

ECHELON CORP
Form 10-K
March 15, 2012
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 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, 2011

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

77-0203595
(I.R.S. Employer

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incorporation or organization)

Identification Number)

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)

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 Stock Market LLC

(The Nasdaq Global Market)

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 the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

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

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

Large accelerated filer Accelerated filer

Non-accelerated filer (do not check if a smaller reporting company) Smaller reporting company

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

As of June 30, 2011, the last business day of the registrant's most recently completed second fiscal quarter, there were 42,437,605 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 \$9.09 of such shares on the Nasdaq Global Market on June 30, 2011) was approximately \$293.6 million. Shares of the

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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 February 29, 2012, 42,529,936 shares of the registrant's common stock, \$.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 22, 2012 (Proxy Statement)	Part III

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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 or strategies regarding the future that are forward-looking. These statements include those discussed in Item 1, Business, including General, Markets, Products and Services, Product Development, Marketing, Competition, and Government Regulation in Item 1A, Risk Factors, in Item 2, Properties in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, including Critical Accounting Policies, Results of Operations, Off-Balance-Sheet Arrangements and Other Contractual Obligations, Liquidity and Capital Resources, Related Party Transactions, Recently Issued Accounting Standards, and elsewhere in this report. In this report, the words anticipate, believe, expect, intend, future, moving toward and 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 factors including, but not limited to, those set forth in the section entitled Risk Factors and elsewhere in this report. 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 electrically controlled device in the world. Today Echelon's technology platform is embedded in more than 100 million devices, 35 million homes, and 300,000 buildings.

Our platform powers energy-savings applications for the smart grid, smart cities and smart buildings that can help customers save on their energy usage, reduce outage duration or prevent outages from happening, reduce carbon footprint and more. 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.

In addition to the energy savings, efficiency and environmental benefits, our energy control networking platform will be important as the electric grid transitions from a centralized and predictable system to 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 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

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while enhancing safety and environmental comfort. Smart outdoor lighting is an initial application for cities moving to a smart cities infrastructure.

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

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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 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. Echelon's Control Operating System (COS) software unifies and works across the device, control node and enterprise tiers. At the device tier, devices such as load controllers, lighting ballasts, meters and thermostats, embed our Free Topology (FT) Power line (PL) smart transceivers enabling them to act as peers working together to collect data and take 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. Echelon's COS software enables these devices to 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. Often, at the physical layer, our devices and control nodes communicate using our power line communications (PLC) products, which are designed to provide enhanced capabilities such as the ability to measure power quality on the line and to dynamically map grid topologies. 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 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.

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. We have 106 patents related to our energy control networking solutions and there are more than 100 million smart devices enabled by our products deployed around the world. With our global headquarters in Silicon Valley in San Jose, California, engineering locations in the United States and Germany, 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.

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. Over 300,000 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.

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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.

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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 approximately two thirds of the energy used and 70 percent of all 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, generators, and/or outdoor lighting controllers. These components enable command, control, and monitoring of each light. They communicate with our SmartServer segment controller over existing power lines.

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.

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 either modernizing their electric grids, or building new smart 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 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

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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). ECNs 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.

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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, France, Germany, Hong Kong, Italy, Japan, the Netherlands, South Korea, and the United Kingdom.

Echelon focuses our sales resources covering these markets in two areas. We have a global sales team dedicated to working with large OEM customers such as Honeywell, Siemens, Philips, Trane and others to ensure a coordinated effort and maximize design in wins. The remainder of the sales force targets large sell with opportunities with our distribution, Value Added Reseller (VAR) and Systems Integrator (SI) partners for buildings, street lighting and other controls projects. This joint selling effort helps pull through sales from distributors so we can best serve current customers and efficiently target new growth opportunities. 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, 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. We are targeting other regional markets with our subsystems 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 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 companies that have specific skills outside our core expertise, such as low-cost technology or RF technologies. Our product investments also focus on designing, building and delivering software as a means of realizing value in smart energy systems.

Our total expenses for product development were \$34.8 million for 2011, \$34.8 million for 2010, and \$35.4 million for 2009. Included in these totals were stock-based compensation expenses of \$3.9 million, \$4.2 million, and \$5.7 million, for the years ended December 31, 2011, 2010, and 2009, 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.

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We anticipate that we will continue to commit substantial resources to product development in the future and, as a result, product development expenses may continue to increase over historical levels. 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. In 2012, we restructured our sales force to take advantage of what we see as the converging market opportunity in energy control networking applications. Under this new structure we have a single, integrated sales force responsible for all the products in our portfolio. We believe this approach increases our sales efficiency and enables us to better match the solutions we offer to the customer's requirements.

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.

Principal Customers

During the three years ended December 31, 2011, 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, 2011, 2010, and 2009, the percentages of our revenues attributable to sales made to these customers were as follows:

	December 31 2011	December 31 Year Ended December 31, 2010	December 31 2009
Duke	27.2%	6.3%	10.7%
Telvent	15.7%	2.8%	1.2%
Eltel	11.5%	28.5%	25.3%
EBV/Avnet	9.5%	12.8%	13.6%
Total	63.9%	50.4%	50.8%

Our international sales include both export sales and sales by international subsidiaries and accounted for 62.8% of our total revenues for 2011, 78.1% of our total revenues for 2010, and 74.9% of our total revenues for 2009.

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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, 2011 and 2010, long-lived assets of approximately \$33.2 million and \$37.0 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, 2011, 2010, and 2009 is as follows (in thousands):

	December 31	December 31	December 31
	Year Ended December 31,		
	2011	2010	2009
Americas	\$ 60,706	\$ 26,769	\$ 27,746
EMEA	80,248	73,543	65,656
APJ	15,533	10,725	9,936
Total	\$ 156,487	\$ 111,037	\$ 103,338

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 and Toshiba related to the Neuron[®] Chip. Toshiba declined to renew its Neuron Chip agreement with Echelon, which expired in January 2010, and ceased manufacturing Neuron Chips in 2011. 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, and with Cypress, On Semiconductor, and AMI Semiconductor for the production of certain other components we sell.

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, 2011, we had working capital, defined as current assets less current liabilities, of \$74.9 million, which was a decrease of approximately \$2.3 million compared to working capital of \$77.3 million as of December 31, 2010.

As of December 31, 2011, we had cash, cash equivalents, and short-term investments of \$58.7 million, which was a decrease of approximately \$6.0 million compared to a balance of \$64.6 million as of December 31, 2010. Cash used in operating activities in 2011 of \$225,000 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.

Competition

We believe the markets for our products are becoming more competitive and price competition is becoming more intense. We believe this is happening since sales opportunities are being adversely affected by 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:

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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.

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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. 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 29, 2012, we had received 106 United States patents, and had 6 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®, LONMARK, LonTalk®, LONWORKS, Neuron, LON, LonPoint®, LonUsers®, 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 29, 2012, we had 302 employees worldwide, of which 127 were in product development, 75 were in sales and marketing, 45 were in general and administrative, 43 were in operations, and 12 were in customer support and training. About 185 employees are located at our headquarters in California and 40 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. None of our employees is represented by a labor union. We have not experienced any work stoppages and we believe relations with our employees are good.

