in the utility's local currency, which will increase our exposure to foreign currency risk.

In addition, for our cost of goods sold, our products are generally assembled by CEMs in China. Although our transactions with these companies are presently denominated in U.S. dollars, in the future they may require us to pay in their local currency, or demand a U.S. dollar price adjustment or other payment to address a change in exchange rates, which would increase our cost to procure our products. This is particularly a risk in China, where any future revaluations of the Chinese currency against the U.S. dollar could result in significant cost increases. In addition, increases in labor costs in the markets where our products are manufactured could also result in higher costs to procure our products. For example, China has recently experienced overall wage increases, which our CEMs have generally passed along to us.

We use the local currency to pay for our operating expenses in the various countries where we have operations. If the value of the U.S. dollar declines as compared to the local currency where the expenses are incurred, our expenses, when translated back into U.S. dollars, will increase. This risk will be heightened as we invest in our joint venture in China.

To date, we have not hedged any of our foreign currency exposures and currently do not maintain any hedges to mitigate our foreign currency risks. Consequently, any resulting adverse foreign currency fluctuations could significantly harm our revenues, cost of goods sold, or operating expenses.

If we sell our NES Smart Grid System products directly to a utility, we may face additional risks.

When we sell our NES Smart Grid System products to a utility directly, we may be required to assume responsibility for installing the NES Smart Grid System in the utility's territory, integrating the NES Smart Grid System into the utility's operating and billing system, overseeing management of the combined system, working with other of the

utility's contractors, and undertaking other activities. To date, we do not have any significant experience with providing these types of services. As a

Table of Contents

result, when we sell directly to a utility, it may be necessary for us to contract with third parties to satisfy these obligations. We cannot assure you that we would find appropriate third parties to provide these services on reasonable terms, or at all. Assuming responsibility for these or other services would add to the costs and risks associated with NES Smart Grid System installations, and could also negatively affect the timing of our revenues and cash flows related to these transactions.

Our business may suffer if it is alleged or found that our products infringe the intellectual property rights of others, or if we are unable to secure rights to use the intellectual property rights of others on reasonable terms.

We may be contractually obligated to indemnify our customers or other third parties that use our products in the event our products are alleged to infringe a third party's intellectual property rights. From time to time, we may also receive notice that a third party believes that our products may be infringing patents or other intellectual property rights of that third party. Responding to those claims, regardless of their merit, can be time consuming, result in costly litigation, divert management's attention and resources, and cause us to incur significant expenses. We do not insure against infringement of a third party's intellectual property rights.

As the result of such a claim, we may elect or be required to redesign our products that are alleged to infringe the third party's patents or other intellectual property rights, which could cause those product offerings to be delayed. Or we could be required to cease distributing those products altogether. In the alternative, we could seek a license to the third party's intellectual property. Even if our products do not infringe, we may elect to take a license or settle to avoid incurring litigation costs. However, it is possible that we would not be able to obtain such a license or settle on reasonable terms, or at all.

In some cases, even though no infringement has been alleged, we may attempt to secure rights to use the intellectual property rights of others that would be useful to us. We cannot guarantee that we would be able to secure such rights on reasonable terms, or at all.

Lastly, our customers may not purchase our products if they are concerned our products may infringe third party intellectual property rights. This could reduce the market opportunity for the sale of our products and services. Any of the foregoing risks could have a material adverse effect on our revenues, results of operations, and financial condition.

Fluctuations in our operating results may cause our stock price to decline.

Our quarterly and annual results have varied significantly from period to period, and we have sometimes failed to meet securities analysts' expectations. Moreover, we have a history of losses and cannot assure you that we will achieve sustained profitability in the future. Our future operating results will depend on many factors, many of which are outside of our control, including the following:

- orders may be cancelled;
- the mix of products and services that we sell may change to a less profitable mix;
- shipment, payment schedules, and product acceptance may be delayed;
- our products may not be purchased by utilities, OEMs, systems integrators, service providers and end-users at the levels we project;
- our ability to develop products that comply with future regulations and trade association guidelines;
- we may be required to modify or add to our Systems product offerings to meet a utility's requirements, which could delay delivery and/or acceptance of our products or increase our costs;
- the revenue recognition rules relating to products such as our NES Smart Grid System could require us to defer some or all of the revenue associated with Systems product shipments until certain conditions, such as delivery and acceptance criteria for our software and/or hardware products, are met in a future period;
- our CEMs may not be able to provide quality products on a timely basis, especially during periods where capacity in the CEM market is limited;
- our products may not be manufactured in accordance with specifications or our established quality standards, or may not perform as designed;

Table of Contents

downturns in any customer's or potential customer's business, or declines in general economic conditions, could cause significant reductions in capital spending, thereby reducing the levels of orders from our customers; we may incur costs associated with any future business acquisitions; and any future impairment charges related to goodwill, other intangible assets, and other long-lived assets required under generally accepted accounting principles in the United States may negatively affect our earnings and financial condition.

Any of the above factors could, individually or in the aggregate, have a material adverse effect on our results of operations and our financial condition, which could cause our stock price to decline.

If our Systems solutions become subject to cyber-attacks, or if public perception is that they are vulnerable to cyber-attacks, our reputation and business would suffer.

We have integrated security technologies into our Systems solutions that are designed to prevent and monitor unauthorized access, misuse, modification or other activity. However, we could be subject to liability or our reputation could be harmed if those technologies fail to prevent cyber-attacks, or if our partners or utility customers fail to safeguard the systems with security policies that conform to industry best practices. In addition, because some of the information collected by our Systems solutions is or could be considered confidential consumer information in some jurisdictions, a cyber-attack could cause a violation of applicable privacy, consumer or security laws, which could cause our company to face financial or legal liability. In addition, any cyber-attack or security breach that affects a competitor's products could lead to the negative perception that our solutions are or could be subject to similar attacks or breaches.

Natural disasters, power outages, and other factors outside of our control such as widespread pandemics could disrupt our business.

We must protect our business and our network infrastructure against damage from earthquake, flood, hurricane and similar events, as well as from power outages. A natural disaster, power outage, or other unanticipated problem could also adversely affect our business by, among other things, harming our primary data center or other internal operations, limiting our ability to communicate with our customers, limiting our ability or our partners' or customers' ability to sell or use our products, affecting our third party developer's ability to complete developments on schedule or at all, or affecting our suppliers' ability to provide us with components or products. For example, the 2011 earthquake and tsunami in Japan adversely impacted our revenues from customers located in Japan and/or our ability to source parts from companies located in Japan. Shortly after the earthquake, we received notice from Toshiba (one of two manufacturers of the Neuron Chip - an important component that we and our customers use in control network devices), that they would no longer be able to manufacture Neuron Chips due to earthquake damage suffered at the semiconductor manufacturing facility that produced the Neuron Chips. However, the abrupt termination of Toshiba's Neuron Chip manufacturing capability caused a disruption in supply and an increase in prices from the remaining supplier, Cypress Semiconductor. Consequently, there is a risk that the events in Japan could ultimately reduce demand for certain of our transceiver products, which are used in conjunction with Neuron Chips in developing control network devices by our customers. Such a reduction in demand could negatively impact our results of operations and financial condition. We do not insure against several natural disasters, including earthquakes.

Any outbreak of a widespread communicable disease pandemic, such as the outbreak of the H1N1 influenza virus in 2009, could similarly impact our operations. Such impact could include, among other things, the inability for our sales and operations personnel located in affected regions to travel and conduct business freely, the impact any such disease may have on one or more of the distributors for our products in those regions, and increased supply chain costs. Additionally, any future health-related disruptions at our third-party contract manufacturers or other key suppliers could affect our ability to supply our customers with products in a timely manner, which would harm our results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

At our corporate headquarters in San Jose, California, we lease two buildings, each of which contains approximately 75,000 square feet of useable space. We moved to this location in October 2001. The leases for the two buildings were scheduled to expire in 2011 and 2013, respectively.

Table of Contents

In June 2008, the building leases were amended, resulting in an extension of the lease term for both buildings through March 2020. The extended leases require minimum lease payments through March 2020 totaling approximately \$48.9 million. For accounting purposes only, we are the “deemed owner” of these buildings. See Note 3 of Notes to Consolidated Financial Statements in Part II, Item 8 of this report for further explanation of the accounting treatment for these leases.

We also lease office space for some of our sales and marketing employees in China, France, Germany, Hong Kong, Italy, Japan, the Netherlands, Sweden, South Korea, Thailand, and the United Kingdom and for some of our research and development employees in Fargo, North Dakota, and Germany. The leases for these offices expire at various dates through 2018. As of December 31, 2012, the future minimum rental payments for all of our leased office space, including those for our corporate headquarters facilities, totaled approximately \$32.3 million. For the year ended December 31, 2012, the aggregate rental expense for all leased office space (which does not include the rent expense for our corporate headquarters facility) was approximately \$1.7 million.

We believe that our facilities will be adequate for at least the next 12 months. For additional information regarding our obligations under property leases, please see Note 9 of Notes to Consolidated Financial Statements included in Part II, Item 8 of this Report.

ITEM 3. LEGAL PROCEEDINGS

For a discussion regarding our legal proceedings and matters, please refer to the “Legal Actions” section of Note 8, Commitments and Contingencies, in Notes to the Consolidated Financial Statements in Item 15 of Part IV of this Annual Report on Form 10-K, which is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II**ITEM MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND
5. ISSUER PURCHASES OF EQUITY SECURITIES**

Our common stock is traded on the Nasdaq Global Market under the symbol “ELON.” We began trading on NASDAQ on July 28, 1998, the date of our initial public offering. The following table sets forth, for the quarter indicated, the high and low sales price per share of our common stock as reported on the Nasdaq Global Market.

	Price Range	
	High	Low
Year ended 31 December, 2012		
Fourth quarter	\$4.19	\$2.10
Third quarter	3.99	2.50
Second quarter	4.56	2.84
First quarter	6.34	4.16
Year ended 31 December, 2011		
Fourth quarter	\$7.44	\$4.39
Third quarter	10.05	6.99
Second quarter	10.72	8.26
First quarter	10.58	7.67

Table of Contents

As of February 28, 2013, there were approximately 330 stockholders of record. Because brokers and other institutions hold many shares on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders.

Dividend Policy

We have never paid dividends on our capital stock and do not currently expect to pay any dividends in the foreseeable future. We intend to retain future earnings, if any, for use in our business.

Equity Compensation Plan Summary Information

For information on our equity compensation plans, please refer to Note 5 to our accompanying Consolidated Financial Statements.

Recent Sales of Unregistered Securities

There were no sales of unregistered securities during the fourth quarter of our fiscal year ended December 31, 2012.

Stock Price Performance Graph

The following graph compares the cumulative total stockholder return on our common stock (assuming reinvestment of dividends) with the cumulative total return on the S&P 500 Index, the S&P 500 Information Technology Index (which is comprised of those companies in the information technology sector of the S&P 500 Index) and the Cleantech Index (an index comprised of more than 50 companies such as First Solar, Siemens AG, Itron Inc., etc.). The graph assumes that \$100 was invested in our common stock on December 31, 2007 and in the S&P 500 Index, the S&P 500 Information Technology Index and the Cleantech Index. Historic stock price performance is not necessarily indicative of future stock performance. Beginning this year, we have included the Cleantech Index as a comparative since we believe that this index is reflective of the environment that our company operates in.

	December 2007	December 2008	December 2009	December 2010	December 2011	December 2012
Echelon Corporation	100	39.49	56.01	49.37	23.59	11.87
S&P 500 Composite Index	100	63.00	79.67	91.68	93.61	108.59
S&P 500 Information Technology Index	100	56.86	91.96	101.32	103.77	119.15
Cleantech Index	100	50.00	69.00	74.18	59.27	63.65

Table of Contents

Repurchase of Equity Securities by the Company

In April 2008, our board of directors approved a stock repurchase program, which authorized us to repurchase up to 3.0 million shares of the Company's common stock. In 2008, we repurchased a total of 750,000 shares under the program at a cost of \$8.9 million. During the years ended December 31, 2011 and 2010, no shares were repurchased under the repurchase program. The stock repurchase program expired in April 2011. The following table provides information about the repurchase of our common stock during the quarter ended December 31, 2012:

Period	Total Number of Shares Purchased (1)	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs (1)
October 1 – October 31	14,243	\$ 3.55	—	—
November 1 – November 30	10,507	\$ 2.56	—	—
December 1 – December 31	2,205	\$ 2.49	—	—
Total	26,955	\$ 3.08	—	—

(1) Shares purchased that were not part of our publicly announced repurchase program represent those shares surrendered to us by employees in order to satisfy stock-for-stock option exercises and/or withholding tax obligations related to stock-based compensation. These purchases do not reduce the number of shares that may yet be purchased under our publicly announced repurchase program.

Table of Contents

ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data is derived from our consolidated financial statements. The information set forth below is not necessarily indicative of results of future operations, and should be read in conjunction with Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Consolidated Financial Statements and Notes in Item 8 of this Form 10-K in order to fully understand factors that may affect the comparability of the information presented below.

Year Ended December 31,

	2012	2011	2010	2009	2008
Consolidated Statement of Operations	(in thousands, except per share data)				
Data:					
Revenues:					
Product	\$ 129,475	\$ 152,699	\$ 107,441	\$ 100,187	\$ 131,073
Service	4,542	3,788	3,596	3,151	2,974
Total revenues	134,017	156,487	111,037	103,338	134,047
Cost of revenues:					
Cost of product	75,391	87,063	59,722	56,813	79,984
Cost of service	2,171	2,262	2,464	2,418	2,587
Total cost of revenues	77,562	89,325	62,186	59,231	82,571
Gross profit	56,455	67,162	48,851	44,107	51,476
Operating expenses:					
Product development	30,009	34,755	34,762	35,435	37,753
Sales and marketing	21,460	25,719	25,062	23,525	23,635
General and administrative	15,050	17,897	17,647	15,742	17,143
Restructuring charges	1,176	—	1,212	—	—
Total operating expenses	67,695	78,371	78,683	74,702	78,531
Loss from operations	(11,240)	(11,209)	(29,832)	(30,595)	(27,055)
Interest and other income (expense), net	(362)	6	393	(28)	2,925
Interest expense on lease financing obligations	(1,360)	(1,468)	(1,572)	(1,668)	(1,404)
Loss before provision for income taxes	(12,962)	(12,671)	(31,011)	(32,291)	(25,534)
Income tax expense	219	329	301	(257)	297
Net loss	\$(13,181)	\$(13,000)	\$(31,312)	\$(32,034)	\$(25,831)
Net loss attributable to non controlling interest	363	—	—	—	—
Net loss attributable to Echelon Corporation stockholders	(12,818)	(13,000)	(31,312)	(32,034)	(25,831)
Net loss per share ¹ :					
Basic	\$(0.30)	\$(0.31)	\$(0.76)	\$(0.79)	\$(0.64)
Diluted	\$(0.30)	\$(0.31)	\$(0.76)	\$(0.79)	\$(0.64)
Shares used in computing net loss per share ¹ :					
Basic	42,650	42,083	41,365	40,724	40,636
Diluted	42,650	42,083	41,365	40,724	40,636
Cash dividends declared per common share	—	—	—	—	—

Consolidated Balance Sheet Data:

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Cash, cash equivalents and short-term investments	61,855	58,656	64,632	80,116	87,316
Working capital	72,661	74,922	77,259	96,357	108,811
Total assets	123,583	151,705	145,570	164,437	185,517
Total liabilities	39,788	62,597	51,581	48,539	52,946
Total stockholders' equity	83,795	89,108	93,989	115,898	132,571

¹ See Note 1 of Notes to Consolidated Financial Statements for an explanation of shares used in computing basic net loss per share, and diluted net loss per share.

Table of Contents

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

The following discussion should be read in conjunction with the consolidated financial statements and notes thereto included elsewhere in this Annual Report. The following discussion contains predictions, estimates, and other forward-looking statements that involve a number of risks and uncertainties about our business. These statements may be identified by the use of words such as "we believe," "expect," "anticipate," "intend," "plan," "goal," "continues," "may" and expressions. Forward-looking statements include statements that refer to projections of our future financial performance, our anticipated growth and trends in our businesses, and other characterizations of future events or circumstances. In particular, these statements include statements such as: our projections of Systems revenues; estimates of our future gross margins; statements regarding reinvesting a portion of our earnings from foreign operations; plans to use our cash reserves to strategically acquire other companies, products, or technologies; our projections of our combined cash, cash equivalent and short term investment balance; the sufficiency of our cash reserves to meet cash requirements; our expectations that our Sub-systems revenues will not fluctuate significantly due to a fluctuation in foreign currency sales; our forecasts regarding our sales and marketing expenses; and estimates of our interest income. Such statements are based on our current expectations and could be affected by the uncertainties and risk factors described throughout this filing and particularly in the "Factors That May Affect Future Results of Operations" section. Therefore, our actual results may differ materially and adversely from those expressed in any forward-looking statements. We undertake no obligation to review or update publicly any forward-looking statements for any reason.

EXECUTIVE OVERVIEW

Echelon Corporation was incorporated in California in February 1988 and reincorporated in Delaware in January 1989. We are based in San Jose, California, and maintain offices in eleven foreign countries throughout Europe and Asia. We develop, market, and sell energy control networking solutions, a critical element of incorporating action-oriented intelligence into the utility grid, buildings, streetlights, and other energy devices – all components of the evolving smart grid, which encompasses everything from the power plant to the plug. Echelon's products can be used to make the management of electricity over the smart grid cost effective, reliable, survivable and instantaneous. Our products enable everyday devices — such as air conditioners, appliances, electricity meters, light switches, thermostats, and valves — to be made "smart" and inter-connected.

Our proven, open standard, multi-application energy control networking platform powers energy-savings applications for smart grid, smart cities and smart buildings that help customers save on their energy usage, reduce outage duration or prevent them from happening entirely, reduce carbon footprint and more. Today, we offer, directly and through our partners worldwide, a wide range of innovative, fully integrated products and services. We classify these products and services into two primary categories: Systems, such as our smart metering solutions, which are targeted for use by utilities and that we previously referred to as our Utility products and services; and Sub-systems that include our components, control nodes and development software, which are sold typically to OEMs who build them into their smart grid, smart cities and smart buildings solutions. Revenues from our Sub-systems products and services were previously referred to as Commercial and Enel Project revenues.

Our total revenues decreased by 14.4% during 2012 as compared to 2011, driven principally by a significant market slowdown, which primarily decreased sales of our Systems products. Gross margins remained fairly constant between the two years, while overall operating expenses decreased by 13.6%. The net effect was a loss attributable to Echelon Corporation stockholders in 2012 that decreased by \$182,000 as compared to 2011.

The following tables provide an overview of key financial metrics for the years ended December 31, 2012 and 2011 that our management team focuses on in evaluating our financial condition and operating performance (in thousands, except percentages).

Table of Contents

	Year ended 31 December					
	2012	2011	\$ Change	% Change		
Net revenues	\$ 134,017	\$ 156,487	\$(22,470)	(14.4)	)	%
Gross margin	42.1	% 42.9	---	(0.8) ppt		
Operating expenses	\$67,695	\$78,371	\$(10,676)	(13.6)	)	%
Net loss attributable to Echelon Corporation Stockholders	\$(12,818)	\$(13,000)	\$ 182	(1.4)	)	%
Cash, cash equivalents, and short-term investments	\$61,855	\$58,656	\$3,199	5.5		%

Net revenues: Our total revenues decreased by 14.4% during 2012 as compared to 2011, driven primarily by a \$14.2 million, or 14%, decrease in sales of our Systems products and services and an \$8.2 million or 14% decrease in net revenues from our Sub-systems products. The decrease in our Systems revenues was primarily due to an overall decrease in the level of large-scale deployments in the United States of our NES system products. With respect to our Sub-systems product line, the decrease in revenues during 2012 was due to decrease in sales to our America and EMEA Sub-system customers other than Enel, reflecting depressed economic conditions and ongoing market share loss. Many of our Sub-systems customers produce products used in commercial or industrial buildings. The markets for these products were adversely affected by the recession that started in 2008. These markets have yet to recover to their pre-recession levels.

Gross margin: Our gross margin decreased by 0.8 percentage points during 2012 as compared to 2011. The decrease was primarily due to an increased percentage of lower margin deals in our Systems business and the change in mix of Sub-systems products sold, with increased revenues from our smart server products. This decline in gross margins was partially offset by the increase in margins from service revenues comprising a higher percentage of total revenues.

Operating expenses: Our operating expenses decreased by 13.6% during 2012 as compared to 2011. The decreases were driven primarily by decreases in compensation costs (primarily due to reduced headcount and other employee related costs) as well as reduced travel costs. Also contributing to the decrease in operating expenses for the year were the reduced fees paid to third party service providers. Along with the reasons noted above, also contributing to the decrease in operating expenses was the impact of the reduction of stock compensation expense of \$600,000 reflecting the retirement of our former CFO as well as the restructuring action during the second quarter of 2012. These decreases were partially offset by the related restructuring charge of approximately \$1.2 million that we booked during 2012 as well as the by the reduced stock compensation expense of \$1.0 million resulting from the passing of our former Executive Chairman, Ken Oshman, in 2011.

Net loss attributable to Echelon Corporation Stockholders: We generated a net loss of \$12.8 million during 2012 which was relatively unchanged from the net loss of \$13.0 million in 2011. Excluding the impact of non-cash stock-compensation charges and restructuring charges, our net loss increased by approximately \$1.3 million in 2012 as compared to 2011.

Cash, cash equivalents, and short-term investments: During 2012, our cash, cash equivalents, and short-term investment balance increased by 5.5%, from \$58.7 million at December 31, 2011 to \$61.9 million at December 31, 2012. This increase was primarily the result of cash provided by operations of \$5.4 million due mainly to reduction in working capital (increased A/R collections of \$19.4 million being the primary driver) and \$2.0 million cash received from our joint venture partner, Holley Metering, partly offset by cash used for taxes paid on stock awards released during the year and principal payments on our lease financing obligations.

Critical Accounting Policies and Estimates

Our discussion and analysis of our financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. Note 1, "Significant Accounting Policies" of Notes to Consolidated Financial Statements in this Annual Report on Form 10-K describes the significant accounting policies and methods used in the preparation of our consolidated financial statements. The preparation of these consolidated financial statements requires us to make

estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to our stock-based compensation, allowance for doubtful accounts, inventories, and commitments and contingencies. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments

Table of Contents

about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies and estimates relate to those policies that are most important to the presentation of our consolidated financial statements and require the most difficult, subjective, and complex judgments.

Revenue Recognition. Our revenues are derived from the sale and license of our products and to a lesser extent, from fees associated with training, technical support, and custom software design services offered to our customers. Product revenues consist of revenues from hardware sales and software licensing arrangements. Service revenues consist of product technical support (including software post-contract support services), training, and custom software development services.

