

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, DC 20549**

**FORM 10-K**

(Mark one)

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

For the fiscal year ended December 31, 1999

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	77-0203595
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification Number)

**4015 Miranda Avenue  
Palo Alto, CA 94304**

(Address of principal executive office and zip code)

**(650) 855-7400**

(Registrant's telephone number, including area code)

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

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

Title of each class	Name of each exchange which registered
Common Stock \$.01 par value	Nasdaq National Market

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 filing requirements for the past 90 days. YES  NO

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

The aggregate market value of common stock held by non-affiliates of the registrant as of February 29, 2000 was \$1,977,635,964 (based on the closing sales price of \$81.125 per share as reported for the Nasdaq Market System of the National Association of Securities Dealers Automated Quotation System on February 29, 2000). Shares of common stock held by each officer, director, and holder of 5% or more of the outstanding common stock has 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, 2000, 33,928,671 shares of the registrant's Common Stock were outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

- (1) Certain sections of the Registrant's proxy statement filed in connection with its annual meeting of stockholders, to be held on April 27, 2000, are incorporated by reference into Part III of this Form 10-K where indicated.
- (2) The table of exhibits filed appears on page 30.

## PART I

*Parts of this Form 10-K, including “Item 1-Business” and “Factors That May Affect Future Results of Operation,” contain forward-looking statements that involve risks and uncertainties, including market acceptance of our products and the growth of the markets for our products, the level of competition we face, our dependence on a limited number of key manufacturers, operational and financial risks associated with international operations and our limited ability to protect our intellectual property rights. These forward-looking statements reflect our current expectations or beliefs concerning future events and financial performance. However, these risks and uncertainties could cause our actual results to differ materially from our historical results or from the levels we presently anticipate. In this Form 10-K, the words “believes,” “future,” and similar expressions identify forward-looking statements. You should not place undue reliance on these forward-looking statements, since they speak only as of the date of this Form 10-K.*

### ITEM 1. BUSINESS

We develop, market and support products and services that allow everyday devices — such as light switches, washing machines, assembly line robots, thermostats, gas pumps, motion sensors, air conditioners, pumps, and valves — to be made “smart” and to communicate with one another and across the Internet. Our products and services are based on our LONWORKS technology. Our LONWORKS technology is an open standard, meaning that many official standards-making bodies have published industry standards based on all or parts of our technology and that many of our technology patents are broadly licensed without royalties or license fees. Our products and services may be used across many industries to network together everyday devices in homes, buildings, factories and transportation systems. They allow original equipment manufacturers or OEMs, and systems integrators which are specialty contractors that combine products from multiple suppliers into integrated systems, to design and put into service open, interoperable distributed control networks. A control network is a collection of everyday devices that communicate with one another to perform a control application — from heating, lighting, security, and elevators in buildings, to the brakes in freight trains, to the equipment in sewage treatment plants, to the lights in your home. In an interoperable system, products or subsystems from multiple vendors can be integrated into a unified system without the need to develop custom hardware or software.

Open control networks are an alternative to the traditional approach of centralized or hard-wired control. Control networks reduce life-cycle costs, are more flexible than centralized systems and permit control systems to be comprised of products and services from a variety of vendors. This can increase competition and enable new applications, while providing improved reliability, serviceability, and functionality. Our LONWORKS control networking technology allows intelligence and communications capabilities to be embedded into individual control devices that may be connected together through a variety of communications media, such as a twisted pair of wires or data cable, the existing power lines in a facility, or any Internet protocol-based network, such as corporate intranets or the Internet. These intelligent, networked control devices are then able to communicate with each other to perform the desired control functions. In effect, the network itself becomes the controller, eliminating the need for central controllers, significantly reducing wiring costs and enhancing the functionality and flexibility of the control system. In addition, by connecting to the Internet, LONWORKS networks allow devices that were once isolated by their physical location to be reached from anywhere in the world. Important data that previously could not be obtained can now be integrated into enterprise-wide information systems to lower costs and increase revenues.

Control systems manage key functions in virtually every type of facility that affects our daily lives. These functions can be as simple as turning a light on and off and as complex as operating a chemical production line. Traditionally, most commercial control systems have used proprietary, central controllers. In these traditional control systems, the intelligence is in the central controller and complex wiring and customization are required for communication. These traditional systems share many of the same drawbacks of centralized computing architectures that rely upon mainframes and minicomputers to communicate to “dumb” terminals that lack independent processing capabilities. These disadvantages include:

- high costs of installing and upgrading the systems;
- a limited ability to customize the system for a particular application;
- a single point of failure that reduces system reliability; and
- a “one size fits all” approach that limits the ability for such systems to be used in applications that are larger or smaller than the one for which they were originally designed.

These shortcomings have limited the market opportunity for control systems because end-users find it costly and difficult to adapt these systems to their changing needs. To overcome these limitations, OEMs, systems integrators and end-users are increasingly moving from closed centrally-controlled systems towards open, distributed control networks.

We offer a comprehensive set of products and services, including transceivers, control modules, routers, network interfaces, development tools and software tools and toolkits. Our products and services provide the infrastructure and support required to build and implement multi-vendor, open, interoperable networks of everyday devices. Our objective is to establish our LONWORKS technology and products as the leading solution for networking everyday devices for control applications. To achieve this goal, we intend to:

- expand our technological expertise;
- target industry-leading OEM customers;
- strengthen our systems integrator distribution channel;
- leverage international market opportunities; and
- take advantage of new market opportunities created by the integration of LONWORKS control networks with the Internet and corporate intranets.

We market our products and services to OEMs and systems integrators in the building, industrial, transportation, home and other automation markets. We sell primarily through a direct sales force in North America and other countries where we have marketing and sales operations, and expand our direct sales efforts with distributors in Europe, Japan, Argentina and various Asia Pacific countries. Representative customers include Bombardier, Edwards High Vacuum International, Fuji Electric, Hitachi, Honeywell, Johnson Controls, Kawasaki, Raytheon and Siemens.

### **Industry Background**

Control systems manage key functions in a variety of facilities. A common application of a control system is to allow a thermostat to communicate with other equipment in a building to automatically adjust temperature and airflow. In addition to interconnecting and monitoring heating, ventilation and air conditioning, or HVAC, control systems are used in buildings to manage such functions as elevators, lighting, security and access control. In industrial facilities, these systems are used to automate semiconductor manufacturing equipment, oil pumping stations, textile dyeing machinery and hundreds of other applications. In transportation systems, control systems are used to regulate such features as propulsion, braking and heating systems. In homes, control systems have seen limited use in high-end residences for lighting control, security and other automation applications.

Control systems consist of an array of hardware devices and software used to collect data from the physical world and convert that data to electrical signals. These signals, in turn, provide information that can be used to effect responses based upon pre-programmed rules and logic. Traditionally, most control systems have incorporated closed, centrally-controlled architectures. These systems share many of the same drawbacks of centralized computing architectures that rely upon mainframes and minicomputers to communicate to “dumb” terminals that lack independent processing capabilities.

Products for control systems are typically designed and manufactured by OEMs that focus on one or more vertical markets, such as HVAC systems for buildings, or braking control systems for trains. Control systems are typically installed and maintained by systems integrators, and in some instances by the in-house installation and maintenance divisions of OEMs. Closed, centralized control systems have a number of inherent disadvantages for OEMs, systems integrators and end-users. OEMs, as the designers of control systems and, in some instances as developers of their own protocols, incur significant development and ongoing support expense to implement and maintain their closed systems. In addition, supporting such a closed infrastructure takes valuable resources away from developing competitive applications and limits the OEM’s ability to support the product development efforts of third party companies that use open platforms. Finally, centralized systems also risk complete shutdown if the central controller fails.

For systems integrators, it is typically very costly and time-consuming to install closed, centralized control systems because of the physical task of installing large amounts of wire and conduit to connect each component to one or more central controllers. Once the physical infrastructure is installed, specially-trained and highly-skilled personnel must program, install and “debug” detailed control logic software into the controllers in order to manage the various components. If a facility incorporates control systems from more than one OEM, systems integrators also spend considerable time connecting systems that were not designed to operate together, such as HVAC and fire/life/safety systems. This complex process also makes it expensive and time consuming to modify the system. End-users ultimately must pay for these products and services. However, because it is so costly to install and modify closed, centrally-controlled systems, end-users often cannot acquire new applications at an affordable cost. We believe that these factors

have reduced the market opportunity for both OEMs and systems integrators to sell new products, functions and applications to end-users.

OEMs, systems integrators and end-users are increasingly trying to overcome the limitations of closed, centralized systems. Just like the computer industry's move away from centralized computing architectures, we believe that across a broad range of control applications, the controls industry is moving away from custom, wiring-intensive and closed interconnection schemes among various system components. We believe that the controls industry is moving towards open, interoperable, distributed architectures in which the control intelligence resides among the sensors and actuators in an intelligent network, rather than in central controllers.

## **Our Solution**

We develop, market and support a family of hardware and software products and services that allows OEMs and systems integrators to design and implement open, interoperable, distributed control networks. Our networking technology allows intelligence and communications capabilities to be embedded into individual control devices. These devices can be connected together through a variety of communications media such as a twisted pair of wires or data cable, the existing power lines in a facility, or any Internet protocol-based network. The intelligent, networked control devices are then able to communicate with each other to perform the desired control functions. For example, a temperature sensor might detect a change in temperature and send a message over the network that is received and acted upon by other devices that have been configured to accept the message. This eliminates the need for central controllers, significantly reduces wiring costs, increases system reliability, enables the creation of systems that do more, and makes it possible to more easily adapt the systems to the user requirements — both at the time of initial installation and over the life of the system as the end-users' needs change. In addition, we believe that our products and services create new market opportunities because they allow devices that were previously not part of control systems, such as home appliances, to cost-effectively be made "smart," networked devices that communicate with one another and across the Internet.

We offer a comprehensive set of products and services that provides the foundation and support required to build and implement open, interoperable networks of everyday devices using products from multiple vendors for the building, industrial, transportation, home and other automation markets. Our products are based on our LONWORKS networking technology, an open, multi-industry standard for networking everyday devices. In a LONWORKS control network, everyday devices are made "smart" and can communicate with one another and across the Internet using our LONWORKS protocol. Each device in the network contains embedded intelligence that implements the protocol and performs local sense and control functions. At the core of this embedded intelligence is the Neuron Chip, an integrated circuit that we initially designed and is currently sold by Motorola and Toshiba. In addition, we offer:

- transceivers that couple the Neuron Chip to the communications medium;
- control modules that are intended to help reduce OEM development cost;
- intelligent LONWORKS routers that allow users to build large systems containing different networking media;
- network interfaces that connect computers to the network;
- development tools that allow OEMs to design LONWORKS technology into their products;
- software tools and toolkits that allow users to install, monitor, maintain and control their systems; and
- hardware and software products that enable the everyday devices in a LONWORKS network to be connected to the Internet and other Internet protocol-based networks.

Based on our past experience in implementing our products, we believe that our family of products and services provides the following customer benefits:

- *Installation Cost Savings.* LONWORKS based open control networks are designed to be less expensive to install than closed, centrally-controlled systems. By replacing individual hard-wired connections with shared network channels, we believe that wiring and conduit material and labor costs can be substantially reduced. By eliminating the need to program and debug complex control logic software, systems can be designed and commissioned more quickly by personnel with less specialized training. In addition, we have designed LONWORKS based networks so they do not require expensive, performance-limiting gateways, which are used to enable communication between various systems, to connect control systems from multiple vendors.

- *Life-Cycle Cost Savings.* LONWORKS networks can eliminate many of the sources of high life-cycle costs found in traditional control systems. By providing an open, interoperable platform, LONWORKS networks allow end-users to select the most cost-effective products and services for their applications from a broad range of OEMs. In addition, we believe that the inherent flexibility of the LONWORKS network architecture permits modifications to the control system to be made at significantly lower cost. These modifications include adding new products, features and functions. LONWORKS technology also allows devices to be logically “rewired” across the network without the need to run new physical wire or to replace or reprogram devices.
- *Improved Quality and Functionality.* With LONWORKS networks, end-users may customize their control networks by using products and applications from an array of vendors that best suits their specific needs. In open LONWORKS networks, any piece of information from any device can easily be shared with any other device in the same control system, in a different control system, or in a computer system, without the need for custom programming or additional hardware. For example, a measurement system can analyze information from a manufacturing system and send back improvements within seconds if the two systems communicate directly, rather than through a process where information is gathered and communicated manually over days or even weeks.
- *Improved Reliability.* In a traditional system that has one central controller, the entire system can fail if that controller fails. However, in a fully distributed LONWORKS control network, there is no single point of failure. Typically, the failure of a device on the network only affects a small subset of devices with which it interacts. Unlike devices in a centrally-controlled system, devices in a LONWORKS network are “self-aware” and can take appropriate actions, such as returning to default set-points, to adapt to the error condition. In addition, by using its built-in processing power, each device can keep track of its own status and can report problems before they occur.
- *Increased Market Opportunities.* We believe that by eliminating high-cost centralized controllers and fostering devices that can work together, LONWORKS technology allows both OEMs and systems integrators to create low-cost, customized solutions to satisfy market demands that have not been met by traditional control systems. We believe that new market opportunities are created by allowing devices that were previously not part of control systems, such as home appliances, to cost-effectively be made smart, networked devices that communicate with one another and across the Internet.

## Strategy

Our objective is to be the leading supplier of products and services used in the growing market for open, interoperable control networks. Key elements of our strategy include:

- *Extend Technological Leadership.* Our LONWORKS networking technology is the foundation for a low-cost, flexible, interoperable and reliable platform for implementing networked control applications. We intend to leverage our position as the developer of the LONWORKS technology, along with our expertise in networking software, distributed control systems and digital and analog circuit design, to deliver a full range of highly-functional and cost-effective products and systems that meet our customers’ needs.
- *Target Industry-Leading OEM Customers.* We seek to develop broad industry support for our LONWORKS technology. To help accomplish this objective, we work closely with industry-leading OEMs, such as Bombardier, Edwards and Honeywell, in the product design process and invest in programs that enable these customers to develop, market and support their products. We believe that close collaborative relationships with OEM customers will continue to accelerate the transition of our targeted industries toward open, multi-vendor architectures for control networks.
- *Strengthen Our Systems Integrator Distribution Channel.* We believe that end-users increasingly prefer multi-vendor control networks in order to decrease life-cycle costs and improve the functionality of their control systems. In order to capitalize on this opportunity, we complement our OEM distribution channel by aggressively targeting independent systems integrators as an additional source to install, configure and maintain highly-functional control networks for end-users. To more effectively meet the needs of systems integrators, we began shipping LonPoint products in 1998, which provides the infrastructure needed to implement open, interoperable, distributed control networks. We intend to continue promoting the benefits of the LONWORKS technology and products to systems integrators and end-users as a means to create stronger demand for our control network solutions.

- *Increase Penetration of Existing Vertical Markets.* While our control network products are applicable across a broad range of industries, we intend to continue to focus our marketing efforts on those vertical markets in which we have established a large customer base. These markets include the building, industrial, transportation and home automation industries. We work closely with OEMs and systems integrators in these markets to identify market needs, and target our product development efforts to meet those needs. For instance, in 1997, we began shipping our LNS network operating system in response to the needs of OEMs for a multi-user platform to install, maintain, monitor and interface with control networks. In addition, we established the LONMARK Interoperability Association in May 1994 to facilitate the development and implementation of interoperable LONWORKS based control systems within various industries. Several industry leaders in our targeted markets have announced and currently promote products that conform to these standards.
- *Take Advantage of New Market Opportunities Created by the Integration of LONWORKS Control Networks with the Internet and Corporate Intranets.* We believe that the ability to interact with LONWORKS control networks through Internet Protocol networks, including the Internet and corporate intranets, delivers important features to our customers that creates new markets for our products. This ability enables end-users to remotely monitor and manage control networks, to collect and analyze data generated by their control networks, and to deliver new value-added services over the Internet that interact with the everyday devices in LONWORKS networks. To meet this market demand, we are developing systems and technology that combine standard data networking and communications protocols with our products and technology. In support of this effort, we entered into strategic agreements with Toshiba and Cisco to develop products that integrate LONWORKS control networks with IP networks and announced the first product resulting from these efforts, the i.LON 1000 Internet Server, in October of 1999.
- *Leverage International Market Opportunities.* With sales and marketing operations in eight countries and 62.4% of our total revenues in 1999 attributable to international sales, we have established a significant international presence. We plan to continue to devote significant resources to international sales, marketing and product development efforts to capitalize on markets for control networks outside of the United States. For example, our most popular power line transceiver was designed to meet the requirements imposed by regulators in North America, Europe and Japan, enabling OEMs to leverage their product development programs across these markets.