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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 54, 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 53, 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.

Oliver R. Stanfield, age 62, has been our Executive Vice President since November 2011. He served as our Executive Vice President and Chief Financial Officer from September 2001 to November 2011, and as our Vice President and Chief Financial Officer from March 1989 to August 2001. He retired as Chief Financial Officer in November 2011 and has remained at our company during a transition period. Mr. Stanfield joined our company from ROLM, where he served in several positions since 1980, including: Director of Pricing; Vice President, Plans and Controls; Vice President, Business Planning; Vice President, Financial Planning and Analysis; Treasurer; and Controller, Mil Spec Division. Prior to joining ROLM, Mr. Stanfield worked for ITEL Corporation, Computer Automation and Rockwell International. Mr. Stanfield began his business career with Ford Motor Company in 1969 in various accounting positions while completing a B.S. degree in Business Administration and an M.B.A. degree from the University of Southern California.

Michael T. Anderson, age 42, has been our Senior Vice President, Worldwide Markets since January 2012. He served 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 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 52, 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 55, 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.

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Russell Harris, age 50, 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 57, 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 46, has been our Senior Vice President, Product Management and Marketing since January 2011. He served as our Senior Vice President of Product Management and Product Marketing from May 2011 to December 2011. 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. In addition, in many instances, a utility may require one or more field trials of a smart grid system (such as one based on our NES Smart Grid System) 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:

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.

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As a result, we can often spend up to two 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 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

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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, and customer cancellation rights. For example, in October 2011, Duke Energy cancelled certain orders for our products that we anticipated we would have delivered in late 2012 and beyond.

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, beginning in the third quarter of 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 cannot recognize the revenue associated with this hardware until such time as the firmware is delivered because payment for the hardware is 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 an increasing 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, particularly our Systems 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, the Echelon Control Operating System, or COS, and the ECN. 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 yielded gross margins in line with our long term goals for this product line, although our operating expenses have increased significantly. Our Systems products are also experiencing continuing downward pricing pressures due to intense competition.

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

Increase market acceptance of our products worldwide 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.

The loss of or significant curtailment of purchases by any of our key customers could 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 fiscal year ended December 31, 2011, a large percentage of our revenue, approximately 64%, 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 results in the allocation of risk to us as the supplier. In addition, if a large customer contract is not replaced upon its expiration with new business of similar magnitude, our revenue and gross product 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 product, resulting in either the loss of a significant customer or a notable 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 may adversely affect our results of operations and financial condition.

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 put pressure on the global economy, which has a negative effect on our business. Further, the recent worldwide financial and credit crisis has hampered the availability of liquidity and credit to fund the continuation and expansion of business operations worldwide. The shortage of liquidity and credit, combined with losses in worldwide equity markets, has continued to contribute to the recent world-wide economic recession.

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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 makes 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. 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 business has increased as the smart metering industry faces 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, have developed, 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, such as adding additional electricity meter form factors;

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

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Telenor, offer metering systems that compete with our Systems offerings.

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.

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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. Some of our competitors may also be eligible for stimulus money, which could give them an additional financial advantage. 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.

A limited number of utilities are currently responsible for a significant portion of our revenues.

A significant portion of our sales were made to a limited number of customers in 2011. As a particular utility's smart grid project nears completion, or if the utility experiences changes in business requirements or implements changes in purchase plans, our revenues could decrease significantly. We expect that a limited number of customers will continue to account for a substantial portion of our revenue in future periods.

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

Risks inherent in our international business activities include the following:

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

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;

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;

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.

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

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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 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 them 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 collaborating with a Chinese partner to develop smart metering products for the Chinese market. To the extent we expand our development activities to third parties in China or elsewhere, our development activities will be exposed to risks inherent in such activities, such as protection of intellectual property, investment risk, economic and political stability, and labor matters. We could also be adversely affected by delays or cost increases experienced by third parties that are developing products on our behalf.

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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. Recently, the Chinese government announced a program whereby labor rates for the manufacture of our products will increase over time. As an example of this, in June 2011, Jabil 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. 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. 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. The other former producer of the Neuron Chip, Toshiba, ceased production due to earthquake damage at its factory in Japan in March 2011. 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.

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.

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. For example, in 2009 we completed the process of ending our relationship with a former CEM partner, Flextronics. As part of this transition, we moved the production of products Flextronics built for us to alternative CEMs. We were also required to purchase certain raw material and in-process inventory from Flextronics that Flextronics procured in anticipation of our production requirements. 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.

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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 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. While we do not currently know of any proposed regulations regarding components in our products that would have a material impact on our business, 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 undetected errors or failures, including 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.

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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.

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.

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 balance will decline during 2012. We expect that cash requirements for our payroll and other operating costs will continue at near existing levels. We also expect that we will continue to acquire capital assets such as computer systems and related software, office and manufacturing equipment, furniture and fixtures, and leasehold improvements, as the need for these items arises.

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, 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.

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 are partnering with a third party to develop certain products in China, and the intellectual property mechanisms available in China are generally less stringent than those found in the U.S. 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

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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

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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.

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.

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 63.9% of our 2011 revenues being attributable to four customers and 71.9% of our December 31, 2011 accounts receivable balance being attributable to these same customers. This concentration risk further increases our credit exposure.

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.

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.

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.

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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.

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.

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 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.

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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 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 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.

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 62.8%, 78.1%, and 74.9% of our total revenues for the years ended December 31, 2011, 2010, and 2009, 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 recent 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.

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.

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 customer's budgets, or the priority they assign to control network development, could also affect the sales cycle.

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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.

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.

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 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.

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;

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;

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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;

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 recent earthquake and tsunami in Japan may adversely impact 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.

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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.

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, 2011, the future minimum rental payments for all of our leased office space, including those for our corporate headquarters facilities, totaled approximately \$35.9 million. For the year ended December 31, 2011, 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 8 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.

Table of Contents**PART II****ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND 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 December 31, 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
Year Ended December 31, 2010		
Fourth quarter	\$ 10.67	\$ 7.71
Third quarter	8.96	6.90
Second quarter	10.75	7.02
First quarter	12.09	6.85

As of February 29, 2012, there were approximately 373 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 4 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, 2011.

Table of Contents**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 and the S&P 500 Information Technology Index (which is comprised of those companies in the information technology sector of the S&P 500 Index). The graph assumes that \$100 was invested in our common stock on December 31, 2006 and in the S&P 500 Index and the S&P 500 Information Technology Index. Historic stock price performance is not necessarily indicative of future stock performance.

	December 2006	December 2007	December 2008	December 2009	December 2010	December 2011
Echelon Corporation	\$ 100.00	\$ 258.00	\$ 101.87	\$ 144.50	\$ 127.37	\$ 60.87
S&P 500 Composite Index	\$ 100.00	\$ 105.49	\$ 66.46	\$ 84.05	\$ 96.71	\$ 98.76
S&P 500 Information Technology Index	\$ 100.00	\$ 116.31	\$ 66.13	\$ 106.95	\$ 117.85	\$ 120.69

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, 2009, 2010, and 2011, 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, 2011:

	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	17,130	\$ 6.77		
November 1- November 30	6,060	\$ 5.59		
December 1- December 31	1,178	\$ 4.86		
Total	24,368	\$ 6.38		

- (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.