We recognize revenue when persuasive evidence of an arrangement exists, delivery to the customer's carrier (and acceptance, as applicable) has occurred, the sales price is fixed or determinable, collectability is probable, and there are no post-delivery obligations. For non-distributor hardware sales, including sales to third party manufacturers, these criteria are generally met at the time of delivery to the customer's carrier. However, for arrangements that contain contractual acceptance provisions, revenue recognition may be delayed until acceptance by the customer or the acceptance provisions lapse unless we can objectively demonstrate that the contractual acceptance criteria have been satisfied, which is generally accomplished by establishing a history of acceptance for the same or similar products. Determining whether sufficient data exists to support recognition of revenue prior to customer acceptance or lapse of acceptance provisions involves significant judgment and changes in those judgments could have a material impact on the timing of revenue recognition. For example, in 2012 we began recognizing revenue on sales of certain variants of our meters at the time of delivery to the customer's carrier (and once all other revenue recognition criteria had been met) irrespective of the contractual acceptance rights stated in our agreements. This decision was based on the acceptance history for these products. We continue to measure acceptance history for other Systems products and intend to transition to revenue recognition at point of transfer of title for these products if and when the acceptance history supports this decision. For sales made to our distributor partners, revenue recognition criteria are generally met at the time the distributor sells the products through to its end-use customer. Service revenue is recognized as the training services are performed, or ratably over the term of the support period.

We account for the rights of return, price protection, rebates, and other sales incentives offered to distributors of our products as a reduction in revenue. With the exception of sales to distributors, the Company's customers are generally not entitled to return products for a refund. For sales to distributors, due to contractual rights of return and other factors that impact our ability to make a reasonable estimate of future returns and other sales incentives, revenues are not recognized until the distributor has shipped our products to the end customer.

Our multiple deliverable revenue arrangements are primarily related to sales of Systems products, which may include, within a single arrangement, electricity meters and data concentrators (collectively, the "Hardware"); NES system software; Element Manager software; post-contract customer support ("PCS") for the NES system and Element Manager software; extended warranties for the Hardware; and, occasionally, specified enhancements or upgrades to software used in the NES system. For arrangements originating or materially modified after December 31, 2009, with the exception of the NES system software, each of these deliverables is considered a separate unit of accounting. The NES system software functions together with an electricity meter to deliver its essential functionality and any related software license fee is charged for on a per meter basis. Therefore, the NES system software and an electricity meter are combined and considered a single unit of accounting. The Element Manager software is not considered to be part of an electricity meter's essential functionality and, therefore, Element Manager software and any related PCS continues to be accounted for under industry specific software revenue recognition guidance. However, all other NES system deliverables are no longer within the scope of industry specific software revenue recognition guidance. We allocate revenue to each element in a multiple-element arrangement based upon the element's relative selling price. We determine the selling price for each deliverable using vendor-specific objective evidence ("VSOE") of selling

price or third-party evidence (“TPE”) of selling price, if it exists. If neither VSOE nor TPE of selling price exists for a deliverable, we use our best estimated selling price (“BESP”) for that deliverable. Since the use of the residual method is eliminated under the new accounting standards, any discounts we offer are allocated to each of the deliverables. Revenue allocated to each element is then recognized when the basic revenue recognition criteria is met for the respective element so long as such revenue is not contingent upon the delivery of other undelivered elements. Consistent with our methodology under previous accounting guidance, if available, we determine VSOE of fair value for each element based on historical stand-alone sales to third parties or from the stated renewal rate for the elements contained in the initial contractual arrangement. We currently estimate the selling prices for our PCS and extended warranties based on VSOE of fair value.

Table of Contents

In many instances, we are not currently able to obtain VSOE of fair value for all deliverables in an arrangement with multiple elements. This may be due to the fact that we infrequently sell each element separately or that we do not price products within a narrow range. When VSOE cannot be established, we attempt to estimate the selling price of each element based on TPE. TPE would consist of our competitor's prices for similar deliverables when sold separately. However, in general, our offerings contain significant differentiation from our competition such that the comparable pricing of products with similar functionality cannot be obtained. Furthermore, we are unable to reliably determine the stand-alone selling prices for similar products of our competitors. Therefore, we typically are not able to obtain TPE of selling price.

When we are unable to establish a selling price using VSOE or TPE, which is generally the case for the Hardware and certain specified enhancements or upgrades to our NES software, we use our BESP in determining the allocation of arrangement consideration. The objective of BESP is to determine the price at which we would transact a sale if the product or service were sold on a stand-alone basis. BESP is generally used for offerings that are not typically sold on a stand-alone basis or for new or highly customized offerings.

We establish pricing for our products and services by considering multiple factors including, but not limited to, geographies, market conditions, competitive landscape, internal costs, gross margin objectives, and industry pricing practices. The determination of pricing also includes consultation with and formal approval by our management, taking into consideration our go-to-market strategy. These pricing practices apply to both our Hardware and software products.

Based on our analysis of pricing stated in contractual arrangements for our Hardware products in historical multiple-element transactions and, to a lesser extent, historical standalone transactions, we have concluded that we typically price our Hardware within a narrow range of discounts when compared to the price listed on our standard pricing grid for similar deliverables (i.e., similar configuration, volume, geography, etc.). Therefore, we have determined that, for our current Hardware for which VSOE or TPE is not available, our BESP is generally comprised of prices based on a narrow range of discounts from pricing stated in our pricing grid.

When establishing BESP for our specified software enhancements or upgrades, we consider multiple factors including, but not limited to, the relative value of the features and functionality being delivered by the enhancement or upgrade as compared to the value of the software product to which the enhancement or upgrade relates, as well as our pricing practices for NES system PCS packages, which may include rights to the specified enhancements or upgrades. We regularly review VSOE and have established a review process for TPE and BESP. We maintain internal controls over the establishment and updates of these estimates. There were no material impacts during the year ended December 31, 2012 resulting from changes in VSOE, TPE, or BESP, nor do we expect a material impact from such changes in the near term.

For multiple element arrangements that were entered into prior to January 1, 2010 and that include NES system and/or Element Manager software, we defer the recognition of all revenue until all software required under the arrangement has been delivered to the customer. Once the software has been delivered, we recognize revenues for the Hardware and software royalties upon customer acceptance of the Hardware based on a constant ratio of meters to data concentrators, which is determined on a contract-by-contract basis. To the extent actual deliveries of either meters or data concentrators is disproportionate to the expected overall ratio for any given arrangement, revenue for the excess meters or data concentrators is deferred until such time as additional deliveries of meters or data concentrators has occurred. Revenues for PCS on the NES system and Element Manager software, as well as for extended warranties on Systems Hardware products, are recognized ratably over the associated service period, which generally commences upon the latter of the delivery of all software, or the customer's acceptance of any given Hardware shipment. As of December 31, 2012 and December 31, 2011, approximately \$2.2 million and \$9.4 million, respectively, of the Company's Systems revenue was deferred. This decrease in deferred revenues was primarily due to a change in the timing of revenue recognition for certain of the Company's Systems products, which resulted from the Company's ability to objectively demonstrate that the contractual acceptance criteria for these products was met at the time of delivery.

Performance-Based Equity Compensation. Certain of the stock-based compensation awards we issue vest upon the achievement of specific financial-based performance requirements. We are required to estimate whether or not it is probable that these financial-based performance requirements will be met, and, in some cases, when they will be met. These estimates of future financial performance require significant management judgment and are based on the best information available at the time of grant, and each quarterly period thereafter until the awards are either earned or forfeited. Any changes we make to our estimates of future financial performance could have a material impact on the amount and timing of compensation expense associated with these awards. See Note 6 of Notes to Consolidated Financial Statements in Part II, Item 8 of this report for further discussion of these awards with financial-based performance requirements.

Inventory Valuation. At each balance sheet date, we evaluate our ending inventories for excess quantities and

Table of Contents

obsolescence. In general, the evaluation for excess quantities includes analyses of historical sales levels by product and projections of future demand. In general, inventories on hand in excess of one year's forecasted demand are deemed to be excess. However, in certain instances when the facts and circumstances for a particular item warrant an extended view, periods of longer than one year are used to determine excess supplies. In performing these analyses, management must make significant judgments in determining the appropriate time horizon over which to analyze for excess inventories.

In performing the excess inventory analysis, management considers factors that are unique to each of our Systems and Sub-systems product lines. For our Systems products, the analysis requires us to consider that Systems customers procure specific meter types that meet their requirements. In other words, any given customer may require a meter that is "custom" to its specifications. Accordingly, management must make significant judgments not only as to which customers will buy how many meters (and associated data concentrators), but also which meter type(s) each customer will buy. In making these judgments, management uses the best sales forecast information available at the time. However, because future sales volumes for any given customer opportunity have the potential to vary significantly, actual results could be materially different from original estimates. This could increase our exposure to excess inventory for which we would need to record a reserve, thereby resulting in a potentially material negative impact to our operating results.

For most of our Sub-systems products, our customers generally buy from a portfolio of "off-the-shelf" or standard products. In addition, whereas for our Systems customers our revenues are attributable to a relatively few customers buying substantial quantities of any given product, our Sub-systems revenues are composed of a larger volume of smaller dollar transactions. Accordingly, while any single Sub-systems customer's demand for a given product may fluctuate from quarter to quarter, the fact that there are so many Sub-systems customers buying a standard product tends to average out increases or decreases in any individual customer's demand. This has historically resulted in a relatively stable future demand forecast for our Sub-systems products, which, absent outside forces such as worsening general economic conditions, management evaluates in determining its requirement for an excess inventory reserve.

In addition to providing a reserve for excess inventories, we do not value inventories that we consider obsolete. We consider a product to be obsolete when one of several factors exists. These factors include, but are not limited to, our decision to discontinue selling an existing product, the product has been re-designed and we are unable to rework our existing inventory to update it to the new version, or our competitors introduce new products that make our products obsolete.

We adjust remaining inventory balances to approximate the lower of our cost or market value. If future demand or market conditions are less favorable than our projections, additional inventory write-downs may be required and would be reflected in cost of sales in the period the revision is made.

Warranty Reserves. We evaluate our reserve for warranty costs based on a combination of factors. In circumstances where we are aware of a specific warranty related problem, for example a product recall, we reserve an estimate of the total out-of-pocket costs we expect to incur to resolve the problem, including, but not limited to, costs to replace or repair the defective items and shipping costs. When evaluating the need for any additional reserve for warranty costs, management takes into consideration the term of the warranty coverage, the quantity of product in the field that is currently under warranty, historical warranty-related return rates, historical costs of repair, and knowledge of new products introduced. If any of these factors were to change materially in the future, we may be required to increase our warranty reserve, which could have a material negative impact on our results of operations and our financial condition. Our reserve for warranty costs was \$519,000 as of December 31, 2012, and \$875,000 as of December 31, 2011.

Table of Contents

RESULTS OF OPERATIONS

The following table reflects the percentage of total revenues represented by each item in our Consolidated Statements of Operations for the years ended December 31, 2012, 2011, and 2010:

	Year ended 31 December				
	2012	2011		2010	
Revenues:					
Product	96.6	% 97.6	%	96.8	%
Service	3.4	2.4		3.2	
Total revenues	100.0	100.0		100.0	
Cost of revenues:					
Cost of product	56.3	55.6		53.8	
Cost of service	1.6	1.5		2.2	
Total cost of revenues	57.9	57.1		56.0	
Gross profit	42.1	42.9		44.0	
Operating expenses:					
Product development	22.4	22.2		31.3	
Sales and marketing	16.0	16.4		22.6	
General and administrative	11.2	11.5		15.9	
Restructuring charges	0.9	—		1.1	
Total operating expenses	50.5	50.1		70.9	
Loss from operations	(8.4)	) (7.2	)	(26.9	)
Interest and other income (expense), net	(0.3)	) —		0.4	
Interest expense on lease financing obligations	(1.0)	) (0.9	)	(1.4	)
Loss before provision for income taxes	(9.7)	) (8.1	)	(27.9	)
Income tax expense	0.2	0.2		0.3	
Net loss	(9.9)	) (8.3	)	(28.2	)
Net loss attributable to non controlling interest	0.3	—		—	
Net loss attributable to Echelon Corporation stockholders	(9.6	)% (8.3	)% (28.2	)%	)%

Revenues

Total revenues

	Year ended 31 December							
	2012	2011	2010	2012 over 2011	2011 over 2010	2012 over 2011	2011 over 2010	
(Dollars in thousands)				\$ Change	\$ Change	% Change	% Change	
Total revenues	\$ 134,017	\$ 156,487	\$ 111,037	(22,470	) 45,450	(14.4	)% 40.9	%

The \$22.5 million decrease in total revenues for the year ended December 31, 2012 as compared to 2011, was primarily due to an \$14.2 million, or 14.3%, decrease in sales of our Systems products and services and an \$8.2 million, or 14.4%, decrease in net revenues from our Sub-systems products, which reflected the slowdown in the market in general. The \$45.5 million increase in total revenues for the year ended December 31, 2011 as compared to 2010 was primarily the result of a \$3.3 million increase in Sub-systems revenues and a \$42.2 million increase in Systems revenues.

As we look forward to 2013, the smart energy market continues to be in the midst of a challenging time. Macro conditions remain tentative amidst the European financial crisis, and competition is heightened as the industry continues to face slow growth and ongoing consolidation. New tender activity for smart-metering deployments continues to be down and pricing

Table of Contents

pressures continue to increase. In addition, the Sub-system business is still being negatively impacted by worldwide macro economic conditions, as well as ongoing market share loss, particularly in the buildings market. In this challenging environment, we expect our revenues in the first quarter of 2013 will be fairly similar to those generated in the fourth quarter of 2012.

Systems revenues

(Dollars in thousands)	Year ended 31 December			2012 over	2011 over	2012 over	2011 over
	2012	2011	2010	2011	2010	2011	2010 %
				\$ Change	\$ Change	% Change	Change
Systems revenues	\$ 85,179	\$ 99,428	\$ 57,257	(14,249)	42,171	(14.3)%	73.7 %

During the years ended December 31, 2012 and 2011, our Systems revenues were derived primarily from a relatively small number of customers who have undertaken large-scale deployments of our NES System products. These deployments generally come to fruition after an extended and complex sales process, and each is relatively substantial in terms of its revenue potential. They vary significantly from one another in terms of, among other things, the overall size of the deployment, the duration of time over which the products will be sold, the mix of products being sold, the timing of delivery of those products, and the ability to modify the timing or size of those projects. This relative uniqueness among each deployment results in significant variability and unpredictability in our Systems revenues. Systems revenues decreased during the year ended December 31, 2012 as compared to 2011. This was primarily due to an overall decrease in the level of large-scale deployments of our NES System products in the United States, Denmark, and Russia, partly offset by an increase in the products shipped to our customer in Finland. Systems revenues increased during the year ended December 31, 2011 as compared to 2010. In particular, the increase was primarily attributable to increased shipments of our NES products for projects in the United States and Finland, partially offset by reductions in shipments for projects in Denmark. To a lesser extent, the increase in Systems revenues was also attributable to the fact that, during 2011 we began recognizing revenue upon delivery to the customer's carrier for our data concentrator products (once all other revenue recognition criteria had been met). Previously, these revenues would have been deferred until the customer acceptance provisions contained in our arrangements had been satisfied. However, based on our review of historical acceptance rates for this product, we were able to objectively demonstrate that the contractual acceptance criteria had been met at the time of delivery to the customer's carrier.

Our ability to recognize revenue for our Systems products depends on several factors, including, but not limited to, the impact on delivery dates of any modifications to existing shipment schedules included in the contracts that have been awarded to us thus far, and in some cases, certain contractual provisions, such as customer acceptance. For arrangements that contain contractual acceptance provisions, revenue recognition may be delayed until acceptance by the customer or the acceptance provisions lapse unless we can objectively demonstrate that the contractual acceptance criteria have been satisfied, which is generally accomplished by establishing a history of acceptance for the same or similar products. In the future, we will continue to evaluate historical acceptance rates for our Systems products and, when the data supports it, will recognize revenue at the point of delivery to the customer's carrier for those particular products (once all other revenue recognition criteria have been met), which could increase our Systems revenue in the period in which this determination is made. In addition, the revenue recognition rules relating to products such as our NES System may require us to defer some or all of the revenue associated with NES product shipments until certain conditions are met in a future period.

Our Systems revenues have historically been concentrated with a relatively few customers. During the years ended December 31, 2012, 2011, and 2010, approximately 86.3%, 94.2%, and 85.4%, respectively, of our Systems revenues were attributable to four customers. While our Systems customers will change over time, given the nature of the

Systems market, we expect our future Systems revenues will continue to be concentrated among a limited number of customers.

Table of Contents

Sub-systems revenues

(Dollars in thousands)	Year ended 31 December			2012 over		2011 over		2012 over		2011 over	
	2012	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
				\$ Change	\$ Change	% Change	% Change	% Change	% Change	% Change	% Change
Sub-systems revenues	\$48,838	\$57,059	\$53,780	(8,221	) 3,279	(14.4	)%	6.1	%		

Our Sub-systems revenues are primarily comprised of sales of our hardware products, and to a lesser extent, revenues we generate from sales of our software products and from our customer support and training offerings. Included in these totals are products and services sold to Enel.

Excluding sales of products and services to Enel, which are discussed more fully below, our Sub-systems revenues decreased by \$7.6 million, or 15.1% during the year ended December 31, 2012 as compared to 2011. This decrease was primarily due to a decrease in revenues in the all the regions we serve and ongoing market share loss. Within the Sub-systems family of products, the year-over-year decrease was driven primarily from decreased sales of our control and connectivity products as well as our SmartServer products. We have seen a loss in market share primarily due to reduced investment in research and development, especially the LONWORKS portfolio, which combined with the overall macro economic slowdown has caused a decrease in our Sub-systems revenues. Excluding sales of products and services to Enel, our Sub-systems revenues increased by \$805,000, or 1.6% in 2011 as compared to 2010. This increase was primarily due to an increase in revenues in the APJ region and the EMEA region, partially offset by a reduction in revenues in the Americas region. During the first quarter of 2010, Sub-systems revenues from the Americas were unusually high due to a concentration with one customer. That unusually high level of revenue was not repeated during the remainder of 2010, or during 2011. Within the Sub-systems family of products, the year-over-year increase was driven primarily from increased sales of our control and connectivity products, partially offset by a decrease in sales of our Network Services products.

Our future Sub-systems revenues will also be subject to further fluctuations in the exchange rates between the United States dollar and the foreign currencies in which we sell these products and services. In general, if the dollar were to weaken against these currencies, our revenues from those foreign currency sales, when translated into United States dollars, would increase. Conversely, if the dollar were to strengthen against these currencies, our revenues from those foreign currency sales, when translated into United States dollars, would decrease. The extent of this exchange rate fluctuation increase or decrease will depend on the amount of sales conducted in these currencies and the magnitude of the exchange rate fluctuation from year to year. The portion of our Sub-systems revenues conducted in currencies other than the United States dollar, principally the Japanese Yen, was about 8.3% for the year ended December 31, 2012, 7.4% in 2011 and 7.3% in 2010. To date, we have not hedged any of these foreign currency risks. We do not currently expect that, during 2013, the amount of our Sub-systems revenues conducted in these foreign currencies will fluctuate significantly from prior year levels. Given the historical and expected future level of sales made in foreign currencies, we do not currently plan to hedge against these currency rate fluctuations. However, if the portion of our revenues conducted in foreign currencies were to grow significantly, we would re-evaluate these exposures and, if necessary, enter into hedging arrangements to help minimize these risks.

Enel project revenues (included in Sub-systems)

(Dollars in thousands)	Year ended 31 December			2012 over		2011 over		2012 over		2011 over	
	2012	2011	2010	2011	2010	2011	2010	2011	2010	2011	2010
				\$ Change	\$ Change	% Change	% Change	% Change	% Change	% Change	% Change
Enel project revenues	\$6,458	\$7,119	\$4,645	(661	) 2,474	(9.3	)%	53.3	%		

In October 2006, we entered into two agreements with Enel, a development and supply agreement and a software enhancement agreement. Under the development and supply agreement, Enel is purchasing additional metering kit and data concentrator products from us. Under the software enhancement agreement, we are providing software enhancements to Enel for use in its Contatore Elettronico system. Enel Project revenues recognized during the years ended December 31, 2012, 2011, and 2010, respectively, related primarily to shipments under the development and supply agreement, and to a lesser extent, from

Table of Contents

revenues attributable to the software enhancement agreement. The software enhancement agreement expired in December 2012 and the development and supply agreement expires in December 2015.

We sell our products to Enel and its designated manufacturers in U.S. dollars. Therefore, the associated revenues are not subject to foreign currency risks.

Gross Profit and Gross Margin

Year ended 31 December

(Dollars in thousands)				2012 over	2011 over	2012 over	2011 over
	2012	2011	2010	2011	2010	2011	2010 %
				\$ Change	\$ Change	% Change	Change
Gross Profit	\$ 56,455	\$ 67,162	\$ 48,851	(10,707)	18,311	(15.9)%	37.5 %
Gross Margin	42.1	% 42.9	% 44.0	% —	—	(0.8)	(1.1)

Gross profit is equal to revenues less cost of revenues. Cost of revenues for product revenues includes direct costs associated with the purchase of components, subassemblies, and finished goods, as well as indirect costs such as allocated labor and overhead; costs associated with the packaging, preparation, and shipment of products; and charges related to warranty and excess and obsolete inventory reserves. Cost of revenues for service revenues consists of employee-related costs such as salaries and fringe benefits as well as other direct and indirect costs incurred in providing training, customer support, and custom software development services. Gross margin is equal to gross profit divided by revenues.

Gross margin decreased by 0.8 percentage points for the year ended December 31, 2012 as compared to 2011. The decrease was primarily due to an increased percentage of lower margin deals in our Systems business and the change in mix of Sub-systems products sold, with increased revenues from our smart server products. This decline in gross margins was partially offset by the increase in margins from service revenues comprising a higher percentage of total revenues. Our gross margins for the year ended December 31, 2012 were impacted by non routine items such as charges for excess inventory and some production equipment that we don't expect to use, which were the result of lower volume expectations, offset by a one time price increase for products sold in the first half of 2012 to one of our customers. On balance these items did not impact our gross margins in 2012 .

Gross margin decreased by approximately 1.1 percentage points during the year ended December 31, 2011 as compared to 2010. The decrease during the year was primarily due to increased manufacturing costs for our Systems products, and the change in mix of Systems and Sub- systems products sold.

In June 2011, Jabil, one of our primary CEMs, notified us that they intended to increase the prices they charge us for manufacturing our Systems products. The new pricing became effective July 1, 2011, and was based on increased fees for Jabil's overhead and profit, cost increases for commodities contained in our products, and higher labor rates for Jabil's production personnel. The impact of these cost increases began to phase in during the third quarter of 2011 and became fully effective at the beginning of the fourth quarter. In an effort to mitigate the effects of these price increases and thus improve our gross margins within the foreseeable future, we are working on certain design modifications for these products intended to reduce their cost to manufacture. We continue to work closely with Jabil to identify other opportunities to reduce their manufacturing costs associated with our products.

