ZOOM TECHNOLOGIES INC
Form 10-K
March 28, 2003

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

(Mark One)

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2002
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 0-18672

ZOOM TECHNOLOGIES, INC.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	51-0448969
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)
207 South Street, Boston, Massachusetts (Address of Principal Executive Offices)	02111 (Zip Code)

Registrant's Telephone Number, Including Area Code: (617) 423-1072
Securities Registered Pursuant to Section 12 (b) of the Act: None
Securities Registered Pursuant to Section 12 (g) of the Act:

Common Stock, $.01 Par Value
(Title of Class)

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

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

Indicate by check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). YES [ ] NO [X]

The aggregate market value of the common stock, $0.01 par value, of the registrant held by non-affiliates of the registrant as of June 28, 2002 (computed by reference to the closing price of such stock on The Nasdaq Market on such date) was approximately $6,288,693.

The number of shares outstanding of the registrant's common stock, $0.01 par value, as of March 20, 2003 was 7,858,266 shares.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's proxy statement for the registrant's 2003 annual meeting of shareholders to be filed with the SEC in April 2003 are incorporated by reference into Part III, Items 10-13 of this Form 10-K.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements contained in this report are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These statements involve known and unknown risks, uncertainties and other factors which may cause our or our industry's actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to statements regarding:

- the timing of new product introductions;
- the success of our V.92 dial-up modems;
- ability to reach our goal of returning to profitability;
- the anticipated development and expansion of our markets and sales channels;
- investment in resources for product design in foreign markets;
- the development of new competitive technologies and products;
- approvals, certifications and clearances for our products;
- production schedules for our products;
- market acceptance of new products;
- business strategies;
- dependence on significant suppliers;
- dependence on significant manufacturers, distributors and customers;
- the availability of debt and equity financing;
- general economic conditions;
- the realization of cash improvement from the sale of excess inventory;
- the realization of cash improvement from the utilization of no-charge components;
- the impact of our cost-savings initiatives; and
- our financial condition or results of operations.

In some cases, you can identify forward-looking statements by terms such as "may," "will," "should," "could," "would," "expects," "plans," "anticipates," "believes," "estimates," "projects," "predicts," "potential" and similar expressions intended to identify forward-looking statements. These statements are only predictions and involve known and unknown risks, uncertainties, and other factors that may cause our actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by such forward-looking statements. Given these uncertainties, you should not place undue reliance on these forward-looking statements. Also, these forward-looking statements represent our estimates and assumptions only as of the date of this report. We expressly disclaim any obligation or undertaking to release publicly any updates or revisions to any forward-looking statement contained in this report to reflect any change in our expectations or any change in events, conditions or circumstances on which any of our forward-looking statements are based. Factors that could cause or contribute to differences in our future financial results include those discussed in the risk factors set forth in Item 7 below as well as those discussed elsewhere in this report. We qualify all of our forward-looking statements by these cautionary statements.

PART I

ITEM 1 - BUSINESS

Overview

We design, produce and market dial-up and broadband modems, speed dialers, and other communications products. Our primary objective is to build upon our position as a leading supplier of Internet access devices and to take advantage of a number of emerging trends in communications including enhanced Internet access, higher data rates, and new voice and multimedia applications.

To date our revenues have come primarily from sales of our dial-up modems. Our dial-up modems connect personal computers and other devices to the local telephone line for transmission of data, fax, voice, and images. Our dial-up modems enable personal computers and other devices to connect to other computers and networks, including the Internet and local area networks, at top data speeds up to 56,000 bits per second. Most of our modems connect to a single telephone line, but we also make multi-line modems which can connect to up to sixteen telephone lines. We also have a line of integrated services digital network ("ISDN") products, which can transmit and receive data simultaneously at up to 128,000 bits per second.

In response to increased demand for faster connection speeds and increased modem functionality, we have invested resources to expand our product line to include cable and ADSL modems and related broadband access products. Cable modems provide a high-bandwidth connection to the Internet through a cable-TV cable that connects to compatible equipment that is typically at or near the cable service provider. We began shipping cable modems during 2000. Our cable modem customers in the U.S., the U.K., and other countries now include cable service providers, original equipment manufacturers, and retailers.

Our Asymmetric Digital Subscriber Line modems, known as ADSL modems, provide a high-bandwidth connection to the Internet through a standard telephone line that typically connects to compatible ADSL equipment in or near the central telephone office. We are now shipping four ADSL modems: one internal PCI bus model and three external models.

We have been designing a new generation of telephone dialers and related telephony products. In the early 1980s Zoom introduced its first generation of dialers, including Demon Dialertm and Hotshottm. Dialers simplify the placing of a phone call by dialing digits automatically. Zoom's new generation of dialers includes a model designed for alternative long distance companies, and a second model designed for use with prepaid phone cards. Zoom plans to extend its proprietary dialer technology into a wide range of telephony products.

Zoom also has a line of cameras designed to be used with personal computers. Some "web camera" models only function when they are connected to a computer, and allow storage or transmission of a still picture or moving video. Some new models also work when they are not connected to the computer; so that pictures or videos can be stored into the camera away from the computer, and later downloaded into the computer.