	2011	Year Ended December 31,			2007
		2010	2009	2008	
		(in thousands, except per share data)			
Consolidated Statement of Operations Data:					
Net revenues:					
Product	\$ 152,699	\$ 107,441	\$ 100,187	\$ 131,073	\$ 135,405
Service	3,788	3,596	3,151	2,974	2,172
Total revenues	156,487	111,037	103,338	134,047	137,577
Cost of revenues:					
Cost of product	87,063	59,722	56,813	79,984	85,035
Cost of service	2,262	2,464	2,418	2,587	2,360
Total cost of revenues	89,325	62,186	59,231	82,571	87,395
Gross profit	67,162	48,851	44,107	51,476	50,182
Operating expenses:					
Product development	34,755	34,762	35,435	37,753	32,644
Sales and marketing	25,719	25,062	23,525	23,635	21,181
General and administrative	17,897	17,647	15,742	17,143	16,083
Restructuring charges		1,212			
Total operating expenses	78,371	78,683	74,702	78,531	69,908
Operating loss	(11,209)	(29,832)	(30,595)	(27,055)	(19,726)
Interest and other income (expense), net	6	393	(28)	2,925	5,717
Interest expense on lease financing obligations	(1,468)	(1,572)	(1,668)	(1,404)	(1,211)
Loss before provision for income taxes	(12,671)	(31,011)	(32,291)	(25,534)	(15,220)
Income tax expense (benefit)	329	301	(257)	297	452
Net loss	\$ (13,000)	\$ (31,312)	\$ (32,034)	\$ (25,831)	\$ (15,672)
Loss per share ¹ :					
Basic	\$ (0.31)	\$ (0.76)	\$ (0.79)	\$ (0.64)	\$ (0.39)
Diluted	\$ (0.31)	\$ (0.76)	\$ (0.79)	\$ (0.64)	\$ (0.39)
Shares used in per share calculation ¹ :					
Basic	42,083	41,365	40,724	40,636	39,891
Diluted	42,083	41,365	40,724	40,636	39,891
Cash dividends declared per common share	\$	\$	\$	\$	\$

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Consolidated Balance Sheet Data:

Cash, cash equivalents and short-term investments	\$ 58,656	\$ 64,632	\$ 80,116	\$ 87,316	\$ 107,190
Working capital	74,922	77,259	96,357	108,811	126,711
Total assets	151,705	145,570	164,437	185,517	204,707
Total liabilities	62,597	51,581	48,539	52,946	51,496
Total stockholders' equity	89,108	93,989	115,898	132,571	153,211

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 similar expressions. In addition, 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. 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 Business and Risk Factors sections. 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 financial performance during 2011 reflects significant improvement in revenues from sales of our Systems products and services, and modest improvement in sales of our Sub-systems products and services. Overall, our net revenues increased by 40.9% over amounts generated in 2010. This led to a significant reduction in our net loss for the year. The following table provides an overview of key financial metrics for the years ended December 31, 2011 and 2010 that our management team focuses on in evaluating our financial condition and operating performance (in thousands, except percentages).

	2011	2010	\$ Change	% Change
Net revenues	\$ 156,487	\$ 111,037	\$ 45,450	40.9%
Gross margin	42.9%	44.0%		(1.1ppt)
Operating expenses	\$ 78,371	\$ 78,683	\$ (312)	(0.4%)
Net loss	\$ (13,000)	\$ (31,312)	\$ (18,312)	(58.5%)
Cash, cash equivalents, and short-term investments	\$ 58,656	\$ 64,632	\$ (5,976)	(9.2%)

Net revenues: As noted above, our net revenues increased in both our Systems and Sub-systems product lines during 2011. As compared to 2010, net revenues from our Systems and Sub-systems product lines increased by 73.7% and 6.1%, respectively. The increase in our Systems revenues was primarily due to an overall increase in the level of large-scale deployments of our NES system products. 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 in 2011 was affected by a change in the timing of revenue recognition for certain of our Systems products, which is discussed more fully below in our discussion of Critical Accounting Policies and Estimates. With respect to our Sub-systems product line, virtually all of the 6.1% growth in 2011 was due to increased sales to Enel. 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. Many of our Sub-systems customers produce products used in commercial or industrial

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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 declined by 1.1 percentage points in 2011 as compared to 2010. Excluding the impact of non-cash stock-based compensation charges, gross margins declined by 1.7%, from 45.2% in 2010 to 43.5% in 2011. The year-over-

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year decrease in gross margin was primarily due to the significant increase in percentage of our revenues attributable to sales of our Systems products, which generally carry lower gross margins than our Sub-systems products. In addition, increases in the cost to manufacture our products, as well as the recognition of costs associated with certain product sales for which revenue was not yet recognized as of December 31, 2011, also contributed to the year-over-year gross margin decline. Partially offsetting these negative gross margin trends in 2011 was the impact of higher overall revenue levels, as indirect costs as a percentage of revenues decreased.

Operating expenses: Our operating expenses decreased by 0.4% in 2011 as compared to 2010. Excluding the impact of restructuring costs and non-cash stock-compensation charges, operating expenses increased by \$3.3 million, or 4.9%, from \$66.4 million in 2010 to \$69.7 million in 2011. Changes in payments received from a third party accounted for \$3.0 million of this \$3.3 million increase. During 2010, we received third party payments of \$4.5 million that were used to reduce our product development expenses. While this arrangement continued in 2011, the amount we received and used to offset product development expenses declined to \$1.5 million.

Net loss: Our net loss decreased by \$18.3 million in 2011 as compared to 2010. This reduction was directly attributable to the \$45.5 million year-over-year increase in net revenues and slightly reduced operating expenses, and was partially offset by a 1.1 percentage point reduction in gross margins. Excluding the impact of restructuring costs of \$1.2 million in 2010 and non-cash stock-compensation charges, our net loss decreased by approximately \$14.4 million in 2011.

Cash, cash equivalents, and short-term investments: During 2011, our cash, cash equivalent, and short-term investment balance decreased by 9.2%, from \$64.6 million at December 31, 2010 to \$58.7 million at December 31, 2011. This \$6.0 million reduction was primarily the result of \$2.3 million worth of capital expenditures, \$2.3 million used to pay taxes on behalf of our employees associated with equity compensation awards, and \$1.7 million in principal payments on our lease financing obligations.

As we look forward to 2012, we acknowledge that the smart energy market is in the midst of a challenging time. Macro conditions remain tentative amidst the European financial crisis, and competition is heightened as the industry faces slow growth and ongoing consolidation. New tenders for smart metering are fewer and farther between and pricing pressures are increasing. In this challenging environment, we remain committed to our goal of reducing our operating losses. However, this will require continued effective execution and near-term payoff from our sales and marketing activities.