Also contributing to the reduction in gross margins during 2011 was the accounting treatment effect for a software deliverable we had committed to a customer but that was not yet delivered as of December 31, 2011. In this case, we had committed to provide a particular customer with firmware for certain hardware that we began delivering to them during the third quarter of 2011 and continued for the remainder of the year. This firmware enabled the hardware, which was included in some of the meters we shipped to this customer, to become fully functional. Because this incremental hardware was not separable from the meters, we were expensing its cost once the customer accepted the corresponding meter. However, we were deferring the associated revenue for this additional hardware functionality

until such time as we delivered the promised firmware in the first quarter of 2012. Partially offsetting the negative 2011 gross margin trends described above was the impact of higher overall revenues.

Table of Contents

In addition to the impact of cost increases from our suppliers, our future gross margins will continue to be affected by several factors, including, but not limited to: overall revenue levels, changes in the mix of products sold, periodic charges related to excess and obsolete inventories, warranty expenses, introductions of cost reduced versions of our Systems and Sub-systems products, changes in the average selling prices of the products we sell, purchase price variances, and fluctuations in the level of indirect overhead spending that is capitalized in inventory. In addition, the impact of foreign exchange rate fluctuations and labor rates may affect our gross margins in the future. We currently outsource the manufacturing of most of our products requiring assembly to CEMs located primarily in China. To the extent labor rates were to rise further, or to the extent the U.S. dollar were to weaken against the Chinese currency, or other currencies used by our CEMs, our costs for the products they manufacture could rise, which would negatively affect our gross margins. Lastly, many of our products, particularly our Systems products, contain significant amounts of certain commodities, such as silver, copper, and cobalt. Prices for these commodities have been volatile, which in turn have caused fluctuations in the prices we pay for the products in which they are incorporated.

Operating Expenses

Product Development

Year ended 31 December

(Dollars in thousands)	2012	2011	2010	2012 over	2011 over	2012 over	2011 over
				2011	2010	2011	2010 %
				\$ Change	\$ Change	% Change	Change
Product Development	\$ 30,009	\$ 34,755	\$ 34,762	(4,746	) (7	(13.7	)% —

Product development expenses consist primarily of payroll and related expenses for development personnel, facility costs, expensed material, fees paid to third party service providers, depreciation and amortization, and other costs associated with the development of new technologies and products.

During 2011, our product development expenses were impacted by a contractual arrangement whereby a third party was making payments to us in connection with certain design and development activities we were performing. During 2011, we completed efforts worth \$1.5 million. These amounts were used to offset our product development expenses in these periods. Excluding the impact of these offsetting payments, our product development expenses decreased by \$6.2 million during 2012 as compared to 2011. These decreases were primarily due to reduced compensation costs, including share based compensation expenses (as mentioned in the executive overview above), which were down primarily due to lower headcount in our product development organization in 2012. These compensation cost reductions were partially offset by increased outside services and contractor costs.

Our product development expenses remained constant in 2011 as compared to 2010. However, excluding the impact of offsetting payments of \$4.5 million in 2010 (versus the \$1.5 million in 2011 referenced above), our product development expenses decreased \$3.0 million in 2011 as compared to 2010. This decrease was primarily due to reduced compensation related expenses, which was primarily attributable to the restructuring program that reduced our product development headcount ; a reduction in expensed materials used in our product development activities and reduced fees paid to third party service providers who assist in our product development activities.

Sales and Marketing

Year ended 31 December

(Dollars in thousands)	2012	2011	2010	2012 over	2011 over	2012 over	2011 over
				2011	2010	2011	2010 %
				\$ Change	\$ Change	% Change	Change

Sales and Marketing	\$ 21,460	\$ 25,719	\$ 25,062	(4,259	) 657	(16.6	)% 2.6
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Sales and marketing expenses consist primarily of payroll, commissions, and related expenses for sales and marketing personnel, travel and entertainment, facilities costs, advertising and product promotion, and other costs associated with our sales and marketing activities.

Table of Contents

Our sales and marketing expenses decreased during 2012 as compared to 2011, driven primarily by lower compensation (including commission expenses and bonus expenses), lower travel and entertainment expenses and reduced fees paid to consultants and other third party service providers.

Our sales and marketing expenses increased by \$0.7 million in 2011 during as compared to 2010, primarily due to increase in fees paid to recruiters, consultants and other third party service providers, increases in membership fees, partially offset by reduced compensation expenses (lower salaries and stock based compensation, partially offset by higher bonuses).

General and Administrative

Year ended 31 December

(Dollars in thousands)	2012	2011	2010	2012 over 2011 \$ Change	2011 over 2010 \$ Change	2012 over 2011 % Change	2011 over 2010 % Change
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General and Administrative	\$ 15,050	\$ 17,897	\$ 17,647	(2,847)	250	(15.9)%	1.4 %
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General and administrative expenses consist primarily of payroll and related expenses for executive, finance, and administrative personnel, professional fees for legal and accounting services rendered to the company, facility costs, insurance, and other general corporate expenses.

General and administrative expenses decreased in 2012 as compared to the same period in 2011, primarily due to lower compensation (including bonus expenses and stock based compensation), lower outside service fees and lower professional fees. Our general and administrative expenses remained fairly constant in 2011 as compared to 2010.

Restructuring Charges

Year ended 31 December

(Dollars in thousands)	2012	2011	2010	2012 over 2011 \$ Change	2011 over 2010 \$ Change	2012 over 2011 % Change	2011 over 2010 % Change
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Restructuring Charges	\$ 1,176	\$ —	\$ 1,212	1,176	(1,212)	100.0 %	(100.0)%
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In May 2012, we undertook further cost cutting measures by initiating a headcount reduction of 42 full-time employees worldwide, to be terminated between May 2012 and March 2013. In connection with this restructuring plan, in the second quarter of 2012, we recorded restructuring charges of approximately \$1.2 million related to termination benefits for these personnel.

With the exception of \$149,000 that remains accrued and reflected in accrued liabilities on our Consolidated Balance Sheets as of December 31, 2012, the restructuring charges of a total of \$1.0 million were paid out in 2012. We expect to pay the remaining \$149,000 of accrued termination benefits through the first two quarters of 2013.

In December 2010, in order to adjust our operating cost structure to more closely align with our 2011 operating plan, we initiated a restructuring program consisting of a headcount reduction of 31 full-time employees worldwide. In connection with this restructuring plan, in the fourth quarter of 2010, we recorded restructuring charges of approximately \$1.2 million related to termination benefits for these personnel.

On February 12, 2013, the Company announced a restructuring action affecting approximately 40 employees whose employment will be terminated as part of an overall plan to reshape the Company for the future. The Company expects to incur severance and other related costs in conjunction with this action. Total charges are expected to include cash costs as well as charges or credits related to stock-based compensation expense, and may include facilities, lease termination, asset impairment and other charges. The Company estimates it will incur pre-tax cash charges of \$2.5 million to \$3.0 million for severance pay expenses and related cash expenditures, which does not include facilities, lease termination or other charges the Company may incur as part of this action. The Company expects to recognize these charges in the quarter ending March 31, 2013.

Table of Contents

Interest and Other Income (Expense), Net

Year ended 31 December

(Dollars in thousands)	2012	2011	2010	2012 over 2011 \$ Change	2011 over 2010 \$ Change	2012 over 2011 % Change	2011 over 2010 % Change
Interest and Other Income (Expense), Net	\$ (362)	\$ 6	\$ 393	(368)	(387)	(6133.3)%	(98.5)%

Interest and other income (expense), net primarily reflects interest earned by our company on cash and short-term investment balances as well as foreign exchange translation gains and losses related to short-term intercompany balances.

Interest and other expense, net increased by \$368,000 during the 2012 as compared to the same period in 2011. This increase was primarily attributable to the increase of \$466,000 in foreign currency translation losses during 2012 as compared to 2011. Interest and other income (expense), net decreased by \$387,000 during 2011 as compared to 2010. This decrease was primarily due to a \$219,000 decrease in foreign currency translation gains, an \$82,000 decrease in interest income, and a \$69,000 increase in losses on disposal of fixed assets. These foreign currency fluctuations are attributable to our foreign currency denominated short-term intercompany balances. We account for translation gains and losses associated with these balances by reflecting these amounts as either other income or loss in our consolidated statements of operations. During periods when the U.S. dollar weakens in value against these foreign currencies, the associated translation losses negatively impact other income. Conversely, when the U.S. dollar strengthens, the resulting translation gains favorably impact other income.

We do not currently anticipate interest income on our investment portfolio will improve during 2012 as we expect interest rates to remain historically low. Future gains or losses associated with translating our foreign currency denominated short-term intercompany balances will depend on exchange rates in effect at the time of translation.

Interest Expense on Lease Financing Obligations

Year ended 31 December

(Dollars in thousands)	2012	2011	2010	2012 over 2011 \$ Change	2011 over 2010 \$ Change	2012 over 2011 % Change	2011 over 2010 % Change
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Interest Expense on

Lease Financing	\$ (1,360)	\$ (1,468)	\$ (1,572)	(108)	(104)	(7.4)%	(6.6)%
Obligations							

The monthly rent payments we make to our lessor under the lease agreements for our San Jose headquarters site are recorded in our financial statements partially as land lease expense, with the remainder being allocated to principal and interest on the financing liability. "Interest expense on lease financing obligations" reflects the portion of our monthly lease payments that is allocated to interest expense.

Interest expense on lease financing obligations decreased by \$108,000 during 2012 as compared to 2011, and by \$104,000 during 2011 as compared to 2010, which were a result of the nature of this expense. As with any amortizing fixed rate loan, payments made earlier in the term of the loan are comprised primarily of interest expense with little being allocated to principal repayment. Payments made later in the term of the loan, however, have an increasing proportion of principal repayment, with less being attributable to interest expense. Accordingly, as we continue to make payments in accordance with our lease obligation, we expect a higher proportion of the payments we make in the future will be allocated to principal repayment and less will be allocated to interest expense.

Income Tax Expense

Year ended 31 December

(Dollars in thousands)	2012	2011	2010
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				2012 over 2011 \$ Change	2011 over 2010 \$ Change	2012 over 2011 % Change	2011 over 2010 % Change
Income Tax Expense	\$ 219	\$ 329	\$ 301	(110	) 28	(33.4	)% 9.3

40

Table of Contents

The income tax expense for years ended 2012, 2011 and 2010 was \$219,000, \$329,000 and \$301,000, respectively. The difference between the statutory rate and our effective tax rate is primarily due to the impact of foreign taxes, changes in the valuation allowance on deferred tax assets, and changes in the accruals related to unrecognized tax benefits.

OFF-BALANCE-SHEET ARRANGEMENTS AND OTHER CONTRACTUAL OBLIGATIONS

Off-Balance-Sheet Arrangements. We have not entered into any transactions with unconsolidated entities whereby we have financial guarantees, subordinated retained interests, derivative instruments, or other contingent arrangements that expose our company to material continuing risks, contingent liabilities, or any other obligation under a variable interest in an unconsolidated entity that provides financing, liquidity, market risk, or credit risk support to us.

Lease Commitments. In December 1999, we entered into a lease agreement with a real estate developer for our existing corporate headquarters in San Jose, California. In October 2000, we entered into a third lease agreement with the same real estate developer for an additional building at our headquarters site. These leases were scheduled to expire in 2011 and 2013, respectively.

Effective June 2008, the building leases were amended resulting in an extension of the lease term for both buildings through March 2020. The extended leases require minimum lease payments through March 2020 totaling approximately \$48.9 million. Both leases permit us to exercise an option to extend the respective lease for two sequential five-year terms.

In addition, we lease facilities under operating leases for our sales, marketing, and product development personnel located elsewhere within the United States and in eleven foreign countries throughout Europe and Asia, including a land lease for accounting purposes associated with our corporate headquarters facilities. These operating leases expire on various dates through 2020, and in some instances are cancelable with advance notice. Lastly, we also lease certain equipment and, for some of our sales personnel, automobiles. These operating leases are generally less than five years in duration.

Purchase Commitments. We utilize several contract manufacturers who manufacture and test our products requiring assembly. These contract manufacturers acquire components and build product based on demand information supplied by us in the form of purchase orders and demand forecasts. These purchase orders and demand forecasts generally cover periods up to twelve months, and in rare cases, up to eighteen months. We also obtain individual components for our products from a wide variety of individual suppliers. We generally acquire these components through the issuance of purchase orders, and in some cases through demand forecasts, both of which cover periods up to twelve months. The products covered by these purchase orders are not included in our reported inventory until such time as we receive them. To the extent our sales forecasts are not achieved, and we are unable to cancel or modify our outstanding purchase orders for quantities exceeding our revised requirements, our reported inventories may increase or we may be required to provide a reserve against excess inventories.

We also utilize purchase orders when procuring capital equipment, supplies, and services necessary for our day-to-day operations. These purchase orders generally cover periods ranging up to twelve months, but in some instances cover a longer duration.

In March 2012, we announced the formation of a joint venture in Hangzhou, China with Holley Metering, a Chinese company with which we have been developing smart energy products for the Chinese and rest-of-world markets. The joint venture required us to provide capital contributions of \$2.0 million, which we contributed during 2012.

Indemnifications. In the normal course of business, we provide indemnifications of varying scope to customers against claims of intellectual property infringement made by third parties arising from the use of our products.

Historically, costs related to these indemnification provisions have not been significant. However, we are unable to estimate the maximum potential impact of these indemnification provisions on our future results of operations.

As permitted under Delaware law, we have agreements whereby we indemnify our officers and directors for certain events or occurrences while the officer or director is, or was serving, at our request in such capacity. The indemnification period covers all pertinent events and occurrences during the officer's or director's lifetime. The maximum potential amount of future payments we could be required to make under these indemnification agreements is unlimited; however, we have director and officer insurance coverage that would enable us to recover a portion of

any future amounts paid. We believe the estimated fair value of these indemnification agreements in excess of the applicable insurance coverage is minimal.

Royalties. We have certain royalty commitments associated with the shipment and licensing of certain products. Royalty expense is generally based on a U.S. dollar amount per unit shipped or a percentage of the underlying revenue. Royalty

Table of Contents

expense, which was recorded as cost of products revenue in our consolidated statements of income, was approximately \$508,000 during the year ended December 31, 2012, \$532,000 in 2011, and \$616,000 in 2010. We will continue to be obligated for royalty payments in the future associated with the shipment and licensing of certain of our products. While we are currently unable to estimate the maximum amount of these future royalties, such amounts will continue to be dependent on the number of units shipped or the amount of revenue generated from these products.

Taxes. We conduct our operations in many tax jurisdictions throughout the world. In many of these jurisdictions, non-income based taxes such as property taxes, sales and use taxes, and value-added taxes are assessed on Echelon's operations in that particular location. While we strive to ensure compliance with these various non-income based tax filing requirements, there have been instances where potential non-compliance exposures have been identified. In accordance with generally accepted accounting principles, we make a provision for these exposures when it is both probable that a liability has been incurred and the amount of the exposure can be reasonably estimated. To date, such provisions have been immaterial, and we believe that, as of December 31, 2012, we have adequately provided for such contingencies. However, it is possible that our results of operations, cash flows, and financial position could be harmed if one or more non-compliance tax exposures are asserted by any of the jurisdictions where we conduct our operations.

Legal Actions. In April 2009, the Company received notice that the receiver for two companies that filed for the Italian law equivalent of bankruptcy protection in May 2004, Finmek Manufacturing SpA and Finmek Access SpA (collectively, the "Finmek Companies"), had filed a lawsuit under an Italian "claw back" law in Padua, Italy against Echelon, seeking the return of approximately \$16.7 million in payments received by Echelon in the ordinary course of business for components we sold to the Finmek Companies prior to the bankruptcy filing. The Finmek Companies were among Enel's third party meters manufacturers, and from time to time through January 2004, we sold components to the Finmek Companies that were incorporated into the electricity meters that were manufactured by the Finmek Companies and sold to Enel SpA for the Enel Project. We continue to believe that the Italian claw back law is not applicable to the circumstances surrounding our transactions with the Finmek Companies and that the claims of the Finmek Companies' receiver are without merit. We have continued to defend the lawsuit as a result. However, it is possible that we, with the consent of our Board of Directors, or the receiver for the Finmek Companies' could decide to pursue settlement of this matter in order to avoid the risk of an adverse judgment, limit administrative inconvenience and curtail litigation costs. In that event, we would make a determination as to whether a loss associated with this action was considered probable or reasonably possible, and we may be required to reserve an appropriate loss to cover an anticipated settlement.

From time to time, in the ordinary course of business, we are subject to legal proceedings, claims, investigations, and other proceedings, including claims of alleged infringement of third-party patents and other intellectual property rights, and commercial, employment, and other matters. In accordance with generally accepted accounting principles, we make a provision for a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These provisions are reviewed at least quarterly and adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel, and other information and events pertaining to a particular case. While we believe we have adequately provided for such contingencies as of December 31, 2012, it is possible that our results of operations, cash flows, and financial position could be harmed by the resolution of any such outstanding claims.

As of December 31, 2012, our contractual obligations were as follows (in thousands):

	Payments due by period				
	Total	Less than 1 year	2-3 years	4-5 years	More than 5 years
Lease financing obligations	\$25,378	\$3,254	\$6,738	\$7,108	\$8,278
Operating leases	7,096	1,432	2,168	1,771	1,725
Purchase commitments	7,716	7,716	—	—	—
Total	\$40,190	\$12,402	\$8,906	\$8,879	\$10,003

The amounts in the table above exclude \$811,000 of income tax liabilities and related interest and penalties related to uncertain tax positions as we are unable to reasonably estimate the timing of settlement. See Note 10, "Income Taxes" of Notes to Consolidated Financial Statements for further discussion.

Table of Contents**LIQUIDITY AND CAPITAL RESOURCES**

Since our inception, we have financed our operations and met our capital expenditure requirements primarily from the sale of preferred stock and common stock, although during 2012 and certain earlier years, we were also able to finance our operations through operating cash flow. From inception through December 31, 2012, we raised \$295.0 million from the sale of preferred stock and common stock, including the exercise of stock options and warrants from our employees and directors.

The following table presents selected financial information as of December 31, 2012, and for each of the last two fiscal years (dollars in thousands):

	December 31,		
	2012	2011	2010
Cash, cash equivalents, and short-term investments	\$61,855	\$58,656	\$64,632
Trade accounts receivable, net	15,725	35,215	25,102
Working capital	72,661	74,922	77,259
Stockholders' equity	83,795	89,108	93,989

As of December 31, 2012, we had \$61.9 million in cash, cash equivalents, and short-term investments, an increase of \$3.2 million as compared to December 31, 2011. Historically, our primary source of cash, other than stock sales, has been receipts from revenue, and to a lesser extent, proceeds from the exercise of stock options and warrants by our employees and directors. Our primary uses of cash have been cost of product revenue, payroll (salaries, commissions, bonuses, and benefits), general operating expenses (costs associated with our offices such as rent, utilities, and maintenance; fees paid to third party service providers such as consultants, accountants, and attorneys; travel and entertainment; equipment and supplies; advertising; and other miscellaneous expenses), acquisitions, capital expenditures, payment of taxes associated with certain equity compensation awards and purchases under our stock repurchase programs.

Cash flows from operating activities. Cash flows from operating activities have historically been driven by net income (loss) levels; adjustments for non-cash charges such as stock-based compensation; depreciation and amortization; changes in accrued investment income; and fluctuations in operating asset and liability balances. Net cash provided by operating activities was \$5.4 million for the year ended December 31, 2012, an increase in cash inflows of approximately \$5.6 million as compared to 2011. During the year ended December 31, 2012, net cash provided by operating activities was primarily the result of changes in operating assets and liabilities of \$5.0 million. While we generated a net loss of \$13.2 million, that amount was more than offset by non-cash charges for stock-based compensation expenses of \$7.0 million and depreciation and amortization expense of \$6.6 million. The primary components of the \$5.0 million net change in our operating assets and liabilities were a \$19.4 million decrease in accounts receivable, a \$5.7 million decrease in deferred cost of goods sold and a \$1.4 million decrease in other current assets, partially offset by a \$9.7 million decrease in accounts payable, a \$7.9 million decrease in deferred revenues, a \$3.3 million decrease in accrued liabilities and a \$642,000 increase in inventories. Accounts receivable decreased primarily as a result of the timing of collections and the fact that our revenues were down in the fourth quarter of 2012 as compared to the same period in 2011. Also contributing to the decrease in accounts receivable was a general improvement in the days sales outstanding for our Systems related receivables. Deferred cost of goods sold decreased in conjunction with a decrease in deferred revenues. Inventories increased primarily due to inventory positions carried over from the first half of the year in to year end, as well as a general increase in the cost of manufacturing, that had a full impact in 2012 as against only half a year of impact in 2011. Accounts payable decreased due to an overall reduction in the level of purchasing activity and timing of expenditures during 2012. Deferred revenues decreased due primarily to our ability to objectively demonstrate that the contractual acceptance criteria for much of the Systems products we shipped during the year was satisfied at the time of delivery, as against prior year where revenues were deferred until customer acceptance was received. Accrued liabilities decreased primarily due to the payment of bonuses and commissions during the first quarter of 2012 that were accrued as of December 31, 2011 in accordance with our 2011 compensation arrangements.

Net cash used in operating activities was \$225,000 in 2011, a \$9.0 million decrease from 2010. During 2011, net cash used in operating activities was primarily the result of our net loss of \$13.0 million and a net change in our operating assets and liabilities of \$3.0 million, which was partially offset by non-cash charges for stock-based compensation expenses of \$9.6 million and depreciation and amortization expenses of \$5.9 million. The primary components of the \$3.0 million net change in our operating assets and liabilities were a \$10.1 million increase in accounts receivable, a \$3.9 million increase in deferred cost of goods sold, and a \$2.1 million increase in inventories, all of which were partially offset by an \$8.0 million increase in accounts payable, a \$3.8 million increase in deferred revenues, and a \$1.2 million increase in accrued liabilities. Accounts receivable increased due primarily to higher days sales outstanding as of December 31, 2011 as compared to December 31, 2010, and to a lesser extent by an overall increase in revenues in the fourth quarter of 2011 as compared to the

Table of Contents

same period in 2010. Deferred cost of goods sold increased in conjunction with an increase in deferred revenues. Inventories increased primarily due to the timing of customer shipments during the latter part of the fourth quarter that had not yet reached their destination. During the fourth quarter of 2011, the amount of product shipped in the latter part of the quarter for which customer acceptance had not yet been received was higher than what was observed in the fourth quarter of 2010. Accounts payable increased due to the timing of expenditures during the fourth quarter of 2011. Deferred revenues increased due primarily to the timing of products shipped during the fourth quarter of 2011. Accrued liabilities increased primarily due to amounts accrued for our 2011 management bonus program, which were partially offset by the payment of termination benefits that were accrued as part of our restructuring program in the fourth quarter of 2010.