## **Markets, Applications and Customers**

We market our products and services primarily in North America, South America, Europe, Japan and selected Asia Pacific countries. Our target markets include:

- *Building Automation.* Companies worldwide are using LONWORKS control networks in most areas of the building automation industry, including access control, automatic doors, elevators, energy management, fire/life/safety, HVAC, lighting, metering, security and window blinds. We believe that LONWORKS networks are widely accepted because they lower installed system cost, reduce ongoing life-cycle costs and increase functionality. For example, British Airways' combined business center, BA Waterside, near Heathrow Airport, included a major automation project using LONWORKS control networks. Our OEM customers in the building automation market include Honeywell, Johnson Controls, the Landis & Staefa division of Siemens, Philips Lighting, Schindler Elevator and Invensys.
- *Industrial Automation.* LONWORKS control networks are found in semiconductor fabrication plants, gas compressor stations, gasoline tank farms, oil pumping stations, water pumping stations, textile dyeing machinery, pulp and paper processing equipment, automated conveyor systems and many other industrial environments. In such industrial installations, LONWORKS networks can replace complex wiring harnesses, reduce installation costs, eliminate expensive programmable logic controllers and distribute control among sensors, actuators and other devices, thereby reducing system costs, improving control and eliminating the problem of a single point of failure, among other things. For example, Edwards, a leading supplier of vacuum pumping systems to the semiconductor industry, is using LONWORKS control networks within each pumping station to replace complex wiring used to connect various motors, sensors, actuators and displays. The same control network is extended to connect up to 400 pumping stations together in a semiconductor fabrication plant to form a complete pumping system. Our OEM customers in the industrial automation market include Brooks Instrument, Edwards, Fuji Electric, Hitachi, Lam Research and Marley Pump.

- *Transportation.* Our technology is used in important transportation applications, including railcars, light rail, busses, motor coaches, fire trucks, naval vessels and aircraft. LONWORKS networks can be used in these transportation systems to improve efficiency, reduce maintenance costs and increase safety and comfort. LONWORKS technology has been specified as the standard for electro-pneumatic braking for freight transportation trains by the American Association of Railroads, and as one of the standards by the New York City Transit Authority for the replacement of its subway cars. Key OEMs in the transportation market include Bombardier, Cummins Engine, Kawasaki and Raytheon.
- *Home Networking and Other.* While the home networking market for automation and control is still in its infancy, many companies are now selling LONWORKS based products for HVAC, lighting, security, utility meters and whole house automation. A number of utility and telecommunications companies located throughout the world, including GTE in the United States and Vattenfall in Europe, have announced residential projects involving LONWORKS networks. Other industries in which LONWORKS control networks have been utilized or are being developed for use include telecommunications (including alarm systems for switching equipment) and agriculture (including feeding and watering systems).

## Products and Services

We offer a comprehensive set of over 80 products and services marketed under the LONWORKS brand name that provide the infrastructure and support required to implement and deploy open, interoperable, control network solutions. All of our products either incorporate or operate with the Neuron Chip and/or the LONWORKS protocol. While we recommend broad use of several of our products with other products that we offer, there is no inherent requirement for a customer to do so, given our open networking technology. For instance, a customer's product could use a transceiver purchased from a third party which is installed with software that uses our network operating system.

*LONWORKS Control and Connectivity Products.* This suite of hardware products, some with embedded firmware, serves as the physical interface between the control software that resides on the managed devices and the cabling and wiring infrastructure. These products include a variety of transceivers, control modules, routers, network interface devices, and IP connectivity products. Standard, off-the-shelf LONWORKS transceivers and control modules simplify the development of LONWORKS nodes, provide the foundation for interoperability and reduce the development cost and time for an OEM's product development. LONWORKS routers provide transparent support for multiple media, which makes it possible to signal between different types of media, such as twisted pair, power line, radio frequency, optical fiber and infrared. Routers can also be used to control network traffic and partition sections of the network from traffic in another area, increasing the total throughput and speed of the network. Network interfaces can be used to connect computers to a LONWORKS network. Our i.LON 1000 Internet Server, which we expect to ship in March of 2000, provides reliable, secure Internet access to the everyday devices in LONWORKS networks. Our FTT-10A transceiver product, which permits communication over a twisted pair of wires, generated about 26% of our revenues during 1999 and 21% of our revenues during 1998. We released the FTT-10A in May 1997.

*LNS.* Our LNS network operating system serves as the platform for installing, maintaining, monitoring and interfacing with control networks. The LNS family of products adds the power of client-server architecture and component-based software design into control systems and allows tools from multiple vendors to work together. The most recent release of LNS is version 2.0, which we released in March 1999. We have also announced LNS version 3.0, which we expect to ship in the second quarter of 2000.

The LonMaker for Windows tool, built on the LNS network operating system and the Visio technical drawing package, gives users a familiar, CAD-like environment in which to design their network's control system. The graphical nature of the LonMaker tool provides an intuitive interface for designing, installing and maintaining multi-vendor, open, interoperable LONWORKS control networks. LNS also allows multiple users, each running their own copy of LonMaker for Windows or other LNS based tools, to utilize the system in parallel, thereby streamlining the design and commissioning process, and facilitating future adds, moves and changes. We first shipped LonMaker for Windows release 1.0 in June 1998. We released LonMaker for Windows version 2.0 in March 1999. We have announced LonMaker for Windows version 3.0, which we expect to ship in the second quarter of 2000.

*LonPoint Products.* Our LonPoint products provide infrastructure for open, interoperable, distributed control networks. LonPoint products include the following:

- interface modules which convert a variety of legacy digital and analog sensors and actuators into intelligent and interoperable LONWORKS devices;
- routers which provide transparent connectivity and intelligent message passing between various combinations of standard LONWORKS media; and
- scheduler and data logging modules, which provide system timekeeping, state coordination, and distributed data storage.

LonPoint products are installed using the LonMaker for Windows tool and include LNS software plug-ins that provide end-users with a customized configuration view of each LonPoint module, thereby reducing the time and training required to configure LonPoint interface modules.

*Development Tools.* We provide development tools that are used by an OEM to design LONWORKS technology into the OEM's products. The LonBuilder Developer's Workbench integrates a complete set of tools for developing LONWORKS based control networks. These tools include an environment for developing and debugging applications at multiple nodes, a network manager to install and configure these nodes, and a protocol analyzer to examine network traffic to ensure adequate capacity and to debug errors. Our most recent release of this product is version 3.01, which we first shipped in July 1996.

The NodeBuilder development tool is designed to make it easy for OEMs to develop and test individual LONWORKS nodes. It uses a familiar Windows based development environment with easy-to-use on line help. The NodeBuilder tool can complement the development capabilities of the LonBuilder Developer's Workbench, since the NodeBuilder tool can be used to develop individual nodes that are then integrated and tested as a system using the LonBuilder tool. Our most recent release of the NodeBuilder development tool is version 1.5, which we first shipped in August 1996.

*Training and Support.* We conduct a variety of technical training courses covering our LONWORKS network technology and products. These courses are designed to provide hands-on, in-depth and practical experience that can be used immediately by OEMs and systems integrators of LONWORKS systems. We also offer technical support to our customers on a per-incident and annual contract basis. We intend these support services to ensure that our products will be used properly and to shorten development time for the customers' products that use our technology by resolving customers' technical problems on a timely basis. As of February 29, 2000, we had 14 employees in the United States, Japan, China and the United Kingdom engaged in training and support.

## **Sales and Marketing**

We market and sell our products and services to OEMs and increasingly to systems integrators to promote the widespread use of our LONWORKS technology. In addition, we believe that awareness of the benefits of LONWORKS networks among end-users will increase demand "pull" for our products. In North America, we sell our products through a direct sales organization. Outside the United States, direct sales, applications engineering and customer support are conducted through our operations in China, France, Germany, Japan, the Netherlands, South Korea, and the United Kingdom. Each of these offices is staffed primarily with local employees. We support our worldwide sales personnel with application engineers and technical and industry experts working in our headquarters. We also leverage our selling efforts through the use of an in-house telephone sales staff. Internationally, we support our direct sales with the use of distributors who tend to specialize in certain geographical markets. We sell our products in Europe principally through EBV, our sole independent European distributor, and through our direct sales force. We rely solely on distributors in certain markets in the Asia Pacific region, including Australia and Taiwan, and in Latin America, through our distributor in Argentina.

In 1998, we began an authorized network integrator program to increase the distribution of our products through systems integrators worldwide. These systems integrators design, install and service control systems using our LonPoint products with legacy devices and other manufacturers' products that meet the certification guidelines of the LONMARK Interoperability Association, thereby reducing dependence on single-vendor products, eliminating the risks of centralized, closed controllers and supporting less complex, peer-to-peer system architectures. We provide these systems integrators with access to the training, tools and products required to cost-effectively install, commission and maintain open, multi-vendor distributed control systems based on LONWORKS control networks.

The LONMARK Interoperability Association and the LonWorld Conference and Exhibition assist our marketing efforts. We formed the LONMARK Interoperability Association in May 1994 and it has about 250 members. This

Association makes technical recommendations for interoperable use of LONWORKS technology and promotes the use of open control networks based on the LONMARK standard. The purpose of the LonWorld Conference and Exhibition is to provide a forum in which parties can share recent information concerning LONWORKS technology and applications, build alliances and support the LONWORKS standard for control networking. In 1999, meetings in Europe and Asia, including our LonWorld99 Conference and Exhibition, drew nearly 1800 participants.

### **Strategic Alliances**

Neuron Chips, which are important components used by our customers in control network nodes, are currently manufactured and distributed by Motorola and Toshiba. We have entered into licensing agreements with each of Motorola, Cypress Semiconductor and Toshiba. Among other things, the agreements grant Motorola, Cypress and Toshiba the worldwide right to manufacture and distribute Neuron Chips using technology licensed by us and require us to provide support and unspecified updates to the licensed technology over the terms of the agreements. The Motorola agreement expires in January 2001, the Cypress agreement expires in April 2009 and the Toshiba agreement expires in January 2010. Motorola has announced that it will discontinue distribution of Neuron Chips after January 31, 2001, although Motorola has the right to terminate the agreement at any time. While we developed the first version of the Neuron Chip, Motorola and Toshiba subsequently have developed (and we expect Cypress to develop) improved, lower-cost versions of the Neuron Chip that are presently utilized in products developed and sold by us and our customers.

We have an agreement with Cisco which is intended to result in products that simplify enterprise-wide integration of LONWORKS control and Internet protocol data networks. The first product to be shipped from this alliance is the i.LON 1000 Internet Server.

### **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. We continue to make significant engineering investments in bringing our LNS network operating system and LonPoint products to market. Extensive product development input is obtained from customers and by monitoring end-user needs and changes in the marketplace.

Our total expenses for product development were \$9.2 million for 1999, \$7.6 million for 1998 and \$7.1 million for 1997. We anticipate that we will continue to commit substantial resources to product development in the future and that product development expenses may increase in the future. To date, we have not recorded any capitalized software development costs from our development efforts. As of February 29, 2000, we had 48 employees in our product development organization.

### **Competition**

Competition in our markets is intense and involves rapidly changing technologies, evolving industry standards, frequent new product introductions and rapid changes in customer requirements. To maintain and improve our competitive position, we must continue to develop and introduce, on a timely and cost-effective basis, new products, features and services that keep pace with the evolving needs of our customers. The principal competitive factors affecting the markets for our control network products are customer service and support, product reputation, quality, performance and price, and product features such as adaptability, scalability, ability to integrate with other products, functionality and ease of use.

In each of our markets, we compete with a wide array of manufacturers, vendors, strategic alliances, systems developers and other businesses. Our competitors include some of the largest companies in the electronics industry, such as Siemens in the building and industrial automation industries and Allen-Bradley, a subsidiary of Rockwell International, and Groupe Schneider in the industrial automation industry. Many of our competitors, alone or together with their trade associations and partners, have longer operating histories, significantly greater financial, technical, marketing, service and other resources, significantly greater name recognition and broader product offerings. As a result, these competitors may be able to devote greater resources to developing, marketing and selling their products, and may be able to respond more quickly to changes in customer requirements or product technology. In addition, those competitors that manufacture and promote closed, centralized proprietary systems may enjoy a captive customer base that depends on these competitors for service, maintenance, upgrades and enhancements. Products from emerging

companies such as emWare could also compete with our products, especially in the home market. Even if we believe that the products offered by some of these emerging companies do not provide the robust and open networking solutions offered by LONWORKS networks, we would be required to educate our customers about what we believe are the long-term cost and potential function problems inherent in such alternative solutions. However, our customers may believe that these alternative products are satisfactory for their needs.

Many of our current and prospective 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. In some cases, companies have established associations or cooperative relationships to enhance the competitiveness and popularity of their products, or to promote their different or incompatible technologies, protocols and standards. For example, in the building automation market, vendors of traditional closed or proprietary control systems, which enjoy a captive market for servicing and replacing equipment, are reluctant to use our interoperable technologies. We also face strong competition by large trade associations that promote alternative technologies and standards in their native countries, such as the BatiBus Club International in France and the European Installation Bus Association in Germany (each of which has over 100 members and licensees). Other examples include the CEBus Industry Council, which is the proponent of an alternative protocol to our LONWORKS protocol for use in the home automation industry, and a group comprised of Asea Brown Boveri, ADtranz AB, Siemens, GEC Alstrom and other manufacturers that support an alternative rail transportation protocol to LONWORKS networks. We work with standards-setting organizations to establish open markets for LONWORKS products in our targeted markets.

LONWORKS technology is open, meaning that many of our key technology patents are broadly licensed without royalties or license fees. As a result, our customers are capable of developing products 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. This could decrease the market for our products and increase competition.

## **Manufacturing**

Our manufacturing strategy is to outsource production to third parties where it is more cost-effective and to limit our internal manufacturing to such tasks as quality inspection, system integration, testing and order fulfillment. We maintain manufacturing agreements with Motorola, Cypress and Toshiba related to the Neuron Chip. Additionally, for most of our products requiring assembly, we use contract electronic manufacturers including Able Electronics, Jabil Circuits and muRata Electronics. These contract electronic manufacturers procure material and assemble, test and inspect the final products to our specifications.

## **Government Regulation**

Many of our products and the industries in which they are used are subject to U.S. and foreign regulation. Government regulatory action could greatly reduce the market for our products. 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 our competitors' 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.

## **Proprietary Rights**

We are the owner of numerous patents, trademarks and logos. As of February 29, 2000, we had received 76 United States patents, and had 15 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. The principal value of the remaining patents relates to our specific implementation of our products.

We hold several registered trademarks in the United States, including Echelon, LonBuilder, LONMARK, LonTalk, LONWORKS, Neuron and NodeBuilder. We have also registered some of our trademarks and logos in foreign countries.

## **Employees**

As of February 29, 2000, we had 173 employees worldwide, of which 48 were in product development, 25 were in operations, 60 were in sales and marketing, 14 were in customer support and training and 26 were in general and

administrative. About 129 employees are located at our headquarters in California. We have employees in eight countries worldwide, with the largest concentrations outside the United States in Japan, the Netherlands and the United Kingdom. None of our employees is represented by a labor union. We have not experienced any work stoppages and consider our relations with employees to be good.

## **Executive Officers of the Registrant**

*M. Kenneth Oshman* has been our President and Chief Executive Officer since December 1988 (age 59). Mr. Oshman, with three associates, founded ROLM Corporation, a telecommunications equipment company, in 1969. He was Chief Executive Officer, President, and a director at ROLM from its founding until its merger with IBM in 1984. Following the merger, he became a Vice President of IBM and a member of the Corporate Management Board. He remained in that position until he left IBM in 1986. Prior to founding ROLM, Mr. Oshman was a member of the technical staff at Sylvania Electric Products from 1963 to 1969. In addition to his responsibilities at our company, Mr. Oshman serves as a director of Sun Microsystems and Knight-Ridder. Mr. Oshman earned B.A. and B.S.E.E. degrees from Rice University and M.S. and Ph.D. degrees in Electrical Engineering at Stanford University.

*Frederik Bruggink* has been Vice President, Europe, Middle East and Africa, since April 1996 (age 44). Mr. Bruggink joined our company from Banyan Systems, where he was Vice President, Europe. From 1985 to 1993, Mr. Bruggink held several positions at Stratus Computer, including General Manager positions for Holland, Benelux, and Northern Europe. His last position at Stratus was Vice President, Northern Europe (including Germany). Prior to joining Stratus, he held sales positions at Burroughs Computers. Mr. Bruggink attended the University of Leiden.

*Lawrence Y.H. Chan* joined our company in April 1997 as Vice President of Asia Pacific and Japan and is based in Hong Kong (age 49). Prior to joining our company, Mr. Chan was Vice President of Asia Pacific and Japan for Banyan Systems. Prior to that, he held management positions at Stratus Computer, both in the U.S. and the Far East. Prior to joining Stratus, he held positions with ComputerVision, Oriental Data Systems, Ltd., Hong Kong Terminals, John Swire and Sons, Ltd., Kowloon Container Terminals Ltd. and NCR Hong Kong Ltd. Mr. Chan was educated at Hong Kong Technical College and the University of Hong Kong. He is a Chartered Information Systems Practitioner and Corporate Member of the British Computer Society.

*Kenneth E. Lavezzo* has been Vice President and General Manager of the LonPoint System since January 1999 (age 58). From September 1990 to December 1998, Mr. Lavezzo was our Vice President of Operations and has been employed at Echelon since 1989. Mr. Lavezzo joined our company from ROLM, where he was the Director responsible for Phonemail and Voice Applications. He also served as General Manager of the Phones Division. Mr. Lavezzo joined ROLM in 1973 and held a variety of other positions ranging from product design and program management to production and manufacturing management. Prior to joining ROLM, he spent seven years at Hewlett-Packard as a member of the technical staff developing medical products and high-speed data acquisition products. Mr. Lavezzo received a B.S. degree in Electrical Engineering from the University of California at Berkeley.