Japan Earthquake and Tsunami. The Neuron Chip is an important component that we and our customers use in control network devices. The Japanese earthquake of March 2011 accelerated a previously announced exit of Toshiba from the Neuron business. Shortly after the earthquake, Toshiba informed us that they would no longer manufacture the Neuron Chip due to earthquake damage suffered at the semiconductor manufacturing facility that produced the Neuron Chip. In light of this development, we have been working with Toshiba's customers to provide them with a smooth migration path to our new Neuron 5000 processor. Alternatively our customers can purchase Neuron Chips from a second manufacturer, Cypress Semiconductor, the sole remaining supplier of 5 volt Neuron Chips. However, the abrupt termination of Toshiba's Neuron Chip manufacturing capability may cause some short-term disruption in these plans, and in the meantime could negatively affect our customer's ability to manufacture control network devices until such time as they complete their transition work. Consequently, there is a risk that the events in Japan could ultimately reduce demand for certain of our transceiver products that are used in conjunction with Neuron Chips in developing control network devices by our customers, for at least the short term. Such a reduction in demand could negatively impact our results of operations and financial condition. In addition, due to Toshiba's inability to manufacture parts and satisfy demand, Cypress recently informed us that it has experienced a sharp increase in Neuron Chip demand. To address this, Cypress told us that they intend to add additional manufacturing capacity. However, in the near term, 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.

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

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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.

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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 2011 we began recognizing revenue on sales of data concentrators 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 this product. We continue to measure acceptance history for other Systems products and intend to transition to revenue recognition at point of delivery to the customer's carrier 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.

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.

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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, 2011 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, 2011 and December 31, 2010, approximately \$9.4 million and \$3.7 million, respectively, of our Systems revenue was deferred. Of the \$3.7 million of deferred revenue at December 31, 2010, approximately \$1.5 million related to arrangements entered into prior to January 1, 2010. All of the \$9.4 million of deferred revenue at December 31, 2011 relates to arrangements that were entered into subsequent to December 31, 2009.

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. For example, during the year ended December 31, 2009, our management concluded that it was unlikely that the financial performance requirements for certain of these awards would be met, and accordingly, we reversed previously recognized compensation expense of \$731,000 associated with these awards. See Note 5 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 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 this analysis, management must make significant judgments in determining the appropriate time horizon over which to analyze for excess inventories.

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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 their specifications.

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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 \$875,000 as of December 31, 2011, and \$904,000 as of December 31, 2010.

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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, 2011, 2010, and 2009:

	Year Ended December 31,		
	2011	2010	2009
Revenues:			
Product	97.6%	96.8%	97.0%
Service	2.4	3.2	3.0
Total revenues	100.0	100.0	100.0
Cost of revenues:			
Cost of product	55.6	53.8	55.0
Cost of service	1.5	2.2	2.3
Total cost of revenues	57.1	56.0	57.3
Gross profit	42.9	44.0	42.7
Operating expenses:			
Product development	22.2	31.3	34.3
Sales and marketing	16.4	22.6	22.8
General and administrative	11.5	15.9	15.2
Restructuring charges		1.1	
Total operating expenses	50.1	70.9	72.3
Loss from operations	(7.2)	(26.9)	(29.6)
Interest and other income, net		0.4	
Interest expense on lease financing obligations	(0.9)	(1.4)	(1.6)
Loss before provision for income taxes	(8.1)	(27.9)	(31.2)
Income tax expense (benefit)	0.2	0.3	(0.2)
Net loss	(8.3)%	(28.2)%	(31.0)%

Revenues*Total revenues*

	Year Ended December 31,			2011 over 2010 \$ Change	2010 over 2009 \$ Change	2011 over 2010 % Change	2010 over 2009 % Change
	2011	2010	2009				
<i>(Dollars in thousands)</i>							
Total revenues	\$ 156,487	\$ 111,037	\$ 103,338	\$ 45,450	\$ 7,699	40.9%	7.5%

The \$45.5 million increase in total revenues in 2011 as compared to 2010 was primarily attributable to a \$42.2 million increase in Systems revenues and a \$3.3 million increase in Sub-systems revenues. The \$7.7 million increase in total revenues in 2010 as compared to 2009 was primarily attributable to a \$9.0 million increase in Systems, partially offset by a \$1.3 million decrease in Sub-systems revenues.

Systems revenues

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	Year Ended December 31,			2011 over	2010 over	2010 over
	2011	2010	2009	2010 \$ Change	2009 \$	2010 %
<i>(Dollars in thousands)</i>						
Systems Revenues	\$ 99,428	\$ 57,257	\$ 48,271	\$ 42,171	\$ 8,986	73.7%
						18.6%

Our Systems revenues are primarily comprised of sales of our NES system products and associated services. During 2011, 2010, and 2009, 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.

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The \$42.2 million, or 73.7% increase in Systems revenues during 2011 as compared to 2010 was primarily due to an overall increase in the level of large-scale deployments of our NES system products. 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. For 2011, this increased Systems revenues by approximately \$1.2 million.

During 2010, our Systems revenues increased by \$9.0 million, or 18.6% as compared to 2009. This increase was primarily due to increased shipments of our NES products for projects in Russia and Denmark. In addition, due to our January 1, 2010 adoption of new accounting guidance for multiple element arrangements, our Systems revenues during 2010 were approximately \$3.1 million higher than they would have been if we had applied the revenue recognition standards in effect during the prior year.

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, 2011, 2010, and 2009, approximately 94.2%, 85.4%, and 82.5%, 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.

Sub-systems revenues

	Year Ended December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
				\$	\$	%	%
<i>(Dollars in thousands)</i>				Change	Change	Change	Change
Sub-systems Revenues	\$ 57,059	\$ 53,780	\$ 55,067	\$ 3,279	(\$ 1,287)	6.1%	(2.3%)

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 sold to Enel, which are discussed more fully below, our Sub-systems revenues increased by \$805,000, or 1.6% in 2011 as compared to 2010. This increase was primarily due to an 18% increase in revenues in the APJ region and a 5% increase in revenues in the EMEA region, partially offset by a 10% 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.

Excluding sales of products and services sold to Enel, our Sub-systems revenues increased by \$4.6 million, or 10.3% in 2010 as compared to 2009. This increase was primarily due to an 18% increase in revenues in the Americas region, and to a lesser extent, from more modest increases in revenues from both the APJ and EMEA regions of 9% and 4%, respectively. We believe these increases were due in large part to improving macro-economic conditions in the Americas and EMEA regions, both of which were severely impacted by the economic slowdown that began in late 2008 and continued through 2009. Within the Sub-systems family of products, the year-over-year increase was driven primarily from increases in our control and connectivity as well as SmartServer products.

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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

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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 7.4% in 2011, 7.3% in 2010, and 6.9% in 2009. To date, we have not hedged any of these foreign currency risks. We do not currently expect that, during 2012, 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)

	Year Ended December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
(Dollars in thousands)				\$ Change	\$ Change	% Change	% Change
Enel Project Revenues	\$ 7,119	\$ 4,645	\$ 10,518	\$ 2,474	\$ (5,873)	53.3%	(55.8%)

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. The \$7.1 million, \$4.6 million, and \$10.5 million of Enel project revenue recognized during 2011, 2010, and 2009, respectively, related primarily to shipments under the development and supply agreement, and to a lesser extent, from revenues attributable to the software enhancement agreement. The software enhancement agreement expires in December 2012 and the development and supply agreement expires in December 2013.