During 2010, net cash used in operating activities of \$9.2 million was primarily the result of our net loss of \$31.3 million, which was partially offset by non-cash charges for stock-based compensation expenses of \$12.3 million, depreciation and amortization expenses of \$6.7 million, and a net change in our operating assets and liabilities of \$3.1 million. The primary components of the \$3.1 million net change in our operating assets and liabilities were a \$3.0 million increase in accounts payable, a \$2.0 million decrease in inventories, and a \$1.8 million increase in accrued liabilities, the benefits of which were partially offset by a \$3.6 million increase in accounts receivable. Accounts payable increased due to the timing of expenditures during the fourth quarter of 2010. Inventories decreased due to continuing improved inventory management in 2010. At the end of 2008, inventory levels were historically high due in part to the world-wide economic slowdown that occurred during the fourth quarter. During 2009 and 2010, inventories were managed back down to more reasonable levels. Accrued liabilities increased primarily due to approximately \$1.2 million of accrued termination benefits resulting from a restructuring program we initiated in the fourth quarter of 2010, and to a lesser extent, by a \$497,000 increase in customer deposits. Accounts receivable increased due to the timing of revenues generated in the fourth quarter. During the fourth quarter of 2010, a higher percentage of the quarter's revenues were generated in the latter half of the quarter as compared to 2009, which resulted in a higher receivable balance as of December 31, 2010.

Cash flows from investing activities. Cash flows from investing activities have historically been driven by transactions involving our short-term investment portfolio, capital expenditures, changes in our long-term assets, and acquisitions. Net cash used in investing activities was \$3.1 million for the year ended December 31, 2012, an increase of \$16.6 million in cash outflows compared to 2011. During the year ended December 31, 2012, net cash used in investing activities was primarily the result of the purchases of available-for-sale short-term investments of \$83.9 million and capital expenditures of \$1.1 million, partially offset by proceeds from maturities and sales of available-for-sale short-term investments of \$82.0 million.

Net cash provided by investing activities in 2011 was primarily the result of net redemptions of available-for-sale short-term investments of \$15.9 million, partially offset by capital expenditures of \$2.3 million.

Net cash provided by investing activities of \$4.0 million in 2010 was primarily the result of net redemptions of available-for-sale short-term investments of \$6.0 million, partially offset by capital expenditures of \$2.0 million.

Cash flows from financing activities. Cash flows from financing activities have historically been driven by the proceeds from issuance of common and preferred stock offset by transactions under our stock repurchase programs and principal payments on our lease financing obligations. Net cash used in financing activities was \$1.3 million for the year ended December 31, 2012, a decrease of \$1.7 million as compared to the same period in 2011. During the year ended December 31, 2012, net cash used in financing activities was primarily the result of \$1.3 million worth of shares repurchased from employees for payment of employee taxes on vesting of performance shares and upon exercise of stock options and \$2.0 million in principal payments on our building lease financing obligations, partly offset by cash received for the capital infusion of \$2.0 million by Holley Metering in our joint venture in China. Net cash used in financing activities in 2011 was primarily attributable to \$2.3 million of repurchases of common stock from our employees for payment of income and other payroll taxes they owed upon the vesting of performance shares and upon the exercise of options and \$1.7 million of principal payments on our lease financing obligations; partially offset by proceeds of \$945,000 resulting from issuance of common stock upon exercise of options by our employees.

Net cash used in financing activities of \$3.9 million in 2010 was primarily attributable to \$2.9 million of repurchases of common stock from our employees for payment of income and other payroll taxes they owed upon the vesting of performance shares and upon the exercise of options and \$1.6 million of principal payments on our lease financing obligations; partially offset by proceeds of \$615,000 resulting from issuance of common stock upon exercise of options by our employees.

As noted above, our cash and investments totaled \$61.9 million as of December 31, 2012. Of this amount, approximately 6% was held by our foreign subsidiaries. Our intent is to permanently reinvest a significant portion of our earnings from foreign operations, and current plans do not anticipate that we will need funds generated from foreign operations to fund our domestic operations. In the event funds from foreign operations are needed to fund operations in the United States and if U.S. tax has not

Table of Contents

already been previously provided, we would provide for and pay any additional U.S. taxes due in connection with repatriating these funds.

We use well-regarded investment managers to manage our invested cash. Our portfolio of investments managed by these investment managers is primarily composed of highly rated U.S. government securities, and to a lesser extent, money market funds. All investments are made according to guidelines and within compliance of policies approved by the Audit Committee of our Board of Directors.

We maintain a \$10.0 million line of credit with our primary bank, which expires on July 1, 2013. The letter of credit contains certain financial covenants requiring us to maintain an overall minimum tangible net worth level and to maintain a minimum level of liquid assets. As of December 31, 2012, we were in compliance with these covenants. As of December 31, 2012, our primary bank has issued, against the line of credit, one standby letter of credit totaling \$113,000. Other than issuing standby letters of credit, we have never drawn against the line of credit, nor have amounts ever been drawn against the standby letters of credit issued by the bank.

In the future, our cash reserves may be used to strategically acquire other companies, products, or technologies that are complementary to our business or for settlements of customer disputes or litigation. In addition, our combined cash, cash equivalents, and short-term investments balances could be negatively affected by various risks and uncertainties, including, but not limited to, the risks detailed in this Annual Report in Part I, Item 1A - Risk Factors. For example, any continued weakening of economic conditions or changes in our planned cash outlay could negatively affect our existing cash reserves.

Based on our current business plan and revenue prospects, we believe that our existing cash reserves will be sufficient to meet our projected working capital and other cash requirements for at least the next twelve months. However, we currently expect that our combined cash, cash equivalent, and short-term investment balance will decline during 2013. In the event that we require additional financing, such financing may not be available to us in the amounts or at the times that we require, or on acceptable terms. If we fail to obtain additional financing, when and if necessary, our business would be harmed.

RELATED PARTY TRANSACTIONS

The law firm of Wilson Sonsini Goodrich & Rosati, P.C. acts as principal outside counsel to our company. Mr. Sonsini, a director of our company, is a member of Wilson Sonsini Goodrich & Rosati, P.C.

In June 2000, we entered into a stock purchase agreement with Enel pursuant to which Enel purchased 3.0 million newly issued shares of our common stock for \$130.7 million. The closing of this stock purchase occurred on September 11, 2000. At the closing, Enel had agreed that it would not, except under limited circumstances, sell or otherwise transfer any of those shares for a specified time period. That time period expired September 11, 2003. To our knowledge, Enel has not disposed of any of its 3.0 million shares. Under the terms of the stock purchase agreement, Enel has the right to nominate a member of our board of directors. A representative of Enel served on our board until March 14, 2012; no Enel representative is presently serving on our board.

At the time we entered into the stock purchase agreement with Enel, we also entered into a research and development agreement with an affiliate of Enel (the "R&D Agreement"). Under the terms of the R&D Agreement, we cooperated with Enel to integrate our LONWORKS technology into Enel's remote metering management project in Italy, the Contatore Elettronico. We completed the sale of our components and products for the deployment phase of the Contatore Elettronico project during 2005. During 2006, we supplied Enel and its designated manufacturers with limited spare parts for the Contatore Elettronico system. In October 2006, we entered into a new development and supply agreement and a software enhancement agreement with Enel. Under the development and supply agreement, Enel and its contract manufacturers purchase additional electronic components and finished goods from us. Under the software enhancement agreement, we provide software enhancements to Enel for use in its Contatore Elettronico system. The software enhancement agreement expired in December 2012 and the development and supply agreement expires in December 2015, although delivery of products and services can extend beyond those dates and the agreements may be extended under certain circumstances.

For the year ended December 31, 2012 and 2011, we recognized revenue from products and services sold to Enel and its designated manufacturers of approximately \$6.5 million and \$7.1 million, respectively. As of December 31, 2012, \$1.6 million of our total accounts receivable balance related to amounts owed by Enel and its designated

manufacturers. As of December 31, 2011, none of our total accounts receivable balance related to amounts owed by Enel and its designated manufacturers.

Table of Contents

RECENTLY ISSUED ACCOUNTING STANDARDS

There have been no new recent accounting pronouncements or changes in accounting pronouncements during the year ended December 31, 2012, that are of significance, or potential significance, to our company.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISKS

We have not experienced any material change in our exposure to interest rate and foreign currency risks since the date of our Annual Report on Form 10-K for the year ended December 31, 2012.

Market Risk Disclosures. The following discussion about our market risk disclosures involves forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements. We are exposed to market risk related to changes in interest rates and foreign currency exchange rates. We do not use derivative financial instruments to hedge these exposures.

Interest Rate Sensitivity. We maintain a short-term investment portfolio consisting mainly of fixed income securities with a weighted average maturity of less than one year. These available-for-sale securities are subject to interest rate risk and will fall in value if market interest rates increase. If market rates were to increase immediately and uniformly by 10% from levels at December 31, 2012 and December 31, 2011, the fair value of the portfolio would decline by an immaterial amount. We currently intend to hold our fixed income investments until maturity, and therefore we would not expect our operating results or cash flows to be affected to any significant degree by a sudden change in market interest rates. However, if necessary, we may sell short-term investments prior to maturity to meet the liquidity needs of the company.

Foreign Currency Exchange Risk. We have international subsidiaries and operations and are, therefore, subject to foreign currency rate exposure. To date, our exposure to exchange rate volatility has not been significant. If foreign exchange rates were to fluctuate by 10% from rates at December 31, 2012, and December 31, 2011, our financial position and results of operations would not be materially affected. However, we could experience a material impact in the future.

In addition, for our cost of goods sold, our products are generally assembled by CEMs in China, although our transactions with these vendors have historically been denominated in U.S. dollars. These vendors may require us to pay in their local currency, or demand a U.S. dollar price adjustment or other payment to address a change in exchange rates, which would increase our cost to procure our products. This is particularly a risk in China, where any future revaluations of the Chinese currency against the U.S. dollar could result in significant cost increases.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Financial Statements and Supplementary Data required by this item are set forth in Item 6 and at the pages indicated in Item 15(a).

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

None.

ITEM 9A. CONTROLS AND PROCEDURES

a. Evaluation of Effectiveness of Disclosure Controls and Procedures

We have designed our disclosure controls and procedures to ensure that information we are required to disclose in reports that we file or submit under the Securities and Exchange Act of 1934 is accumulated and communicated to our management, including our principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure, and that such information is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms. As of the end of the period covered by this Annual Report on Form 10-K, under the supervision of our Chief Executive Officer and our Chief Financial Officer, we evaluated the effectiveness of our disclosure controls and procedures, as such terms are defined in Rule 13a-15(e) and Rule 15d-15(e) under the Securities and Exchange Act of 1934. Based on this evaluation, our Chief Executive Officer and our Chief Financial Officer have concluded that our disclosure controls and procedures were effective as of December 31, 2012.

Table of Contents

b. Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934). 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. Our internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Under the supervision and with the participation of our management, including our Chief Executive Officer and our Chief Financial Officer, we conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2012. This evaluation was based on the framework in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on our evaluation under the framework in Internal Control - Integrated Framework, our management concluded that our internal control over financial reporting is effective at this reasonable assurance level as of December 31, 2012. The Company's independent registered public accounting firm, KPMG LLP, has issued an attestation report on the Company's internal control over financial reporting. The report on the audit of internal control over financial reporting appears on page 52 of this Form 10-K.

c. Changes in Internal Control Over Financial Reporting

There were no changes in our internal controls over financial reporting (as defined in Rule 13a-15(e) of the Exchange Act) that occurred during the quarter ended December 31, 2012, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

Echelon is scheduled to hold its 2013 annual meeting of stockholders on May 21, 2013. The meeting will commence at 10:00 a.m., PDT, and is scheduled to be held at our corporate headquarters located at 570 Meridian Avenue, San Jose, California 95126. The date of record for the annual meeting is March 27, 2013.

Table of Contents

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information regarding our executive officers required by this Item is incorporated herein by reference from the section titled “Executive Officers of Registrant” in Part I of this annual report on Form 10-K. The remaining information required by this Item is incorporated herein by reference from our Proxy Statement for the 2013 Annual Meeting of Stockholders (the “2013 Proxy Statement”), which will be filed with the Securities and Exchange Commission no later than 120 days after the end of our fiscal year ended December 31, 2012.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated herein by reference from our 2013 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 our 2013 Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

The information required by this Item is incorporated herein by reference from our 2013 Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item is incorporated herein by reference from our 2013 Proxy Statement.

Table of Contents

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

(a) The following documents are filed as part of this Form:

1. Financial Statements

	Page
Report of Independent Registered Public Accounting Firm	52
Consolidated Balance Sheets	53
Consolidated Statements of Operations	54
Consolidated Statements of Comprehensive Loss	55
Consolidated Statements of Stockholders' Equity	56
Consolidated Statements of Cash Flows	57
Notes to Consolidated Financial Statements	58
2. Financial Statement Schedule	

See Note 14 in Notes to Consolidated Financial Statements	80
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All other schedules have been omitted because they are not applicable or the required information is included in the Consolidated Financial Statements or the Notes thereto.

3. Exhibits

Item 601 of Regulation S-K requires the following exhibits listed below. Each management contract or compensatory plan or arrangement required to be filed as an exhibit to this Form 10-K has been identified.

Exhibit No.	Description of Document
3.2 ⁽¹⁾	Amended and Restated Certificate of Incorporation of Registrant.
3.3 ⁽²⁾	Amended and Restated Bylaws of Registrant.
4.1 ⁽³⁾	Form of Registrant's Common Stock Certificate.
4.2 ⁽⁴⁾	Second Amended and Restated Modification Agreement dated May 15, 1997.
10.1 ⁽⁴⁾	Form of Indemnification Agreement entered into by Registrant with each of its directors and executive officers.
10.2 ⁽¹⁰⁾	1997 Stock Plan (as amended and restated March 26, 2004)
10.2(a) ⁽⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement with early exercise feature
10.2(b) ⁽⁵⁾⁺	Form of 1997 Stock Plan Nonqualified Stock Option Agreement with early exercise feature
10.2(c) ⁽⁶⁾⁺	Form of 1997 Stock Plan Nonqualified Stock Option Agreement
10.2(d) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement (re: non-standard vesting schedule)
10.2(e) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for non-US employees
10.2(f) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement with performance based vesting criteria for non-US employees
10.2(g) ⁽⁵⁾⁺	Form of 1997 Stock Plan Stock Appreciation Right Agreement for non-US employees
10.2(h) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement with performance based vesting criteria
10.2(i) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement
10.2(j) ⁽¹³⁾⁺	Form of 1997 Stock Plan Stock Appreciation Right Agreement
10.2(k) ⁽⁷⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for US-based corporate officers
10.2(l) ⁽¹¹⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for non US-based corporate officers
10.2(m) ⁽⁷⁾⁺	Form of 1997 Stock Plan Stock Appreciation Right Agreement for US-based corporate officers
10.2(n) ⁽⁷⁾⁺	Form of 1997 Stock Plan Stock Appreciation Right Agreement for non US-based corporate officers
10.2(o) ⁽¹²⁾⁺	Form of 1997 Stock Plan Restricted Stock Award Agreement

Table of Contents

10.2(p) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement for U.S. Optionees (2012)
10.2(q) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement for U.S. Corporate Officers (2012)
10.2(r) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement for Optionees Outside the U.S. (2012)
10.2(s) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement for Corporate Officers Outside the U.S. (2012)
10.2(t) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement Appendix A for Optionees Outside the U.S. (2012)
10.2(u) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for Participants Outside the U.S. (2012)
10.2(v) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for Corporate Officers Outside the U.S. (2012)
10.2(w) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement Appendix A for Participants Outside the U.S. (2012)
10.2 ⁽¹⁵⁾⁺	1997 Stock Plan (as amended and restated August 18, 2010)
10.3 ⁽⁴⁾	1988 Stock Option Plan and forms of related agreements.
10.4 ⁽⁴⁾	Second Amended and Restated Modification Agreement dated May 15, 1997 (included in Exhibit 4.2).
10.5 ⁽⁴⁾	Form of International Distributor Agreement.
10.6 ⁽⁴⁾	Form of OEM License Agreement.
10.7 ⁽⁴⁾	Form of Software License Agreement.
10.8 ⁽⁴⁾	International Distributor Agreement between the Company and EBV Elektronik GmbH as of December 1, 1997.
10.9 ⁽⁸⁾	1998 Director Option Plan.
10.10 ⁽⁹⁾	Building 1 Lease Agreement dated December 30, 1999
10.11 ⁽⁹⁾	First Amendment to Building 1 Lease Agreement dated May 10, 2000
10.12 ⁽⁹⁾	Echelon Corporation Common Stock Purchase Agreement with ENEL S.p.A. dated June 30, 2000
10.13 ⁽⁹⁾	Second Amendment to Building 1 Lease Agreement dated September 22, 2000
10.14 ⁽⁹⁾	Building 2 Lease Agreement dated November 15, 2001
10.15 ⁽⁹⁾	Third Amendment to Building 1 Lease Agreement dated April 10, 2008
10.16 ⁽⁹⁾	First Amendment to Building 2 Lease Agreement dated April 10, 2008
10.17 ⁽¹⁴⁾	Form of Value Added Reseller Agreement
10.18	Assignment and Amendment dated April 29, 2011 between the Company and Avnet Europe Comm VA (assigning and modifying the International Distributor Agreement filed as Exhibit 10.8 to the Registration Statement on Form S-1 filed on June 1, 1998)
10.19+	Echelon Corporation Employment Agreement by and between Echelon Corporation and Ronald A. Sege dated August 18, 2010
10.20+	Echelon Corporation Employment letter with William R. Slakey dated September 6, 2011
21.1 ⁽³⁾	Subsidiaries of the Registrant.
23.1	Consent of KPMG LLP, Independent Registered Public Accounting Firm.
24.1 ⁽⁴⁾	Power of Attorney (see signature page).
31.1	Certificate of Echelon Corporation Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certificate of Echelon Corporation Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification by the Chief Executive Officer and the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase
101.DEF*	XBRL Taxonomy Extension Definition Linkbase
101.LAB*	XBRL Taxonomy Extension Label Linkbase

101.PRE* XBRL Taxonomy Extension Presentation Linkbase

* The financial information contained in these XBRL documents is unaudited and is furnished, not filed with the Securities and Exchange Commission.

50

Table of Contents

⁺ Indicates management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 14(c) of Form 10-K.

- (1) Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2000, filed on November 14, 2000.
- (2) Incorporated herein by reference to the Registrant's Current Report on Form 8-K dated August 16, 2007, filed on August 17, 2007.
- (3) Incorporated herein by reference to the Registrant's Registration Statement on Form S-1/A filed on July 9, 1998.
- (4) Incorporated herein by reference to the Registrant's Registration Statement on Form S-1 filed on June 1, 1998.
- (5) Incorporated herein by reference to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2006, filed on March 16, 2007.
- (6) Incorporated herein by reference to the Registrant's Current Report Form 8-K dated April 12, 2007, filed on April 18, 2007.
- (7) Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2008, filed on August 11, 2008.
- (8) Incorporated herein by reference to the Registrant's Registration Statement on Form S-8 filed on August 21, 2000.
- (9) Incorporated herein by reference to the Registrant's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2008, filed on March 11, 2010.
- (10) Incorporated herein by reference to the Registrant's Registration Statement on Form S-8 filed on June 1, 2005.
- (11) Incorporated herein by reference to the Registrant's Registration Statement on Form S-8 filed on August 6, 2010.
- (12) Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2010, filed on November 3, 2010
- (13) Incorporated herein by reference to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, filed on March 17, 2008
- (14) Incorporated herein by reference to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2009, filed on March 16, 2010
- (15) Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2012, filed on August 8, 2012

Table of Contents

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders

Echelon Corporation:

We have audited the accompanying consolidated balance sheets of Echelon Corporation and subsidiaries (the Company) as of December 31, 2012 and 2011, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2012. We also have audited the Company's internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for these consolidated financial statements, 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 included in Item 9A(b). Our responsibility is to express an opinion on these consolidated financial statements and an opinion on the Company's internal control over financial reporting based on our audits.

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

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

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Echelon Corporation and subsidiaries as of December 31, 2012 and 2011, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2012, in conformity with U.S. generally accepted accounting principles. Also in our opinion, Echelon Corporation and subsidiaries maintained, in all material respects, effective internal control over financial reporting as of December 31, 2012, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission.

/s/ KPMG LLP
Santa Clara, California
February 28, 2013

52

Table of Contents

ECHELON CORPORATION

CONSOLIDATED BALANCE SHEETS

(In thousands, except share and per share amounts)

	December 31, 2012	December 31, 2011
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$18,876	\$17,658
Short-term investments	42,979	40,998
Accounts receivable, net of allowances of \$859 in 2012 and \$1,801 in 2011	15,725	35,215
Inventories	11,729	11,125
Deferred cost of goods sold	846	6,536
Other current assets	2,662	4,044
Total current assets	92,817	115,576
Property and equipment, net	21,777	27,201
Goodwill	8,276	8,235
Other long term assets	713	693
Total assets	\$123,583	\$151,705
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	\$8,551	\$18,313
Accrued liabilities	4,637	7,755
Current portion of lease financing obligations	2,056	1,870
Deferred revenues	4,912	12,716
Total current liabilities	20,156	40,654
LONG-TERM LIABILITIES:		
Lease financing obligations, excluding current portion	18,185	20,193
Other long-term liabilities	1,447	1,750
Total long-term liabilities	19,632	21,943
STOCKHOLDERS' EQUITY:		
Preferred stock, \$0.01 par value:		
Authorized - 5,000,000 shares; none outstanding	—	—
Common stock, \$0.01 par value:		
Authorized - 100,000,000 shares		
Issued - 46,270,136 in 2012 and 45,740,637 shares in 2011, Outstanding - 43,050,952 in 2012 and 42,521,453 shares in 2011	463	457
Additional paid-in capital	352,589	346,952
Treasury stock (3,219,184 shares in 2012 and 2011)	(28,130)	(28,130)
Accumulated other comprehensive income	509	244
Accumulated deficit	(243,233)	(230,415)
Total Echelon Corporation stockholders' equity	82,198	89,108
Non controlling interest in subsidiary	1,597	—
Total stockholders' equity	83,795	89,108

Total liabilities and stockholders' equity	\$ 123,583	\$ 151,705
See accompanying notes to consolidated financial statements.		