We were incorporated in British Columbia under the name 1519 Holdings Ltd. on July 7, 1986 and subsequently changed our name to Zoom Telephonics, Inc. on October 1, 1987. On June 28, 1991, we changed our jurisdiction of incorporation from British Columbia to Canada. In February 2002 we changed our jurisdiction of incorporation from Canada to the State of Delaware and changed our corporate name to Zoom Technologies, Inc. Our operations continue to be carried out by our wholly owned subsidiary, Zoom Telephonics, Inc., a Delaware corporation. Our principal executive offices are located at 207 South Street, Boston, MA 02111 and our telephone number is (617) 423-1072.

Products

General

The vast majority of our products facilitate communication of data through the Internet. Our dial-up modems and integrated services digital network, or ISDN, modems link PCs and portable information devices through the telephone network and connected networks, including the Internet and local area networks. Similarly, our cable modems use the cable-TV cable and our ADSL modems use the local telephone line to provide a high-speed link to the Internet. Our dialers can be used to route voice calls to a voice-over-IP network including the Internet. Our PC cameras provide pictures that can be communicated over the Internet.

Dial-Up Modems

We have a broad line of dial-up modems with top data speeds up to 56,000 bps, available in internal, external and PCMCIA models. PC-oriented internal modems are designed primarily for installation in the PCI or ISA slot of IBM PC-compatibles. Embedded internal modems are designed to be embedded in non-PC equipment such as point-of-purchase terminals, kiosks, and set-top boxes. Many of our external modems are designed to work with almost any terminal or computer, including IBM PC-compatibles, the Apple MacIntosh and other computers. Our external models include desktop models and multi-line modems with up to sixteen modems in an enclosure. Our PCMCIA modems are designed for use with notebook and sub-notebook computers as well as PDAs (personal digital assistants) equipped with standard PCMCIA slots. When sold as packaged retail products, our modems are shipped complete with third-party software that supports the hardware capabilities of the modem.

56K modems allow users connected to standard phone lines to download data at speeds up to 56,000 bps when communicating with compatible central sites connected to digital lines such as ISDN or T1 lines. Those central sites are typically online services, Internet Service Providers, or remote LAN access equipment. We began shipping pre-standard K56flextm 56K modems in the second quarter of 1997. In February 1998, a committee of the International Telecommunications Union ("ITU") agreed upon the V.90 standard for 56K. V.90 is now widely deployed in equipment made by central site manufacturers, and most of our dial-up modem sales include V.90. We are now also shipping V.92 modems, which offer increased functionality and faster upstream data rates than other dial-up modems. We expect V.92 modems to take an increasing and ultimately larger share of the dial-up modem market because of these increased functions.

In March and April of 1999, we acquired substantially all of the modem assets of Hayes Microcomputer Products, Inc., an early leader in the modem industry. In July 2000, we acquired the trademark and product rights to Global Village products. Global Village is a leading modem brand for Apple MacIntosh computers. We now sell and market dial-up modems under the Zoom, Hayes and Global Village names, as well as under various other private-label brands developed for some of our large accounts.

In 2000, 2001, and 2002, our dial-up modems and related products comprised of approximately 92%, 83%, and 84% of our sales respectively.

The following sets forth some of the key features incorporated in one or more of our dial-up modems:

- ZoomGuardtm. ZoomGuard represents the protective circuitry added to our modems to improve their ability to withstand the effects of lightning striking a phone line to which the modem is connected. For most modem manufacturers, lightning is a major cause of field failures.
- PC Card Guard tm. PC Card Guard represents the protective circuitry added to our PCMCIA modems to protect against destruction caused by plugging the modem into a digital PBX phone jack. We were one of the first companies to

develop this useful feature.

- Voice Mail. Voice mail capability allows a PC to serve as an answering machine with message storage and local or remote message retrieval.
- Channel 2tm. Channel 2 is our trademark for a feature that works with the optional Call Waiting feature available from some phone companies. Channel 2 permits the modem to recognize an incoming call when the modem is on-line, so that the user can determine how to handle the call.
- Distinctive Ring. Distinctive Ring is a service offered by telephone companies that assigns more than one phone number to a single phone line, with each number ringing differently. This service along with appropriate modem functionality allows someone to arrange for one phone number to be answered as a phone line, a second number to be answered as a fax line, and a third number to be answered as a data line. We have been issued a United States patent related to our distinctive ring technology.
- Plug & Play. Microsoft's Windows software supports Plug & Play, a standard that is intended to allow the installation of Plug & Play-compatible peripherals like modems with limited hardware configuration by the end-user.

International Modems.

Most foreign countries have their own telecommunications standards and regulatory approval requirements for sales of communications products such as those we offer. As a result, the introduction of new products into international markets can be costly and time-consuming. In 1993, we introduced our first dial-up modem approved for selected Western European countries. Since then we have continued to expand our product offerings internationally. We have received regulatory approvals for, and are currently selling dial-up modems in a number of countries, including Australia, Austria, Belgium, Denmark, Finland, Germany, Hungary, India, Ireland, Italy, Japan, the Netherlands, Poland, Portugal, Russia, Slovenia, South Africa, Spain, Sweden, Switzerland, and the United Kingdom. We intend to continue to expand and enhance our product line for our existing markets and to seek approvals for the sale of our products in new countries throughout the world.

Multi-line Modems.