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

Gross Profit and Gross Margin

	Year Ended December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
(Dollars in thousands)				\$ Change	\$ Change	% Change	% Change
Gross Profit	\$ 67,162	\$ 48,851	\$ 44,107	\$ 18,311	\$ 4,744	37.5%	10.8%
Gross Margin	42.9%	44.0%	42.7%			(1.1)	1.3

Gross profit is equal to revenues less cost of goods sold. Cost of goods sold 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 goods sold 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 during 2011 was approximately 1.1 percentage points lower than in 2010. This reduction was primarily due to the mix of revenues reported. During 2011, approximately 64% of our revenues were attributable to sales of our Systems products and services, while the remaining 36% came from sales of our Sub-systems products and services. In 2010, approximately 52% of our revenues were attributable to sales of our Systems products and services, while the remaining 48% were attributable to sales of our Sub-systems products and services. In general, revenues from sales of our Systems products generate lower gross margins than do sales of our Sub-systems products. In addition, 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. This negative impact is in addition to other cost increases we've observed recently. In an effort to mitigate the effects of these price increases and thus improve our gross margins within the foreseeable future, we have commenced work on certain design modifications for these products intended to reduce their cost to manufacture. We are also working 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 have committed to a customer but that was not yet delivered as of December 31, 2011. In this case, we have committed to provide a particular

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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 will enable the hardware, which is included in some of the meters we've shipped to this customer, to become fully functional. Because this incremental hardware is not separable from the meters, we are expensing its cost once the customer accepts the corresponding meter. However, we are deferring the associated revenue for this

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additional hardware functionality until such time as we deliver the promised firmware, which we currently expect will be in the first quarter of 2012. At the time the firmware is delivered, we will recognize the deferred revenue for which the cost has already been recognized, which we currently estimate will result in improved gross margins of approximately 3 to 4 percentage points in that period.

Partially offsetting the negative 2011 gross margin trends described above was the impact of higher overall revenues. While our indirect costs increased modestly during 2011 as compared to 2010, when expressed as a percentage of revenues, these costs decreased, which improved gross margins.

2010 gross margins of 44.0% improved by 1.3 percentage points as compared to those generated in 2009. This improvement was primarily due to improved gross margins in our Systems product line, which resulted from a higher percentage of our Systems revenues being generated from sales of the more recent and cost reduced versions of our Systems products. In addition, as a percentage of 2010 revenues, indirect costs were down 0.9 percentage points as compared to 2009, which was due in part to higher overall revenues. Partially offsetting these improvements was the impact on gross margins resulting from the mix of revenues reported. During 2010, approximately 52% of our revenues were attributable to sales of our Systems products and services, while the remaining 48% of our revenues were attributable to sales of our Sub-systems products and services. During 2009, approximately 47% of our revenues were attributable to sales of our Systems products and services, while the remaining 53% of our revenues were attributable to sales of our Sub-systems products and services.

In addition to the impact of the Jabil cost increases, 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 December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
				\$	\$	%	%
<i>(Dollars in thousands)</i>				Change	Change	Change	Change
Product Development	\$ 34,755	\$ 34,762	\$ 35,435	\$ (7)	\$ (673)	(0.0%)	(1.9%)

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

During 2010 and 2011, our product development expenses were impacted by a contractual arrangement whereby a third party made payments to us in connection with certain design and development activities we performed. During 2010, we completed efforts worth \$4.5 million, for which payments from the third party were used to offset our product development expenses. During 2011, we completed additional milestones worth \$1.5 million. These amounts were also used to offset our product development expenses. Excluding the impact of these offsetting payments, our product development expenses decreased \$3.0 million in 2011 as compared to 2010.

The \$3.0 million reduction in product development expenses during 2011 as compared to the same period in 2010 was primarily due to a \$1.2 million reduction in compensation related expenses, which was primarily attributable to the restructuring program that reduced our product development headcount by approximately 10% in early 2011; a \$611,000 reduction in expensed materials used in our product development activities; a \$608,000 reduction in fees paid to third party service providers who assist in our product development activities; and a \$187,000 reduction in out-of-pocket costs we incurred in connection with the design and development project discussed above. The remaining reduction came from miscellaneous other spending categories.

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As discussed above, the \$673,000 decrease in product development expenses during 2010 as compared to 2009 was primarily due to the \$4.5 million of offsetting payments we received from a third party in 2010. Excluding the impact of this \$4.5 million, our product development expenses increased by \$3.8 million during 2010. This increase was primarily due to the incremental expenses we incurred associated with this project. Another factor contributing to the 2010 decrease in product development expenses as compared to 2009 was a reduction in non-cash equity compensation charges, which decreased by \$1.5 million between the two periods. This reduction

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was due primarily to the equity awards issued in conjunction with our 2008 employee stock option exchange program. Many of these awards, which were granted in December 2008, vested in full during 2009. As such, the grant date fair value associated with these awards was fully expensed during 2009.

We currently expect that our product development expenses will increase modestly in 2012 as compared to 2011 due primarily to the fact that we do not anticipate receiving any further offsetting payments in 2012.

Sales and marketing

	Year Ended December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
(Dollars in thousands)				\$	\$	%	%
Sales and Marketing	\$ 25,719	\$ 25,062	\$ 23,525	\$ 657	\$ 1,537	2.6%	6.5%

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.

The \$657,000 increase in sales and marketing expenses in 2011 as compared to 2010 is comprised of the following: a \$642,000 increase in fees paid to recruiters, consultants and other third party service providers; a \$273,000 increase in dues paid for memberships in certain trade organizations; and a \$94,000 increase in travel and related expenses; all of which was partially offset by a \$232,000 reduction in compensation expense; and \$120,000 of decreases in other miscellaneous spending categories. The \$232,000 reduction in compensation expense was principally comprised of a \$688,000 reduction in non-cash equity compensation charges and a \$301,000 reduction in salaries, commissions, and other general compensation related expenses, partially offset by a \$738,000 increase in bonus expenses primarily associated with our 2011 management bonus plan. The management bonus plan provides for payments only in the event certain targets for revenue generation and expense control are achieved.

Also contributing to the increase in sales and marketing expenses in 2011 as compared to 2010 was the impact of foreign currency exchange rate fluctuations between the U.S. dollar and the local currencies in several of the foreign countries in which we operate, including the Euro, the British Pound Sterling, and the Japanese Yen. Approximately \$346,000, or 52.7%, of the \$657,000 increase was the result of these foreign currency exchange rate fluctuations. Excluding the impact of these exchange rate fluctuations, sales and marketing expenses increased by approximately 1.2% between the two periods.

The \$1.5 million increase in sales and marketing expenses in 2010 as compared to 2009 was primarily due to a \$584,000 increase in compensation expenses, which was driven by a \$1.1 million increase in commission expenses partially offset by a \$482,000 reduction in non-cash equity compensation charges. Also contributing to year-over-year increase was a \$396,000 increase in travel and entertainment expenses, a \$323,000 increase in marketing expenses, and \$234,000 of other miscellaneous spending increases. Partially offsetting the year-over-year increase was approximately \$24,000 of favorable foreign currency exchange rate fluctuations between the United States dollar and the local currencies in several of the foreign countries in which we operate, including the Euro, the British Pound Sterling, and the Japanese Yen. Excluding the impact of these exchange rate fluctuations, sales and marketing expenses increased by approximately 6.6% between the two years.