Table of Contents

ECHELON CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

(In thousands, except per share amounts)

	Year ended 31 December		
	2012	2011	2010
REVENUES:			
Product	\$ 129,475	\$ 152,699	\$ 107,441
Service	4,542	3,788	3,596
Total revenues ⁽¹⁾	134,017	156,487	111,037
COST OF REVENUES:			
Cost of product	75,391	87,063	59,722
Cost of service	2,171	2,262	2,464
Total cost of revenues	77,562	89,325	62,186
Gross profit	56,455	67,162	48,851
OPERATING EXPENSES:			
Product development	30,009	34,755	34,762
Sales and marketing	21,460	25,719	25,062
General and administrative	15,050	17,897	17,647
Restructuring charges	1,176	—	1,212
Total operating expenses	67,695	78,371	78,683
Loss from operations	(11,240)	) (11,209	) (29,832)
Interest and other income (expense), net	(362)	) 6	393
Interest expense on lease financing obligations	(1,360)	) (1,468	) (1,572)
Loss before provision for income taxes	(12,962)	) (12,671	) (31,011)
Income tax expense	219	329	301
Net loss	(13,181)	) (13,000	) (31,312)
Net loss attributable to non controlling interest	363	—	—
Net loss attributable to Echelon Corporation	\$ (12,818	) \$ (13,000	) \$ (31,312)
Stockholders			
Net loss per share:			
Basic	\$ (0.30	) \$ (0.31	) \$ (0.76)
Diluted	\$ (0.30	) \$ (0.31	) \$ (0.76)
Shares used in computing net loss per share:			
Basic	42,650	42,083	41,365
Diluted	42,650	42,083	41,365

¹ Includes related party amounts of \$6,458 in 2012, \$7,119 in 2011, and \$4,645 in 2010. See Note 12 for additional information on related party transactions.

See accompanying notes to consolidated financial statements.

Table of Contents

ECHELON CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(In thousands)

	Year ended 31 December			
	2012	2011	2010	
Net loss	\$(13,181	) \$(13,000	) \$(31,312	)
Other comprehensive income (loss), net of tax:				
Foreign currency translation adjustment	259	(302	) (500	)
Unrealized holding gain (loss) on available-for-sale securities	6	(15	) 15	
Total other comprehensive income (loss)	265	(317	) (485	)
Comprehensive loss	(12,916	) (13,317	) (31,797	)
Less: comprehensive loss attributable to non controlling interest	363	—	—	
Comprehensive loss attributable to Echelon Corporation Stockholders	\$(12,553	) \$(13,317	) \$(31,797	)

See accompanying notes to consolidated financial statements.

Table of Contents

ECHELON CORPORATION
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY
(In thousands)

	Echelon Corporation Shareholders				Additional Paid-in- capital	Accumulated Other Comprehensive Income (Loss)	Accumulated Deficit	Non Controlling Interest	Total
	Common Stock Shares	Amount	Treasury Stock Shares	Amount					
BALANCE AT DECEMBER 31, 2009	44,225	\$ 442	(3,219)	\$(28,130)	\$ 328,643	\$ 1,046	\$(186,103)	—	\$ 115,898
Exercise of stock options	1,647	16	—	—	12,516	—	—	—	12,532
Release of performance shares	723	7	—	—	(7	) —	—	—	—
Issuance of restricted stock	250	3	—	—	(3	) —	—	—	—
Stock received for payment of option exercise price	(1,291)	(13	) —	—	(11,946	) —	—	—	(11,959)
Stock received for payment of employee taxes on vesting of performance shares and upon exercise of stock options	(343	)(3	) —	—	(3,010	) —	—	—	(3,013)
Stock-based compensation	—	—	—	—	12,328	—	—	—	12,328
Foreign currency translation adjustment	—	—	—	—	—	(500	) —	—	(500)
Unrealized holding loss on available-for-sale securities	—	—	—	—	—	15	—	—	15
Net loss	—	—	—	—	—	—	(31,312	) —	(31,312)
BALANCE AT DECEMBER 31, 2010	45,211	\$ 452	(3,219)	\$(28,130)	\$ 338,521	\$ 561	\$(217,415)	—	\$ 93,989
Exercise of stock options	505	5	—	—	3,600	—	—	—	3,605
Release of performance shares	549	5	—	—	(5	) —	—	—	—
Stock received for payment of option exercise price	(281	)(3	) —	—	(2,657	) —	—	—	(2,660)
Stock received for payment of employee taxes on vesting of performance shares and upon exercise of	(243	)(2	) —	—	(2,156	) —	—	—	(2,158)

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stock options									
Stock-based compensation	—	—	—	—	9,649	—	—	—	9,649
Foreign currency translation adjustment	—	—	—	—	—	(302)	—	—	(302)
Unrealized holding loss on available-for-sale securities	—	—	—	—	—	(15)	—	—	(15)
Net loss	—	—	—	—	—	—	(13,000)	—	(13,000)
BALANCE AT DECEMBER 31, 2011	45,741	\$457	(3,219)	\$(28,130)	\$346,952	\$ 244	\$(230,415)	—	\$89,108
Release of performance shares	883	9	—	—	(9)	—	—	—	—
Stock received for payment of employee taxes on vesting of performance shares and upon exercise of stock options	(354)	(3)	—	—	(1,330)	—	—	—	(1,333)
Sale of subsidiary shares to non controlling interest	—	—	—	—	—	—	—	1,960	1,960
Stock-based compensation	—	—	—	—	6,976	—	—	—	6,976
Foreign currency translation adjustment	—	—	—	—	—	259	—	—	259
Unrealized holding gain on available-for-sale securities	—	—	—	—	—	6	—	—	6
Net loss	—	—	—	—	—	—	(12,818)	(363)	(13,181)
BALANCE AT DECEMBER 31, 2012	46,270	\$463	(3,219)	\$(28,130)	\$352,589	\$ 509	\$(243,233)	\$ 1,597	\$83,795
See accompanying notes to consolidated financial statements.									

Table of Contents

ECHELON CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands)

	Year ended 31 December		
	2012	2011	2010
CASH FLOWS PROVIDED BY (USED IN) OPERATING ACTIVITIES:			
Net loss including non-controlling interest	\$ (13,181)	\$ (13,000)	\$ (31,312)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Depreciation and amortization	6,580	5,921	6,721
Increase in (reduction of) allowance for doubtful accounts	40	25	28
Loss on disposal of fixed assets	22	128	5
Reduction of (increase in) accrued investment income	(6)	70	(31)
Stock-based compensation	6,976	9,649	12,328
Change in operating assets and liabilities:			
Accounts receivable	19,405	(10,121)	(3,580)
Inventories	(642)	(2,106)	2,006
Deferred cost of goods sold	5,686	(3,926)	608
Other current assets	1,386	164	(402)
Accounts payable	(9,669)	8,033	2,999
Accrued liabilities	(3,250)	1,185	1,795
Deferred revenues	(7,906)	3,806	(275)
Deferred rent	(43)	(53)	(75)
Net cash provided by (used in) operating activities	5,398	(225)	(9,185)
CASH FLOWS PROVIDED BY (USED IN) INVESTING ACTIVITIES:			
Purchases of available-for-sale short-term investments	(83,926)	(71,978)	(62,848)
Proceeds from maturities and sales of available for sale short term investments	81,957	87,850	68,847
Change in other long-term assets	(15)	(17)	27
Capital expenditures	(1,129)	(2,349)	(1,995)
Net cash provided by (used in) investing activities	(3,113)	13,506	4,031
CASH FLOWS PROVIDED BY (USED IN) FINANCING ACTIVITIES:			
Principal payments of lease financing obligations	(1,971)	(1,731)	(1,588)
Proceeds from exercise of stock options	—	945	615
Proceeds from non controlling interests	1,960	—	—
Repurchase of common stock from employees for payment of taxes on vesting of restricted stock units and upon exercise of stock options	(1,325)	(2,265)	(2,945)
Net cash used in financing activities	(1,336)	(3,051)	(3,918)
EFFECT OF EXCHANGE RATE CHANGES ON CASH	269	(247)	(459)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	1,218	9,983	(9,531)
CASH AND CASH EQUIVALENTS:			
Beginning of year	17,658	7,675	17,206
End of year	\$18,876	\$17,658	\$7,675
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:			
Cash paid for interest on lease financing obligations	\$1,350	\$1,459	\$1,564
Cash paid for income taxes	\$357	\$429	\$—
See accompanying notes to consolidated financial statements.			

Table of Contents

ECHELON CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. Significant Accounting Policies:

Operations

Echelon Corporation (the “Company”) was incorporated in California in February 1988 and was reincorporated in Delaware in January 1989. The Company is based in San Jose, California, and maintains offices in eleven foreign countries throughout Europe and Asia. Echelon develops, markets, and sells energy control networking solutions, a critical element of incorporating action-oriented intelligence into the utility grid, buildings, streetlights, and other energy devices - all components of the evolving smart grid, which encompasses everything from the power plant to the plug. Echelon's products can be used to make the management of electricity over the smart grid cost effective, reliable, survivable and instantaneous. The Company's products enable everyday devices - such as air conditioners, appliances, electricity meters, light switches, thermostats, and valves - to be made “smart” and inter-connected.

The Company's products are based on its LonWorks networking technology, an open standard for interoperable networked control. In a LonWorks control network, intelligent control devices, called nodes, communicate using the Company's LonWorks protocol. The Company's open standard, multi-application energy control networking platform powers energy-savings applications for the smart grid, smart cities and smart buildings that help customers save on their energy usage, reduce outage duration or prevent outages from happening entirely, reduce carbon footprint and more. The Company classifies its products and services into two primary categories: Systems, such as its smart metering solutions, which are targeted for use by utilities and that were previously referred to as Utility products and services; and Sub-systems that include components, control nodes and development software, which are sold typically to OEMs who build them into their smart grid, smart cities and smart buildings solutions. Revenues from the Company's Sub-systems products and services were previously referred to as Commercial and Enel Project revenues. The Company sells its products and services directly or through its partners around the world to the building, industrial, transportation, utility/home and other automation markets.

Basis of Presentation

The consolidated financial statements include the accounts of the Company, its wholly-owned subsidiaries, and a subsidiary in which it has a controlling interest (collectively referred to as the “Company”). The Company reports noncontrolling interests in consolidated entities as a component of equity separate from the Company's equity. All material inter-company transactions between and among the Company and its consolidated subsidiaries and other consolidated entities have been eliminated in consolidation.

Risks and Uncertainties

The Company's operations and performance depend significantly on worldwide economic conditions and their impact on purchases of the Company's products, as well as the ability of suppliers to provide the Company with products and services in a timely manner. The impact of any of the matters described below could have an adverse effect on the Company's business, results of operations and financial condition.

The Company's sales are currently concentrated with a relatively small group of customers, as approximately 59.6% of net revenues for the year ended December 31, 2012 were derived from four customers. Customers in any of the Company's target market sectors may experience unexpected reductions in demand for their products and consequently reduce their purchases from the Company, resulting in either the loss of a significant customer or a notable decrease in the level of sales to a significant customer. In addition, if any of these customers are unable to obtain the necessary capital to operate their business, they may be unable to satisfy their payment obligations to the Company.

The Company utilizes third-party contract electronic manufacturers to manufacture, assemble, and test its products. As a result of current credit market conditions, if any of these third-parties were unable to obtain the necessary capital to operate their business, they may be unable to provide the Company with timely services or to make timely deliveries of products.

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Due to the continuing worldwide economic situation, coupled with the fact that the Company's Systems customers generally procure products that have been customized to meet their requirements, the Company has limited visibility into ultimate product demand, which makes sales forecasting more difficult. As a result, anticipated demand may not materialize, which could subject the Company to increased levels of excess and obsolete inventories.

From time to time, the Company has experienced shortages or interruptions in supply for certain products or components used in the manufacture of the Company's products that have been or will be discontinued. In order to ensure an adequate supply of these items, the Company has occasionally purchased quantities of these items that are in excess of the

Table of Contents

Company's then current estimate of short-term requirements. For example, to ensure supply, the Company procured a substantial quantity of a certain component used in one of its Systems products. If the long-term requirements do not materialize as originally expected, or if the Company develops alternative solutions that no longer employ these items and the Company is not able to dispose of these excess products or components, the Company could be subject to increased levels of excess and obsolete inventories.

Use of Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States of America requires management to make judgments, assumptions, and estimates that affect amounts reported in the Consolidated Financial Statements and accompanying notes. Significant estimates and judgments are used for revenue recognition, performance-based equity compensation, inventory valuation, allowance for warranty costs, and other loss contingencies. In order to determine the carrying values of assets and liabilities that are not readily apparent from other sources, the Company bases its estimates and assumptions on current facts, historical experience, and various other factors that it believes to be reasonable under the circumstances. Actual results experienced by the Company may differ materially from management's estimates.

Recently Issued Accounting Standards

In June 2011, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2011-05, Comprehensive Income (ASC Topic 220) — Presentation of Comprehensive Income. The amendments from this update will result in more converged guidance on how comprehensive income is presented under U.S. GAAP and International Financial Reporting Standards ("IFRS"). With this update to ASC 220, an entity has the option to present the total of comprehensive income, the components of net income, and the components of other comprehensive income either in a single continuous statement of comprehensive income or in two separate but consecutive statements. In either option, an entity is required to present each component of net income along with total net income, each component of other comprehensive income along with a total for other comprehensive income, and a total amount for comprehensive income. The amendments in this update do not change the items that must be reported in other comprehensive income or when an item of other comprehensive income must be reclassified to net income, nor do they affect how earnings per share is calculated or presented. The amended guidance also requires presentation of adjustments for items that are reclassified from other comprehensive income to net income in the statement where the components of net income and the components of other comprehensive income are presented. The amendments in this ASU should be applied retrospectively. For public entities, the amendments are effective for fiscal years, and interim periods within those years, beginning after December 15, 2011. In December 2011, the FASB decided to defer the requirement to present reclassifications of other comprehensive income on the face of the income statement. The Company's adoption of this guidance as of January 1, 2012 did not have a material impact on its consolidated financial position, results of operations or cash flows.

Revenue Recognition

The Company's revenues are derived from the sale and license of its products and to a lesser extent, from fees associated with training, technical support, and custom software design services offered to its customers. Product revenues consist of revenues from hardware sales and software licensing arrangements. Service revenues consist of product technical support (including software post-contract support services), training, and custom software development services.

The Company recognizes revenue when persuasive evidence of an arrangement exists, delivery to the customer's carrier (and acceptance, as applicable) has occurred, the sales price is fixed or determinable, collectability is probable, and there are no post-delivery obligations. For non-distributor hardware sales, including sales to third party manufacturers, these criteria are generally met at the time of delivery to the customer's carrier. However, for arrangements that contain contractual acceptance provisions, revenue recognition may be delayed until acceptance by the customer or the acceptance provisions lapse unless the Company can objectively demonstrate that the contractual acceptance criteria have been satisfied, which is generally accomplished by establishing a history of acceptance for the same or similar products. For sales made to the Company's distributor partners, revenue recognition criteria are

generally met at the time the distributor sells the products through to its end-use customer. Service revenue is recognized as the training services are performed, or ratably over the term of the support period.

The Company accounts for the rights of return, price protection, rebates, and other sales incentives offered to distributors of its products as a reduction in revenue. With the exception of sales to distributors, the Company's customers are generally not entitled to return products for a refund. For sales to distributors, due to contractual rights of return and other factors that impact our ability to make a reasonable estimate of future returns and other sales incentives, revenues are not recognized until the distributor has shipped its products to the end customer.

Table of Contents

The Company's multiple deliverable revenue arrangements are primarily related to sales of its Systems products, which may include, within a single arrangement, electricity meters, data concentrators and related hardware (collectively, the "Hardware"); NES system software; Element Manager software; post-contract customer support ("PCS") for the NES system and Element Manager software; extended warranties for the Hardware; and, occasionally, specified enhancements or upgrades to software used in the NES system. For arrangements originating or materially modified after December 31, 2009, with the exception of the NES system software, each of these deliverables is considered a separate unit of accounting. The NES system software functions together with an electricity meter to deliver its essential functionality and any related software license fee is charged for on a per meter basis. Therefore, the NES system software and an electricity meter are combined and considered a single unit of accounting. The Element Manager software is not considered to be part of an electricity meter's essential functionality and, therefore, Element Manager software and any related PCS continues to be accounted for under industry specific software revenue recognition guidance. However, all other NES system deliverables are no longer within the scope of industry specific software revenue recognition guidance.

The Company allocates revenue to each element in a multiple-element arrangement based upon their relative selling price. The Company determines the selling price for each deliverable using vendor specific objective evidence ("VSOE") of selling price or third party evidence ("TPE") of selling price, if it exists. If neither VSOE nor TPE of selling price exists for a deliverable, the Company uses its best estimated selling price ("BESP") for that deliverable. Since the use of the residual method is eliminated under the new accounting standards, any discounts offered by the Company are allocated to each of the deliverables. Revenue allocated to each element is then recognized when the basic revenue recognition criteria is met for the respective element.

Consistent with its methodology under previous accounting guidance, if available, the Company determines VSOE of fair value for each element based on historical stand-alone sales to third parties or from the stated renewal rate for the elements contained in the initial contractual arrangement. The Company currently estimates selling prices for its PCS and extended warranties based on VSOE of fair value.

In many instances, the Company is not currently able to obtain VSOE of fair value for all deliverables in an arrangement with multiple elements. This may be due to the Company infrequently selling each element separately or not pricing products within a narrow range. When VSOE cannot be established, the Company attempts to estimate the selling price of each element based on TPE. TPE would consist of competitor prices for similar deliverables when sold separately. Generally, the Company's offerings contain significant differentiation such that the comparable pricing of products with similar functionality cannot be obtained. Furthermore, the Company is unable to reliably determine the stand-alone selling prices for similar products of its competitors. Therefore, the Company is typically not able to obtain TPE of selling price.

When the Company is unable to establish a selling price using VSOE or TPE, which is generally the case for the Hardware and certain specified enhancements or upgrades to the Company's NES software, the Company uses its BESP in determining the allocation of arrangement consideration. The objective of BESP is to determine the price at which the Company would transact a sale if the product or service were sold on a stand-alone basis. BESP is generally used for offerings that are not typically sold on a stand-alone basis or for new or highly customized offerings. The Company establishes pricing for its products and services by considering multiple factors including, but not limited to, geographies, market conditions, competitive landscape, internal costs, gross margin objectives, and industry pricing practices. The determination of pricing also includes consultation with and formal approval by the Company's management, taking into consideration the Company's go-to-market strategy. These pricing practices apply to both the Company's Hardware and software products.

Based on an analysis of pricing stated in contractual arrangements for its Hardware products in historical multiple-element transactions and, to a lesser extent, historical standalone transactions, the Company has concluded that it typically prices its Hardware within a narrow range of discounts when compared to the price listed on the Company's standard pricing grid for similar deliverables (i.e., similar configuration, volume, geography, etc.). Therefore, the Company has determined that, for its current Hardware for which VSOE or TPE is not available, the Company's BESP is generally comprised of prices based on a narrow range of discounts from pricing stated in its

pricing grid.

When establishing BESP for the Company's specified software enhancements or upgrades, the Company considers multiple factors including, but not limited to, the relative value of the features and functionality being delivered by the enhancement or upgrade as compared to the value of the software product to which the enhancement or upgrade relates, as well as the Company's pricing practices for NES system software PCS packages, which may include rights to the specified enhancements or upgrades.

The Company regularly reviews VSOE and has established a review process for TPE and BESP. The Company maintains internal controls over the establishment and updates of these estimates. There were no material impacts during the year ended

Table of Contents

December 31, 2012, resulting from changes in VSOE, TPE, or BESP, nor does the Company expect a material impact from such changes in the near term.

For multiple element arrangements that were entered into prior to January 1, 2010 and that included NES system and/or Element Manager software, the Company deferred the recognition of all revenue until all software required under the arrangement had been delivered to the customer. Once the software was delivered, the Company recognized revenues for the Hardware and software royalties upon customer acceptance of the Hardware based on a constant ratio of meters to data concentrators, which is determined on a contract-by-contract basis. To the extent actual deliveries of either meters or data concentrators was disproportionate to the expected overall ratio for any given arrangement, revenue for the excess meters or data concentrators was deferred until such time as additional deliveries of meters or data concentrators had occurred. Revenues for PCS on the NES system and Element Manager software, as well as for extended warranties on Systems Hardware products, were recognized ratably over the associated service period, which generally commenced upon the later of the delivery of all software, or the customer's acceptance of any given Hardware shipment.

As of December 31, 2012 and December 31, 2011, approximately \$2.2 million and \$9.4 million, respectively, of the Company's Systems revenue was deferred. This decrease in deferred revenues was primarily due to a change in the timing of revenue recognition for certain of the Company's Systems products, which resulted from the Company's ability to objectively demonstrate that the contractual acceptance criteria for these products was met at the time of delivery. All of the deferred revenue at December 31, 2012 and December 31, 2011 relates to revenue that is being accounted for under the revenue recognition guidance applicable to transactions entered into after December 31, 2009.

Deferred Revenue and Deferred Cost of Goods Sold

Deferred revenue consists substantially of amounts billed or payments received in advance of revenue recognition. Deferred cost of goods sold related to deferred product revenues includes direct product costs and applied overhead. Deferred cost of goods sold related to deferred service revenues includes direct labor costs and applied overhead. Once all revenue recognition criteria have been met, the deferred revenues and associated cost of goods sold are recognized.

Stock-Based Compensation

The Company accounts for employee stock-based payment transactions in which the Company receives employee services in exchange for equity instruments of the enterprise. Stock-based compensation cost for restricted stock units ("RSUs") granted to employees is measured based on the closing fair market value of the Company's common stock on the date of grant. Stock-based compensation cost for RSUs granted to non-employee consultants is measured based on the closing fair market value of the Company's common stock at the earlier of the date at which a commitment for performance by the consultant to earn the performance shares is reached, or the date at which the consultant's performance necessary for the performance shares to vest has been completed. Stock-based compensation cost for stock options and stock appreciation rights granted to employees ("SARs") is estimated at the grant date based on each award's fair-value as calculated using the Black-Scholes-Merton ("BSM") option-pricing model. The Company recognizes stock-based compensation cost as expense using the accelerated multiple-option approach over the requisite service period. Further information regarding stock-based compensation can be found in Note 6 of these Notes to Consolidated Financial Statements.

Cash and Cash Equivalents

The Company considers bank deposits, money market investments and all debt and equity securities with an original maturity of three months or less to be cash and cash equivalents.

Short-Term Investments

The Company classifies its investments in marketable debt securities as available-for-sale. Securities classified as available-for-sale are reported at fair value with the related unrealized holding gains and losses, net of tax, being included in accumulated other comprehensive income (loss).