In 1996 we began shipping a family of multi-line dial-up modems targeted for local area network fax and data server applications, computer bulletin boards, multi-line voice mail, and other applications. The Zoom/MultiLine products hold up to eight voice dial-up faxmodems in one small external case that includes status indicators for each dial-up modem. The Hayes Century product line provides up to 16 dial-up modems in a single enclosure.

ISDN Products.

We have a family of modems for Integrated Service Digital Network, or ISDN, communications. ISDN is a telephone service that allows existing phone lines to be used to transmit data digitally. ISDN service permits much higher data transmission rates than conventional analog telephone service. Basic ISDN service provides two 64,000 bps channels and one 16,000 bps channel. The higher rates of data transmission achievable with ISDN can be particularly attractive for data-intensive applications such as the transmission of graphics and video images, World Wide Web browsing, or video telephony.

In late 2000 we introduced the following ISDN products:

- a PCI model that plugs into the PCI slot of a Windows PC,
- a USB model that plugs into the USB port of a PC, and
- a serial port model that plugs into the serial port of a PC.

Cable Modems

Each cable service provider has its own approval process, in which the cable service provider may require CableLabs(R) certification in addition to the cable service provider's own company approval. We have obtained CableLabs(R) certification for four types of DOCSIS-standard cable modems - PCI, USB, Ethernet, and Ethernet/USB models. Some of these models have also received cable service provider approvals; for instance, the Ethernet/USB model includes approvals by AT&T, Adelphia, Charter, Comcast, Cox, and Mediacom. The approval process has been and continues to be a significant barrier to entry, as are the strong relationships with cable service providers enjoyed by incumbent cable equipment providers like Motorola and Scientific Atlanta.

In 2002 Zoom was successful at gaining new cable service provider approvals, and in upgrading firmware where appropriate for some customers. In 2003 we expect to continue to sell cable modems to cable service providers and original equipment manufacturers both inside and outside the US. We are already selling cable modems through some high-volume retailers in the US, and we hope to expand sales through that channel. So far sales through the retail channel have been handicapped by a number of factors, including the approval process described above and the fact that some cable service providers do not provide a financial incentive to a customer who purchases his own modem rather than leasing it from the cable service provider.

ADSL Modems.

Our ADSL modems incorporate the standards that are most popular with U.S. telephone companies and Internet Service providers, including G.DMT and G.Lite. In 2000, we designed and shipped our first ADSL modems, an external USB model and an internal PCI model. In 2002 we introduced new USB and PCI models, and also introduced an Ethernet model and a USB/Ethernet model with router features.

Wireless

In general we are de-emphasizing wireless network interface cards, and concentrating our wireless network product plans on broadband modems with built-in wireless networking capability.

Full-Color Video Cameras and Other Video Products.

In late 1997 we shipped the Zoom/Video Cam, a full-color PC video camera. Since then we have introduced new PC camera models. We have limited hardware product development in the video area. Typically we purchase another company's camera hardware, and license appropriate packing and documentation to achieve a finished product. We are continuing to expand our line of PC cameras to utilize our sales channels and to benefit from the growing market for low-cost cameras.

Dialers and Related Telephony Products.

Our dialers simplify the placing of a phone call by dialing digits automatically. We shipped our first telephone dialer, the Demon Dialer(R), in 1981, and in 1983 began shipping the Hotshot(TM) dialer. As the dialer market diminished due to equal access, we focused on modems and other peripherals for the personal computer market. In the second half of 2003, we expect to commence shipping a new generation of dialers incorporating proprietary technology. Our proprietary technology includes proprietary hardware, firmware, and software, and is currently protected by one U.S. patent. These dialers are well suited to easily route appropriate calls through money-saving long-distance service providers. We expect to sell some of our dialer models to long-distance service providers, and other models to high-volume retailers. In 2002, dialer products represented under 1% of Zoom's sales.

Sales Channels

General

We sell our products primarily through high-volume retailers and distributors, value-added resellers, PC system integrators, and OEMs. We support our major accounts in their efforts to discern strategic directions in the market, to maintain appropriate inventory levels, and to offer a balanced selection of products. As we expand our product offerings, particularly in cable, ADSL and other broadband modems, we are seeking to expand and strengthen our market channels to include cable service providers, phone companies, and Internet Service Providers. Expanding our market channels to include significant sales to these customers has been challenging and we cannot assure that we will be successful.

During 2002, our customers who accounted for more than 10% of our total sales were Staples, Best Buy, and DSG Retail. Together, these 3 customers accounted for 43% of our total sales. The loss of any of these customers, or a significant reduction in sales to these customers, could have a material adverse effect on our business.

High-volume Retailers.

In the United States, we reach the PC retail market primarily through high-volume retailers. Our extensive United States retail distribution network includes Best Buy, CDW, Fry's, Micro Electronics, PC Connection, Staples, and many others.

Distributors.

We sell significant quantities of dial-up modems through distributors, who often sell to corporate accounts, value-added resellers and other channels that are generally not served by our high-volume retailers. Our North American distributors include D&H Distributing, Gates-Arrow, Ingram Micro, and Tech Data.

System Integrators and Original Equipment Manufacturers.