*Peter A. Mehring* has been Vice President, Engineering since March 1998 (age 38). From January 1996 to March 1998, Mr. Mehring held a variety of positions at Umax Computer Corporation where he was a Founder, General Manager, and Vice President of Research and Development. Prior to joining Umax, Mr. Mehring held engineering management positions at Radius, Power Computing Corporation, Sun Microsystems, and Wang Laboratories. Mr. Mehring received a B.S. degree in Electrical Engineering from Tufts University, Massachusetts.

*Jerry Rulli* has been Vice President of Americas since February 2000 (age 43). Mr. Rulli joined our company from Framework Technologies, where he was Vice-President of Sales. Prior to joining Framework Technologies, Mr. Rulli was the Vice President of Sales at Bright Tiger Technologies. From March 1990 to June 1997, Mr. Rulli held a variety of sales management positions at Banyan Systems, including Vice President of Sales and Business Development for Banyan's worldwide Internet subsidiary company, Switchboard, Inc. Mr. Rulli received a B.S. degree in Political Science and Sociology from the University of Wisconsin, River Falls.

*Oliver R. Stanfield* has been our Vice President of Finance & Chief Financial Officer since March 1989 (age 51). 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 ITTEL 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. in Business Administration and an M.B.A. degree from the University of Southern California.

*Thad H. Starkey* has been our Vice President of Operations since January 1999 (age 40). From March 1994 through December 1998, Mr. Starkey was our Director of Materials/Production and was recently the project manager of the Oracle ERP system implementation. Mr. Starkey joined our company from Capetronic Corporation where he was Director of Materials specializing in far east sourcing, new product introduction and worldwide distribution. Prior to Capetronic, Mr. Starkey worked at Unisys and Bendix Aerospace. Mr. Starkey received a B.S. degree in Management from Alfred University.

*Beatrice Yormark* has been our Vice President of Marketing and Sales since January 1990 (age 55). Ms. Yormark joined our company from Connect, Inc., an on-line information services company, where she was the Chief Operating Officer. Before joining Connect, Ms. Yormark held a variety of positions, including Executive Director of Systems Engineering for Telaction Corporation, Director in the role of Partner at Coopers & Lybrand, Vice President of Sales at INTERACTIVE Systems Corporation, and various staff positions at the Rand Corporation. Ms. Yormark received a B.S. degree in Mathematics from City College of New York and an M.S. degree in Computer Science from Purdue University.

## **ITEM 2. PROPERTIES**

We lease two buildings representing about 55,000 square feet of office, manufacturing and distribution facilities in Palo Alto, California under two leases that expire on March 31 and June 30, 2000. The aggregate rental expense under these two leases was about \$1.4 million during 1999. We also lease office space for our sales and marketing employees in China, France, Germany, South Korea, Japan, the Netherlands and the United Kingdom. The aggregate rental expense for such office space was about \$400,000 during 1999.

In the fourth quarter of 1999, our Board of Directors approved a relocation plan to exit our current Palo Alto leased facilities and relocate to a new leased facility in San Jose, California. Over the first two quarters of 2000, we will temporarily move our activities from Palo Alto to a facility in Sunnyvale, California under a lease that will expire in July 2001. Our new corporate headquarters building, to be located in San Jose, is currently under construction and scheduled for completion by June 2001. This lease requires minimum rental payments for ten years and requires that we provide a \$3 million security deposit in May 2000.

## **ITEM 3. LEGAL PROCEEDINGS**

There are no material legal proceedings to which we were a party or to which any of our properties are subject. We are not aware of any material legal proceedings contemplated by any governmental authority against us or any of our properties.

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

No matters were submitted to a vote of security holders during the fourth quarter of our fiscal year ended December 31, 1999.

## PART II

### ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Our common stock is traded on the Nasdaq National 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 National Market.

<u>Year ended December 31, 1999</u>	<u>Price Range</u>	
	<u>High</u>	<u>Low</u>
Fourth quarter	\$15.69	\$ 6.88
Third quarter	8.31	6.00
Second quarter	12.81	6.88
First quarter	19.75	3.75
<u>Year ended December 31, 1998</u>	<u>High</u>	<u>Low</u>
Fourth quarter	\$ 4.25	\$ 1.97
Third quarter (from July 28, 1998)	7.25	1.94

As of February 29, 2000, there were about 597 stockholders of record. Because many shares are held by brokers and other institutions on behalf of stockholders, we are unable to estimate the total number of stockholders represented by these record holders. We have never paid dividends on our capital stock and do not expect to pay any dividends in the foreseeable future. We intend to retain future earnings, if any, for use in our business.

## ITEM 6. SELECTED FINANCIAL DATA

The following selected consolidated financial data has been derived from the audited 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.

	<u>Year Ended December 31,</u>				
	<u>1999</u>	<u>1998</u>	<u>1997</u>	<u>1996</u>	<u>1995</u>
<b>Consolidated Statement of Operations Data:</b>	(in thousands, except per share data)				
Revenues:					
Product.....	\$ 37,546	\$ 29,163	\$ 24,665	\$ 20,708	\$ 20,183
Service .....	<u>2,220</u>	<u>3,038</u>	<u>3,637</u>	<u>3,282</u>	<u>3,160</u>
Total revenues .....	39,766	32,201	28,302	23,990	23,343
Cost of revenues:					
Cost of product.....	14,297	12,784	11,761	10,761	9,434
Cost of service.....	<u>1,529</u>	<u>1,836</u>	<u>1,810</u>	<u>1,142</u>	<u>1,141</u>
Total cost of revenues.....	<u>15,826</u>	<u>14,620</u>	<u>13,571</u>	<u>11,903</u>	<u>10,575</u>
Gross profit.....	<u>23,940</u>	<u>17,581</u>	<u>14,731</u>	<u>12,087</u>	<u>12,768</u>
Operating expenses:					
Product development.....	9,214	7,564	7,121	7,526	7,355
Sales and marketing .....	15,152	12,535	12,128	11,577	10,881
General and administrative .....	4,101	4,119	4,004	3,921	4,386
Non-recurring charge .....	<u>549</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>
Total operating expenses .....	<u>29,016</u>	<u>24,218</u>	<u>23,253</u>	<u>23,024</u>	<u>22,622</u>
Loss from operations .....	(5,076)	(6,637)	(8,522)	(10,937)	(9,854)
Interest and other income, net .....	<u>1,355</u>	<u>945</u>	<u>497</u>	<u>373</u>	<u>1,284</u>
Loss before provision for income taxes .....	(3,721)	(5,692)	(8,025)	(10,564)	(8,570)
Provision for income taxes .....	<u>186</u>	<u>159</u>	<u>189</u>	<u>152</u>	<u>143</u>
Net loss .....	<u><u>\$ (3,907)</u></u>	<u><u>\$ (5,851)</u></u>	<u><u>\$ (8,214)</u></u>	<u><u>\$ (10,716)</u></u>	<u><u>\$ (8,713)</u></u>
Loss per share (1):					
Basic .....	<u><u>\$ (0.12)</u></u>	<u><u>\$ (0.24)</u></u>	<u><u>\$ (0.44)</u></u>	<u><u>\$ (0.62)</u></u>	<u><u>\$ (0.56)</u></u>
Pro forma basic .....		<u><u>\$ (0.20)</u></u>	<u><u>\$ (0.32)</u></u>		
Shares used in per share calculation (1):					
Basic .....	<u>32,910</u>	<u>24,845</u>	<u>18,603</u>	<u>17,354</u>	<u>15,695</u>
Pro forma basic.....		<u>29,405</u>	<u>25,756</u>		
<b>Consolidated Balance Sheet Data:</b>					
Cash, cash equivalents and short-term investments.....	\$ 24,304	\$ 29,053	\$ 7,853	\$ 8,051	\$ 16,044
Working capital .....	30,290	33,733	8,883	7,905	17,653
Total assets .....	39,711	41,950	16,816	15,855	24,547
Total stockholders' equity .....	32,938	35,786	8,800	7,138	15,978

(1) See Note 2 of Notes to Consolidated Financial Statements for an explanation of shares used in computing basic net loss per share and pro forma basic net loss per share.

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

*This Management's Discussion and Analysis of Financial Condition and Results of Operations includes a number of forward-looking statements which reflect our current views with respect to future events and financial performance. These forward-looking statements are subject to certain risks and uncertainties, including those discussed in the "Factors That May Affect Future Results of Operations" and elsewhere in this Form 10-K that could cause actual results to differ materially from historical results or those anticipated. In this report, the words "believes," "future," and similar expressions identify forward-looking statements. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date of this Form 10-K.*

### OVERVIEW

We develop, market and support a family of hardware and software products and services that enables OEMs and systems integrators to design and implement open, interoperable, distributed control networks. We offer our products and services to OEMs and systems integrators in the building, industrial, transportation, home and other automation markets. We provide a variety of technical training courses related to our products and underlying technology. We also provide customer support on a per-incident or annual contract basis.

We market our products and services in North America, Europe, Japan, South America and selected Asia-Pacific countries through a direct sales organization augmented with the use of third-party distributors and systems integrators. International sales, which include both export sales and sales by international subsidiaries, accounted for 62.4% of our total revenues for 1999, 55.4% of our total revenues for 1998 and 57.5% of our total revenues for 1997. The percentage of our revenues that was denominated in currencies other than the U.S. dollar, principally the Japanese Yen, was 10.8% in 1999, 9.1% in 1998 and 10.7% in 1997. However, this percentage may increase over time as we respond to market requirements to sell our products and services in local currencies, such as the Euro. As a result, our operations and the market price of our products may be directly affected by economic and political conditions in the countries where we do business. We expect that international sales will continue to constitute a significant portion of total revenues.

We derive our revenues primarily from the sale and licensing of our products and, to a lesser extent, from fees associated with training and technical support offered to our customers. Our product revenues consist of revenues from sales of transceivers, control modules, routers, network interface devices and development tools and from licenses for network services software products. We have not had significant revenues from software licensing arrangements to date. Our service revenues consist of product support (including software post-contract support services) and training. We recognize revenue from product sales at the time we ship the products to the customer. We record estimated reserves for warranty costs as well as for sales returns and allowances related to anticipated return of products sold to distributors with limited rights of return, at the time we sell the products. These reserves have not been material to our financial results. We recognize revenue from software sales when we ship the software if we have no significant post-delivery obligations and if we determine that collection is probable. We generally have not had any significant post-delivery obligations associated with the sale of our products. We recognize service revenues as we perform the services.

We have experienced operating losses in all prior years, including 1999. During this period, we have invested significantly in product development to implement open control networks. Our development projects included development of transceivers, control modules, routers, network interface devices, network management software, LonPoint products and the i.LON 1000 Internet Server. Furthermore, because our strategy depends significantly on achieving broad adoption of our LONWORKS technology across many industries worldwide, we have incurred significant selling and marketing expenses to promote our products. We currently believe it is unlikely that our future rate of growth of product development, sales and marketing expenses will fall below their historical levels. In addition, we believe that our products are priced competitively to ensure that our LONWORKS technology is broadly adopted in many industries. We plan to continue to invest significantly in product development, sales and marketing, and to the extent such expenditures are accelerated to exploit market opportunities, or do not result in significant increases in revenues, we may continue to incur operating losses for the foreseeable future.

Our quarterly and annual results have varied significantly, and we expect our results to continue to vary. Many of the factors that can cause our results to vary are outside of our control. For example, the rates at which OEMs purchase our products and services can fluctuate. These rates are affected by the OEMs' own business cycles. Another factor is whether we can introduce new products in a timely manner. From time to time, we have delayed introducing new

products beyond our projected shipping date. These delays have increased costs and postponed revenues. Because our future revenues depend on our ability to timely introduce new product offerings, any future delays could harm our business. Our expense levels are based substantially on the levels of future revenues that we expect to generate. Consequently, if our revenues are less than we expect, our expense levels could be disproportionately high as a percentage of total revenues, and our operating results could be harmed. In the past, we have sometimes failed to meet our expected targets for revenues. In addition, declines in sales of our existing products over time have hurt the growth of our revenues.

## Results of Operations

The following table shows the percentage of total revenues represented by each item in our Consolidated Statement of Operations for 1999, 1998 and 1997:

	<u>Year Ended December 31,</u>		
	<u>1999</u>	<u>1998</u>	<u>1997</u>
Revenues:			
Product.....	94.4%	90.6%	87.1%
Service .....	<u>5.6</u>	<u>9.4</u>	<u>12.9</u>
Total revenues .....	100.0	100.0	100.0
Cost of revenues:			
Cost of product .....	36.0	39.7	41.6
Cost of service .....	<u>3.8</u>	<u>5.7</u>	<u>6.4</u>
Total cost of revenues.....	<u>39.8</u>	<u>45.4</u>	<u>48.0</u>
Gross profit.....	<u>60.2</u>	<u>54.6</u>	<u>52.0</u>
Operating expenses:			
Product development .....	23.2	23.5	25.1
Sales and marketing .....	38.1	38.9	42.9
General and administrative .....	10.3	12.8	14.1
Non-recurring charge.....	<u>1.4</u>	--	--
Total operating expenses .....	<u>73.0</u>	<u>75.2</u>	<u>82.1</u>
Loss from operations .....	(12.8)	(20.6)	(30.1)
Interest and other income, net.....	<u>3.4</u>	<u>2.9</u>	<u>1.7</u>
Loss before provision for income taxes.....	(9.4)	(17.7)	(28.4)
Provision for income taxes .....	<u>0.4</u>	<u>0.5</u>	<u>0.6</u>
Net loss .....	<u>(9.8)%</u>	<u>(18.2)%</u>	<u>(29.0)%</u>

### Comparison of Years Ended December 31, 1999 and 1998

#### Revenues

Total revenues for 1999 grew to \$39.8 million from \$32.2 million in 1998. One customer, EBV, the sole independent distributor of our products in Europe, accounted for 27.3% of total revenues for 1999 and 22.6% of total revenues for 1998.

*Product.* Product revenues for 1999 grew to \$37.5 million from \$29.2 million in 1998. The 28.7% increase in product revenues was primarily a result of increasing sales of control and connectivity, LonPoint products and network service products only slightly offset by a decrease in sales of our development tools products.

*Service.* Service revenues for 1999 decreased to \$2.2 million from \$3.0 million in 1998. The 26.9% decrease in service revenues between the years was due to reduced customer support revenues resulting from a change in our product offerings between the two years as well as a restructure in support pricing options offered to customers, partially offset by an increase in training revenue.

#### Cost of Revenues

*Cost of product.* Cost of product revenues consists of costs associated with the purchase of components and subassemblies, as well as allocated labor, overhead and manufacturing variances associated with the packaging, preparation and shipment of products. Cost of product revenues for 1999 increased to \$14.3 million from \$12.8 million in

1998. These costs represented a product gross margin of 61.9% in 1999 and 56.2% in 1998. The increase in product gross margin percentages was due to cost reductions of several of our control and connectivity products as well as an increase in the volumes of our higher margin network services products.

*Cost of service.* Cost of service revenues consists of employee-related costs as well as direct costs incurred in providing training and customer support services. Cost of service revenues for 1999 was \$1.5 million compared to \$1.8 million in 1998. These costs represented service gross margins of 31.1% in 1999 and 39.6% in 1998. The decrease in service gross margin percentage in 1999 compared to 1998 was primarily due to the decline in service revenues not offset by a similar decline in service costs.

#### *Operating Expenses*

*Product development.* Product development expenses consist primarily of payroll and related expenses, expensed material and facility costs associated with the development of new technologies and products. Product development expenses for 1999 increased to \$9.2 million from \$7.6 million in the same period of 1998. These expenses represented 23.2% of total revenues in 1999 and 23.5% of total revenues in 1998. The increase in spending was primarily the result of increased salaries and other costs related to the hiring of additional engineering personnel as well as contracted consulting services in order to support the development of new and existing products.

*Sales and marketing.* Sales and marketing expenses consist primarily of payroll and related expenses including commissions to sales personnel, travel and entertainment, advertising and product promotion and facilities costs associated with our sales and support offices. Sales and marketing expenses for 1999 increased to \$15.2 million from \$12.5 million in 1998. These expenses represented 38.1% of total revenues in 1999 and 38.9% of total revenues in 1998. The increase in selling costs in 1999 was primarily the result of increased sales and marketing spending in the worldwide sales regions with the largest increase in the Asia Pacific region as we grew our sales force and expanded our marketing in that area of the world.

*General and administrative.* General and administrative expenses consist primarily of payroll and related expenses for executive, accounting and administrative personnel, insurance, professional fees and other general corporate expenses. Although there were some minor changes in the various expense categories expended in this department, there were no significant changes to the total spending which was \$4.1 million in 1999 and 1998. These expenses represented 10.3% of total revenues in 1999 and 12.8% of total revenues in 1998.

*Non-recurring charge.* The non-recurring charge of \$549,000 for 1999 relates to the exit from our current Palo Alto leased facilities as a result of the planned move to a temporary facility in Sunnyvale, California. As a result of vacating the Palo Alto facility, we recorded an expense of \$549,000 to be paid over the remaining lease term for that facility which expires June 30, 2000.