Fair Value Measurements

The Company measures at fair value its cash equivalents and available-for-sale investments using a valuation hierarchy based on whether the inputs to those valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's own assumptions. These two types of inputs have created the following fair value hierarchy:

• Level 1 - Quoted prices for identical instruments in active markets;

• Level 2 - Quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active, and model-derived valuations in which all significant inputs and significant value drivers

Table of Contents

are observable in active markets; and

• Level 3 - Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

This hierarchy requires the Company to minimize the use of unobservable inputs and to use observable market data, if available, when estimating fair value. Other than cash and money market funds, the Company's only financial assets or liabilities required to be measured at fair value on a recurring basis at December 31, 2012, are fixed income available-for-sale securities. See Note 2 of these Notes to Consolidated Financial Statements for a summary of the input levels used in determining the fair value of the Company's cash equivalents and short-term investments as of December 31, 2012.

Inventories

Inventories are stated at the lower of cost (first in, first out) or market and include material, labor and manufacturing overhead. When required, provisions are made to reduce excess and obsolete inventories to their estimated net realizable value. Inventories consist of the following (in thousands):

	December 31, 2012	December 31, 2011
Purchased materials	\$2,081	\$2,346
Work in process	—	86
Finished goods	9,648	8,693
	\$11,729	\$11,125

Impairment of Long-Lived Assets Including Goodwill

The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate the carrying amount of an asset may not be recoverable. Recoverability is measured by comparing the asset's carrying value to the future undiscounted cash flows the asset is expected to generate. If long-lived assets are considered to be impaired, the impairment to be recognized equals the amount by which the carrying value of the asset exceeds its fair value. For the three years ended December 31, 2012, the Company recognized no impairments.

Costs in excess of the fair value of tangible and other identifiable intangible assets acquired and liabilities assumed in a purchase business combination are recorded as goodwill, which is tested for impairment using a two-step approach. The Company evaluates goodwill, at a minimum, on an annual basis during the first quarter and whenever events and changes in circumstances suggest that the carrying amount may not be recoverable. Impairment of goodwill is tested at the reporting unit level by comparing the reporting unit's carrying amount, including goodwill, to the fair value of the reporting unit. For purposes of this analysis, the Company considers itself as a single reporting unit. If the carrying amount of the reporting unit exceeds its fair value, goodwill is considered impaired and a second step is performed to measure the amount of impairment loss, if any. To date, the Company has recorded no impairment of goodwill.

Software Development Costs

For software to be sold, leased, or otherwise marketed, the Company capitalizes eligible computer software development costs upon the establishment of technological feasibility, which the Company has defined as completion of a working model. For the three years ended December 31, 2012, costs that were eligible for capitalization were insignificant and, thus, the Company has charged all software development costs to product development expense in the accompanying consolidated statements of operations.

Table of Contents

Accrued Liabilities

Accrued liabilities consist of the following (in thousands):

	December 31, 2012	December 31, 2011
Accrued payroll and related costs	\$3,237	\$5,673
Warranty reserve	419	823
Restructuring charges	149	49
Customer deposits	106	101
Accrued taxes	117	170
Other accrued liabilities	609	939
	\$4,637	\$7,755

Foreign Currency Translation

The functional currency of the Company's subsidiaries is the local currency. Accordingly, all assets and liabilities are translated into U.S. dollars at the current exchange rate as of the applicable balance sheet date. Revenues and expenses are translated at the average exchange rate prevailing during the period. Gains and losses resulting from the translation of the financial statements are included in accumulated other comprehensive income (loss).

Remeasurement adjustments for non-functional currency monetary assets and liabilities, including short-term intercompany balances, are included in other income (expense) in the accompanying consolidated statements of operations. Currently, the Company does not employ a foreign currency hedge program utilizing foreign currency exchange contracts as the foreign currency transactions and risks to date have not been significant.

Concentrations of Credit Risk and Suppliers

The Company's financial instruments consist of cash equivalents, short-term investments, accounts receivable, accounts payable, and lease financing obligations. The carrying value of the Company's financial instruments approximates fair value. Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of investments, which are classified as either cash equivalents or short-term investments, and trade receivables. With respect to its investments, the Company has an investment policy that limits the amount of credit exposure to any one financial institution and restricts placement of the Company's investments to financial institutions independently evaluated as highly creditworthy. With respect to its trade receivables, the Company performs ongoing credit evaluations of each of its customers' financial condition. For a customer whose credit worthiness does not meet the Company's minimum criteria, the Company may require partial or full payment prior to shipment. Alternatively, prior to shipment, customers may be required to provide the Company with an irrevocable letter of credit or arrange for some other form of coverage, such as a bank guarantee, to mitigate the risk of uncollectibility. Additionally, the Company establishes an allowance for doubtful accounts and sales return allowances based upon factors surrounding the credit risk of specific customers, historical trends, and other available information. With the exception of amounts owed to the Company on sales made to certain significant customers, concentrations of credit risk with respect to trade receivables are generally limited due to the Company's large number of customers and their dispersion across many different industries and geographies. As of December 31, 2012 and 2011, the percentage of the Company's total accounts receivable balance that were due from the following significant customers is as follows (refer to Note 6 "Significant Customers" for a discussion of revenues generated from the Company's significant customers):

	December 31, 2012	2011
Telvent Energia y Medioambiente SA	46.1%	46.2%
Duke Energy Corporation	—%	15.7%
Enel Distribuzione Spa	9.4%	—%
Eltel Networks A/S	1.3%	7.5%
EBV Elektronik GmbH / Avnet Europe Comm VA	9.2%	2.5%
Total	66.0%	71.9%

Table of Contents

For most of the Company's products requiring assembly, it relies on a limited number of contract electronic manufacturers, principally Jabil and TYCO. The Company also maintains manufacturing agreements with a limited number of semiconductor manufacturers for the production of key products, including those used in the Company's Systems products.

The Neuron Chip is an important component that the Company and its customers use in control network devices. In addition to those sold by the Company, the Neuron Chip is currently manufactured and distributed only by Cypress Semiconductor. Our agreement with Cypress Semiconductor is currently valid until the second quarter of 2014. Another semiconductor supplier, STMicroelectronics, manufactures the Company's power line smart transceiver products, for which the Company has no alternative source. In addition, the Company currently purchases several key products and components from sole or limited source suppliers with which it does not maintain signed agreements that would obligate them to supply to the Company on negotiated terms.

If any of the Company's key suppliers were to stop manufacturing the Company's products or cease supplying the Company with its key components, it could be expensive and time consuming to find a replacement. Also, as the Company's Systems business grows, it will be required to expand its business with its key suppliers or find additional sources of supply. There is no guarantee that the Company would be able to find acceptable alternatives or additional sources.

The failure of any key manufacturer to produce a sufficient number of products on time, at agreed quality levels, and fully compliant with the Company's product, assembly and test specifications could adversely affect the Company's revenues and gross profit, and could result in claims against the Company by its customers, which could harm the Company's results of operations and financial position.

(q) Computation of Basic and Diluted Net Loss Per Share

Basic net income (loss) per share is calculated by dividing net income (loss) attributable to Echelon Corporation Stockholders by the weighted average shares of common stock outstanding during the period. Diluted net income per share attributable to Echelon Corporation Stockholders is calculated by adjusting the weighted average number of outstanding shares assuming conversion of all potentially dilutive stock options and warrants under the treasury stock method

The following is a reconciliation of the numerators and denominators of the basic and diluted net loss per share computations for the years ended December 31, 2012, 2011 and 2010 (in thousands, except per share amounts):

	Year ended 31 December		
	2012	2011	2010
Net loss (Numerator):			
Net loss, basic & diluted	\$(12,818	) \$(13,000	) \$(31,312
Shares (Denominator):			
Weighted average common shares outstanding	42,650	42,083	41,365
Shares used in basic computation	42,650	42,083	41,365
Common shares issuable upon exercise of stock options (treasury stock method)	—	—	—
Shares used in diluted computation	42,650	42,083	41,365
Net loss per share:			
Basic	\$(0.30	) \$(0.31	) \$(0.76
Diluted	\$(0.30	) \$(0.31	) \$(0.76

For the years ended December 31, 2012, 2011 and 2010, the diluted net loss per share calculation is equivalent to the basic net loss per share calculation as there were no potentially dilutive stock options or RSUs due to the Company's net loss position. The number of stock options, stock appreciation rights, restricted stock units ("RSUs"), and restricted stock awards ("RSAs") excluded from this calculation for the years ended December 31, 2012, 2011 and 2010 was 5,868,929, 5,625,065 and 6,476,817 respectively.

Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are

Table of Contents

measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The Company takes a two-step approach to recognizing and measuring uncertain tax positions. The first step is to evaluate the tax position for recognition by determining if the weight of available evidence indicates that it is more likely than not that the tax position will be sustained on audit, including resolution of any related appeals or litigation processes. The second step is to measure the tax benefit as the largest amount that is more than 50% likely of being realized upon effective settlement. The Company re-evaluates its income tax positions on a quarterly basis to consider factors such as changes in facts or circumstances, changes in or interpretations of tax law, effectively settled issues under audit, and new audit activity. Such a change in recognition or measurement would result in recognition of a tax benefit or an additional charge to the tax provision. Interest and penalties on unrecognized tax benefits are classified as income tax expense.

Comprehensive Income (Loss)

Comprehensive loss for the Company consists of net loss plus the effect of unrealized holding gains or losses on investments classified as available-for-sale and foreign currency translation adjustments.

2. Financial Instruments

On a recurring basis, the Company measures certain of its financial assets, namely its cash equivalents and available-for-sale investments, at fair value. The Company does not have any financial liabilities measured at fair value on a recurring basis. The fair value of the Company's financial assets measured at fair value on a recurring basis was determined using the following inputs at December 31, 2012 (in thousands):

Fair Value Measurements at Reporting Date Using				
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
	Total	(Level 1)	(Level 2)	(Level 3)
Money market funds ⁽¹⁾	\$5,243	\$5,243	\$—	\$—
U.S. government securities ⁽²⁾	42,979	—	42,979	—
Total	\$48,222	\$5,243	\$42,979	\$—

The fair value of the Company's financial assets measured at fair value on a recurring basis was determined using the following inputs at December 31, 2011 (in thousands):

Fair Value Measurements at Reporting Date Using				
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable Inputs	Significant Unobservable Inputs
	Total	(Level 1)	(Level 2)	(Level 3)
Money market funds ⁽¹⁾	\$5,215	\$5,215	\$—	\$—
U.S. government securities ⁽²⁾	45,999	—	45,999	—
Total	\$51,214	\$5,215	\$45,999	\$—

⁽¹⁾ Included in cash and cash equivalents in the Company's consolidated balance sheets

⁽²⁾ Represents our portfolio of available for sale securities and is included in either cash and cash equivalents or short-term investments in the Company's consolidated balance sheets

Cash equivalents consist of either investments with remaining maturities of three months or less at the date of purchase, or money market funds for which the carrying amount is a reasonable estimate of fair value.

The Company's available-for-sale securities consist of U.S. government securities with a minimum and weighted average credit rating of A-1+. The Company values these securities based on pricing from pricing vendors, who may use quoted prices in active markets for identical assets (Level 1 inputs) or inputs other than quoted prices that are

observable either directly or

65

Table of Contents

indirectly (Level 2 inputs) in determining fair value. However, the Company classifies all of its fixed income available-for-sale securities as having Level 2 inputs. The valuation techniques used to measure the fair value of the Company's financial instruments having Level 2 inputs were derived from non-binding market consensus prices that are corroborated by observable market data, quoted market prices for similar instruments, or pricing models, such as discounted cash flow techniques. The Company's procedures include controls to ensure that appropriate fair values are recorded such as comparing prices obtained from multiple independent sources.

As of December 31, 2012, the Company's available-for-sale securities had contractual maturities from six to twelve months and an average remaining term to maturity of nine months. As of December 31, 2012, the amortized cost basis, aggregate fair value, and gross unrealized holding gains and losses of the Company's short-term investments by major security type were as follows (in thousands):

	Amortized Cost	Aggregate Fair Value	Unrealized Holding Gains	Unrealized Holding Losses
U.S. government and agency securities	\$42,971	\$42,979	\$8	\$—

The amortized cost basis, aggregate fair value and gross unrealized holding gains and losses for the Company's available-for-sale short-term investments, by major security type, were as follows as of December 31, 2011 (in thousands):

	Amortized Cost	Aggregate Fair Value	Unrealized Holding Gains	Unrealized Holding Losses
U.S. government securities	\$45,997	\$45,999	\$3	\$1

Market values were determined for each individual security in the investment portfolio. Any decline in value of these investments is primarily related to changes in interest rates and is considered to be temporary in nature. The Company reviews its investments on a regular basis to evaluate whether or not any have experienced an other-than-temporary decline in fair value. The cost of securities sold is based on the specific identification method and realized gains and losses are included in Interest and other income (expense), net

3. Property and Equipment

A summary of property and equipment, net as of December 31, 2012 and 2011 is as follows (in thousands):

	December 31, 2012	December 31, 2011
Buildings and improvements	\$37,356	\$37,356
Computer and other equipment	21,763	23,771
Software	4,159	4,942
Furniture and fixtures	2,728	2,698
Leasehold improvements	3,823	3,826
	69,829	72,593
Less: Accumulated depreciation and amortization	(48,052)	(45,392)
Property and equipment, net	\$21,777	\$27,201

Property and equipment are stated at cost. The cost of buildings and improvements for the Company's leased San Jose, California headquarters facilities, for which it is the "deemed owner" for accounting purposes only, includes both the costs paid for directly by the Company and the costs paid for by the builder (lessor) from the period commencing with the start of construction through the lease commencement date for each building. These "building assets" are reflected as "Buildings and Improvements" in the schedule above. Building improvements paid for by the Company subsequent to the lease commencement date of each building are reflected as "Leasehold Improvements" in the schedule above.

Effective June 2008, the building leases were amended, resulting in an extension of the lease term for both buildings through March 2020. As a result of the lease extensions, the lease financing obligations for each building were

increased based on the present value of the revised lease payments on the date of the extension, with a corresponding increase to the net carrying amount of the cost of the building assets (see further information below).

Table of Contents

Depreciation is provided using the straight-line method as follows:

- Building assets and leasehold improvements are depreciated over the shorter of the remaining lease term or estimated useful lives (see further information below);

- Computer equipment and related software, other equipment, and furniture and fixtures are depreciated over their estimated useful lives of two to five years; and

- Certain telecommunications equipment is depreciated over its estimated useful life of 10 years.

Accounting for buildings and improvements

In December 1999, the Company entered into a lease agreement with a real estate developer for its existing corporate headquarters in San Jose, California. In October 2000, the Company entered into a second lease agreement with the same real estate developer for an additional building at its headquarters site. These leases were scheduled to expire in 2011 and 2013, respectively.

Effective June 2008, the building leases were amended resulting in an extension of the lease term for both buildings through March 2020. The extended leases require minimum lease payments through March 2020 totaling approximately \$48.9 million. Both leases permit the Company to exercise an option to extend the respective lease for 2 sequential five-year terms. In addition, the amended leases eliminated the Company's requirement to provide the landlord with security deposits, which the Company had previously satisfied through the issuance of standby letters of credit ("LOCs").

The Company has historically accounted for the two buildings at its San Jose, California headquarters site under authoritative guidance pertaining to leases in which the Company is both involved in the construction of the lease assets and for which certain sale-leaseback criteria are not met. This results in the Company being the "deemed owner" of the two buildings for accounting purposes only. Accordingly, the leases associated with these facilities are accounted for as financing obligations.

For the December 1999 and October 2000 lease agreements, the Company initially recorded lease financing obligations of \$12.0 million and \$15.2 million, respectively, which corresponded to the building asset costs paid for by the lessor. As a result of the lease extension in June 2008, the Company increased the carrying amount of its lease financing obligations by approximately \$12.5 million to approximately \$27.6 million (an amount equal to the present value of the revised lease payments at the date of the lease extension), with a corresponding increase to the net carrying amount of the building assets. In addition, all of the accumulated depreciation on the building assets at the date of the lease extensions was eliminated with a corresponding decrease to the gross carrying amount of the building assets. As a result of the extension in lease terms, the Company also extended the estimated useful lives of the building assets and the leasehold improvements to equal the amended lease term.

For each of the years ended December 31, 2012, 2011, and 2010, the Company has recorded depreciation expense associated with the building assets of \$2.0 million. As of December 31, 2012 and 2011, the net book value of the building assets was \$14.6 million and \$16.6 million, respectively.

Under the lease agreements, a portion of the total lease payments is accounted for as an operating lease of land and recorded as expense on a straight-line basis over the term of the lease. The remaining portions of the monthly lease payments are considered to be payments of principal and interest on the lease financing obligations. For each of the years ended December 31, 2012, 2011, and 2010, land lease expense was \$0.7 million. For the years ended December 31, 2012, 2011, and 2010, principal reductions on the lease financing obligations were \$1.9 million, \$1.7 million and \$1.6 million, respectively; and interest expense was \$1.4 million, \$1.5 million, and \$1.6 million, respectively. See Note 8 for further information on commitments for future minimum lease payments associated with the lease financing obligations.

Table of Contents

4. Accumulated Other Comprehensive Income (Loss)

	Foreign currency translation adjustment (Amount in thousands)	Unrealized gain (loss) on available-for-sale securities (Amount in thousands)	Accumulated Other Comprehensive Income (Loss) (Amount in thousands)
Beginning balance at December 31, 2011	\$242	\$2	\$244
Current period change	259	6	265
Ending balance at December 31, 2012	\$501	\$8	\$509

5. Stockholders' Equity and Employee Stock Option Plans:

a) Preferred Stock

As of December 31, 2012, the Company was authorized to issue 5,000,000 shares of new \$0.01 par value preferred stock, of which none was outstanding.

(b) Common Stock

As of December 31, 2012, the Company was authorized to issue 100,000,000 shares of \$0.01 par value common stock, of which 43,050,952 were outstanding.

In April 2008, the Company's board of directors approved a stock repurchase program, which authorized the Company to repurchase up to 3.0 million shares of the Company's common stock. Since inception, the Company repurchased a total of 750,000 shares under the program at a cost of \$8.9 million. The stock repurchase program expired in April 2011.

(c) Stock Option Programs

The Company grants equity compensation awards under the 1997 Stock Plan (the "1997 Plan"). Prior to July 2008, the Company also issued options to certain members of its Board of Directors under the 1998 Director Option Plan (the "Director Option Plan"). A more detailed description of each plan can be found below.

Stock option and other equity compensation grants are designed to reward employees, officers, directors, and certain non-employee consultants for their long-term contribution to the Company, to align their interest with those of the Company's stockholders in creating stockholder value, and to provide incentives for them to remain with the Company. The number and frequency of equity compensation grants is based on competitive practices, operating results of the Company, and accounting regulations. Since the inception of the 1997 Plan, the Company has granted equity compensation awards to all of its employees.

Historically, the Company has issued new shares upon the exercise of stock options. However, treasury shares are also available for issuance, although the Company does not currently intend to use treasury shares for this purpose.

1997 Stock Plan

During 1997, the Company adopted the 1997 Stock Plan for employees, officers, directors, and non-employee consultants, which was amended and restated in May 2004. As of December 31, 2012, a total of 17,707,231 shares of Common Stock were reserved for issuance under the 1997 Plan. This plan includes annual increases on the first day of the Company's fiscal year (beginning in 2000) not to exceed the lesser of (i) 5,000,000 shares or (ii) 4% of the outstanding shares on such date. Incentive stock options to purchase shares of common stock may be granted at not less than 100% of the fair market value. Options granted prior to June 15, 2000 and after May 5, 2003, generally have a term of five years from the date of grant. Options granted June 15, 2000 through May 5, 2003, generally have a term of ten years. The exercise price of stock options granted under the 1997 Plan is determined by the Board of Directors (or a Committee of the Board of Directors), but will be at least equal to 100% of the fair market value per share of common stock on the date of grant (or at least 110% of such fair market value for an incentive stock option granted to a stockholder with greater than 10% voting power of all our stock), except that up to 10% of the aggregate number of shares reserved for issuance under the 1997 Plan (including shares that have been issued or

Table of Contents

are issuable in connection with options exercised or granted under the 1997 Plan) may have exercise prices that are from 0% to 100% of the fair market value of the common stock on the date of grant. Options generally vest ratably over four years.

The 1997 Plan also allows for the issuance of stock purchase rights and options that are immediately exercisable through execution of a restricted stock purchase agreement. Shares purchased pursuant to a stock purchase agreement generally vest ratably over four years. In the event of termination of employment, the Company, at its discretion, may repurchase unvested shares at a price equal to the original issuance price. In addition, the 1997 Plan allows for the issuance of stock appreciation rights ("SARs"), restricted stock awards ("RSAs"), and restricted stock units ("RSUs"). SARs are rights to receive, in cash or shares of our common stock, as designated on the grant date, the appreciation in fair market value of common stock between the exercise date and the date of grant. To date, the Company has only issued SARs that can be settled in shares of the Company's common stock. SARs may be granted alone or in tandem with options. The exercise price of a SAR will be at least equal to 100% of the fair market value per share of common stock on the date of grant. SARs issued by the Company generally vest in equal, annual installments over four years, and expire on the five year anniversary of the grant date. RSUs and RSAs are awards that result in a payment to a participant, generally in the form of an issuance of shares of the Company's common stock, at such time as specified performance goals or other vesting criteria are achieved or the awards otherwise vest. RSUs and RSAs issued by the Company generally vest in equal, annual installments over four years, although certain of these awards vest monthly over twelve months, or 100% after one or two years. In addition, certain of these RSU and RSA grants have additional financial-based performance requirements that must be met before vesting can occur. RSUs and RSAs with performance-based vesting conditions expire no later than the five year anniversary of the grant date if the performance criteria have not been met.

Table of Contents

(d) Stock Award Activity

The following table summarizes stock award activity under all plans for the years ended December 31, 2012, 2011, and 2010:

	Shares Available for Grant	Options Outstanding Number Outstanding	Weighted-Average Exercise Price Per Share
BALANCE AT DECEMBER 31, 2009	9,983,699	5,928,776	\$8.45
Options and stock appreciation rights granted	(342,900)	) 342,900	7.68
RSUs granted	(1,628,183)	) —	—
Options and stock appreciation rights cancelled	348,913	(348,913)	) 10.42
RSUs cancelled	168,298	—	—
Options exercised	—	(1,647,115)	) 7.61
Unissued shares returned to plan	1,260,465	—	—
1998 Directors Plan shares expired	(10,000)	) —	—
Additional shares reserved	1,640,230	—	—
BALANCE AT DECEMBER 31, 2010	11,420,522	4,275,648	\$8.55
Options and stock appreciation rights granted	(313,750)	) 313,750	8.26
RSUs granted	(1,381,070)	) —	—
Options and stock appreciation rights cancelled	981,365	(981,365)	) 8.64
RSUs cancelled	480,571	—	—
Options exercised	—	(504,561)	) 7.15
Unissued shares returned to plan	190,406	—	—
1998 Directors Plan shares expired	(10,000)	) —	—
Additional shares reserved	1,679,692	—	—
BALANCE AT DECEMBER 31, 2011	13,047,736	3,103,472	\$8.71
Options granted	(1,883,388)	) 1,883,388	3.21
RSUs granted	(700,987)	) —	—
Options and stock appreciation rights cancelled	1,047,545	(1,047,545)	) 8.73
RSUs cancelled	315,817	—	—
Options exercised	—	—	—
Unissued shares returned to plan	—	—	—
1998 Directors Plan shares expired	(60,000)	) —	—
Additional shares reserved	1,700,859	—	—
BALANCE AT DECEMBER 31, 2012	13,467,582	3,939,315	\$6.08

The total intrinsic value of options and SARs exercised during the years ended December 31, 2012, 2011, and 2010 was approximately \$0.0 million, \$1.2 million, and \$2.8 million, respectively. The intrinsic value is calculated as the difference between the market value on the date of exercise and the exercise price of the shares.