Our OEM customers sell our products under their own name or incorporate our products as a component of their systems. We seek to be responsive to the needs of personal computer manufacturers by providing on-time delivery of high-quality, reliable, cost-effective products with strong engineering and sales support. We believe many of these customers also appreciate the improvement in their products' image due to use of a Zoom or Hayes brand modem.

International Channels.

In international markets, we sell our products primarily through independent distributors and retailers. Our international distributors include Beijing Tide Hightech Co. Ltd, Computer 2000, Criterium, Informatics, Micro Peripherals, Pouladis, UMD, and others. Our major European high-volume retailers include Business Logic, Centromail, DSG Retail (Dixons, PC World, and PC City), Time Computers, and others. Our international net sales as a percentage of total sales have grown from 8% in 1994 to 40% in 2002. Our revenues from international sales were $17.2 million in 2000, $15.7 million in 2001, and $14.9 million in 2002. See note 17 to our accompanying financial statement for further information regarding our geographic sales. Approximately 56%, 61% and 70% of our international sales in 2000, 2001 and 2002, respectively, were customers in the United Kingdom. We believe sales growth outside of the United States will continue to require substantial additional investments of resources for product design and testing, regulatory approvals, and native-language instruction manuals, software, packaging, sales support, and technical support. We have made this investment in the past for many countries, and we expect to make this investment for many countries and products in the future.

Sales, Marketing and Support

Our sales, support, and marketing are primarily managed from our headquarters in Boston, Massachusetts and our technical support office in Boca Raton, Florida. In North America we sell our Zoom, Hayes, Global Village, and private-label dial-up modem products primarily through commissioned independent sales representatives managed and supported by our own staff. Most major cable service providers are serviced by our employees. North American technical support is primarily handled from our Boston headquarters location and from our technical support offices in Boca Raton, Florida. We also maintain a sales, support, and logistics office in the United Kingdom. Warehousing, customs clearance, and shipping for the United Kingdom and some other European countries are primarily handled by contract with an unaffiliated specialist in these services located in England. For countries outside North America and Europe, our in-house staff typically works directly with country-specific distributors. Our worldwide OEM sales are primarily handled by our staff in the United States and United Kingdom, who are at times assisted by our sales staff or commissioned sales representatives. See note 17 to our accompanying financial statements for geographic information regarding our sales.

We believe that Zoom, Hayes, and Global Village are widely recognized brand names. We build upon our brand equity in a variety of ways, including cooperative advertising, product packaging, trade shows, and public relations. We generally provide our high-volume retailers with funds to advertise our products in conjunction with the customers' general advertising. We believe that this type of advertising efficiently and effectively targets the end-user market for our products.

We attempt to develop quality products that are user-friendly and require minimal support. We typically support our claims of quality with product warranties of one to seven years, depending upon the product. To address the needs of those end-users of our products who require assistance, we have our own staff of technical specialists who currently provide telephone support six days per week. Our technical support specialists also maintain a significant World Wide Web support facility that includes email, firmware and software downloads, and the SmartFactstm Q&A search engine. In 2001 we expanded our European technical support to enable users in other countries to access support in their own language. This support is generally provided by our support staff in Boston, Florida, and the United Kingdom.

Research and Development

Our research and development efforts are focused on developing new products for PC communications markets, further enhancing the capabilities of existing products, and reducing production costs. We have developed close collaborative relationships with certain of our OEM customers and component suppliers, who work with us to identify and respond to emerging technologies and market trends by developing products that address these trends. In addition, we purchase modem and other chipsets that incorporate sophisticated technology from third parties, thereby eliminating the need for us to develop this technology in-house. As of December 31, 2002 we had 22 employees engaged primarily in research and development. Our research and development team performs electronics hardware design and layout, mechanical design, prototype construction and testing, component specification, firmware and software development, product testing, foreign and domestic regulatory approval efforts, end-user and internal documentation, and third-party software selection and testing.

During 2000, 2001 and 2002 we expended $6.2 million, $5.3 million, and $3.5 million, respectively, on research and development activities.

Manufacturing and Suppliers

Our products are currently designed for high-volume automated assembly, primarily in China, Korea, Taiwan, and the United States to help assure reduced costs, rapid market entry, short lead times, and reliability. For some products we supply large kits of parts to one of several automated contract manufacturers. For other products, particularly those manufactured in Asia, our contract manufacturers obtain some of the material required to assemble the products based upon a Zoom Telephonics Approved Vendor List and Parts List. The contract manufacturers insert parts onto the printed circuit board, with most parts automatically inserted by machine, solder the circuit board, and in-circuit test the completed assemblies. Functional test and packaging are sometimes performed by the contract manufacturer. For the United States and many other markets, functional test and packaging are more commonly performed at our manufacturing facilities in Boston, allowing us to tailor the packaging and its contents for our customers immediately before shipping. We also perform circuit design, circuit board layout, and strategic component sourcing in our Boston manufacturing facility. Wherever the product is built, our quality systems are used to help assure that the product meets our specifications.