We currently expect that we will continue investing in our sales and marketing efforts during 2012, and therefore anticipate that our sales and marketing expenses will increase in 2012 as compared to 2011. In addition, our future sales and marketing expenses will continue to be affected by fluctuations in exchange rates between the U.S. dollar and the foreign currencies where we operate. If the United States dollar were to weaken against these currencies, our sales and marketing expenses could increase. Conversely, if the dollar were to strengthen against these currencies, it would have a favorable impact on our sales and marketing expenses.

General and administrative

	Year Ended December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
(Dollars in thousands)				\$	\$	%	%
					Change		

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				Change		Change	Change
General and Administrative	\$ 17,897	\$ 17,647	\$ 15,742	\$ 250	\$ 1,905	1.4%	12.1%

General and administrative expenses consist primarily of payroll and related expenses for executive, accounting, and administrative personnel, professional fees for legal and accounting services rendered to our company, facility costs, insurance, and other general corporate expenses.

The \$250,000 increase in general and administrative expenses in 2011 as compared to 2010 was primarily due to a \$449,000 increase in fees paid to third party service providers, partially offset by a \$203,000 reduction in compensation related expenses. The reduction in compensation related expenses was driven by a \$222,000 increase in salaries and associated payroll expenses and a \$1.0

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million increase in bonus expense associated with our 2011 management bonus plan, partially offset by a \$1.4 million reduction in equity compensation expenses. The reduction in equity compensation expense was primarily the result of the passing of our former Executive Chairman, Ken Oshman, who died in August 2011. At the time of his death, Mr. Oshman had outstanding and unvested equity compensation awards for which cumulative compensation expense of approximately \$976,000 had been recognized as of June 30, 2011. This cumulative compensation expense was reversed in the third quarter of 2011. The management bonus plan provides for payments only in the event certain targets for revenue generation and expense control are achieved.

The \$1.9 million increase in general and administrative expenses in 2010 as compared to 2009 was primarily due to a \$1.2 million increase in compensation and other employee related expenses, which was driven by a \$592,000 increase in salaries primarily related to compensation for our interim and current Chief Executive Officers and to a lesser extent from restoration of full salaries for our non-sales personnel in May 2010, a \$293,000 increase in non-cash equity compensation expenses, a \$141,000 increase in bonuses, and miscellaneous other compensation and benefit expense increases of \$208,000. Also contributing to the year-over-year increase was a \$513,000 increase in fees paid to third party service providers and other miscellaneous spending increases of \$145,000.

Restructuring Charges

	Year Ended December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
(Dollars in thousands)				\$	\$	%	%
Restructuring charges	\$	\$ 1,212	\$	\$ (1,212)	\$ 1,212	(100.0%)	N/A

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. Of the 31 employees affected, 15 were in product development, 7 were in sales and marketing, 5 were in operations, and 4 were in general and administrative. 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.

With the exception of \$49,000 that remains accrued and reflected in accrued liabilities on our Consolidated Balance Sheets as of December 31, 2011, the restructuring charges of \$1.2 million were paid out in the first two quarters of 2011. We expect to pay the remaining \$49,000 of accrued termination benefits through the first two quarters of 2012.

Interest and Other Income (Expense), Net

	Year Ended December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
(Dollars in thousands)				\$	\$	%	%
Interest and Other Income (Expense), Net	\$ 6	\$ 393	\$ (28)	\$ (387)	\$ 421	(98.5%)	1,503.6%

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.

During 2011, interest and other income (expense), net decreased by approximately \$387,000 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. The decrease in foreign currency translation gains is due 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 strengthens in value against these foreign currencies, as it did during both 2011 and 2010, the associated translation gains favorably impact other income. Conversely, when the U.S. dollar weakens, the resulting translation losses negatively impact other income. The reduction in interest income is primarily the result of a reduction in our average invested cash balance between the periods coupled with reductions in the weighted average yield on our investment portfolio.

During 2010, interest and other income (expense), net increased by approximately \$421,000 as compared to 2009. This increase was primarily due to a \$682,000 increase in foreign currency translation gains on our short-term intercompany balances, which was partially offset by a

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\$233,000 decrease in interest income. As was the case in 2011, the reduction in interest income was primarily the result of a reduction in our average invested cash balance between the periods coupled with reductions in the weighted average yield on our investment portfolio.

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.

Table of Contents**Interest Expense on Lease Financing Obligations**

	Year Ended December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
<i>(Dollars in thousands)</i>				\$	\$	% Change	% Change
Interest Expense on Lease Financing Obligations	\$ 1,468	\$ 1,572	\$ 1,668	\$ (104)	\$ (96)	(6.6%)	(5.8%)

In December 1999 and October 2000, we entered into two separate lease agreements with a local real estate developer for the two buildings we currently occupy at our San Jose headquarters site. As discussed in Note 3 of Notes to Consolidated Financial Statements in Item 15 of this Report, we are considered the deemed owner of the two buildings for accounting purposes only.

Accordingly, we have recorded as an asset on our balance sheet the costs paid by our lessor to construct our headquarters facility, along with a corresponding financing liability for an amount equal to these lessor paid construction costs. The monthly rent payments we make to our lessor under our lease agreements are recorded in our financial statements partially as land lease expense and partially as 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.

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, we currently expect a higher proportion of the payments we make in 2012 will be allocated to principal repayment and less will be allocated to interest expense.

Income Tax Expense (Benefit)

	Year Ended December 31,			2011 over	2010 over	2011 over	2010 over
	2011	2010	2009	2010	2009	2010	2009
<i>(Dollars in thousands)</i>				\$	\$	% Change	% Change
Income Tax Expense (Benefit)	\$ 329	\$ 301	\$ (257)	\$ 28	\$ 558	9.3%	217.1%

The provision for income taxes for 2011, 2010, and 2009 includes a provision for state and foreign taxes based on our annual estimated effective tax rate for the year. The difference between the statutory rate and our effective tax rate is primarily due to the impact of foreign taxes and our valuation allowance on our deferred tax assets. Income tax expense of \$329,000 and \$301,000 in 2011 and 2010, respectively, and income tax benefit of \$257,000 in 2009, consists primarily of taxes related to profitable foreign subsidiaries and various state minimum taxes. In 2009, the taxes for profitable foreign subsidiaries were more than offset by U.S. federal tax refunds we were able to apply for as a result of federal tax legislation that was passed during the year.

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 second 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.

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. Both leases permit us to exercise an option to extend the respective lease for two sequential five-year terms. In addition, the amended leases eliminated our requirement to provide the landlord with security deposits totaling \$6.2 million, which we had previously satisfied through the issuance of standby letters of credit (LOCs).

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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 (see Notes as referenced above). 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.

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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.

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 expense, which was recorded as cost of products revenue in our consolidated statements of income, was approximately \$532,000 during 2011, \$616,000 during 2010, and \$450,000 during 2009.