#### *Interest and other income, net*

Interest and other income, net primarily reflects interest earned on our cash and short-term investment balances. Interest and other income, net for 1999 increased to \$1.4 million from \$945,000 in 1998. The increase in 1999 was primarily due to the higher average cash and short-term investment balance throughout the entire year compared to 1998 which didn't reflect higher balances until receipt of the cash proceeds from the IPO at the end of July 1998.

#### *Provision for income taxes*

Income taxes consist of income taxes related to some of our foreign subsidiaries. Income taxes were \$186,000 for 1999 and \$159,000 for 1998.

### **Comparison of Years Ended December 31, 1998 and 1997**

#### *Revenues*

Total revenues for 1998 grew to \$32.2 million from \$28.3 million in 1997. One customer, EBV, accounted for 22.6% of total revenues in 1998 and 10.9% of total revenues for 1997.

*Product.* Product revenues for 1998 grew to \$29.2 million from \$24.7 million in 1997. The 18.2% increase in product revenues was primarily a result of increasing sales of control and connectivity products partially offset by the decrease in sales for network services and development tools products.

*Service.* Service revenues for 1998 decreased to \$3.0 million from \$3.6 million in 1997. The 16.5% decrease in service revenues between the years was due to fewer participants attending the training courses that we offered and reduced customer support revenues due to a change in our product offerings.

#### *Cost of Revenues*

*Cost of product.* Cost of product revenues for 1998 increased to \$12.8 million from \$11.8 million in 1997, an increase of 8.7%. These costs represented product gross margins of 56.2% in 1998 and 52.3% in 1997. The increase in product gross margin percentages was primarily due to cost reductions for our higher volume control and connectivity products.

*Cost of service.* Cost of service revenues were \$1.8 million in both 1998 and 1997. These costs represented service gross margins of 39.6% in 1998 and 50.2% in 1997. The decrease in service gross margin percentage in 1998 compared to 1997 was primarily due to the decline in service revenues.

#### *Operating Expenses*

*Product development.* Product development expenses for 1998 increased to \$7.6 million from \$7.1 million in the same period of 1997. These expenses represented 23.5% of total revenues in 1998 and 25.1% of total revenues in 1997. The dollar amount increase was primarily the result of increased salaries and other costs related as we hired additional engineering personnel to support the development of new and existing products.

*Sales and marketing.* Sales and marketing expenses for 1998 increased to \$12.5 million from \$12.1 million in 1997. These expenses represented 38.9% of total revenues in 1998 and 42.9% of total revenues in 1997. The decrease in sales and marketing expense as a percentage of total revenues was primarily due to our larger revenue base in 1998.

*General and administrative.* General and administrative expenses for 1998 increased to \$4.1 million from \$4.0 million from the same period of 1997. These expenses represented 12.8% of total revenues in 1998 and 14.1% of total revenues in 1997. The decrease in general and administrative expenses as a percentage of total revenues was primarily due to the larger revenue base in 1998.

#### *Interest and other income, net*

Interest and other income, net for the year ended 1998 increased to \$945,000 from \$497,000 in 1997. The increase in 1998 was primarily due to the higher cash and short-term investments balances generated in the third quarter of 1998 when we received net proceeds of \$31.7 million from our initial public offering.

#### *Provision for income taxes*

Income taxes were \$159,000 for 1998 and \$189,000 for 1997.

## SELECTED QUARTERLY RESULTS OF OPERATIONS

The following tables set forth certain consolidated statement of operations data for each of the quarters in 1999 and 1998, as well as the percentage of our net revenues represented by each item. This information has been derived from our unaudited consolidated financial statements. The unaudited consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements included in this report and include all adjustments, consisting only of normal recurring adjustments, that we consider necessary for a fair presentation of such information when read in conjunction with our annual audited consolidated financial statements and notes appearing elsewhere in this report. The operating results for any quarter do not necessarily indicate the results for any subsequent period or for the entire fiscal year.

	Quarter Ended							
	Q499	Q399	Q299	Q199	Q498	Q398	Q298	Q198
Revenues:								
Product.....	\$ 10,881	\$ 9,301	\$ 9,191	\$ 8,173	\$ 7,896	\$ 6,406	\$ 7,673	\$ 7,188
Service .....	<u>521</u>	<u>473</u>	<u>591</u>	<u>635</u>	<u>677</u>	<u>717</u>	<u>873</u>	<u>771</u>
Total revenues .....	<u>11,402</u>	<u>9,774</u>	<u>9,782</u>	<u>8,808</u>	<u>8,573</u>	<u>7,123</u>	<u>8,546</u>	<u>7,959</u>
Cost of revenues:								
Cost of product.....	3,911	3,473	3,588	3,325	3,479	2,701	3,356	3,249
Cost of service.....	<u>363</u>	<u>387</u>	<u>399</u>	<u>380</u>	<u>434</u>	<u>424</u>	<u>434</u>	<u>543</u>
Total cost of revenues.....	<u>4,274</u>	<u>3,860</u>	<u>3,987</u>	<u>3,705</u>	<u>3,913</u>	<u>3,125</u>	<u>3,790</u>	<u>3,792</u>
Gross profit.....	<u>7,128</u>	<u>5,914</u>	<u>5,795</u>	<u>5,103</u>	<u>4,660</u>	<u>3,998</u>	<u>4,756</u>	<u>4,167</u>
Operating expenses:								
Product development.....	2,360	2,227	2,187	2,440	2,000	1,803	1,803	1,958
Sales and marketing .....	4,354	3,705	3,593	3,500	3,430	3,010	3,064	3,031
General and administrative .....	966	1,035	1,061	1,039	1,027	1,105	1,052	935
Non-recurring charge.....	<u>549</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>
Total operating expenses .....	<u>8,229</u>	<u>6,967</u>	<u>6,841</u>	<u>6,979</u>	<u>6,457</u>	<u>5,918</u>	<u>5,919</u>	<u>5,924</u>
Loss from operations .....	(1,101)	(1,053)	(1,046)	(1,876)	(1,797)	(1,920)	(1,163)	(1,757)
Interest and other income, net .....	<u>310</u>	<u>352</u>	<u>331</u>	<u>362</u>	<u>433</u>	<u>403</u>	<u>34</u>	<u>75</u>
Loss before provision for income taxes .....	(791)	(701)	(715)	(1,514)	(1,364)	(1,517)	(1,129)	(1,682)
Provision for income taxes .....	<u>56</u>	<u>42</u>	<u>29</u>	<u>59</u>	<u>22</u>	<u>37</u>	<u>45</u>	<u>55</u>
Net loss.....	<u>\$ (847)</u>	<u>\$ (743)</u>	<u>\$ (744)</u>	<u>\$ (1,573)</u>	<u>\$ (1,386)</u>	<u>\$ (1,554)</u>	<u>\$ (1,174)</u>	<u>\$ (1,737)</u>
Loss per share (1):								
Basic .....	<u>\$ (0.03)</u>	<u>\$ (0.02)</u>	<u>\$ (0.02)</u>	<u>\$ (0.05)</u>	<u>\$ (0.04)</u>	<u>\$ (0.05)</u>	<u>\$ (0.06)</u>	<u>\$ (0.09)</u>
Pro forma basic .....						<u>\$ (0.05)</u>	<u>\$ (0.04)</u>	<u>\$ (0.06)</u>
Shares used in per share calculation (1):								
Basic .....	<u>33,143</u>	<u>33,028</u>	<u>32,826</u>	<u>32,639</u>	<u>32,509</u>	<u>28,273</u>	<u>19,381</u>	<u>19,029</u>
Pro forma basic .....						<u>30,845</u>	<u>27,269</u>	<u>26,916</u>

(1) See Note 2 of Notes to Consolidated Financial Statements for an explanation of shares used in computing basic net loss per share and pro forma basic net loss per share.

	Quarter Ended							
	Q499	Q399	Q299	Q199	Q498	Q398	Q298	Q198
Revenues:								
Product.....	95.4%	95.2%	94.0%	92.8%	92.1%	89.9%	89.8%	90.3%
Service .....	<u>4.6</u>	<u>4.8</u>	<u>6.0</u>	<u>7.2</u>	<u>7.9</u>	<u>10.1</u>	<u>10.2</u>	<u>9.7</u>
Total revenues .....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Cost of revenues:								
Cost of product .....	34.3	35.5	36.7	37.8	40.6	37.9	39.2	40.8
Cost of service .....	<u>3.2</u>	<u>4.0</u>	<u>4.1</u>	<u>4.3</u>	<u>5.1</u>	<u>6.0</u>	<u>5.1</u>	<u>6.8</u>
Total cost of revenues.....	<u>37.5</u>	<u>39.5</u>	<u>40.8</u>	<u>42.1</u>	<u>45.7</u>	<u>43.9</u>	<u>44.3</u>	<u>47.6</u>
Gross profit.....	<u>62.5</u>	<u>60.5</u>	<u>59.2</u>	<u>57.9</u>	<u>54.3</u>	<u>56.1</u>	<u>55.7</u>	<u>52.4</u>
Operating expenses:								
Product development .....	20.7	22.8	22.4	27.7	23.3	25.3	21.1	24.6
Sales and marketing .....	38.2	37.9	36.7	39.7	40.0	42.3	35.9	38.1
General and administrative .....	8.5	10.6	10.8	11.8	12.0	15.5	12.3	11.7
Non-recurring charge.....	<u>4.8</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>--</u>
Total operating expenses .....	<u>72.2</u>	<u>71.3</u>	<u>69.9</u>	<u>79.2</u>	<u>75.3</u>	<u>83.1</u>	<u>69.3</u>	<u>74.4</u>
Loss from operations.....	(9.7)	(10.8)	(10.7)	(21.3)	(21.0)	(27.0)	(13.6)	(22.0)
Interest and other income, net.....	<u>2.8</u>	<u>3.6</u>	<u>3.4</u>	<u>4.1</u>	<u>5.1</u>	<u>5.7</u>	<u>0.4</u>	<u>0.9</u>
Loss before provision for income taxes.....	(6.9)	(7.2)	(7.3)	(17.2)	(15.9)	(21.3)	(13.2)	(21.1)
Provision for income taxes .....	<u>0.5</u>	<u>0.4</u>	<u>0.3</u>	<u>0.7</u>	<u>0.3</u>	<u>0.5</u>	<u>0.5</u>	<u>0.7</u>
Net loss .....	<u>(7.4)%</u>	<u>(7.6)%</u>	<u>(7.6)%</u>	<u>(17.9)%</u>	<u>(16.2)%</u>	<u>(21.8)%</u>	<u>(13.7)%</u>	<u>(21.8)%</u>

*Net Revenues.* Net revenues increased sequentially for most quarters with the exception of the third quarter which has historically been flat or lower than its preceding quarter. Revenues in the third quarter of the year tend to be lower due to the seasonal nature of some of our international markets. Increased shipments were due to growth in the volume of sales from existing customers, the addition of new customers, and the introduction of new products such as LonPoint products in the second quarter of 1998 and releases of new versions of the LNS network operating systems in the first quarter of 1999.

*Gross Profit.* Our gross profit increased as a percentage of net revenues in 1999 compared to 1998 primarily due to our move to a new lower cost contract electronic manufacturer effective the beginning of 1999. Movement of margin between quarters within the two years is due to product mix changes. Our gross margins also continued to improve in 1999 due to increased sales of our higher margin network services products.

*Product development.* Product development expenses have fluctuated in certain quarters related to various contracted services and the timing of the hiring of new personnel. The primary reason for the general overall increase is related to increased staffing in the areas of new product design and technology development.

*Sales and marketing.* Sales and marketing expenses tend to fluctuate on a quarterly basis given the timing of various marketing programs and the timing of commissions based on revenues. The larger than usual fourth quarters in both 1999 and 1998 have been due to both increased hiring during those quarters and special marketing conferences.

*General and administrative.* General and administrative expenses can vary between quarters primarily due to the timing of certain legal and travel expenses but the costs generally have remained fairly flat for the eight quarters presented and represent less than a 1% change on a year to year comparison.

*Non-recurring charge.* The non-recurring charge of \$549,000 recorded in the fourth quarter of 1999 relates to the exit from our current Palo Alto leased facilities as a result of the planned move to a temporary facility in Sunnyvale, California.

*Interest and other income, net.* Interest and other income, net, primarily relates to the amount of cash and investments which varies on a quarterly basis due to receivables collection efforts, inventory growth and expense timing. The increase in the third quarter of 1998 relates to the interest income generated by the net proceeds from the initial public offering.

## **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. From our inception through December 31, 1999, we raised \$127.9 million from the sale of preferred stock and common stock.

In July 1998, we consummated an initial public offering of 5,000,000 shares of our common stock at a price to the public of \$7.00 per share. The net proceeds from the offering were about \$31.7 million. Concurrent with the closing of the initial public offering, 7,887,381 shares of convertible preferred stock were converted into an equivalent number of shares of common stock. The net proceeds received upon the consummation of such offering were invested in short-term, investment-grade, interest-bearing instruments.

As of December 31, 1999, we had working capital, defined as current assets less current liabilities, of \$30.3 million, which was a decrease of about \$3.4 million compared to working capital of \$33.7 million as of December 31, 1998. Cash, cash equivalents and short-term investments decreased by \$4.7 million in 1999 from 1998 primarily to fund current operations.

As of December 31, 1999, we had cash, cash equivalents and short-term investments of \$24.3 million. Net cash used in operating activities was \$4.6 million for 1999, \$9.2 million for 1998 and \$9.5 million for 1997. Cash used in operating activities in 1999 was principally the result of the net loss, an increase in accounts receivable, and a decrease in deferred revenue, which were only partially offset with depreciation and an increase in accounts payable. Cash used in operating activities in 1998 was principally the result of the net loss, increases in receivables, inventories and other current assets, a decrease in deferred revenue, and a partial offset with depreciation. Cash used in operating activities in

1997 was principally the result of the net loss, increases in accounts receivable and inventories, a decrease in deferred revenue, and a partial offset with depreciation and increases in accounts payable and accrued liabilities.

Net cash provided by investing activities in 1999 of \$1.5 million was principally due to the proceeds from maturities and sales of available-for-sale investments offset by capital expenditures. Net cash used in investing activities was \$16.8 million for 1998 and \$3.6 million for 1997. These amounts reflect the purchases of short-term investments with the proceeds received from our initial public offering in July 1998 and from the issuance of preferred stock in May 1997. In addition, we had larger capital expenditures in 1998 related to investments in a new enterprise resource planning system and other equipment needs as a result of our growth.

We believe that our existing available cash, cash equivalents and short-term investments will satisfy our projected working capital and other cash requirements for at least the next twelve months. However, we may require additional financing within this period, but 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.

### **Year 2000 Compliance**

We did not experience any system problems relating to the Year 2000 issue. To our knowledge, none of our material suppliers or vendors experienced any material Year 2000 problems. We do not expect to incur any material expenditures relating to Year 2000 systems remediation.

### **New Accounting Standards**

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, "Accounting for Derivative Investments and Hedging Activities," which establishes standards for the accounting for derivative transactions and the derivative portion of certain other contracts. SFAS No. 133 will become effective for our fiscal year beginning January 1, 2001. We believe that SFAS No. 133 will not have a material effect on our financial statements.

In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 101 ("SAB 101"), "Revenue Recognition in Financial Statements." SAB 101 provides guidance on applying generally accepted accounting principles to revenue recognition in financial statements. We will adopt SAB 101 as required in the first quarter of 2000 and will evaluate the effect that such adoption may have on our consolidated results of operations and financial position.

## **FACTORS THAT MAY AFFECT FUTURE RESULTS OF OPERATIONS**

### **WE HAVE A HISTORY OF LOSSES, AND WE EXPECT TO INCUR LOSSES IN THE FUTURE.**

We have incurred net losses each year since our inception. At December 31, 1999, we had an accumulated deficit of \$94.4 million. We have invested and continue to invest significant financial resources in product development, marketing and sales. If our revenues do not increase significantly as a result of these expenditures, our financial results could decline. We may not achieve profitability if our revenues increase more slowly than we expect or not at all. Even if we achieve profitability, we may not be able to sustain or increase profitability on a quarterly or annual basis. Our future operating results will depend on many factors, including:

- the growth of the markets for our products;
- the acceptance of our products;
- the level of competition that we face;
- our ability to develop and market new products; and
- general economic conditions.

As of December 31, 1999, we had net operating loss carryforwards for Federal income tax reporting purposes of about \$83.9 million and for state income tax reporting purposes of about \$4.9 million, which expire at various dates through 2019. In addition, as of December 31, 1999, we had tax credit carryforwards of about \$4.4 million, which expire at various dates through 2019. The Internal Revenue Code of 1986, as amended, contains provisions that may limit the use in any future period of net operating loss and credit carryforwards upon the occurrence of certain events, including a significant change in ownership interests. We had deferred tax assets, including our net operating loss carryforwards and

tax credits, totaling about \$37.9 million as of December 31, 1999. A valuation allowance has been recorded for the entire deferred tax asset as a result of uncertainties regarding the realization of the asset balance, our history of losses and the variability of our operating results.