We usually use one primary contract manufacturer for a given design. We sometimes maintain back-up production tooling at a second assembler for our highest-volume products. Our contract manufacturers are normally adequate to meet reasonable and properly planned production needs; but a fire, natural calamity, strike, or other significant event at an assembler's facility could adversely affect our shipments and revenues. Currently, a substantial percentage of our manufacturing is performed by SameTime Electronics ("SameTime"). The loss of SameTime's services or a material adverse change in SameTime's business or in our relationship with SameTime could materially and adversely harm our business. To lessen the risk associated with using one manufacturer of a substantial portion of our products, we are also using Vtech, Mac Systems, Taicom, Abocom, Behaviour Tech, SIS (Southern Info. Systems) and Billion to manufacture various of our products.

Our products include a large number of parts, most of which are available from multiple sources with varying lead times. However, most of our products include a sole-sourced chipset as the most critical component of the product. We currently buy dial-up modem chipsets exclusively from the two highest-volume dial-up modem chipset manufacturers, Conexant Systems, Inc. and Agere Systems Inc. Conexant and Agere have significant resources for semiconductor design and fabrication, analog and digital signal processing, and communications firmware development. Integrated circuit product areas covered by one or both companies include dial-up modems, ADSL modems, cable modems, wireless networking, home phone line networking, routers, and gateways. We also buy chipsets for our ADSL modems from Conexant. Some of our chipset suppliers provide us certain concessions and incentives, such as reduced prices or free chipsets, if we purchase or agree to purchase a certain dollar amount of products from these suppliers. Our commitments to purchase products from these suppliers are described in further detail in Item 7 of this report and in note 7(b) to our accompanying financial statements.

We have experienced delays in receiving shipments of modem chipsets in the past, and we may experience such delays in the future. Moreover, there can be no assurance that a chipset supplier will, in the future, sell chipsets to us in quantities sufficient to meet our needs or that we will purchase the specified dollar amount of products necessary to receive concessions and incentives from a chipset supplier. An interruption in a chipset supplier's ability to deliver chipsets, a failure of our suppliers to produce chipset enhancements or new chipsets on a timely basis and at competitive prices, a material increase in the price of the chipsets, our failure to purchase a specified dollar amount of products or any other adverse change in our relationship with modem component suppliers could have a material adverse effect on our results of operations.

Competition

The PC communication products industry is intensely competitive and characterized by aggressive pricing practices, continually changing customer demand patterns and rapid technological advances and emerging industry standards. These characteristics result in frequent introductions of new products with added capabilities and features, and continuous improvements in the relative functionality and price of modems and other PC communications products. Our operating results and our ability to compete could be adversely affected if we are unable to:

- successfully anticipate customer demand accurately;
- manage our product transitions, inventory levels, and manufacturing process efficiently;
- distribute or introduce our products quickly in response to customer demand and technological advances;
- differentiate our products from those of our competitors; or
- otherwise compete successfully in the markets for our products.

Our primary competitors by product group include the following:

- Dial-up modem competitors: Actiontec, Askey, Best Data, Creative Labs, GVC, Intel, Sitecom, SONICblue, and US Robotics.
- Cable modem competitors: Com21, D-Link, Linksys, Motorola, Netgear, Scientific Atlanta, SMC, Terayon, Thomson, and Toshiba.
- ADSL modem competitors: 3Com, Alcatel, Siemens (formerly Efficient Networks), Thomson, US Robotics, and Westell.

Many of our competitors and potential competitors have more extensive financial, engineering, product development, manufacturing, and marketing resources than we do.

The principal competitive factors in our industry include the following:

- product performance, features, and reliability;
- price;
- brand image;
- product availability and lead times;
- size and stability of operations;
- breadth of product line and shelf space;
- sales and distribution capability;
- technical support and service;
- product documentation and product warranties;
- relationships with providers of broadband access services; and
- compliance with industry standards.

We believe we are able to provide a competitive mix of the above factors for all of our main product areas, particularly when our products are sold through retailers or computer product distributors. We are less successful in selling directly to providers of broadband access services.

Cable and ADSL modems transmit data at significantly faster speeds than dial-up modems, which still account for the vast majority of our revenues. Cable and ADSL modems, however, are generally more expensive than dial-up modems and typically require a more expensive Internet access service. In addition, the use of cable and ADSL modems is currently impeded by a number of technical and infrastructure limitations. We began shipping both cable and ADSL modems in the year 2000. In the year 2002, most of our competitors' cable and ADSL modem products were sold through cable service operators, phone companies, and Internet Service Providers. Only about 11% of new US cable modem placements in 2002 were sold at retail, and an even lower percentage were sold through retailers in most other countries. ADSL had even less success at retail in the

US. Some European countries, however, significantly expanded their retailer sale of ADSL modems in 2002, particularly in those countries that encouraged competition with the incumbent telephone company. In the U.K., for instance, this resulted in Zoom placing four ADSL modem models into DSG Retail.

Successfully penetrating the broadband modem market presents a number of challenges, including:

- the current limited retail market for broadband modems;
- the relatively small number of cable, telecommunications and Internet service providers that make up a substantial part of the market for broadband modems;
- the significant bargaining power of these large volume purchasers;
- the time consuming, expensive and uncertain approval processes of the various cable and ADSL service providers; and
- the strong relationships with service providers enjoyed by some incumbent equipment providers, including Motorola and Scientific Atlanta for cable modems.

Our initial sales of broadband products have been adversely affected by all of these factors. It is likely that our success in selling broadband modems will require success in the retail market. We continue to make efforts to improve our share of the retail market and to expand the size of the retail market.