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, 2011, 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 believe that the Italian claw back law is not applicable to our transactions with the Finmek Companies, and the claims of the Finmek Companies' receiver are without merit and we are defending the lawsuit.

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, 2011, it is possible that our results of operations, cash flows,

and financial position could be harmed by the resolution of any such outstanding claims.

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As of December 31, 2011, our contractual obligations were as follows (in thousands):

	Total	Payments due by period			More than 5 years
		Less than 1 year	2-3 years	4-5 years	
Lease financing obligations	\$ 28,592	\$ 3,214	\$ 6,582	\$ 6,903	\$ 11,893
Operating leases	7,640	1,445	2,149	1,590	2,456
Purchase commitments	26,067	26,067			
Total	\$ 62,299	\$ 30,726	\$ 8,731	\$ 8,493	\$ 14,349

The amounts in the table above exclude \$966,000 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 9, *Income Taxes* of Notes to Consolidated Financial Statements for further discussion.

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 the years 2002 through 2004, we were also able to finance our operations through operating cash flow. From inception through December 31, 2011, we raised \$295.0 million from the sale of preferred stock and common stock, including the exercise of stock options from our employees and directors.

In March and August 2004, March 2006, and February 2007, our board of directors approved a stock repurchase program, which authorized us to repurchase up to 3.0 million shares of our common stock, in accordance with Rule 10b-18 and other applicable laws, rules and regulations. Since inception, we repurchased a total of 2,204,184 shares under the program at a cost of \$16.1 million. The stock repurchase program expired in March 2008.

In April 2008, our board of directors approved a new stock repurchase program, which authorized us to repurchase up to 3.0 million shares of our common stock, in accordance with Rule 10b-18 and other applicable laws, rules and regulations. There were no repurchases under this stock repurchase program during the year ended December 31, 2011. This stock repurchase program expired in April 2011. Since inception, we repurchased a total of 750,000 shares under this program at a cost of \$8.9 million.

The following table presents selected financial information for each of the last three fiscal years (dollars in thousands):

	As of December 31,		
	2011	2010	2009
Cash, cash equivalents, and short-term investments	\$ 58,656	\$ 64,632	\$ 80,116
Trade accounts receivable, net	35,215	25,102	21,496
Working capital	74,922	77,259	96,357
Stockholder's equity	89,108	93,989	115,898

As of December 31, 2011, we had \$58.7 million in cash, cash equivalents, and short-term investments, a decrease of \$6.0 million as compared to December 31, 2010. 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, and purchases under our stock repurchase programs.

Cash flows from operating activities. Cash flows from operating activities have historically been driven by net loss levels, adjustments for non-cash charges such as stock-based compensation expenses, depreciation, and amortization; changes in accrued investment income; and fluctuations in operating asset and liability balances. 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

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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 was 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

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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 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.

During 2009, net cash used in operating activities of \$5.8 million was primarily the result of our net loss of \$32.0 million, which was partially offset by non-cash charges for stock-based compensation expenses of \$14.4 million, depreciation and amortization expenses of \$6.5 million, and a net decrease in our operating assets and liabilities of \$5.2 million. The primary components of the \$5.2 million net decrease in our operating assets and liabilities were a \$5.6 million decrease in inventories, a \$1.9 million decrease in accounts receivable, and a \$1.1 million decrease in other current assets, the benefits of which were partially offset by a \$3.1 million decrease in accounts payable. Inventories decreased due to improved inventory management in 2009. 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. Accounts receivable decreased due to the timing of revenues generated in the fourth quarter. During the fourth quarter of 2008, 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, 2008. Other current assets decreased due to the receipt in 2009 of non-trade related receivables that were outstanding as of December 31, 2008. Accounts payable decreased due to the timing of expenditures during the fourth quarter of 2009.

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 provided by investing activities was \$13.5 million for 2011, a \$9.5 million increase in cash inflows compared to 2010. 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.

Net cash used in investing activities of \$14.1 million in 2009 was primarily the result of net purchases of available-for-sale short-term investments of \$13.4 million and by capital expenditures of \$1.8 million, partially offset by a \$1.1 million decrease in our other long-term assets due to the repayment of a loan made to one of our key employees.

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 program and principal payments under our lease financing obligations. Net cash used in financing activities was \$3.1 million for 2011, an \$867,000 decrease in cash outflows compared to 2010. 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.

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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.

Net cash used in financing activities of \$757,000 in 2009 was primarily attributable to \$1.5 million of principal payments on our lease financing obligations and \$1.3 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; partially offset by proceeds of \$2.0 million from issuance of common stock upon exercise of options by our employees.

As noted above, our cash and investments totaled \$58.7 million as of December 31, 2011. Of this amount, approximately 1% 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 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, 2012. 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, 2011, we were in compliance with these covenants. As of December 31, 2011, 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. 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 2012. We expect that cash requirements for our payroll and other operating costs will continue at about existing levels. We also expect that we will continue to acquire capital assets such as computer systems and related software, office and manufacturing equipment, furniture and fixtures, and leasehold improvements, as the need for these items arises. 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

During the years ended December 31, 2011, 2010, and 2009, the law firm of Wilson Sonsini Goodrich & Rosati, P.C. acted as principal outside counsel to our company. Mr. Sonsini, a director of our company, is a member of Wilson Sonsini Goodrich & Rosati, P.C.

From time to time, our former Executive Chairman, M. Kenneth Oshman, used his private plane or charter aircraft for Echelon business for himself and any employees that accompanied him. In August 2008, our board of directors approved a reimbursement arrangement whereby our company would reimburse Mr. Oshman for 50% of the costs incurred for his private plane or charter aircraft travel used while on company business. The Compensation Committee of our board of directors reaffirmed this arrangement in February 2011. Such costs included flight charges (subject to any discounted rate that may apply), fuel, fuel surcharges, landing fees, crew costs and related expenses. This arrangement was discontinued upon Mr. Oshman's death in August 2011. During the year ended December 31, 2011, we incurred no expenses pursuant to the reimbursement arrangement. While the arrangement was in effect, the Audit Committee of the board of directors regularly reviewed these reimbursements.

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 (see Note 11 to our accompanying consolidated financial statements for additional information on our transactions with Enel). The closing of this stock purchase occurred on September 11, 2000. At the closing, Enel

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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 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 expires in December 2012 and the development and supply agreement expires in December 2013, although delivery of products and services can extend beyond those dates and the agreements may be extended under certain circumstances.

During 2011, we recognized revenue from products and services sold to Enel and its designated manufacturers of approximately \$7.1 million, none of which was included in accounts receivable, net at December 31, 2011. During 2010, we recognized revenue from products and services sold to Enel and its designated manufacturers of approximately \$4.6 million, none of which was included in accounts receivable, net at December 31, 2010. During 2009, we recognized revenue from products and services sold to Enel and its designated manufacturers of approximately \$10.5 million.