Table of Contents

The following table provides additional information regarding RSU and RSA activity for the years ended December 31, 2012, 2011, and 2010:

	Number Nonvested and Outstanding	Weighted-Average Grant Date Fair-Value
BALANCE AT DECEMBER 31, 2009	1,464,090	\$10.52
RSUs granted	1,628,183	8.02
RSUs vested and released	(722,806)	10.06
RSUs cancelled	(168,298)	9.76
BALANCE AT DECEMBER 31, 2010	2,201,169	\$8.88
RSUs and RSAs granted	1,381,070	8.74
RSUs vested and released	(580,075)	10.55
RSUs cancelled	(480,571)	8.96
BALANCE AT DECEMBER 31, 2011	2,521,593	\$8.40
RSUs granted	700,987	3.25
RSUs vested and released	(977,149)	8.48
RSUs cancelled	(315,817)	7.80
BALANCE AT DECEMBER 31, 2012	1,929,614	\$6.56

The fair value of each RSU and RSA granted to employees was estimated on the date of grant by multiplying the number of shares granted times the fair market value of the Company's stock on the grant date.

The total intrinsic value of RSUs and RSAs vested and released during the years ended December 31, 2012, 2011, and 2010 was approximately \$3.7 million, \$5.1 million, and \$6.2 million, respectively. The intrinsic value of vested and released RSUs and RSAs is calculated by multiplying the fair market value of the Company's stock on the vesting date by the number of shares vested. As of December 31, 2012, the number of RSUs and RSAs outstanding and expected to vest was 1,793,546, with a total intrinsic value of \$4.4 million. The intrinsic value of the outstanding and expected to vest RSUs and RSAs is calculated based on the market value of the Company's closing stock price of \$2.45 as of December 31, 2012, the last market trading day of 2012.

The following table provides additional information for significant ranges of outstanding and exercisable stock options and stock appreciation rights as of December 31, 2012:

Exercise Price Range	Number Outstanding	Weighted Average Remaining Contractual Life (in years)	Weighted Average Exercise Price per Share	Aggregate Intrinsic Value
2.51-2.57	11,400	9.88	\$2.57	—
3.17	1,662,084	9.39	3.17	—
3.40-7.46	601,775	4.73	5.97	—
7.47	499,059	1.37	7.47	—
7.69	414,401	0.96	7.69	—
7.89-10.62	454,450	2.03	9.43	—
11.33-13.32	279,396	0.94	12.79	—
13.85	6,750	1.78	13.85	—
15.45	1,000	0.27	15.45	—
18.55	9,000	0.03	18.55	—
Outstanding	3,939,315	5.29	\$6.08	—

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Vested and expected to vest	3,778,267	5.28	\$6.18	—
Exercisable	1,696,476	1.63	\$8.54	—

71

Table of Contents

The aggregate intrinsic value in the preceding table represents the total pretax intrinsic value, based on the Company's closing stock price of \$2.45 as of December 31, 2012, which would have been received by the option holders had all option holders exercised their options as of that date.

6. Stock-based Compensation

(a) Valuation of Options, SARs, and Performance Shares Granted

The Company has elected to use the BSM option-pricing model to estimate the fair value of stock options and SARs that it grants. The BSM model incorporates various assumptions including volatility, expected term of the option from the date of grant to the time of exercise, risk-free interest rates, and dividend yields. The weighted average fair value of options and SARs granted during the years ended December 31, 2012, 2011, and 2010, was \$1.85, \$4.05, and \$3.94, respectively, and was determined using the following weighted average assumptions:

	Year ended 31 December		
	2012	2011	2010
Expected dividend yield	—%	—%	—%
Risk-free interest rate	0.9%	1.2%	1.2%
Expected volatility	63.9%	64.2%	67.5%
Expected term (in years)	6.10	4.10	4.20

The expected dividend yield reflects the fact that the Company has not paid any dividends in the past and does not currently intend to pay dividends in the foreseeable future. The risk-free interest rate assumption is based on U.S. Treasury yields in effect at the time of grant for the expected term of the option. The expected volatility is based on both the historical volatility of the Company's common stock over the most recent period commensurate with the expected life of the option as well as on implied volatility calculated from the market traded options on the Company's stock. The expected term has been calculated by applying a Monte Carlo simulation model that incorporates the Company's historical data on post-vest exercise activity and employee termination behavior.

The grant date fair value of RSUs and RSAs granted to employees is determined by multiplying the fair market value of the Company's stock on the grant date times the number of RSUs and RSAs awarded. During 2011, the Company issued a limited number of performance shares to non-employee consultants. The final measurement date for these awards is determined at the earlier of the date at which a commitment for performance by the consultant to earn the performance shares is reached, or the date at which the consultant's performance necessary for the performance shares to vest has been completed. Between the date of issuance and the final measurement date, which is expected to be the date the consultants' performance is complete and the awards vest, the awards are remeasured based on the fair market value of the Company's stock at each reporting date. During the year ended December 31, 2012, awards granted to non-employee consultants and the related share-based payment expense was not significant.

(b) Equity Compensation Expense for RSUs and RSAs with Financial or other Performance-Based Vesting Requirements

As of December 31, 2012, there were 230,000 non-vested RSUs and RSAs that were subject to service-based vesting conditions as well as certain financial or other performance-based vesting requirements that must be achieved before vesting can occur. The following table contains pertinent information regarding these outstanding awards as of December 31, 2012 (in thousands except for number of awards granted):

Table of Contents

Grant Date	# of Awards Granted	Fair Value on Grant Date	Cumulative Expense Recognized	Unearned Compensation Expense	Latest Date Performance Condition Could be Met
August 2010	142,500	\$1,058	\$451	\$607	April 2015
April 2011	17,500	156	51	105	April 2015
May 2011	20,000	212	67	145	April 2015
November 2011	50,000	277	53	224	April 2015
Total	230,000	\$1,703	\$622	\$1,081	

Through December 31, 2012, cumulative compensation expense of \$622,000 associated with these 230,000 unvested RSUs and RSAs has been recognized. From the date of grant through June 30, 2012, the Company had believed it was probable that the associated performance requirements would be achieved and therefore recognized expense on these awards. During the third quarter of 2012 and as of December 31, 2012, the Company believes that the performance condition is no longer probable of achievement. However, the Company has not yet determined that the performance condition is improbable of achievement. Therefore, beginning in the third quarter of 2012, the Company has discontinued the recognition of compensation costs related to these awards. If, prior to the expiration of the RSUs and RSAs, the Company determines that the performance condition is again probable, compensation expense will once again be recognized. Alternatively, if the Company determines that the performance condition is improbable of achievement, the cumulative compensation expense of \$622,000 associated with these awards will be reversed.

c) Expense Allocation

Compensation expense for all share-based payment awards has been recognized using the accelerated multiple-option approach. As stock-based compensation expense recognized in the Consolidated Statements of Operations for the years ended December 31, 2012, 2011, and 2010 is based on awards ultimately expected to vest, it has been reduced for estimated forfeitures. Forfeitures are required to be estimated at the time of grant and revised, if necessary, in subsequent periods if actual forfeitures differ from those estimates. Forfeitures have been estimated based on historical experience.

As of December 31, 2012, total compensation cost related to non-vested stock options and other equity based awards not yet recognized was \$8.9 million, which is expected to be recognized over the next 20 months on a weighted-average basis.

The following table summarizes stock-based compensation expense for the years ended December 31, 2012, 2011, and 2010 and its allocation within the consolidated statements of operations (in thousands):

	Year ended 31 December,		
	2012	2011	2010
Cost of product	\$567	\$864	\$1,172
Cost of service	111	112	125
Stock based compensation expense included in cost of revenues	678	976	1,297
Product development	2,304	3,891	4,185
Sales and marketing	1,896	2,251	2,939
General and administrative	2,098	2,531	3,907
Stock based compensation expense included in operating expenses	\$6,298	\$8,673	\$11,031
Total stock based compensation expense related to stock options and share awards	\$6,976	\$9,649	\$12,328
Tax benefit	\$—	\$—	\$—
	\$6,976	\$9,649	\$12,328

Stock-based compensation expense related to stock options
and share awards, net of tax

As of December 31, 2012, approximately \$38,000 and \$3,000 of stock-based compensation expense was capitalized as part of the cost of inventory and deferred cost of goods sold, respectively. As of December 31, 2011, approximately \$38,000 and \$23,000 of stock-based compensation expense was capitalized as part of the cost of inventory and deferred cost of goods sold,

73

Table of Contents

respectively.

7. Significant Customers:

The Company markets its products and services throughout the world to original equipment manufacturers (OEMs) and systems integrators in the building, industrial, transportation, utility/home, and other automation markets. During the years ended December 31, 2012, 2011 and 2010, the Company had four customers that accounted for a significant portion of its revenues: EBV Elektronik GmbH and Avnet Europe Comm VA (“EBV/Avnet”), the Company’s primary distributors of its Sub-systems products in Europe, Duke Energy Corporation (“Duke”), a U.S. utility company; and Eltel Networks A/S (“Eltel”) and Telvent Energia y Medioambiente SA (“Telvent”), value added resellers of the Company’s Systems products. For the years ended December 31, 2012, 2011 and 2010 the percentage of the Company’s revenues attributable to sales made to these customers was as follows:

	Year ended 31 December			
	2012	2011	2010	
Telvent	29.7	% 15.7	% 2.8	%
Duke	13.7	% 27.2	% 6.3	%
Eltel	8.1	% 11.5	% 28.5	%
EBV/Avnet	8.1	% 9.5	% 12.8	%
Total	59.6	% 63.9	% 50.4	%

In April 2011, the Company’s distributor agreement with EBV was assigned from EBV to Avnet Europe Comm VA, a limited partnership organized under the laws of Belgium (“Avnet”). Each of EBV and Avnet are indirect subsidiaries of Avnet, Inc., a New York corporation, which is a distributor of electronic parts, enterprise computing and storage products and embedded subsystems. At the time of the assignment, the term of the distributor agreement was extended and will now expire in June 2014.

8. Goodwill

The carrying amount of goodwill as of December 31, 2012, 2011, and 2010 relates to three acquisitions, including ARIGO Software GmbH (“ARIGO”) in 2001, BeAtHome in 2002, and MTC in 2003. The goodwill acquired as part of the ARIGO transaction is valued in Euros, and is therefore subject to foreign currency translation gains and losses. The changes in the carrying amount of goodwill, net for the years ended December 31, 2012 and 2011 are as follows (in thousands):

	Amount
Balance as of December 31, 2010	\$8,316
Unrealized foreign currency translation loss	(81)
Balance as of December 31, 2011	8,235
Unrealized foreign currency translation loss	41
Balance as of December 31, 2012	\$8,276

9. Commitments and Contingencies:

(a) Lease Commitments

As discussed in Note 3, the Company accounts for the leases of its corporate headquarters facilities as lease financing obligations. As of December 31, 2012, the future minimum lease payments for the lease financing obligations were as follows (in thousands):

Table of Contents

2013	\$ 3,254	
2014	3,328	
2015	3,410	
2016	3,493	
2017	3,615	
2018 and thereafter	8,278	
Total payments	\$ 25,378	
Amount representing interest	(5,186	)
Present value of future minimum lease payments	\$ 20,192	
Lease financing obligations classified as current	\$ 2,056	
Lease financing obligations classified as long-term	\$ 18,136	

The Company also leases facilities under operating leases for its sales, marketing, and product development personnel located elsewhere within the United States and in several foreign countries throughout Europe and Asia, including a land lease for accounting purposes associated with the Company's corporate headquarters facilities. These operating leases expire on various dates through 2020, and in some instances are cancelable with advance notice. Lastly, the Company also leases certain equipment and, for some of its sales personnel, automobiles. These operating leases are generally less than five years in duration. As of December 31, 2012, future minimum lease payments under all operating leases, including \$5.6 million related to the land lease associated with the Company's corporate headquarters facilities (see Note 3), were as follows (in thousands):

2013	\$ 1,432
2014	1,236
2015	932
2016	886
2017	885
2018 and thereafter	1,725
Total payments	\$ 7,096

Rent expense for all operating leases was approximately \$1.7 million for 2012, \$1.9 million for 2011, and \$2.1 million for 2010. Although certain of the operating lease agreements provide for escalating rent payments over the term of the lease, rent expense under these agreements is recognized on a straight-line basis. As of December 31, 2012, the Company has accrued approximately \$251,000 of deferred rent related to these agreements, of which approximately \$36,000 is reflected in current liabilities while the remainder is reflected in other long-term liabilities in the accompanying consolidated balance sheet. As of December 31, 2011, the Company has accrued approximately \$294,000 of deferred rent related to these agreements, of which approximately \$44,000 is reflected in current liabilities while the remainder is reflected in other long-term liabilities in the accompanying consolidated balance sheet.

(b) Royalties

The Company has certain royalty commitments associated with the shipment and licensing of certain of its products. Royalty expense is generally based on a dollar amount per unit shipped or a percentage of the underlying revenue. Royalty expense, which is recorded as a component of cost of product revenues in the Company's consolidated statements of operations, was approximately \$508,000, \$532,000, and \$616,000 for the years ended December 31, 2012, 2011, and 2010, respectively.

The Company will continue to be obligated for royalty payments in the future associated with the shipment and licensing of certain of its products. The Company is currently unable to estimate the maximum amount of these future royalties. However, such amounts will continue to be dependent on the number of units shipped or the amount of revenue generated from these products.

(c) Guarantees

In the normal course of business, the Company provides indemnifications of varying scope to its customers against claims of intellectual property infringement made by third parties arising from the use of its products. Historically, costs related to

Table of Contents

these indemnification provisions have not been significant. However, the Company is unable to estimate the maximum potential impact of these indemnification provisions on its future results of operations.

As permitted under Delaware law, the Company has entered into agreements whereby it indemnifies its officers and directors for certain events or occurrences while the officer or director is, or was serving, at the Company's request in such capacity. The indemnification period covers all pertinent events and occurrences during the officer's or director's lifetime. The maximum potential amount of future payments the Company could be required to make under these indemnification agreements is unlimited. However, the Company has directors and officers insurance coverage that would enable it to recover a portion of any future amounts paid. The Company believes the estimated fair value of these indemnification agreements in excess of the applicable insurance coverage is minimal, if any.

(d) Taxes

The Company conducts operations in many tax jurisdictions throughout the world. In many of these jurisdictions, non-income based taxes such as property taxes, sales and use taxes, and value-added taxes are assessed on the Company's operations in that particular location. While the Company strives to ensure compliance with these various non-income based tax filing requirements, there have been instances where potential non-compliance exposures have been identified. In accordance with accounting principles generally accepted in the United States of America, the Company makes a provision for these exposures when it is both probable that a liability has been incurred and the amount of the exposure can be reasonably estimated. To date, such provisions have been immaterial, and the Company believes that, as of December 31, 2012, it has adequately provided for such contingencies. However, it is possible that the Company's results of operations, cash flows, and financial position could be harmed if one or more non-compliance tax exposures are asserted by any of the jurisdictions where the Company conducts its operations.

(e) Legal Actions

In April 2009, the Company received notice that the receiver for two companies that filed for the Italian law equivalent of bankruptcy protection in May 2004, Finmek Manufacturing SpA and Finmek Access SpA (collectively, the "Finmek Companies"), had filed a lawsuit under an Italian "claw back" law in Padua, Italy against the Company, seeking the return of approximately \$16.7 million in payments received by the Company in the ordinary course of business for components sold by the Company to the Finmek Companies prior to the bankruptcy filing. The Finmek Companies were among Enel's third party meters manufacturers, and from time to time through January 2004, the Company sold components to the Finmek Companies that were incorporated into the electricity meters that were manufactured by the Finmek Companies and sold to Enel SpA for the Enel Project. The Company continues to believe that the Italian claw back law is not applicable to the circumstances surrounding our transactions with the Finmek Companies and that the claims of the Finmek Companies' receiver are without merit. The Company has continued to defend the lawsuit as a result. However, it is possible that the Company, with the consent of its Board of Directors, or the receiver for the Finmek Companies' could decide to pursue settlement of this matter in order to avoid the risk of an adverse judgment, limit administrative inconvenience and curtail litigation costs. In that event, the Company would make a determination as to whether a loss associated with this action was considered probable or reasonably possible, and may be required to reserve an appropriate loss to cover an anticipated settlement.

From time to time, in the ordinary course of business, the Company may be subject to other legal proceedings, claims, investigations, and other proceedings, including claims of alleged infringement of third-party patents and other intellectual property rights, and commercial, employment, and other matters. In accordance with generally accepted accounting principles, the Company makes a provision for a liability when it is both probable that a liability has been incurred and the amount of the loss can be reasonably estimated. These provisions are reviewed at least quarterly and adjusted to reflect the impacts of negotiations, settlements, rulings, advice of legal counsel, and other information and events pertaining to a particular case. While the Company believes it has adequately provided for such contingencies as of December 31, 2012, the amounts of which were immaterial, it is possible that the Company's results of operations, cash flows, and financial position could be harmed by the resolution of any such outstanding claims.

Line of Credit

The Company maintains a \$10.0 million line of credit with its primary bank, which expires on July 1, 2013. The letter of credit contains certain financial covenants requiring the Company to maintain an overall minimum tangible net

worth level and to maintain a minimum level of liquid assets. As of December 31, 2012, the Company was in compliance with these covenants. As of December 31, 2012, the Company's primary bank has issued, against the line of credit, one standby letter of credit totaling \$113,000. Other than issuing standby letters of credit, the Company has never drawn against the line of credit, nor have amounts ever been drawn against the standby letters of credit issued by the bank.

Table of Contents

10. Income Taxes:

The provision for income taxes attributable to continuing operations is based upon income (loss) before income taxes from continuing operations as follows (in thousands):

	Year ended 31 December			
	2012	2011	2010	
Domestic	\$(13,614	) \$(13,782	) \$(31,730	)
Foreign	652	1,111	719	
	\$(12,962	) \$(12,671	) \$(31,011	)

The provision for income taxes consists of the following (in thousands):

	Year ended 31 December		
	2012	2011	2010
Federal:			
Current	\$—	\$—	\$—
Deferred	—	—	—
Total federal provision	—	—	—
State:			
Current	5	4	4
Deferred	—	—	—
Total state provision	5	4	4
Foreign:			
Current	214	325	297
Deferred	—	—	—
Total foreign provision	214	325	297
Total income tax expense (benefit)	\$219	\$329	\$301

The provision for income taxes differs from the amount estimated by applying the statutory Federal income tax rate to income before taxes as follows (in thousands):

	Year ended 31 December			
	2012	2011	2010	
Federal tax at statutory rate of 35%	\$(4,537	) \$(4,435	) \$(10,854	)
State taxes, net of federal benefit	5	3	2	
U.S.-Foreign rate differential	87	(46	) 42	
Change in Valuation Allowance	4,530	4,825	11,136	
Others	134	(18	) (25	)
Total income tax expense	\$219	\$329	\$301	

As of December 31, 2012 and 2011, a valuation allowance has been recorded against 100% of gross deferred tax assets as a result of uncertainties regarding the realization of the asset balance. As of December 31, 2012 and 2011, the Company had no significant deferred tax liabilities. The components of the net deferred income tax asset are as follows (in thousands):

Table of Contents

	Year ended 31 December	
	2012	2011
Net operating loss carry forwards	\$55,669	\$53,477
Tax credit carry forwards	24,826	19,902
Fixed and intangible assets	7,486	7,501
Capitalized research and development costs	58	37
Reserves and other cumulative temporary differences	20,910	22,878
Gross deferred income tax assets	108,949	103,795
Valuation allowance	(108,949	) (103,795
Net deferred income tax assets	\$—	\$—

As of December 31, 2012, part of the Company's valuation allowance on deferred tax assets pertains to certain tax credits and net operating loss carry forwards. In the future, we will reduce the valuation allowance associated with these credits and losses upon the earlier of the period in which we utilize them to reduce the amount of income tax we would otherwise be required to pay on our income tax returns, or when it becomes more likely than not that the deferred tax assets are realizable. In addition, the Internal Revenue Code of 1986, as amended, contains provisions that limit the net operating loss and credit carryforwards available for use in any given period upon the occurrence of certain events, including a significant change in ownership interests. The Company performed an analysis of the ownership changes in 2001. Since that time, some ownership changes may have occurred, which could cause certain of the Company's net operating loss and credit carryforwards to be limited in future periods.

As of December 31, 2012, the Company had net operating loss carryforwards of \$184.4 million for federal income tax reporting purposes and \$75.0 million for state income tax reporting purposes, which expire at various dates through 2031. Of these amounts, a significant portion represents federal and state tax deductions from stock-based compensation. The tax benefit from these deductions will be recorded as an adjustment to additional paid-in capital in the year in which the benefit is realized. In addition, as of December 31, 2012, the Company had approximately \$10.3 million and \$14.4 million of tax credit carryforwards for increased research expenditures for federal and California purposes, respectively. The federal research tax credits will expire at various dates if not utilized by 2032 and the state tax credit can be carried over indefinitely. In accordance with current Internal Revenue Code rules, federal net operating loss carryforwards must be utilized in full before federal research and development tax credits can be used to offset current tax liabilities. As a result, depending on the Company's future taxable income in any given year, some or all of the federal increased research tax credits, as well as portions of the Company's federal and state net operating loss carryforwards, may expire before being utilized.

Amounts held by foreign subsidiaries are generally subject to United States income taxation on repatriation to the United States. The Company currently intends to permanently reinvest its undistributed earnings from its foreign subsidiaries outside the United States and United States income taxes have not been provided on cumulative total earnings of \$9.7 million. It is not practicable to determine the income tax liability that might be incurred if these earnings were to be distributed.