Intellectual Property Rights

We rely primarily on a combination of copyrights, trademarks, trade secrets and patents to protect our proprietary rights. We have trademarks and copyrights for our firmware (software on a chip), printed circuit board artwork, instructions, packaging, and literature. We also have four patents and one pending patent application in the United States. The patents which have been issued expire between 2011 and 2015. There can be no assurance that any patent application will be granted or that any patent obtained will provide protection or be of commercial benefit to us, or that the validity of a patent will not be challenged. Moreover, there can be no assurance that our means of protecting our proprietary rights will be adequate or that our competitors will not independently develop comparable or superior technologies.

We license certain technologies used in our products, typically bundled software, on a non-exclusive basis. In addition we purchase chipsets that incorporate sophisticated technology. We have received, and may receive in the future, infringement claims from third parties relating to our products and technologies. We investigate the validity of these claims and, if we believe the claims have merit, we respond through licensing or other appropriate actions. Certain of these past claims have related to technology included in modem chipsets. We forwarded these claims to the appropriate vendor. If we or our component manufacturers were unable to license necessary technology on a cost-effective basis, we could be prohibited from marketing products containing that technology, incur substantial costs in redesigning products incorporating that technology, or incur substantial costs defending any legal action taken against it.

Government Regulation

In addition to obtaining approvals and certifications of our broadband products from CableLabs(R) and, in some cases, the actual cable, telephone or Internet service provider, all of our products sold in the U.S are required to meet United States government regulations, including regulations of the United States Federal Communications Commission, known as the FCC, which regulate equipment, such as modems, that connects to the public telephone network. The FCC also regulates electromagnetic radiation emissions. For each of our products sold in most foreign countries, specific regulatory approvals must be obtained for

matters such as electrical safety, manufacturing standards, country-specific telecommunications equipment requirements, and electromagnetic radiation and susceptibility requirements. We have received regulatory approvals for certain modems in Australia, Austria, Belgium, Bulgaria, China, Cyprus, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, Luxembourg, the Netherlands, Norway, Poland, Portugal, Russia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Turkey, and the United Kingdom. We expect to continue to seek and receive approvals for new products in a large number of countries throughout the world. The regulatory process can be time-consuming and can require the expenditure of substantial resources. In many foreign countries, obtaining required regulatory approvals may take significantly longer than in the United States. There can be no assurance that the FCC or foreign regulatory agencies will grant the requisite approvals for any of our products on a timely basis, if at all. United States and foreign regulations regarding the manufacture and sale of telecommunications devices are subject to future change. We cannot predict what impact, if any, such changes may have upon its business.

Seasonality

We believe our sales are somewhat seasonal, with increased sales generally occurring in mid-August through November. We expect that our quarterly results will continue to fluctuate in the future as a result of seasonality and other factors.

Backlog

Our backlog as of March 5, 2003 was $1.6 million, and on March 6, 2002 was $1.5 million. Many orders included in backlog may be canceled or rescheduled by customers without significant penalty. Backlog as of any particular date should not be relied upon as indicative of our net sales for any future period.

Employees

As of December 31, 2002 we had 185 full-time employees (including employees hired on a temporary basis) versus 215 in 2001. Of the 2002 total, 22 were engaged in research and development, 90 were involved in purchasing, assembly, packaging, shipping and quality control, 47 were engaged in sales, marketing and technical support, and the remaining 26 performed accounting, administrative, management information systems, and executive functions. Our temporary employees were comprised of 12 individuals at December 31, 2002. Most of these temporary employees were employed in manufacturing. None of our employees is represented by a labor union.

Our Executive Officers

The names and biographical information of our current executive officers, are set forth below:

Name	Age	Position with Zoom
Frank B. Manning	54	Chief Executive Officer, President and Chairman of the Board
Peter R. Kramer	51	Executive Vice President and Director
Robert A. Crist	59	Vice President of Finance and Chief Financial Officer
Terry J. Manning	51	Vice President of Sales and Marketing
Dean N. Panagopoulos	45	Vice President of Network Products
Deena Randall	49	Vice President of Operations

Frank B. Manning is a co-founder of our company. Mr. Manning has been our president, chief executive officer, and a director since May 1977. He has served

as our chairman of the board since 1986. He earned his BS, MS and PhD degrees in Electrical Engineering from the Massachusetts Institute of Technology, where he was a National Science Foundation Fellow. Mr. Manning was a director of MicroTouch Systems, a former NASDAQ-listed company involved in touchscreen technology, from 1993 until their acquisition by 3M in early 2001. Since 1998 Mr. Frank Manning has also been a director of the Massachusetts Technology Development Corporation, a public purpose venture capital firm that invests in seed and early-stage technology companies in Massachusetts.

Peter R. Kramer is a co-founder of our company. Mr. Kramer has been our executive vice president and a director since May 1977. He earned his BA degree in 1973 from SUNY Stony Brook and his MFA degree from C.W. Post College in 1975.

Robert A. Crist joined us in July 1997 as vice president of finance and chief financial officer. From April 1992 until joining us, Mr. Crist served in various capacities at Wang Laboratories, Inc. (now Getronics), a computer software and services company, including chief financial officer for the software business. Prior to 1992 Mr. Crist served in various capacities at Unisys Corporation, including assistant corporate controller, corporate director of business planning and analysis, and corporate manufacturing and engineering controller. Mr. Crist earned his BA degree from Pennsylvania State University and he earned his MBA from the University of Rochester in 1971.