RECENTLY ISSUED ACCOUNTING STANDARDS

There have been no new recent accounting pronouncements or changes in accounting pronouncements during the year ended December 31, 2011, that are of significance, or potential significance, to our company.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

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 100 basis points from levels at December 31, 2011, the fair market value of the portfolio would decline by an immaterial amount, due primarily to the fact that current interest rates remain at historically low levels. We currently intend to hold our fixed income investments until maturity or for a period of time as needed to recover any decline in value due to interest rate fluctuation, 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, in the unlikely event it was necessary, we could decide to sell some or all of our 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. Due to our modest exposure to foreign currency fluctuations, if foreign exchange rates were to fluctuate by 10% from rates at December 31, 2011, our financial position and results of operations would not be materially affected. However, it is possible that there could be a material impact in the future.

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.

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ITEM 9A. CONTROLS AND PROCEDURES

(a) Evaluation of Effectiveness of Disclosure Controls and Procedure

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, 2011.

(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, 2011. 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, 2011. 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 48 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, 2011 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION

On March 14, 2012, Livio Gallo informed us that, for personal reasons, he was retiring as a member of our Board of Directors. We accepted his retirement effective immediately.

Echelon is scheduled to hold its 2012 annual meeting of stockholders on May 22, 2012. The meeting will commence at 10:00 a.m., PDT, and will 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, 2012.

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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 2012 Annual Meeting of Stockholders (the "2012 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, 2011.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated herein by reference from our 2012 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 2012 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 2012 Proxy Statement.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this Item is incorporated herein by reference from our 2012 Proxy Statement.

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
<u>Report of Independent Registered Public Accounting Firm</u>	48
<u>Consolidated Balance Sheets</u>	49
<u>Consolidated Statements of Operations</u>	50
<u>Consolidated Statements of Comprehensive Loss</u>	51
<u>Consolidated Statements of Stockholders' Equity</u>	52
<u>Consolidated Statements of Cash Flows</u>	53
<u>Notes to Consolidated Financial Statements</u>	54

2. Financial Statement Schedule

<u>See Note 13 in Notes to Consolidated Financial Statements</u>	75
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.	

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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
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

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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.

+ 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.

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- (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

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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, 2011 and 2010, 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, 2011. We also have audited the Company's internal control over financial reporting as of December 31, 2011, 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, 2011 and 2010, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2011, 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, 2011, based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

The Company changed its method of accounting for multiple element revenue transactions in the year ended December 31, 2010, resulting from the adoption of new accounting pronouncements.

/s/ KPMG LLP

Santa Clara, California

March 14, 2012

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ECHELON CORPORATION

CONSOLIDATED BALANCE SHEETS

(in thousands, except share and per share amounts)

	December 31,	
	2011	2010
ASSETS		
Current Assets:		
Cash and cash equivalents	\$ 17,658	\$ 7,675
Short-term investments	40,998	56,957
Accounts receivable, net of allowances of \$1,801 in 2011 and \$945 in 2010	35,215	25,102
Inventories	11,125	8,993
Deferred cost of goods sold	6,536	2,588
Other current assets	4,044	3,962
Total current assets	115,576	105,277
Property and equipment, net	27,201	31,020
Goodwill	8,235	8,316
Other long-term assets	693	957
TOTAL ASSETS	\$ 151,705	\$ 145,570
LIABILITIES AND STOCKHOLDERS EQUITY		
Current Liabilities:		
Accounts payable	\$ 18,313	\$ 10,399
Accrued liabilities	7,755	6,713
Current portion lease financing obligations	1,870	1,731
Deferred revenues	12,716	9,175
Total current liabilities	40,654	28,018
Long-Term Liabilities:		
Lease financing obligations, excluding current portion	20,193	22,062
Other long-term liabilities	1,750	1,501
Total long-term liabilities	21,943	23,563
Commitments and Contingencies (Note 8)		
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 45,740,637 shares in 2011 and 45,211,460 shares in 2010		
Outstanding 42,521,453 shares in 2011 and 41,992,276 shares in 2010	457	452
Additional paid-in capital	346,952	338,521
Treasury stock, at cost (3,219,184 shares in 2011 and 2010)	(28,130)	(28,130)
Accumulated other comprehensive income	244	561
Accumulated deficit	(230,415)	(217,415)

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Total stockholders' equity	89,108	93,989
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	\$ 151,705	\$ 145,570

See accompanying notes to the consolidated financial statements.

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ECHELON CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share amounts)

	Year Ended December 31,		
	2011	2010	2009
REVENUES:			
Product	\$ 152,699	\$ 107,441	\$ 100,187
Service	3,788	3,596	3,151
Total revenues ¹	156,487	111,037	103,338
COST OF REVENUES:			
Cost of product	87,063	59,722	56,813
Cost of service	2,262	2,464	2,418
Total cost of revenues	89,325	62,186	59,231
Gross profit	67,162	48,851	44,107
OPERATING EXPENSES:			
Product development	34,755	34,762	35,435
Sales and marketing	25,719	25,062	23,525
General and administrative	17,897	17,647	15,742
Restructuring charges		1,212	
Total operating expenses	78,371	78,683	74,702
Loss from operations	(11,209)	(29,832)	(30,595)
Interest and other income (expense), net	6	393	(28)
Interest expense on lease financing obligations	(1,468)	(1,572)	(1,668)
Loss before income taxes	(12,671)	(31,011)	(32,291)
Income tax expense (benefit)	329	301	(257)
NET LOSS	\$ (13,000)	\$ (31,312)	\$ (32,034)
Loss per share:			
Basic	\$ (0.31)	\$ (0.76)	\$ (0.79)
Diluted	\$ (0.31)	\$ (0.76)	\$ (0.79)
Shares used in per share calculation:			
Basic	42,083	41,365	40,724
Diluted	42,083	41,365	40,724

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¹ Includes related party amounts of \$7,119 in 2011, \$4,645 in 2010, and \$10,518 in 2009. See Note 11 for additional information on related party transactions.

See accompanying notes to the consolidated financial statements.

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ECHELON CORPORATION
 CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

(in thousands)

	Year Ended December 31,		
	2011	2010	2009
Net loss	\$ (13,000)	\$ (31,312)	\$ (32,034)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustment	(302)	(500)	335
Unrealized holding gain (loss) on available-for-sale securities	(15)	15	(73)
Comprehensive loss	\$ (13,317)	\$ (31,797)	\$ (31,772)

See accompanying notes to the consolidated financial statements.

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ECHELON CORPORATION
 CONSOLIDATED STATEMENTS OF STOCKHOLDERS EQUITY

(in thousands)

	Common Stock		Treasury Stock		Additional Paid-In Capital	Accumulated Other Comprehen- sive Income (Loss)	Accumu- lated Deficit	Total
	Shares	Amount	Shares	Amount				
BALANCE AT DECEMBER 31, 2008	43,676	\$ 437	(3,219)	\$ (28,130)	\$ 313,549	\$ 784	\$ (154,069)	\$ 132,571
Exercise of stock options	428	4			2,879			2,883
Release of performance shares	365	3			(3)			
Stock received for payment of option exercise price	(119)	(1)			(835)			(836)
Stock received for payment of employee taxes on vesting of performance shares and upon exercise of stock options	(124)	(1)			(1,343)			(1,344)
Repurchase of employee shares	(1)				(7)			(7)
Stock-based compensation								