**OUR LIMITED HISTORY AND THE UNDETERMINED MARKET ACCEPTANCE OF OUR PRODUCTS MAKE IT DIFFICULT TO EVALUATE OUR FUTURE PROSPECTS.**

We have only a limited operating history on which you can base your evaluation of our business. We face a number of risks as an emerging company in a new market, and you must consider our prospects in light of these risks. Our future operating results are difficult to predict due to many factors, including the following:

- our targeted markets have not yet accepted many of our products and technologies;
- the nature of our business and markets require rapid progress;
- potential changes in voluntary product standards can significantly influence many of the markets for our products; and
- our industry is very competitive.

**FLUCTUATIONS IN OUR OPERATING RESULTS MAY CAUSE OUR STOCK PRICE TO DECLINE.**

Our quarterly and annual results have varied significantly, and we have failed to meet securities analysts' expectations in the past. Our future results may fluctuate and may not meet those expectations in some future period. As a result, the price of our common stock could fluctuate or decline. The factors that could cause this variability, many of which are outside of our control, include the following:

- fluctuations in the rates at which OEMs purchase our products and services;
- OEMs' own business cycles;
- our ability to introduce new products on a timely basis;
- any downturns in any customer's or potential customer's business, or declines in general economic conditions that cause significant reductions in their capital spending;
- increased competition;
- market acceptance of our products;
- product life cycles;
- order delays or cancellations;
- changes in the mix of products and services that we sell;
- shipment and payment schedules;
- changes in our pricing policies or those of our competitors;
- changes in product distribution; and
- product ratings by industry analysts and endorsement of competing products by industry groups.

In addition, our expense levels are based, in significant part, on the future revenues that we expect. Consequently, if our revenues are less than we expect, our expense levels could be disproportionately high as a percentage of total revenues.

**IF OUR OEMS DO NOT EMPLOY OUR PRODUCTS AND TECHNOLOGIES, OR IF WE DO NOT MAINTAIN AND EXPAND OUR DISTRIBUTION CHANNELS, OUR REVENUES COULD DECREASE SIGNIFICANTLY.**

To date, substantially all of our product sales have been to OEMs. The product and marketing decisions made by OEMs significantly affect the rate at which our products are used in control networks. We believe that since OEMs in certain industries receive a large portion of their revenues from sales of products and services to their installed base, these OEMs have tended to moderate the rate at which they incorporate LONWORKS technology into their products. We have attempted to motivate OEMs, as well as systems integrators and owners of control systems, to transition more rapidly to LONWORKS technology. Furthermore, OEMs that manufacture and promote products and technologies that compete or may compete with us may be particularly reluctant to employ our products and technologies to any significant extent, if at all. We may not be able to maintain or improve the current rate at which our products are accepted by OEMs and others, which could decrease our revenues.

Currently, significant portions of our revenues are derived from sales by EBV, the sole independent distributor of our products to OEMs in Europe since December 1997. EBV accounted for 27.3% of our total revenues in 1999, 22.6% of our total revenues in 1998 and 10.9% of our total revenues in 1997. Our current agreement with EBV expires in December 2000. In addition, as part of our distribution strategy, we intend to develop distribution arrangements with systems integrators. In particular, we expect that a significant portion of our future revenues will be derived from sales by such systems integrators. If EBV or any other existing or future distributor fails to dedicate sufficient resources and efforts to marketing and selling our products, our revenues could decrease. If EBV significantly reduces the stocking levels for our products, both revenues and customer service levels would be decreased. In that case, we might be required to add our own pan-European distribution capability to meet the needs of our customers. Our business will be harmed if we fail to do any of the following:

- develop new distribution channels;
- maintain the EBV arrangement or any other distribution channels; or
- renew the EBV arrangement on a timely basis.

**WE DEPEND ON A LIMITED NUMBER OF KEY MANUFACTURERS FOR NEURON CHIPS AND USE CONTRACT ELECTRONIC MANUFACTURERS FOR MOST OF OUR PRODUCTS REQUIRING ASSEMBLY. IF ANY OF THESE MANUFACTURERS TERMINATES OR DECREASES ITS RELATIONSHIPS WITH US, WE MAY NOT BE ABLE TO SUPPLY OUR PRODUCTS AND OUR REVENUES WOULD SUFFER.**

The Neuron Chip is an important component that our customers use in control network nodes. In addition, the Neuron Chip is an important device that we use in many of our products. Neuron Chips are currently distributed by both Motorola and Toshiba. We have entered into licensing agreements with each of Motorola, Toshiba and Cypress. The agreements, among other things, grant Motorola, Toshiba and Cypress the worldwide right to manufacture and distribute Neuron Chips using technology licensed from us and require us to provide support and unspecified updates to the licensed technology over the terms of the agreements. The Motorola agreement expires in January 2001, the Cypress agreement expires in April 2009 and the Toshiba agreement expires in January 2010. Motorola has announced that it will discontinue distribution of Neuron Chips after January 31, 2001, although Motorola has the right to terminate the agreement at any time. While we developed the first version of the Neuron Chip, Motorola and Toshiba subsequently developed improved, lower-cost versions of the Neuron Chip that are presently used in products that our customers and we develop and sell. We currently have no other source of supply for Neuron Chips and have neither the resources nor the skills to replace Toshiba or Cypress as a manufacturer of Neuron Chips. Both Motorola and Toshiba have played, and Toshiba and Cypress are expected to play, a key role in the development and marketing of LONWORKS technology. If we lose Toshiba or Cypress as a supplier, we may not be able to locate an alternate source for the design, manufacture or distribution of Neuron Chips.

Our future success will also depend significantly on our ability to successfully manufacture our products cost-effectively and in sufficient volumes. For most of our products requiring assembly, we use contract electronic manufacturers, including Able Electronics, Jabil Circuits and muRata Electronics. These contract electronic manufacturers procure material and assemble, test and inspect the final products to our specifications. This strategy involves certain risks. By using third parties to manufacture our products, we have reduced control over delivery schedules, product availability, manufacturing yields, quality and costs. In addition, contract electronic manufacturers can themselves experience turnover and instability exposing us to additional risks as well as missed commitments to our customers. We will also face risks if and when we transition between contract electronic manufacturers. For example, we may have to move raw material and in process inventory between locations in different parts of the world. Also, we would be required to reestablish acceptable manufacturing processes with a new work force. We currently purchase several key components only from sole or limited sources. 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 these products or components from alternate sources at acceptable prices and within a reasonable period of time, our revenues could decrease.

**MANY OF OUR CURRENT COMPETITORS HAVE LONGER OPERATING HISTORIES AND SIGNIFICANTLY GREATER FINANCIAL, TECHNICAL, MARKETING AND OTHER RESOURCES THAN WE DO, AND MAY BE MORE SUCCESSFUL AT SELLING THEIR PRODUCTS THAN WE ARE.**

Competition in our markets is intense and involves rapidly changing technologies, evolving industry standards, frequent new product introductions and rapid changes in customer requirements. To maintain and improve our competitive position, we must continue to develop and introduce, on a timely and cost-effective basis, new products, features and services that keep pace with the evolving needs of our customers. The principal competitive factors that affect the markets for our control network products are the following:

- our customer service and support;
- our product reputation, quality, performance; and
- the price and features of our products such as adaptability, scalability, the ability to integrate with other products, functionality, and ease of use.

In each of our markets, we compete with a wide array of manufacturers, vendors, strategic alliances, systems developers and other businesses. Our competitors include some of the largest companies in the electronics industry, such as Siemens in the building and industrial automation industries and Allen-Bradley, a subsidiary of Rockwell, and Group Schneider in the industrial automation industry. 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. 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. In addition, those competitors that manufacture and promote closed, proprietary control systems may enjoy a captive customer base dependent on such competitors for service, maintenance, upgrades and enhancements. Products from emerging companies such as emWare could also compete with our products, especially in the home market. Even if we believe that the products offered by some of these emerging companies do not provide the robust and open networking solutions offered by LONWORKS networks, we would be required to educate our customers about what we believe are the long-term cost and potential function problems inherent in such alternative solutions. However, our customers may believe that these alternative products are satisfactory for their needs.

Many of our current and prospective 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. In some cases, companies have established associations or cooperative relationships to enhance the competitiveness and popularity of their products, or to promote these different or incompatible technologies, protocols and standards. For example, in the building automation market, we face widespread reluctance by vendors of traditional closed or proprietary control systems, who enjoy a captive market for servicing and replacing equipment, to use our interoperable technologies. We also face strong competition by large trade associations that promote alternative technologies and standards in their native countries, such as the BatiBus Club International in France and the European Installation Bus Association in Germany, each of which has over 100 members and licensees. Other examples include the CEBus Industry Council, which is the proponent of an alternative protocol to our LONWORKS protocol for use in the home automation industry, and a group comprised of Asea Brown Boveri, ADtranz AB, Siemens, GEC Alstrom and other manufacturers that support an alternative rail transportation protocol to our LONWORKS protocol. Our technologies, protocols or standards may not be successful in any of our markets, and we may not be able to compete with new or enhanced products or standards introduced by existing or future competitors.

LONWORKS technology is open, meaning that many of our technology patents are broadly licensed without royalties or license fees. As a result, our customers are capable of developing products 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. This could decrease the market for our products and increase the competition that we face.

**THE TRADING PRICE OF OUR STOCK HAS BEEN VOLATILE, AND MAY FLUCTUATE DUE TO FACTORS BEYOND OUR CONTROL.**

The trading price of our common stock is subject to significant fluctuations in response to numerous factors, including:

- our quarterly operating results may vary widely;
- our customers or we may announce technological innovations or new products;
- securities analysts may change their estimates of our financial results; and
- significant stockholders may sell some or all of their holdings of our stock.

In addition, the market price of securities of technology companies, especially those in new or emerging industries such as ours, has been very volatile in the past. This volatility is often unrelated to the operating performance of particular companies. In the future, our operating results may fall below analysts' expectations, which could adversely affect the market price of our stock. In the past, following a period of volatility in the market price of a company's securities, securities class action lawsuits have often been instituted against such companies. If such a lawsuit were brought against us, regardless of its outcome, we would incur substantial costs and our management resources would be diverted in defending such litigation.

**OUR EXECUTIVE OFFICERS AND TECHNICAL PERSONNEL ARE CRITICAL TO OUR BUSINESS, AND WITHOUT THEM WE MAY NOT BE ABLE TO EXECUTE OUR BUSINESS STRATEGY.**

Our performance depends substantially on the performance of our executive officers and key employees. We are dependent in particular on our Chief Executive Officer, as well as our technical personnel, due to the specialized technical nature of our business. Our future success will depend on our ability to attract, integrate, motivate and retain qualified technical, sales, operations and managerial personnel. Competition for qualified personnel in our business areas is intense, and we may not be able to continue to attract and retain qualified executive officers and key personnel necessary to enable our business to succeed. Our product development and marketing functions are largely based in Silicon Valley, a highly competitive marketplace. It is particularly difficult to recruit, relocate, and retain qualified personnel in this geographic area. In addition, if we lose the services of any of our key personnel and are not able to find replacements in a timely manner, business could be disrupted, other key personnel may decide to leave, and we may incur increased operating expenses in finding and compensating a replacement. We maintain and are the beneficiary of three life insurance policies totaling \$2.5 million each covering M. Kenneth Oshman, our Chief Executive Officer, Beatrice Yormark, our Vice President of Sales and Marketing, and Oliver R. Stanfield, our Chief Financial Officer. These insurance proceeds might be insufficient to compensate us in the event of the death of any of these key officers.

**THE MARKET FOR OUR PRODUCTS IS NEW AND RAPIDLY EVOLVING. IF WE ARE NOT ABLE TO DEVELOP OR ENHANCE PRODUCTS TO RESPOND TO CHANGING MARKET CONDITIONS, OUR REVENUES WILL SUFFER.**

Customer requirements for control network products can change as a result of innovations or changes within the building, industrial, transportation, home and other industries. For example, new or different standards within industry segments may be adopted, giving rise to new customer requirements. These customer requirements may or may not be compatible with our current or future product offerings. Our future success depends in large part on our ability to continue to enhance existing products, lower product cost and develop new products that maintain technological competitiveness. We may not be successful in modifying our products and services to address these requirements and standards. For example, certain of our competitors may develop competing technologies based on Internet Protocols (IP) that may have advantages over our products in remote connection. In addition, from time to time, we have delayed introducing new products beyond our projected shipping date for such products. In each instance, these delays increased our costs and delayed our revenues.

**IF OUR INTEROPERABLE PRODUCTS ARE NOT ACCEPTED BY OUR TARGETED MARKETS, WE MAY BE UNABLE TO GENERATE SALES OF OUR PRODUCTS.**

Our future operating success will depend, in significant part, on the successful development of interoperable products by us and OEMs, and the acceptance of interoperable products by systems integrators and end-users. We have expended considerable resources to develop, market and sell interoperable products, and have made such products a

cornerstone of our sales and marketing strategy. We have widely promoted interoperable products as offering benefits such as lower life-cycle costs and improved flexibility to owners and users of control networks. However, OEMs that manufacture and market closed systems may not accept, promote or employ interoperable products, since doing so may expose their businesses to increased competition. In addition, OEMs might not, in fact, successfully develop interoperable products, or their interoperable products might not be accepted by their customers. If OEMs fail to develop interoperable products, or interoperable products are not accepted by our markets, our revenues will suffer.

### **WE FACE OPERATIONAL AND FINANCIAL RISKS ASSOCIATED WITH INTERNATIONAL OPERATIONS.**

Our sales and marketing operations are located in eight countries. Revenues from international sales, which include both export sales and sales by international subsidiaries, accounted for about 62.4% of our total revenues in 1999, 55.4% of our total revenues in 1998, and 57.5% of our total revenues in 1997. Our operations and the market price of our products may be directly affected by economic and political conditions in the countries where we do business. In addition, we may not be able to maintain or increase the international demand for our products. Additional risks inherent in our international business activities generally include the following:

- currency fluctuations;
- unexpected changes in regulatory requirements, tariffs and other trade barriers;
- costs of localizing products for foreign countries and lack of acceptance of non-local products in foreign countries;
- longer accounts receivable payment cycles;
- difficulties in managing international operations;
- potentially adverse tax consequences, including restrictions on repatriation of earnings; and
- the burdens of complying with a wide variety of foreign laws.

Differing vacation and holiday patterns in other countries, particularly in Europe, may also affect the amount of business that we transact in other countries in any quarter, the timing of our revenues and our ability to forecast our projected operating results for such quarter. The portion of our revenues that were conducted in currencies other than the U.S. dollar, principally the Japanese Yen, was about 10.8% in 1999, 9.1% in 1998 and 10.7% in 1997. Fluctuations in the value of currencies in which we conduct our business relative to the U.S. dollar could cause currency translation adjustments. The introduction of the Euro as the standard currency in participating European countries may also impact our ability to transact sales in U.S. dollars. We have agreed with EBV, our European distributor, that upon notice from EBV, we will sell our products to EBV in Euros rather than U.S. dollars. We do not know when or if EBV will give such notice. If fewer of our sales in Europe are transacted in U.S. dollars, we may experience an increase in currency translation adjustments, particularly as a result of general economic conditions in Europe as a whole. We do not currently engage in currency hedging transactions or otherwise cover our foreign currency exposure.

### **AS A RESULT OF OUR LENGTHY SALES CYCLE, WE HAVE LIMITED ABILITY TO FORECAST THE AMOUNT AND TIMING OF SPECIFIC SALES. IF WE FAIL TO COMPLETE OR ARE DELAYED IN COMPLETING TRANSACTIONS, OUR REVENUES COULD VARY SIGNIFICANTLY FROM PERIOD TO PERIOD.**

The sales cycle between initial customer contact and execution of a contract or license agreement with a customer can vary widely. OEMs typically conduct extensive and lengthy product evaluations before making initial purchases of our products. Subsequent purchases of our products may be delayed by prolonged product development and introduction periods for OEMs. Attendant delays in our sales cycle can result from, among other things, changes in customers' budgets or in the priority assigned to control network development and the need to educate customers about the potential applications of and cost savings associated with our products. We generally have little or no control over these factors, which may cause a potential customer to favor a competitor's products, or to delay or forgo purchases altogether. Also, there can be long sales cycles between the selection of our products for use by a systems integrator, and the purchase of such products by the systems integrator.

### **WE HAVE LIMITED ABILITY TO PROTECT OUR INTELLECTUAL PROPERTY RIGHTS.**

Our success depends significantly upon our intellectual property rights. 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 our intellectual property rights, all of which afford only limited protection. We have 76 issued U.S.

patents, 15 pending U.S. patent applications, and various foreign counterparts. It is possible that patents will not issue from these pending applications or from any future applications or that, if issued, any claims allowed will not be sufficiently broad to protect our technology. If any of our patents fail to protect our technology, our competitors may find it easier to offer equivalent or superior technology. We have 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 take all necessary steps 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 to obtain and use information that we regard as proprietary. Any of the patents, trademarks, copyrights or intellectual property rights that have been or may be issued or granted to us could be challenged, invalidated or circumvented, and any of the rights granted may not provide protection for our proprietary rights. In addition, there can be no assurance that we have taken or will take all necessary steps to protect our intellectual property rights. Third parties may also independently develop similar technology without breach of our trade secrets or other proprietary rights. We have licensed in the past and may license in the future our key technologies to third parties. In addition, the laws of some foreign countries, including several in which we operate or sell our products, do not protect proprietary rights to as great an extent as do the laws of the United States. Certain 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 of this litigation, 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 infringement, misuse, misappropriation or independent third-party development of our technology or intellectual property rights or to prevent an unauthorized third party from copying or otherwise obtaining and using our products or technology.