Terry J. Manning joined us in 1984 and served as corporate communications director from 1984 until 1989 when he became the director of our sales and marketing department. Terry Manning is Frank Manning's brother. Terry Manning earned his BA degree from Washington University in St. Louis in 1974 and his MPPA degree from the University of Missouri at St. Louis in 1977.

Dean N. Panagopoulos joined us in February 1995 as director of information systems. In July 2000 Mr. Panagopoulos was promoted to the position of vice president of network products. From 1993 to 1995, Mr. Panagopoulos worked as an independent consultant. From 1991 to 1993, Mr. Panagopoulos served as director of technical services for Ziff Information Services, a major outsourcer of computing services. He attended the Massachusetts Institute of Technology from 1975 to 1978 and earned his BS degree in Information Systems from Northeastern University in 1983.

Deena Randall joined us in 1977 as our first employee. Ms. Randall has served in various senior positions within our organization and has directed our operations since 1989. Ms. Randall earned her BA degree from Eastern Nazarene College in 1975.

ITEM 2 - PROPERTIES

Our corporate headquarters are located at 201 and 207 South Street, Boston, Massachusetts. Approximately 16,000 square feet of this 56,000 square foot facility is leased to third parties. We purchased these buildings in April 1993. In January 2001, we received $6.0 million in financing by securing a mortgage on this property. Our mortgage is a 5-year balloon mortgage that is amortized on a 20-year basis. The interest rate is fixed for one year, based on the one year Federal Home Loan Bank rate plus 2.5% per annum. The rate is adjusted on January 10th of each calendar year. During fiscal 2002, the rate of interest was changed to 4.97%. As of January 10, 2003, the rate of interest was reduced to 3.81%

In August 1996, we entered into a five-year lease for a 77,428 square foot manufacturing and warehousing facility at 645 Summer Street, Boston, MA. On February 28, 2001, we exercised our option to extend this lease for an additional five years. We believe that this space provides us with enough manufacturing space for our current operations and could support significant growth.

In March 1999, we assumed an office lease from Hayes Microcomputer Products, Inc. at 430 Frimley Business Park, Camberley, Surrey, U.K. We have an agreement in principle to extend this lease term to 2006.

In September 2002, we entered into a five year lease, as a tenant, for approximately 3,500 square feet at 950 Broken Sound Parkway NW, Boca Raton, Florida. We primarily use this facility as a technical support facility.

ITEM 3 - LEGAL PROCEEDINGS

No material litigation.

ITEM 4 - SUBMISSION OF MATTERS TO A VOTE OF SECURITY HOLDERS

No matter was submitted to a vote of security holders during the fourth quarter of the fiscal year covered in this report.

PART II

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

In 2001 and 2002, our common stock was traded on the Nasdaq National Market under the symbol "ZOOM." The following table sets forth, for the periods indicated, the high and low sale prices per share of common stock, as reported by the Nasdaq National Market. In January, 2003, our common stock was delisted from the Nasdaq National Market and was listed, and is currently trading, on the Nasdaq Small Cap Market under the symbol "ZOOM."

Fiscal Year Ending December 31, 2001	High	Low
First Quarter.....	$ 4.500	$ 2.188
Second Quarter.....	3.320	2.250
Third Quarter.....	3.100	1.050
Fourth Quarter.....	1.800	1.100

Fiscal Year Ending December 31, 2002	High	Low
First Quarter.....	$ 2.130	$ 1.040
Second Quarter.....	1.450	0.600
Third Quarter.....	1.330	0.560
Fourth Quarter.....	1.140	0.450

As of March 20, 2003, there were 7,858,266 shares of our common stock outstanding and approximately 264 holders of record of our common stock.

Recent Sales of Unregistered Securities

We did not sell any unregistered securities during the fourth quarter of 2002.

Dividend Policy

We have never declared or paid cash dividends on our capital stock and do not plan to pay any cash dividends in the foreseeable future. Our current policy is to retain all of our earnings to finance future growth.

ITEM 6 - SELECTED FINANCIAL DATA The following table contains our selected consolidated financial data and is qualified in its entirety by the more detailed consolidated financial statements and notes thereto included elsewhere in this report. Our statement of operations data for the years ending December

31, 2000, 2001 and 2002 and our balance sheet data as of December 31, 2001 and 2002 have been derived from our consolidated financial statements, which have been audited by KPMG LLP, independent certified public accountants, and are included elsewhere in this report. Our statement of operations data for the years ending December 31, 1998 and 1999 and our balance sheet data as of December 31, 1998, 1999, and 2000 have been derived from our consolidated financial statements, which have been audited by KPMG LLP and are not included in this report. This data should be read in conjunction with the consolidated financial statements and related notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations" appearing elsewhere herein.