The following is a rollforward of the Company's uncertain tax positions for the years ended December 31, 2012 and 2011 (in thousands):

	Year ended 31 December	
	2012	2011
Balance as of the beginning of the year	\$4,355	\$4,537
Tax positions related to current year:		
Additions	80	241
Reductions	—	—
Tax positions related to prior years:		
Additions	—	167
Reductions	(405	) —

Settlements	—	—	
Lapses in statute of limitations	(648	) (590	)
Balance as of the end of the year	\$3,382	\$4,355	

78

Table of Contents

Included in the balance of total unrecognized tax benefits at December 31, 2012 are potential benefits of \$670,000, which if recognized, would affect the effective rate on income from continuing operations.

On December 31, 2012, the Company had accrued interest and penalties related to the uncertain tax benefits of approximately \$140,000. During 2012, the Company decreased the prior year balance by \$71,000 due to both lapses in statute and change of methodology.

The Company is subject to taxation in the United States and various state and foreign jurisdictions. In the United States, the tax years from 1993 remain open to examination by federal and most state tax authorities due to certain net operating loss and credit carryforward positions. In the foreign jurisdictions, the number of tax years open to examination by local tax authorities ranges from three to six years.

On December 17, 2010, President Obama signed into law "The Tax Relief, Unemployment Reinsurance Reauthorization and Job Creation Act of 2010." Among many other tax initiatives, the new law extends the 50% bonus depreciation on eligible property through December 31, 2012 and allows for 100% bonus depreciation on eligible property from September 9, 2010 through December 31, 2011. In addition, the federal credit for increased research expenditures has been extended for two years retroactive to January 1, 2010. As the Company anticipates it will continue to be in a tax loss position for 2012, it will forego the bonus depreciation in its U.S. tax filings for the year ended December 31, 2012.

11. Warranty Reserves:

When evaluating the reserve for warranty costs, management takes into consideration the term of the warranty coverage, the quantity of product in the field that is currently under warranty, historical return rates, and historical costs of repair. In addition, certain other applicable factors, such as technical complexity, may also be taken into consideration when historical information is not yet available for recently introduced products. Estimated reserves for warranty costs are generally provided for when the associated revenue is recognized. In addition, additional warranty reserves may be established when the Company becomes aware of a specific warranty related problem, such as a product recall. Such additional warranty reserves are based on the Company's current estimate of the total out-of-pocket costs expected to be incurred to resolve the problem, including, but not limited to, costs to replace or repair the defective items and shipping costs. The reserve for warranty costs was \$519,000 as of December 31, 2012 and \$875,000 as of December 31, 2011. Of these amounts, \$419,000 and \$823,000 were included in Accrued Liabilities as of December 31, 2012 and 2011, respectively, while the remaining \$100,000 and \$52,000 were included in Other Long-Term Liabilities as of December 31, 2012 and 2011, respectively.

12. Related Parties:

The law firm of Wilson Sonsini Goodrich & Rosati, P.C. acts as principal outside counsel to the Company. Mr. Sonsini, a director of the Company, is a member of Wilson Sonsini Goodrich & Rosati, P.C.

In June 2000, the Company entered into a stock purchase agreement with Enel pursuant to which Enel purchased 3.0 million newly issued shares of its common stock for \$130.7 million. The closing of this stock purchase occurred on September 11, 2000. At the closing, Enel had agreed that it would not, except under limited circumstances, sell or otherwise transfer any of those shares for a specified time period. That time period expired September 11, 2003. To the Company's knowledge, Enel has disposed none of its 3.0 million shares. Under the terms of the stock purchase agreement, Enel has the right to nominate one member of the Company's board of directors. A representative of Enel served on the board until March 14, 2012; no Enel representative is presently on the board.

At the time the Company entered into the stock purchase agreement with Enel, it also entered into a research and development agreement with an affiliate of Enel (the "R&D Agreement"). Under the terms of the R&D Agreement, the Company cooperated with Enel to integrate its LONWORKS technology into Enel's remote metering management project in Italy, the Contatore Elettronico. The Company completed the sale of its components and products for the deployment phase of the Contatore Elettronico project during 2005. During 2006, the Company supplied Enel and its designated manufacturers with limited spare parts for the Contatore Elettronico system. In October 2006, the Company entered into a new development and supply agreement and a software enhancement agreement with Enel. Under the development and supply agreement, Enel and its contract manufacturers purchase additional electronic

components and finished goods from the Company. Under the software enhancement agreement, the Company provides software enhancements to Enel for use in its Contatore Elettronico system. The software enhancement agreement expired in December 2012 and the development and supply agreement expires

Table of Contents

in December 2015, although delivery of products and services can extend beyond those dates and the agreements may be extended under certain circumstances.

For the years ended December 31, 2012 and 2011, the Company recognized revenue from products and services sold to Enel and its designated manufacturers of approximately \$6.5 million and \$7.1 million, respectively. As of December 31, 2012, \$1.6 million of the Company's total accounts receivable balance related to amounts owed by Enel and its designated manufacturers. As of December 31, 2011, none of our total accounts receivable balance related to amounts owed by Enel and its designated manufacturers.

13. Restructuring

In December 2010, the Company recorded restructuring charges of approximately \$1.2 million related to termination benefits, of which \$49,000 remained accrued as of December 31, 2011. This remaining amount was paid to the remaining affected employee during the quarter ended June 30, 2012.

In May 2012, the Company undertook further cost cutting measures by initiating a headcount reduction of 42 full-time employees worldwide, to be terminated between May 2012 and March 2013. In connection with this restructuring plan, in 2012, the Company recorded restructuring charges of approximately \$1.2 million related to termination benefits for these personnel.

The following table sets forth a summary of restructuring activities related to the Company's May 2012 restructuring program (in thousands):

	January 1, 2012	Costs Incurred	Cash Payments	December 31, 2012
Termination benefits	\$—	\$1,176	\$1,027	\$149

Accrued restructuring charges as of December 31, 2012 comprise the remaining liability balance and are reflected in accrued liabilities on the Company's Consolidated Balance Sheet as of December 31, 2012. The Company expects to pay these accrued termination benefits prior to June 30, 2013.

14. Valuation and Qualifying Accounts (in thousands):

	Balance at Beginning of Period	Charged/ (Credited) to Revenues and Expenses	Write-Off of Previously Provided Accounts	Balance at End of Period
Year Ended December 31, 2012:				
Allowance for Doubtful Accounts	\$390	\$48	\$8	\$430
Allowance for Customer Returns and Sales Credits	\$1,411	\$4,265	\$5,247	\$429
Year Ended December 31, 2011:				
Allowance for Doubtful Accounts	\$361	\$30	\$1	\$390
Allowance for Customer Returns and Sales Credits	\$584	\$6,750	\$5,923	\$1,411
Year Ended December 31, 2010:				
Allowance for Doubtful Accounts	\$350	\$22	\$11	\$361
Allowance for Customer Returns and Sales Credits	\$827	\$5,396	\$5,639	\$584

15. Segment Disclosure:

Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing business

Table of Contents

performance. The Company's chief operating decision-making group is the Executive Staff, which is comprised of the Chief Executive Officer and his direct reports.

The Company operates in one principal industry segment, its reportable segment: the design, manufacture and sale of products for the controls network industry, and markets its products primarily to the smart grid, smart cities and smart buildings markets. The Company's products provide the infrastructure and support required to implement and deploy open, interoperable, control network solutions. Most of the Company's products either incorporate or operate with the Neuron® Chip and/or the LONWORKS protocol. The Company also provides a range of services to its customers that consist of technical support, training courses covering its LONWORKS network technology and products, and custom software development. Any given customer purchases a small subset of products and services that are appropriate for that customer's application.

The Company operates in three main geographic areas: the Americas; Europe, Middle East and Africa ("EMEA"); and Asia Pacific / Japan ("APJ"). Each geographic area provides products and services to the Company's customers located in the respective region. The Company's long-lived assets include property and equipment, goodwill, purchased technology, and deposits on its leased facilities. Long-lived assets are attributed to geographic areas based on the country where the assets are located. As of December 31, 2012 and December 31, 2011, long-lived assets of approximately \$27.7 million and \$33.2 million, respectively, were domiciled in the United States. Long-lived assets for all other locations are not material to the consolidated financial statements.

The Company has two primary product lines: Systems and Sub-systems. Systems revenue is primarily composed of sales of meters and data concentrators to system integrators or utilities. The Company previously referred to this as Utility revenue. Sub-systems revenue is principally composed of sales of components, software, and sub-system modules to utilities, building energy, or street lighting customers. This was previously reported as Commercial and Enel Project revenues. Summary revenue information by product line for the years ended December 31, 2012, 2011 and 2010 is as follows (in thousands):

	Year ended 31 December		
	2012	2011	2010
Systems	\$85,179	\$99,428	\$57,257
Sub-systems	48,838	57,059	53,780
Total	\$134,017	\$156,487	\$111,037

In North America, the Company sells its products primarily through a direct sales organization and select third-party electronics representatives. Outside North America, the Company sells its products through direct sales organizations in EMEA and APJ, value-added resellers, and local distributors. Revenues are attributed to geographic areas based on the country where the products are shipped to or the services are delivered. Summary revenue information by geography for the years ended December 31, 2012, 2011 and 2010 is as follows (in thousands):

	Year ended 31 December		
	2012	2011	2010
Americas			
United States	\$32,981	\$58,182	\$24,275
Other Americas	2,485	2,524	2,494
Total Americas	35,466	60,706	26,769
EMEA			
Finland	38,958	23,633	2,577
Germany	13,097	18,455	19,637
Denmark	10,939	17,959	31,680
Other EMEA	21,195	20,201	19,649
Total EMEA	84,189	80,248	73,543

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APJ	14,362	15,533	10,725
Total	\$134,017	\$156,487	\$111,037

For information regarding the Company's major customers, please refer to Note 7, Significant Customers.

81

Table of Contents

16. Joint Venture

On March 23, 2012, the Company entered into an agreement with Holley Metering Limited (“Holley Metering”), a designer and manufacturer of energy meters in China, to create a joint venture, Zhejiang Echelon-Holley Technology Co., Ltd. (“Echelon-Holley”). The joint venture is focusing on the development and sales of smart energy products for China and rest-of-world markets. The Company has a 51% ownership interest in the joint venture and exercises controlling influence. Therefore, Echelon-Holley’s accounts are included in the Company’s Consolidated Financial Statements as of December 31, 2012 and for the year then ended. Holley Metering’s interests in Echelon-Holley’s net assets are reported in the noncontrolling interest in subsidiary on the Consolidated Balance Sheet as of December 31, 2012. Net loss attributable to the noncontrolling interest in Echelon-Holley was \$363,000 during year ended December 31, 2012.

As of December 31, 2012, Echelon and Holley Metering had contributed in cash a total of approximately \$4,000,000 in Share Capital, as defined, to Echelon-Holley in proportion to their respective ownership interests.

17. Subsequent events

On February 12, 2013, the Company announced a restructuring action affecting approximately 40 employees whose employment will be terminated as part of an overall plan to reshape the Company for the future. The Company expects to incur severance and other related costs in conjunction with this action. Total charges are expected to include cash costs as well as charges or credits related to stock-based compensation expense, and may include facilities, lease termination, asset impairment and other charges. The Company estimates it will incur pre-tax cash charges of \$2.5 million to \$3.0 million for severance pay expenses and related cash expenditures, which does not include facilities, lease termination or other charges the Company may incur as part of this action. The Company expects to recognize these charges in the quarter ending March 31, 2013.

Table of Contents

18. SELECTED QUARTERLY FINANCIAL DATA (UNAUDITED):

The following tables set forth certain consolidated statement of operations data for each of the quarters in 2012 and 2011. This information has been derived from our quarterly unaudited consolidated financial statements. The quarterly unaudited consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements included in this report and include all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair presentation of such information when read in conjunction with our annual audited consolidated financial statements and notes appearing in this report. The operating results for any quarter do not necessarily indicate the results for any subsequent period or for the entire fiscal year.

	Three months ended							
	December 2012	September 2012	June 2012	March 2012	December 2011	September 2011	June 2011	March 2011
Consolidated Statement of Operations Data:								
Revenues:								
Product	\$22,088	\$28,056	\$39,845	\$39,486	\$39,484	\$43,010	\$42,526	\$27,679
Service	1,710	1,008	977	847	1,051	817	1,217	703
Total revenues	23,798	29,064	40,822	40,333	40,535	43,827	43,743	28,382
Cost of revenues:								
Cost of product	12,039	16,672	24,230	22,450	24,026	25,419	22,966	14,652
Cost of service	570	493	523	585	601	501	573	587
Total cost of revenues	12,609	17,165	24,753	23,035	24,627	25,920	23,539	15,239
Gross profit	11,189	11,899	16,069	17,298	15,908	17,907	20,204	13,143
Operating expenses:								
Product development	6,559	7,256	7,393	8,801	8,750	7,533	8,874	9,598
Sales and marketing	4,948	4,807	5,548	6,157	6,536	5,885	6,056	7,242
General and administrative	3,426	3,679	3,599	4,346	4,489	3,747	4,771	4,890
Restructuring charges	—	—	1,176	—	—	—	—	—
Total operating expenses	14,933	15,742	17,716	19,304	19,775	17,165	19,701	21,730
Income (loss) from operations	(3,744)	(3,843)	(1,647)	(2,006)	(3,867)	742	503	(8,587)
Interest and other income (expense), net	(168)	(184)	254	(264)	129	390	(153)	(360)
Interest expense on lease financing obligations	(329)	(336)	(344)	(351)	(357)	(363)	(371)	(377)
Income (loss) before provision for income taxes	(4,241)	(4,363)	(1,737)	(2,621)	(4,095)	769	(21)	(9,324)
Income tax expense (benefit)	71	57	144	(53)	100	114	120	(5)
Net income (loss)	(4,312)	(4,420)	(1,881)	(2,568)	(4,195)	655	(141)	(9,319)
Net loss attributable to non controlling interest	207	156	—	—	—	—	—	—
Net income (loss) attributable to Echelon Corporation stockholders	\$(4,105)	\$(4,264)	\$(1,881)	\$(2,568)	\$(4,195)	\$655	\$(141)	\$(9,319)
Income (loss) per share:								
Basic	\$(0.10)	\$(0.10)	\$(0.04)	\$(0.06)	\$(0.10)	\$0.02	\$0.00	\$(0.22)
Diluted	\$(0.10)	\$(0.10)	\$(0.04)	\$(0.06)	\$(0.10)	\$0.02	\$0.00	\$(0.22)
Shares used in net income (loss) per share calculation:								
Basic	42,905	42,806	42,560	42,323	42,290	42,232	42,038	41,783

Diluted	42,905	42,806	42,560	42,323	42,290	42,987	42,038	41,783
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Table of Contents

SIGNATURES

Pursuant to the requirements 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.

Date: February 28, 2013

ECHELON CORPORATION
By: /s/ William R. Slakey
William R. Slakey
Executive Vice President and Chief Financial Officer (Duly
Authorized Officer and Principal Financial Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Ronald Sege and William R. Slakey his true and lawful attorney-in-fact and agent, with full power of substitution and, for him and in his 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 the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent 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 he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his 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 ON BEHALF OF THE REGISTRANT AND IN THE CAPACITIES AND ON THE DATES INDICATED.

Signatures	Title	Date
/s/ Ronald Sege Ronald Sege	Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)	February 28, 2013
/s/ William R. Slakey William R. Slakey	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	February 28, 2013
/s/ C. Michael Marszewski C. Michael Marszewski	Vice President Corporate Controller (Principal Accounting Officer)	February 28, 2013
s/ Armas Clifford Markkula, Jr Armas Clifford Markkula, Jr.	Vice Chairman	February 25, 2013
/s/ Robert J. Finocchio, Jr. Robert J. Finocchio, Jr	Director	February 26, 2013
/s/ Robert R. Maxfield Robert R. Maxfield	Director	February 25, 2013
/s/ Richard M. Moley Richard M. Moley	Director	February 25, 2013

/s/ Larry W. Sonsini
Larry W. Sonsini

Director

February 25, 2013

Table of Contents

EXHIBIT INDEX

Exhibit No.	Description of Document
3.2 ⁽¹⁾	Amended and Restated Certificate of Incorporation of Registrant.
3.3 ⁽²⁾	Amended and Restated Bylaws of Registrant.
4.1 ⁽³⁾	Form of Registrant's Common Stock Certificate.
4.2 ⁽⁴⁾	Second Amended and Restated Modification Agreement dated May 15, 1997.
10.1 ⁽⁴⁾	Form of Indemnification Agreement entered into by Registrant with each of its directors and executive officers.
10.2 ⁽¹⁰⁾	1997 Stock Plan (as amended and restated March 26, 2004)
10.2(a) ⁽⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement with early exercise feature
10.2(b) ⁽⁵⁾⁺	Form of 1997 Stock Plan Nonqualified Stock Option Agreement with early exercise feature
10.2(c) ⁽⁶⁾⁺	Form of 1997 Stock Plan Nonqualified Stock Option Agreement
10.2(d) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement (re: non-standard vesting schedule)
10.2(e) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for non-US employees
10.2(f) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement with performance based vesting criteria for non-US employees
10.2(g) ⁽⁵⁾⁺	Form of 1997 Stock Plan Stock Appreciation Right Agreement for non-US employees
10.2(h) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement with performance based vesting criteria
10.2(i) ⁽⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement
10.2(j) ⁽¹³⁾⁺	Form of 1997 Stock Plan Stock Appreciation Right Agreement
10.2(k) ⁽⁷⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for US-based corporate officers
10.2(l) ⁽¹¹⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for non US-based corporate officers
10.2(m) ⁽⁷⁾⁺	Form of 1997 Stock Plan Stock Appreciation Right Agreement for US-based corporate officers
10.2(n) ⁽⁷⁾⁺	Form of 1997 Stock Plan Stock Appreciation Right Agreement for non US-based corporate officers
10.2(o) ⁽¹²⁾⁺	Form of 1997 Stock Plan Restricted Stock Award Agreement
10.2(p) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement for U.S. Optionees (2012)
10.2(q) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement for U.S. Corporate Officers (2012)
10.2(r) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement for Optionees Outside the U.S. (2012)
10.2(s) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement for Corporate Officers Outside the U.S. (2012)
10.2(t) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Stock Option Agreement Appendix A for Optionees Outside the U.S. (2012)
10.2(u) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for Participants Outside the U.S. (2012)
10.2(v) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement for Corporate Officers Outside the U.S. (2012)
10.2(w) ⁽¹⁵⁾⁺	Form of 1997 Stock Plan Performance Share Agreement Appendix A for Participants Outside the U.S. (2012)
10.2 ⁽¹⁵⁾⁺	1997 Stock Plan (as amended and restated August 18, 2010)
10.3 ⁽⁴⁾	1988 Stock Option Plan and forms of related agreements.
10.4 ⁽⁴⁾	Second Amended and Restated Modification Agreement dated May 15, 1997 (included in Exhibit 4.2).
10.5 ⁽⁴⁾	Form of International Distributor Agreement.
10.6 ⁽⁴⁾	Form of OEM License Agreement.
10.7 ⁽⁴⁾	Form of Software License Agreement.
10.8 ⁽⁴⁾	International Distributor Agreement between the Company and EBV Elektronik GmbH as of December 1, 1997.
10.9 ⁽⁸⁾	1998 Director Option Plan.
10.10 ⁽⁹⁾	Building 1 Lease Agreement dated December 30, 1999
10.11 ⁽⁹⁾	First Amendment to Building 1 Lease Agreement dated May 10, 2000
10.12 ⁽⁹⁾	Echelon Corporation Common Stock Purchase Agreement with ENEL S.p.A. dated June 30, 2000

10.13 ⁽⁹⁾ Second Amendment to Building 1 Lease Agreement dated September 22, 2000

85

Table of Contents

10.14 ⁽⁹⁾	Building 2 Lease Agreement dated November 15, 2001
10.15 ⁽⁹⁾	Third Amendment to Building 1 Lease Agreement dated April 10, 2008
10.16 ⁽⁹⁾	First Amendment to Building 2 Lease Agreement dated April 10, 2008
10.17 ⁽¹⁴⁾	Form of Value Added Reseller Agreement
10.18	Assignment and Amendment dated April 29, 2011 between the Company and Avnet Europe Comm
10.19+	VA (assigning and modifying the International Distributor Agreement filed as Exhibit 10.8 to the Registration Statement on Form S-1 filed on June 1, 1998)
10.20+	Echelon Corporation Employment Agreement by and between Echelon Corporation and Ronald A. Sege dated August 18, 2010
21.1 ⁽³⁾	Echelon Corporation Employment letter with William R. Slakey dated September 6, 2011
23.1	Subsidiaries of the Registrant.
24.1 ⁽⁴⁾	Consent of KPMG LLP, Independent Registered Public Accounting Firm.
31.1	Power of Attorney (see signature page).
31.2	Certificate of Echelon Corporation Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certificate of Echelon Corporation Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
101.INS*	Certification by the Chief Executive Officer and the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.SCH*	XBRL Instance Document
101.CAL*	XBRL Taxonomy Extension Schema
101.DEF*	XBRL Taxonomy Extension Calculation Linkbase
101.LAB*	XBRL Taxonomy Extension Definition Linkbase
101.PRE*	XBRL Taxonomy Extension Label Linkbase
	XBRL Taxonomy Extension Presentation Linkbase

* The financial information contained in these XBRL documents is unaudited and is furnished, not filed with the Securities and Exchange Commission.

+ Indicates management contract or compensatory plan or arrangement required to be filed as an exhibit pursuant to Item 14(c) of Form 10-K.

- (1) Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2000, filed on November 14, 2000.
- (2) Incorporated herein by reference to the Registrant's Current Report on Form 8-K dated August 16, 2007, filed on August 17, 2007.
- (3) Incorporated herein by reference to the Registrant's Registration Statement on Form S-1/A filed on July 9, 1998.
- (4) Incorporated herein by reference to the Registrant's Registration Statement on Form S-1 filed on June 1, 1998.
- (5) Incorporated herein by reference to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2006, filed on March 16, 2007.
- (6) Incorporated herein by reference to the Registrant's Current Report Form 8-K dated April 12, 2007, filed on April 18, 2007.
- (7) Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2008, filed on August 11, 2008.
- (8) Incorporated herein by reference to the Registrant's Registration Statement on Form S-8 filed on August 21, 2000.
- (9) Incorporated herein by reference to the Registrant's Annual Report on Form 10-K/A for the fiscal year ended December 31, 2008, filed on March 11, 2010.
- (10) Incorporated herein by reference to the Registrant's Registration Statement on Form S-8 filed on June 1, 2005.
- (11) Incorporated herein by reference to the Registrant's Registration Statement on Form S-8 filed on August 6, 2010.
- (12) Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2010, filed on November 3, 2010

- (13) Incorporated herein by reference to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2007, filed on March 17, 2008
- (14) Incorporated herein by reference to the Registrant's Annual Report on Form 10-K for the fiscal year ended December 31, 2009, filed on March 16, 2010

Table of Contents

- (15) Incorporated herein by reference to the Registrant's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2012, filed on August 8, 2012