#### **DEFECTS IN OR MISUSE OF OUR PRODUCTS COULD RESULT IN A LOSS OF OR DELAY IN MARKET ACCEPTANCE, INCREASED SERVICE AND WARRANTY COSTS, AND INCREASED LIABILITY FOR COMPENSATORY OR OTHER DAMAGES.**

The products that we develop, license and sell may contain errors or failures or may be improperly installed or implemented. Errors or failures may be found in our products, and we may not be able to successfully correct those errors or failures in a timely manner or at all. In addition, our products may not be properly installed or implemented by third parties. In addition, such errors or failures may delay our revenue recognition and divert our engineering resources to correct such defects. We maintain errors and omissions insurance to cover liability associated with our operations but it is possible that such insurance may not be available or may be insufficient in amount to cover any particular claim. Although our agreements with our customers typically contain provisions intended to limit our exposure to potential claims as well as any liabilities arising from such claims, and may in very limited instances require that we be named as an additional insured under the insurance policies carried by some of our customers, such contracts and insurance may not effectively protect us against the liabilities and expenses associated with product errors or failures. Accordingly, errors or failures in our products or applications or improper installation or implementation of our products by third parties could harm our operating results. In addition, because of the low cost and interoperable nature of our products, LONWORKS technology could be used in a manner for which it was not intended. As a result, our reputation could be harmed and we might suffer material financial losses.

#### **REGULATORY ACTIONS COULD AFFECT OUR ABILITY TO MARKET AND SELL OUR PRODUCTS.**

Many of our products and the industries in which they are used are subject to U.S. and foreign regulation. Government regulatory action could greatly reduce the market for our products. 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. These regulations limit the ability of companies in general 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 some of our products or to increase the market opportunity for the competitors' products. In the late 1990's, we experienced efforts by CEMA, a trade association that developed a competing home automation protocol, to persuade the FCC to mandate use of its protocol in analog television and set-top box applications. We remain involved in litigation arising from a related FCC proceeding concerning commercial availability of these "navigation devices." That case is

currently on appeal, and a decision is expected this year. Although these specific FCC and judicial proceedings are not a significant threat to our digital and Internet-based products, existing or future regulations or regulatory actions could adversely affect the market for our products or require us to expend significant management, technical or financial resources.

**VOLUNTARY STANDARDS THAT ARE ESTABLISHED IN OUR MARKETS COULD LIMIT OUR ABILITY TO SELL OUR PRODUCTS AND REDUCE OUR REVENUES.**

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. Some of our competitors have attempted to use voluntary standards to reduce the market opportunity for our products, or to increase the market opportunity for the competitors' products, by lobbying for the adoption of voluntary standards that would exclude or limit the use of our products. We participate in many voluntary standards processes both to avoid adoption of exclusionary standards and to promote voluntary standards for our products. However, we do not have the resources to participate in all voluntary standards processes that may affect our markets. The adoption of voluntary standards that are incompatible with our products or technology could limit the market opportunity for our products.

**OUR EXISTING STOCKHOLDERS CONTROL A SIGNIFICANT PERCENTAGE OF OUR STOCK, WHICH WILL LIMIT YOUR ABILITY TO INFLUENCE CORPORATE MATTERS.**

As of February 29, 2000, our directors and executive officers, together with certain entities affiliated with them, beneficially owned 33% of our outstanding stock. Under the terms of a stock purchase agreement, one other stockholder that owns about 1% of our outstanding common stock has agreed to vote (i) all of its shares in favor of the slate of director nominees recommended by the Board of Directors, and (ii) a number of shares equal to at least that percentage of shares voted by all other stockholders for or against any given matter, as recommended by the Board of Directors (except certain matters relating to certain changes to our charter, liquidations, a sale of our company or a merger of our company into another entity), as recommended by a majority of our Board of Directors. As a result, these stockholders may be able to control substantially all matters requiring approval by our stockholders, including the election of all directors and approval of significant corporate transactions.

**ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK**

*Interest Rate Risk.* Our exposure to market risk for changes in interest rates relates primarily to our investment portfolio. All investments are in high-credit quality issuances and, by our company policy, are limited in the amount of credit exposure to any one issuer. We ensure the safety and preservation of the invested principal funds by investing in safe and high-credit quality securities, which include only marketable securities with active secondary or resale markets to ensure portfolio liquidity.

The table below presents principal amounts and related weighted average interest rates for our investment portfolio at December 31, 1999. According to our policy, all investments mature in two years or less. (in thousands, except average interest rates)

	<u>Carrying Amount</u>	<u>Average Interest Rate</u>
Cash Equivalents:		
U.S. corporate securities.....	\$ 8,691	5.39 %
Total cash equivalents .....	<u>8,691</u>	<u>5.39 %</u>
Short-term Investments:		
U.S. corporate securities.....	13,978	5.89 %
Foreign securities .....	<u>990</u>	<u>5.62 %</u>
Total short-term investments.....	<u>14,968</u>	<u>5.87 %</u>
Total investment securities.....	<u>\$ 23,659</u>	<u>5.69 %</u>

*Foreign Currency Exchange Risk.* We transact business in various foreign countries. Our primary foreign currency cash flows are in Japan and Western Europe. Currently, we do not employ a foreign currency hedge program utilizing foreign currency exchange contracts as the foreign currency transactions and risks to date have not been significant. We have agreed with EBV, our European distributor, that upon notice from EBV, we will sell our products to EBV in Euros rather than in U.S. dollars. We do not know when or if EBV will give such notice.

## **ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

The Financial Statements and Supplementary Data required by this item are set forth at the pages indicated at Item 14(a).

## **ITEM 9. CHANGE IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE**

None.

## **PART III**

## **ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT**

We refer you to the information regarding Directors appearing under the caption "Election of Directors" and "Other Information - Compliance with Section 16 (a) of the Securities Exchange Act of 1934" in our proxy statement to be filed with the Securities and Exchange Commission within 120 days after the end of our fiscal year ended December 31, 1999, which information is incorporated herein by reference; and to the information under the heading "Executive Officers of the Registrant" in Part I hereof.

## **ITEM 11. EXECUTIVE COMPENSATION**

We refer you to the information under the caption "Executive Compensation" in our proxy statement to be filed with the Securities Exchange Commission within 120 days after the end of our fiscal year ended December 31, 1999, which we incorporate herein by reference.

## **ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT**

We refer you to the information appearing under the caption "Share Ownership by Principal Stockholders and Management" in our proxy statement to be filed with the Securities Exchange Commission within 120 days after the end of the our fiscal year ended December 31, 1999, which we incorporate herein by reference.

## **ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS**

We refer you to the information appearing under the caption "Other Information - Certain Transactions" in our proxy statement to be filed with the Securities Exchange Commission within 120 days after the end of our fiscal year ended December 31, 1999, which we incorporate herein by reference.

## PART IV

### ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

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

1. Financial Statements

	<u>Page</u>
Report of Independent Public Accountants .....	32
Consolidated Balance Sheets .....	33
Consolidated Statements of Operations .....	34
Consolidated Statements of Stockholders' Equity .....	35
Consolidated Statements of Comprehensive Loss .....	35
Consolidated Statements of Cash Flows .....	36
Notes to Consolidated Financial Statements .....	37

2. Financial Statement Schedules

Schedule II Valuation and Qualifying Accounts .....	47
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All other schedules have been omitted because they are not applicable or the required information is included in the Consolidated Financial Statements or Notes thereto.

3. Exhibits

Exhibit

<u>No.</u>	<u>Description of Document</u>
1.1*	Form of Underwriting Agreement.
3.1*	Amended and Restated Certificate of Incorporation of Registrant.
3.2*	Amended and Restated Certificate of Incorporation of Registrant (to be effective upon closing of Offering).
3.3*	Amended and Restated Bylaws of Registrant.
4.1*	Form of Registrant's Common Stock Certificate.
4.2*	Second Amended and Restated Modification Agreement dated May 15, 1997.
5.1*	Opinion of Wilson Sonsini Goodrich & Rosati P.C., regarding the legality of the securities being issued.
10.1*	Form of Indemnification Agreement entered into by Registrant with each of its directors and executive officers.
10.2*	1997 Stock Plan and forms of related agreements.
10.3*	1988 Stock Option Plan and forms of related agreements.
10.4*	Second Amended and Restated Modification Agreement dated May 15, 1997 (included in Exhibit 4.2).
10.5*	Form of International Distributor Agreement.

- 10.6\* Form of OEM License Agreement.
- 10.7\* Form of Software License Agreement.
- 10.8\* International Distributor Agreement between the Company and EBV Elektronik GmbH as of December 1, 1997.
- 10.9\* 1998 Director Option Plan.
- 21.1\* Subsidiaries of the Registrant.
- 23.1 Consent of Arthur Andersen LLP.
- 24.1\* Power of Attorney.
- 27.1 Financial Data Schedule (available in EDGAR format only).

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\* Previously filed.

(b) Reports on Form 8-K

None.

## REPORT OF INDEPENDENT PUBLIC ACCOUNTANTS

To Echelon Corporation:

We have audited the accompanying consolidated balance sheets of Echelon Corporation (a Delaware corporation) and subsidiaries as of December 31, 1999 and 1998, and the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for each of the three years in the period ended December 31, 1999. These financial statements and the schedule referred to below are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Echelon Corporation and subsidiaries as of December 31, 1999 and 1998, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1999 in conformity with accounting principles generally accepted in the United States.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The schedule listed under Item 14(a) is presented for purposes of complying with the Securities and Exchange Commission's rules and is not part of the basic financial statements. This schedule has been subjected to the auditing procedures applied in our audits of the basic financial statements and, in our opinion, fairly states in all material respects the financial data required to be set forth therein in relation to the basic financial statements taken as a whole.

ARTHUR ANDERSEN LLP

San Jose, California  
January 18, 2000

ECHELON CORPORATION  
CONSOLIDATED BALANCE SHEETS  
(in thousands, except share and per share amounts)

	As of December 31,	
	1999	1998
<b>ASSETS</b>		
<b>CURRENT ASSETS:</b>		
Cash and cash equivalents .....	\$ 9,336	\$ 11,552
Short-term investments .....	14,968	17,501
Accounts receivable, net of allowances of \$884 in 1999 and \$1,182 in 1998 .....	7,303	4,559
Inventories .....	3,159	3,364
Other current assets .....	<u>2,297</u>	<u>2,170</u>
Total current assets .....	<u>37,063</u>	<u>39,146</u>
<b>PROPERTY AND EQUIPMENT:</b>		
Computer and other equipment.....	9,211	8,665
Furniture and fixtures .....	1,461	1,339
Leasehold improvements .....	<u>525</u>	<u>528</u>
	11,197	10,532
Less: Accumulated depreciation and amortization .....	<u>(8,549)</u>	<u>(7,728)</u>
Net property and equipment.....	<u>2,648</u>	<u>2,804</u>
	<u>\$ 39,711</u>	<u>\$ 41,950</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
<b>CURRENT LIABILITIES:</b>		
Accounts payable.....	\$ 2,586	\$ 1,787
Accrued liabilities.....	2,540	2,067
Current portion of deferred revenues .....	<u>1,647</u>	<u>1,559</u>
Total current liabilities .....	<u>6,773</u>	<u>5,413</u>
<b>LONG-TERM LIABILITIES:</b>		
Deferred rent, net of current portion .....	--	76
Deferred revenues, net of current portion .....	<u>--</u>	<u>675</u>
Total long-term liabilities .....	<u>--</u>	<u>751</u>
<b>STOCKHOLDERS' EQUITY:</b>		
Convertible preferred stock, \$.01 par value:		
Authorized—5,000,000 shares; none outstanding		
Common stock, \$.01 par value:		
Authorized—100,000,000 shares		
Outstanding—33,239,934 shares in 1999 and 32,542,859 shares in 1998 .....	332	325
Additional paid-in capital .....	127,613	126,844
Accumulated other comprehensive loss .....	(202)	(287)
Deferred compensation .....	(399)	(597)
Accumulated deficit.....	<u>(94,406)</u>	<u>(90,499)</u>
Total stockholders' equity.....	<u>32,938</u>	<u>35,786</u>
	<u>\$ 39,711</u>	<u>\$ 41,950</u>

The accompanying notes are an integral part of these consolidated balance sheets.

ECHELON CORPORATION  
CONSOLIDATED STATEMENTS OF OPERATIONS  
(in thousands, except per share amounts)

	<u>For the Year Ended December 31,</u>		
	<u>1999</u>	<u>1998</u>	<u>1997</u>
<b>REVENUES:</b>			
Product .....	\$ 37,546	\$ 29,163	\$ 24,665
Service .....	<u>2,220</u>	<u>3,038</u>	<u>3,637</u>
Total revenues .....	<u>39,766</u>	<u>32,201</u>	<u>28,302</u>
<b>COST OF REVENUES:</b>			
Cost of product .....	14,297	12,784	11,761
Cost of service .....	<u>1,529</u>	<u>1,836</u>	<u>1,810</u>
Total cost of revenues .....	<u>15,826</u>	<u>14,620</u>	<u>13,571</u>
Gross profit .....	<u>23,940</u>	<u>17,581</u>	<u>14,731</u>
<b>OPERATING EXPENSES:</b>			
Product development .....	9,214	7,564	7,121
Sales and marketing .....	15,152	12,535	12,128
General and administrative .....	4,101	4,119	4,004
Non-recurring charge .....	<u>549</u>	<u>--</u>	<u>--</u>
Total operating expenses .....	<u>29,016</u>	<u>24,218</u>	<u>23,253</u>
Loss from operations .....	(5,076)	(6,637)	(8,522)
Interest and other income, net .....	<u>1,355</u>	<u>945</u>	<u>497</u>
Loss before provision for income taxes .....	(3,721)	(5,692)	(8,025)
<b>PROVISION FOR INCOME TAXES</b> .....	<u>186</u>	<u>159</u>	<u>189</u>
Net loss .....	<u>\$ (3,907)</u>	<u>\$ (5,851)</u>	<u>\$ (8,214)</u>
Loss per share:			
Basic .....	<u>\$ (0.12)</u>	<u>\$ (0.24)</u>	<u>\$ (0.44)</u>
Pro forma basic .....		<u>\$ (0.20)</u>	<u>\$ (0.32)</u>
Shares used in per share calculation:			
Basic .....	<u>32,910</u>	<u>24,845</u>	<u>18,603</u>
Pro forma basic .....		<u>29,405</u>	<u>25,756</u>

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

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

	Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Deferred Compensation	Accumulated Other Comprehensive Income (Loss)		Accumulated Deficit	Total
	Shares	Amount	Shares	Amount			(Loss)	Deficit		
BALANCE AT DECEMBER 31, 1996.....	5,887	\$ 59	18,494	\$ 185	\$ 83,359	\$ —	\$ ( 31)	\$ (76,434)	\$ 7,138	
Exercise of stock options.....	—	—	354	3	289	—	—	—	292	
Repurchase of common stock, net.....	—	—	(16)	—	(16)	—	—	—	(16)	
Sale of Series E preferred stock.....	2,000	20	—	—	9,900	—	—	—	9,920	
Foreign currency translation adjustment.....	—	—	—	—	—	—	320	—	(320)	
Net loss.....	—	—	—	—	—	—	—	(8,214)	(8,214)	
 BALANCE AT DECEMBER 31, 1997.....	 7,887	 79	 18,832	 188	 93,532	 —	 (351)	 (84,648)	 8,800	
Exercise of stock options, net of repurchases.....	—	—	824	8	860	—	—	—	868	
Issuance of common stock in connection with public offering, net issuance costs of \$3,253.....	—	—	5,000	50	31,697	—	—	—	31,747	
Conversion of preferred stock to common stock..	(7,887)	(79)	7,887	79	—	—	—	—	—	
Deferred compensation.....	—	—	—	—	755	(755)	—	—	—	
Amortization of deferred compensation.....	—	—	—	—	—	158	—	—	158	
Foreign currency translation adjustment.....	—	—	—	—	—	—	37	—	37	
Unrealized holding gain on available-for-sale securities.....	—	—	—	—	—	—	27	—	27	
Net loss.....	—	—	—	—	—	—	—	(5,851)	(5,851)	
 BALANCE AT DECEMBER 31, 1998.....	 —	 —	 32,543	 325	 126,844	 (597)	 (287)	 (90,499)	 35,786	
Exercise of stock options and warrants, net of repurchases.....	—	—	697	7	769	—	—	—	776	
Amortization of deferred compensation.....	—	—	—	—	—	198	—	—	198	
Foreign currency translation adjustment.....	—	—	—	—	—	—	133	—	133	
Unrealized holding loss on available-for-sale securities.....	—	—	—	—	—	—	(48)	—	(48)	
Net loss.....	—	—	—	—	—	—	—	(3,907)	(3,907)	
 BALANCE AT DECEMBER 31, 1999.....	 <u>—</u>	 <u>\$ —</u>	 <u>33,240</u>	 <u>\$ 332</u>	 <u>\$127,613</u>	 <u>\$ (399)</u>	 <u>\$ (202)</u>	 <u>\$ (94,406)</u>	 <u>\$ 32,938</u>	

CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS  
(in thousands)

	For the Year Ended December 31,		
	<u>1999</u>	<u>1998</u>	<u>1997</u>
Net loss.....	\$ (3,907)	\$ (5,851)	\$ (8,214)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustment.....	133	37	(320)
Unrealized holding gain (loss) on available-for-sale securities.....	(48)	27	—
Comprehensive loss.....	<u>\$ (3,822)</u>	<u>\$ (5,787)</u>	<u>\$ (8,534)</u>

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

ECHELON CORPORATION  
CONSOLIDATED STATEMENTS OF CASH FLOWS  
(in thousands)

	<u>For the Year Ended December 31,</u>		
	<u>1999</u>	<u>1998</u>	<u>1997</u>
<b>CASH FLOWS FROM OPERATING ACTIVITIES:</b>			
Net loss .....	\$ (3,907)	\$ (5,851)	\$ (8,214)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization .....	1,148	962	715
Deferred compensation expense .....	198	158	--
Loss on disposal of fixed assets .....	28	7	--
Change in operating assets and liabilities:			
Accounts receivable .....	(2,744)	(749)	(579)
Inventories .....	205	(920)	(852)
Other current assets .....	(127)	(974)	150
Accounts payable .....	799	(294)	281
Accrued liabilities .....	473	73	252
Deferred revenues .....	(587)	(1,467)	(1,177)
Deferred rent .....	(76)	(137)	(57)
Net cash used in operating activities .....	<u>(4,590)</u>	<u>(9,192)</u>	<u>(9,481)</u>
<b>CASH FLOWS FROM INVESTING ACTIVITIES:</b>			
Purchase of held-to-maturity short-term investments .....	--	--	(10,740)
Purchase of available-for-sale short-term investments .....	(9,027)	(18,612)	--
Proceeds from maturities of held-to-maturity short-term investments .....	--	2,981	7,759
Proceeds from sales and maturities of available-for-sale short-term investments .....	11,560	1,084	--
Unrealized gains (losses) on securities .....	(48)	27	--
Capital expenditures .....	<u>(1,020)</u>	<u>(2,260)</u>	<u>(593)</u>
Net cash provided by (used in) investing activities .....	<u>1,465</u>	<u>(16,780)</u>	<u>(3,574)</u>
<b>CASH FLOWS FROM FINANCING ACTIVITIES:</b>			
Proceeds from issuance of preferred and common stock, net of offering costs .....	<u>776</u>	<u>32,615</u>	<u>10,196</u>
EFFECT OF EXCHANGE RATES ON CASH .....	<u>133</u>	<u>37</u>	<u>(320)</u>
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS .....	(2,216)	6,680	(3,179)
<b>CASH AND CASH EQUIVALENTS:</b>			
Beginning of year .....	<u>11,552</u>	<u>4,872</u>	<u>8,051</u>
End of year .....	<u>\$ 9,336</u>	<u>\$11,552</u>	<u>\$ 4,872</u>
<b>SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:</b>			
Cash paid for income taxes .....	<u>\$ 174</u>	<u>\$ 196</u>	<u>\$ 185</u>

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

ECHELON CORPORATION  
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

December 31, 1999

1. ORGANIZATION OF THE COMPANY:

Echelon Corporation (the "Company") was incorporated in Delaware in January 1989. The Company develops, markets and supports a family of hardware and software products and services that enables OEMs and systems integrators to design and implement open, interoperable, distributed control networks. The Company's products are based on its LONWORKS networking technology, an open standard for interoperable networked control developed by the Company. In a LONWORKS control network, intelligent control devices, called nodes, communicate using the Company's LONWORKS protocol. The Company sells its products and services to the building, industrial, transportation, home and other automation markets.

The Company is subject to certain risks and challenges including, among others: history of losses; undetermined market acceptance; fluctuation in operating results; dependence on OEMs and distribution channels; dependence on key manufacturers; competition; volatility of stock price; dependence on key personnel; new products and rapid technological change; market acceptance of interoperability; international operations and currency fluctuations; lengthy sales cycle; limited protection of intellectual property rights; risks of product defects or misuse; regulatory actions; voluntary standards and control by existing stockholders.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES:

*Principles of Consolidation*

The Company's consolidated financial statements reflect operations of the Company and its wholly owned subsidiaries. All significant intercompany transactions and balances have been eliminated.

*Use of Estimates in the Preparation of Financial Statements*

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

*Revenue Recognition and Product Warranty*

The Company's revenues are derived from the sale and license of its products and to a lesser extent, from fees associated with training and technical support offered to its customers. Product revenues consist of revenues from hardware sales and software licensing arrangements. Revenues from software licensing arrangements have not been significant to date. Service revenues consist of product support (including software post-contract support services) and training.

Revenue from hardware sales are recognized upon shipment to the customer. Estimated reserves for warranty costs as well as reserves for sales returns and allowances related to anticipated return of products sold to distributors with limited rights of return, which are not material to the consolidated financial statements, are recorded at the time of sale. Revenue from software sales, including sales to distributors, are recognized upon shipment of the software if there are no significant post-delivery obligations and if collection is probable. The Company generally has not had any significant post-delivery obligations associated with the sale of its products. Service revenue is recognized as the training services are performed, or ratably over the term of the support period.

During 1990, the Company entered into separate licensing agreements with Motorola, Inc. ("Motorola") and Toshiba Corporation ("Toshiba") which expire in January 2001 and January 2010, respectively, unless renewed. Motorola has the right to terminate the agreement at any time. Motorola has announced that it will discontinue distribution of Neuron Chips after January 31, 2001. Motorola was a significant stockholder and was a related party to the Company due to its representation on the Company's Board of Directors during part of 1999, 1998, and part of 1997.

The agreements provide, among other things, for the worldwide right to manufacture and distribute products subject to the licensed technology and requires the Company to provide support and unspecified updates to the licensed technology over the terms of the agreements, including support relating to compatibility testing and qualification of updates to the licensed technology. The agreements also provide for nonrefundable advance royalty payments aggregating \$6,750,000, which were received by the Company in 1990 and 1991. These payments are being recognized as revenue ratably over the ten-year royalty period due to the ongoing obligation to provide support and unspecified updates to the licensed technology. As of December 31, 1999, the Company has deferred \$675,000 of royalty payments that will be recognized in 2000. Any additional royalties that are reported by Motorola or Toshiba are recognized as revenue upon receipt of such royalties by the Company. Product revenues for the years ended December 31, 1999, 1998 and 1997 each include \$675,000 related to these advance royalty payments. For the years ended December 31, 1999, 1998 and 1997, Motorola accounted for about \$416,000, \$487,000 and \$360,000 of total revenues, respectively.

#### *Cash and Cash Equivalents*

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

#### *Short-Term Investments*

The Company classifies its investments in debt and equity securities as available-for-sale in accordance with Statement of Financial Accounting Standards ("SFAS") No. 115, "Accounting for Certain Investments in Debt and Equity Securities." Securities classified as available-for-sale are reported at fair market value with the related unrealized holding gains and losses, net of tax, being included in accumulated other comprehensive income (loss) in the accompanying consolidated statements of stockholders' equity.

As of December 31, 1999 and 1998, the Company's available-for-sale securities had contractual maturities of from four to twenty-three months, and from three to twenty months, respectively, and an average maturity of six months and ten months, respectively. The fair value of available-for-sale securities was determined based on quoted market prices at the reporting date for those instruments. The amortized cost basis, aggregate fair value and gross unrealized holding gains and losses by major security type were as follows (in thousands):

	December 31,					
	1999		Unrealized Holding Losses	1998		Unrealized Holding Gains
	Amortized Cost	Aggregate Fair Value		Amortized Cost	Aggregate Fair Value	
U.S. corporate securities:						
Commercial paper .....	\$ 3,979	\$ 3,979	\$ --	\$ 5,160	\$ 5,160	\$ --
Certificates of deposit .....	1,044	1,044	--	2,001	2,001	--
Corporate notes and bonds .....	<u>8,976</u>	<u>8,955</u>	<u>(21)</u>	<u>9,315</u>	<u>9,342</u>	<u>27</u>
	13,999	13,978	(21)	16,476	16,503	27
Foreign securities .....	<u>990</u>	<u>990</u>	<u>--</u>	<u>998</u>	<u>998</u>	<u>--</u>
Total investments in debt and equity securities.....	<u>\$ 14,989</u>	<u>\$ 14,968</u>	<u>\$ (21)</u>	<u>\$ 17,474</u>	<u>\$ 17,501</u>	<u>\$ 27</u>

#### *Inventories*

Inventories are stated at the lower of cost (first-in, first-out) or market and include material, labor and manufacturing overhead. Inventories consist of the following (in thousands):

	December 31,	
	1999	1998
Purchased materials.....	\$ 1,674	\$ 1,671
Work-in-process.....	51	--
Finished goods .....	<u>1,434</u>	<u>1,693</u>
	<u>\$ 3,159</u>	<u>\$ 3,364</u>

### *Property and Equipment*

Property and equipment are stated at cost. Depreciation is provided using the straight-line method over the estimated useful lives of two to five years for computer and other equipment and furniture and fixtures. Leasehold improvements are amortized over the shorter of the remaining lease term or the estimated useful life of the improvements using the straight-line method.

### *Software Development Costs*

The Company capitalizes eligible computer software development costs upon the establishment of technological feasibility, which the Company has defined as completion of a working model. For the years ended December 31, 1999, 1998 and 1997, costs that were eligible for capitalization were insignificant and, thus, the Company has charged all software development costs to product development expense in the accompanying consolidated statements of operations.

### *Accrued Liabilities*

Accrued liabilities consisted of the following (in thousands):

	<u>December 31,</u>	
	<u>1999</u>	<u>1998</u>
Accrued payroll and related costs .....	\$ 1,191	\$ 1,008
Accrued marketing costs .....	372	354
Other accrued liabilities .....	428	705
Accrued non-recurring charges .....	<u>549</u>	<u>--</u>
	<u>\$ 2,540</u>	<u>\$ 2,067</u>

### *Non-recurring Charge*

In the fourth quarter of 1999, the Company's Board of Directors approved a relocation plan to exit its current Palo Alto, California leased facilities and relocate to a new leased facility in San Jose, California. Over the first two quarters of 2000, the Company will temporarily move its activities from Palo Alto to a facility in Sunnyvale, California. The Company will then relocate to San Jose upon completion of their new corporate headquarters, which is scheduled for June 2001. As a result of vacating the Palo Alto facility, the Company recorded \$549,000, which was charged as an expense in 1999 and will be paid over the remaining lease term through June 30, 2000.

### *Foreign Currency Translation*

The functional currency of the Company's subsidiaries is the local currency. Accordingly, all assets and liabilities are translated into U.S. dollars at the current exchange rate as of the applicable balance sheet date. Revenues and expenses are translated at the average exchange rate prevailing during the period. Gains and losses resulting from the translation of the financial statements are included in accumulated other comprehensive income (loss) in the accompanying consolidated statements of stockholders' equity. Currently, the Company does not employ a foreign currency hedge program utilizing foreign currency exchange contracts as the foreign currency transactions and risks to date have not been significant.

### *Concentrations of Credit Risk*

Financial instruments which potentially subject the Company to concentrations of credit risk consist principally of temporary cash investments and trade receivables. The Company has cash investment policies that limit the amount of credit exposure to any one financial institution and restrict placement of these investments to financial institutions evaluated as highly creditworthy. Concentrations of credit risk with respect to trade receivables are limited due to the large number of customers comprising the Company's customer base and their dispersion across many different industries and geographies. With respect to trade receivables, the Company performs ongoing credit evaluations of its customers' financial condition. Additionally, the Company establishes an allowance for doubtful accounts and sales return allowances based upon factors surrounding the credit risk of specific customers, historical trends and other

available information. As of December 31, 1999, about 23% of the total accounts receivable balance was due from one customer. No single accounts receivable balance was greater than 10% as of December 31, 1998.

*Computation of Basic Net Loss Per Share and Pro Forma Basic Net Loss Per Share*

Historical net loss per share has been calculated under SFAS No. 128, "Earnings per Share." SFAS No. 128 requires companies to compute earnings per share under two different methods (basic and diluted). Basic net loss per share is calculated by dividing net loss by the weighted average shares of common stock outstanding during the period. No diluted loss per share information has been presented in the accompanying consolidated statements of operations since potential common shares from the conversion of preferred stock, stock options and warrants are antidilutive.

Pro forma basic net loss per share has been calculated assuming the conversion of the outstanding preferred stock into an equivalent number of shares of common stock, as if the shares had been converted on the dates of their issuance.

*Comprehensive Income (loss)*

SFAS No. 130 "Reporting Comprehensive Income" establishes standards for reporting and display of comprehensive income (loss) and its components. SFAS No. 130 requires companies to report a "comprehensive income (loss)" that includes unrealized holding gains and losses and other items that have previously been excluded from net loss and reflected instead in stockholders' equity. Comprehensive income (loss) for the Company consists of net loss plus the effect of unrealized holding gains or losses on investments classified as available-for-sale and foreign currency translation adjustments. The accumulated balances for each component of the accumulated other comprehensive income (loss) are as follows (in thousands):

	<u>December 31,</u>	
	<u>1999</u>	<u>1998</u>
Unrealized holding gain (loss) on available-for-sale securities .....	\$ (21)	\$ 27
Cumulative translation adjustment.....	<u>(181)</u>	<u>(314)</u>
	<u>\$ (202)</u>	<u>\$ (287)</u>

*New Accounting Pronouncements*

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, "Accounting for Derivative Investments and Hedging Activities," which establishes standards for the accounting for derivative transactions and the derivative portion of certain other contracts. SFAS No. 133 will become effective for the Company's fiscal year beginning January 1, 2001. Management believes that SFAS No. 133 will not have a material effect on the Company's financial statements.

In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin No. 101 ("SAB 101"), "Revenue Recognition in Financial Statements." SAB 101 provides guidance on applying generally accepted accounting principles to revenue recognition in financial statements. The Company will adopt SAB 101 as required in the first quarter of 2000 and is evaluating the effect that such adoption may have on its consolidated results of operations and financial position.

*Reclassifications*

Certain reclassifications have been made to the prior year amounts to conform with the fiscal year 1999 presentation.

**3. SEGMENT DISCLOSURE:**

In 1998, the Company adopted SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information." Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the chief operating decision maker in deciding how to allocate resources and in assessing business performance. The Company's chief operating decision-making group is the Executive Staff, which is comprised of the Chief Executive Officer and the Vice Presidents. SFAS No. 131 also requires disclosures about products and services, geographic areas and major customers. The adoption of SFAS No. 131 did not affect results of operations or the financial position of the Company but did affect the disclosure of segment information.

The Company operates in one principal industry segment: the design, manufacture and sale of products for the controls network industry, and markets its products primarily to the building automation, industrial automation, transportation, and home automation markets. The Company's products are marketed under the LONWORKS brand name which provides the infrastructure and support required to implement and deploy open, interoperable, control network solutions. All of the Company's products either incorporate or operate with the Neuron Chip and/or the LONWORKS protocol. The Company also provides services to customers which consist of technical support and training courses covering its LONWORKS network technology and products. The Company offers about 80 products and services that together constitute the LONWORKS system. Any given customer purchases a small subset of such products and services that are appropriate for that customer's application.

The Company manages its business primarily on a geographic basis. The Company's geographic areas are comprised of the Americas, Europe, Middle East and Africa ("EMEA") and Asia Pacific/ Japan ("APJ"). Each geographic area provides products and services as further described in Note 1. The Company evaluates the performance of its geographic areas based on profit or loss from operations. Profit or loss for each geographic area includes sales and marketing expenses and other charges directly attributable to the area and excludes certain expenses which are managed outside the geographic area. Costs excluded from area profit or loss primarily consist of unallocated corporate expenses, comprised of product development costs, corporate marketing costs and other general and administrative expenses which are separately managed. The Company has no long-lived assets, other than property and equipment. Long-lived assets are attributed to geographic areas based on the country where the assets are located. As of December 31, 1999 and 1998, long-lived assets of about \$2.3 million and \$2.4 million, respectively were domiciled in the United States. Long-lived assets for all other locations is not material to the consolidated financial statements. Assets and the related depreciation and amortization are not being reported by geography because the information is not reviewed by the Executive Staff to make decisions about resources to be allocated to the geographic areas based on their performance.

In North America, the Company sells its products through a direct sales organization. Outside the United States, direct sales, applications engineering and customer support are conducted through the Company's operations in Europe, Japan and China. Revenues are attributed to geographic areas based on the country where the customer is domiciled. Summary information by geography for the years ended December 31, 1999, 1998 and 1997 is as follows (in thousands):

	<u>Year Ended December 31,</u>		
	<u>1999</u>	<u>1998</u>	<u>1997</u>
Revenues from customers:			
Americas .....	\$ 14,109	\$ 13,447	\$ 11,219
EMEA .....	17,991	13,484	12,226
APJ .....	6,820	4,338	3,758
Unallocated .....	846	932	1,099
Total .....	<u>\$ 39,766</u>	<u>\$ 32,201</u>	<u>\$ 28,302</u>
Gross profit (loss):			
Americas .....	\$ 8,985	\$ 8,377	\$ 7,020
EMEA .....	9,862	6,467	6,034
APJ .....	4,247	2,721	2,519
Unallocated .....	846	16	(842)
Total .....	<u>\$ 23,940</u>	<u>\$ 17,581</u>	<u>\$ 14,731</u>
Income (loss) from operations:			
Americas .....	\$ 5,166	\$ 5,085	\$ 3,560
EMEA .....	6,569	3,496	2,835
APJ .....	923	329	620
Unallocated .....	(17,734)	(15,547)	(15,537)
Total .....	<u>\$ (5,076)</u>	<u>\$ (6,637)</u>	<u>\$ (8,522)</u>

One customer, the sole independent distributor of the Company's products in Europe since December 1997, accounted for 27.3%, 22.6%, and 10.9% of total revenues for the years ended December 31, 1999, 1998 and 1997, respectively.

#### 4. COMMITMENTS:

The Company leases its facilities under operating leases which expire on various dates through 2011. The leases related to the Company's facilities in Palo Alto expire in March and June 2000. The lease related to the temporary facility in Sunnyvale expires in July 2001. In December 1999, the Company entered into a lease agreement with a real estate developer for its new corporate headquarters which is under construction and scheduled for completion in June 2001. This agreement requires minimum rental payments for ten years and requires that the Company provide a \$3 million security deposit in May 2000. As of December 31, 1999, future minimum lease payments under all operating leases were as follows (in thousands):

2000.....	\$ 1,834
2001.....	1,708
2002.....	1,877
2003.....	1,835
2004.....	1,815
Thereafter .....	<u>12,593</u>
Total .....	<u>\$21,662</u>

Rent expense for the years ended December 31, 1999, 1998 and 1997 was \$1,810,000, \$1,802,000 and \$1,818,000, respectively. The lease agreements provide for escalating rent payments over the term of the lease. Rent expense under these agreements is recognized on a straight-line basis. As of December 31, 1999 and 1998, the Company has accrued about \$76,000 and \$246,000, respectively, of deferred rent related to these agreements of which \$76,000 and \$170,000 is included in accrued liabilities as of December 31, 1999 and 1998, respectively, in the accompanying consolidated balance sheets.

#### 5. STOCKHOLDERS' EQUITY:

##### *Preferred Stock*

With the closing of the Company's initial public offering ("IPO") in July 1998, all of the outstanding preferred stock automatically converted into 7,887,381 shares of common stock. Upon conversion of the outstanding preferred stock to common stock, such preferred stock was retired. As of December 31, 1999, the Company was authorized to issue 5,000,000 shares of new \$0.01 par value preferred stock, of which none was outstanding as of December 31, 1999.

##### *Common Stock*

As of December 31, 1999, the Company was authorized to issue 100,000,000 shares of \$.01 par value common stock.

##### *Warrants*

In connection with the issuance of the Series D preferred stock in 1994, the Company granted certain investment bankers warrants to purchase 30,000 shares of the Company's common stock at \$12.00 per share. These warrants expired on February 2, 1999.

In connection with the issuance of the Series E preferred stock in 1997, warrants to purchase an aggregate of 400,000 shares of common stock at a per share exercise price of \$5.00 were issued. At the date of issuance, the fair market value of these warrants was deemed to be immaterial. These warrants are exercisable at any time until their expiration, which is the earlier of May 15, 2002 or a change in control. Each warrant contains a cashless conversion right. As of December 31, 1999, 55,181 of these warrants have been exercised and 344,819 remain outstanding.

##### *1988 Stock Option Plan*

During 1988, the Company adopted the 1988 Stock Option Plan (the "1988 Plan") for key employees, officers and directors. Incentive stock options to purchase shares of common stock were granted at not less than 100% of the fair market value and generally have a term of five years from the date of grant, not to exceed ten years. The 1988 Plan also provides for holders of non-qualified stock options to purchase shares at not less than 85% of the fair market value.

Options generally vest ratably over four years. Fair market value for these grants was determined by the Board of Directors prior to the stock becoming available on a public market.

The 1988 Plan also allows for the issuance of options which are immediately exercisable through execution of a restricted stock purchase agreement. Shares purchased pursuant to a stock purchase agreement generally vest over four years. In the event of termination of employment, the Company, at its discretion, may repurchase unvested shares at a price equal to the original issue price. Options granted under the 1988 Plan will remain outstanding in accordance with their original terms. However, effective April 1997, the Board of Directors determined that no further options will be granted under the 1988 Plan.

#### *1997 Stock Plan*

During 1997, the Company adopted the 1997 Stock Plan (the "1997 Plan") for key employees, officers and directors. A total of 3,030,962 shares of Common Stock are currently reserved for issuance pursuant to the 1997 Plan. This plan includes annual increases on the first day of the Company's fiscal year (beginning in 1999) not to exceed the lesser of (i) 5,000,000 shares or (ii) 5% of the outstanding shares on such date. Incentive stock options to purchase shares of common stock may be granted at not less than 100% of the fair market value and generally have a term of five years from the date of grant, not to exceed ten years. The exercise price of nonstatutory stock options and stock purchase rights granted under the 1997 Plan is determined by the Administrator, but will also be at least equal to 100% of the fair market value per share of common stock on the grant or issue date, except that up to 10% of the aggregate number of shares reserved for issuance under the 1997 Plan (including shares that have been issued or are issuable in connection with options exercised or granted under the 1997 Plan) may have exercise prices that are from 0% to 100% of the fair market value of the common stock on the date of grant. Options generally vest ratably over four years. Fair market value is determined with reference to the closing price of the common stock as reported on the Nasdaq National Market on the date immediately preceding grant date.

The 1997 Plan also allows for the issuance of options which are immediately exercisable through execution of a restricted stock purchase agreement. Shares purchased pursuant to a stock purchase agreement generally vest ratably over four years. In the event of termination of employment, the Company, at its discretion, may repurchase unvested shares at a price equal to the original issuance price.

#### *1998 Directors Option Plan*

Non-employee directors are entitled to participate in the 1998 Director Option Plan (the "Director Plan"). The Director Plan was adopted by the Board of Directors in May 1998 and became effective upon the closing of the stock offering in July 1998. The Director Plan has a term of ten years, unless terminated sooner by the Board. A total of 275,000 shares of Common Stock are currently reserved for issuance under the Director Plan. The plan provides for an increase each year equal to 100,000 shares or such lesser amount as the Board may determine. The plan also provides for the automatic grant of 25,000 shares of common stock (the "First Option") to each non-employee director on the date he or she first becomes a director. Each non-employee director is also automatically granted an option to purchase 10,000 shares (a "Subsequent Option") on the date of the Company's Annual Stockholder Meeting provided that he or she is re-elected to the Board or otherwise remains on the Board, if on such date he or she shall have served on the Board for at least the preceding six months. Each First Option and each Subsequent Option shall have a term of five years and the shares subject to the option shall vest as to 25% of the shares subject to option on each anniversary of the date of grant. The exercise price of each First Option and Subsequent Option shall be 100% of the fair market value per share of the common stock, generally determined with reference to the closing price of the common stock as reported on the Nasdaq National Market on the date preceding grant date. During 1999 and 1998, options to purchase an aggregate of 75,000 and 60,000 shares were granted under the Director Plan at exercise prices ranging from \$7.06 to \$8.50 in 1999 and an exercise price equal to \$7.00 per share in 1998.

In the event of a merger of the Company with or into another corporation or the sale of substantially all of the assets of the Company, each option shall be assumed or an equivalent option may be substituted by the successor corporation. Following such assumption or substitution, if the optionee's status as a director of the successor corporation terminates other than upon a voluntary resignation by the optionee, the option shall become fully exercisable, including as to shares as to which it would not otherwise be exercisable. If the outstanding options are not assumed or substituted, the options shall become fully vested and exercisable. Options granted under the Director Plan must be exercised within three months of the end of the optionee's tenure as a director of the Company, or within twelve months after such director's termination by death or disability, but in no event later than the expiration of the option's five year term; provided,

however, that shares subject to an option granted to a director who has served as a director with the Company for at least five years shall become fully vested and exercisable for the remainder of the option's five year term upon such director's termination. No option granted under the Director Plan is transferable by the optionee other than by will or the laws of descent and distribution, and each option is exercisable, during the lifetime of the optionee, only by such optionee.

The following table summarizes option activity under all plans (prices are weighted average prices):

	Year Ended December 31,					
	1999		1998		1997	
	Shares	Price	Shares	Price	Shares	Price
Options outstanding,						
Beginning of year .....	4,585,554	\$ 2.18	4,316,432	\$ 1.28	2,851,514	\$ 1.14
Granted.....	1,843,900	7.50	1,707,450	5.07	2,185,700	1.40
Cancelled.....	(181,045)	3.16	(613,413)	5.51	(366,626)	1.29
Exercised.....	<u>(686,068)</u>	<u>1.20</u>	<u>(824,915)</u>	<u>1.19</u>	<u>(354,156)</u>	<u>0.83</u>
Options outstanding,						
End of year .....	<u>5,562,341</u>	<u>\$ 4.03</u>	<u>4,585,554</u>	<u>\$ 2.18</u>	<u>4,316,432</u>	<u>\$ 1.28</u>
Exercisable, end of year .....	<u>3,977,955</u>	<u>\$ 3.18</u>	<u>3,891,704</u>	<u>\$ 2.03</u>	<u>4,280,307</u>	<u>\$ 1.29</u>

Certain options issued under the 1988 and 1997 Plans may be exercised any time prior to their expiration. In addition, the Company has the right, upon termination of an option holder's employment or service with the Company, at its discretion, to repurchase any unvested shares issued under the 1988 and 1997 Plans at the original purchase price. As of December 31, 1999, 373,875 shares were subject to repurchase by the Company at prices ranging from \$1.29 to \$2.00 per share and a weighted average repurchase price of \$1.40. Of the 3,977,955 options exercisable as of December 31, 1999, 1,893,291 were vested.

On December 14, 1998, the Board of Directors authorized the repricing of 393,350 options to purchase the Company's common stock at \$3.125 price per share (the fair market value as reported on the Nasdaq National Market on the date immediately preceding the authorized date) that were previously granted at \$7.00 per share. The Board action excluded options granted to all the officers and directors of the Company.

In connection with the issuance of stock options during 1998, the Company has recorded deferred compensation in the aggregate amount of \$755,000, representing the difference between the deemed fair value of the Company's common stock and the exercise price of the stock options at the date of grant. The Company is amortizing the deferred compensation expense over the shorter of the period in which the employee provides services or the applicable vesting period, which is typically 48 months. For the years ended December 31, 1999 and 1998, amortization expense was \$198,000 and \$158,000, respectively. Deferred compensation is decreased in the period of forfeiture arising from the early termination of an option holder's services.

The Company accounts for the Plans under APB Opinion No. 25, "Accounting for Stock Issued to Employees." Had compensation expense for the Plans been determined consistent with SFAS No. 123, "Accounting for Stock-Based Compensation," the Company's net loss and basic net loss per share would have been increased to the following pro forma amounts (in thousands, except per share amounts):

	Year Ended December 31,		
	1999	1998	1997
Net loss:			
As reported.....	\$(3,907)	\$(5,851)	\$(8,214)
Pro forma.....	(9,052)	(7,344)	(8,626)
Basic net loss per share:			
As reported.....	\$ (0.12)	\$ (0.24)	\$ (0.44)
Pro forma.....	(0.28)	(0.27)	(0.46)

The weighted-average grant date fair value of options granted during 1999, 1998 and 1997 was \$6.18, \$2.87 and \$0.19, respectively. Under SFAS No. 123, the fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model with the following weighted average assumptions:

	Year Ended December 31,		
	1999	1998	1997
Expected dividend yield .....	0.0%	0.0%	0.0%
Risk-free interest rate .....	6.6%	5.2%	5.6%
Expected volatility .....	150.0%	70.0%	--
Expected life (in years) .....	3.0	4.0	4.0

Because the Company was a non-public entity in 1997, it has omitted expected volatility in determining a value for its options during that year.

Because additional stock options are expected to be granted each year, the above pro forma disclosures are not representative of pro forma effects on reported financial results for future years.

The following table summarizes the stock options outstanding as of December 31, 1999:

Exercise Price Range	Options Outstanding			Options Exercisable	
	Number Outstanding at December 31, 1999	Weighted Average Remaining Life (in years)	Weighted Average Exercise Price	Number Exercisable December 31, 1999	Weighted Average Exercise Price
\$1.00-\$1.29	402,365	0.88	\$ 1.22	402,365	\$ 1.22
1.40	2,239,903	2.08	1.40	2,239,403	1.40
2.00-3.88	617,631	3.75	2.77	98,687	2.40
5.13-7.06	2,021,942	4.30	7.02	1,187,500	7.04
7.13-9.75	156,250	6.12	8.02	50,000	8.50
\$11.00-\$14.25	124,250	4.96	13.07	--	--
	<u>5,562,341</u>	<u>3.16</u>	<u>\$ 4.03</u>	<u>3,977,955</u>	<u>\$ 3.18</u>

#### Shares Reserved

As of December 31, 1999, the Company had shares of common stock reserved for future issuance as follows:

Stock Option Plans .....	8,868,303
Warrants to Purchase Common Stock .....	<u>344,819</u>
	<u>9,213,122</u>

#### 6. INCOME TAXES:

The Company accounts for income taxes using SFAS No. 109, "Accounting for Income Taxes". SFAS No. 109 provides for an asset and liability approach under which deferred income taxes are based upon enacted tax laws and rates applicable to the periods in which the taxes become payable.

Income taxes for the years ended December 31, 1999, 1998 and 1997 primarily consist of taxes related to foreign subsidiaries.

The components of the net deferred income tax asset are as follows (in thousands):

	<u>December 31,</u>	
	<u>1999</u>	<u>1998</u>
Net operating loss carryforwards .....	\$ 29,628	\$ 28,333
Deferred revenue .....	472	601
Tax credit carryforwards .....	4,441	4,063
Capitalized research and development costs .....	2,135	1,678
Reserves and other cumulative temporary differences .....	<u>1,208</u>	<u>1,379</u>
	37,884	36,054
Valuation allowance .....	<u>(37,884)</u>	<u>(36,054)</u>
Net deferred income tax asset .....	<u>\$ --</u>	<u>\$ --</u>

As of December 31, 1999, the Company had net operating loss carryforwards for Federal and state income tax reporting purposes of about \$83.9 million and \$4.9 million, respectively, which expire at various dates through 2019. In addition, as of December 31, 1999, the Company had tax credit carryforwards of about \$4.4 million, which expire at various dates through 2019. The Internal Revenue Code of 1986, as amended, contains provisions that may limit the net operating loss and credit carryforwards available for use in any given period upon the occurrence of certain events, including a significant change in ownership interests, such as the IPO completed in July 1998.

A valuation allowance has been recorded for the entire deferred tax asset as a result of uncertainties regarding the realization of the asset balance due to the history of losses and the variability of operating results. As of December 31, 1999 and 1998, the Company had no significant deferred tax liabilities.

## SCHEDULE II

ECHELON CORPORATION  
VALUATION AND QUALIFYING ACCOUNTS  
(in thousands)

ALLOWANCE FOR DOUBTFUL ACCOUNTS  
AND SALES ALLOWANCES

<u>Description</u>	<u>Beginning Balance</u>	<u>Charged to Revenues and Expenses</u>	<u>Deductions</u>	<u>Ending Balance</u>
Year ended December 31, 1997:	\$ 819	35	292	\$ 562
Year ended December 31, 1998:	562	620	—	1,182
Year ended December 31, 1999:	\$ 1,182	—	298	\$ 884

## SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ECHELON CORPORATION

By: /s/ OLIVER R. STANFIELD  
Oliver R. Stanfield  
Vice President Finance, and Chief Financial Officer (Duly  
Authorized Officer and Principal Financial and  
Accounting Officer)

## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints M. Kenneth Oshman and Oliver R. Stanfield his true and lawful attorney-in-fact and agent, with full power of substitution and, for him and in his name, place and stead, in any and all capacities to sign any and all amendments to this Report on Form 10-K, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

PURSUANT TO THE REQUIREMENTS OF THE SECURITIES EXCHANGE ACT OF 1934, THIS REPORT HAS BEEN SIGNED BY THE FOLLOWING PERSONS ON BEHALF OF THE REGISTRANT AND IN THE CAPACITIES AND ON THE DATES INDICATED.

<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ M. KENNETH OSHMAN</u> M. Kenneth Oshman	Chairman of the Board, President and Chief Executive Officer (Principal Executive Officer)	March 15, 2000
<u>/s/ OLIVER R. STANFIELD</u> Oliver R. Stanfield	Vice President of Finance and Chief Financial Officer (Principal Financial and Principal Accounting Officer)	March 17, 2000
<u>/s/ ROBERT J. FINOCCHIO</u> Robert Finocchio	Director	March 15, 2000
<u>/s/ ROBERT R. MAXFIELD</u> Robert R. Maxfield	Director	March 15, 2000
<u>/s/ RICHARD M. MOLEY</u> Richard M. Moley	Director	March 15, 2000
<u>/s/ ARTHUR ROCK</u> Arthur Rock	Director	March 15, 2000
<u>/s/ LARRY W. SONSINI</u> Larry W. Sonsini	Director	March 16, 2000