	Years Ending December 31,				
	1998	1999	2000	2001	200
	(In thousands) except per share amounts				
Statement of Operations Data:					
Net sales	$ 59,846	$ 62,228	$ 57,708	$ 41,570	$ 37,27
Cost of goods sold	45,181	40,550	39,404	35,193	27,93
Gross profit	14,665	21,678	18,304	6,377	9,33
Operating expenses:					
Selling	9,753	11,711	10,672	7,480	5,84
General and administrative	4,976	6,276	6,228	7,938	3,40
Research and development	4,449	6,425	6,249	5,328	3,52
Total operating expenses	19,178	24,412	23,149	20,746	12,77
Operating income (loss)	(4,513)	(2,734)	(4,845)	(14,370)	(3,44
Other income (expense), net	1,074	737	469	(159)	6
Income (loss) before income taxes	(3,439)	(1,997)	(4,376)	(14,529)	(3,37
Income tax expense (benefit)	(1,287)	(588)	(1,299)	3,800	2,01
Income (loss) before extraordinary item	(2,152)	(1,409)	(3,077)	(18,239)	(5,39
Extraordinary gain on elimination of negative goodwill	-	-	-	-	25
Net income (loss)	(2,152)	(1,409)	(3,077)	(18,329)	(5,13
Earnings (loss) per common and common equivalent share:					
Loss before extraordinary item:					
Basic and diluted	$ (.29)	$ (.19)	$ (.40)	$ (2.33)	$ (.6
Extraordinary gain on elimination of negative goodwill	$ -	$ -	$ -	$ -	$ .0
Net loss:					
Basic and diluted	$ (.29)	$ (.19)	$ (.40)	$ (2.33)	$ (.6
Weighted average common and common equivalent shares:					
Basic and diluted	7,474	7,483	7,757	7,861	7,86

	Years Ending December 31,				
	1998	1999	2000	2001	2002
	(In thousands)				
Balance Sheet Data:					

Working capital	$ 33,376	$ 29,573	$ 23,562	$ 18,218	$ 15,34
Total assets	43,560	43,072	46,960	29,185	22,63
Long-term obligations	-	481	369	6,001	5,34
Total stockholders' equity	38,425	37,514	36,747	18,416	13,48

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

The following discussion and analysis should be read in conjunction with the "Selected Financial Data" and the consolidated financial statements included elsewhere in this report and the information described under the caption "Risk Factors" below.

Overview

On February 28, 2002, we completed a change in our jurisdiction of incorporation from Canada to the State of Delaware. In connection with the change in jurisdiction, we changed our corporate name from Zoom Telephonics, Inc. to Zoom Technologies, Inc. These changes were accomplished through a process called a continuance under the laws of Canada and domestication under the laws of the State of Delaware. The Company continues to trade on the Nasdaq Stock Market under the symbol "ZOOM", and to operate through its wholly owned Delaware subsidiary, Zoom Telephonics, Inc., which has not changed its name.

We were established in 1977, and initially produced and marketed speed dialers and other specialty telephone accessories. We shipped our first dial-up modem in 1983 and our first dial-up faxmodem in 1990. In 2002, dial-up modems and related products comprised approximately 84% of our net sales. We sell our dial-up modems and related products both domestically and internationally through high-volume retailers and distributors, and to PC manufacturers and other OEMs. Starting in 2000, we made a significant investment in broadband modems, namely cable modems and ADSL modems. Our hope is to increase our sales of these products, in addition to other products including PC cameras and telephone dialers.

We continually seek to improve our product designs and manufacturing approach in order to reduce our costs. We pursue a strategy of outsourcing rather than internally developing our dial-up modem chipsets, which are application-specific integrated circuits that form the technology base for our modems. By outsourcing the chipset technology, we are able to concentrate our research and development resources on modem system design, leverage the extensive research and development capabilities of our chipset suppliers, and reduce our development time and associated costs and risks. As a result of this approach, we are able to quickly develop new and innovative products while maintaining a relatively low level of research and development expense as a percentage of sales. We also outsource aspects of our manufacturing to contract manufacturers as a means of reducing our fixed labor costs and capital expenditures, and to provide us with greater flexibility in our production capacity.

In recent years, the market for after-market sales of dial-up modems has declined, as personal computer (PC) manufacturers have incorporated a modem as a built-in component in most consumer PCs. A new dial-up modem standard, known as V.92, may provide an improvement in after-market dial-up modem sales, but this improvement is dependent on the installation of compatible equipment by the Internet Service Providers. The installation of V.92 equipment by the Internet Service Providers has begun, but so far this has been deployed slowly.

In response to increased demand for faster connection speeds and increased modem functionality, we have invested resources to expand our product line to include cable and ADSL modems and other broadband access products. We are also planning to begin volume shipment of a new generation of telephone dialers in the second half of 2003 and expect to continue to expand our line of PC cameras.

Critical Accounting Policies

The following is a discussion of what we view as our more significant accounting policies. These policies are also described in the notes to our consolidated financial statements. As described below, management judgments and estimates must be made and used in connection with the preparation of our consolidated financial statements. Material differences could result in the amount and timing of our revenue and expenses for any period if we made different judgments or used different estimates.

Revenue Recognition. We sell hardware products to our customers. The products include dial-up modems, embedded modems, cable modems, PC cameras, ISDN and ADSL modems, telephone dialers, and wireless and wired networking equipment. We generally do not sell software or services. We earn a small amount of royalty revenue. We derive our revenue primarily from the sales of hardware products to three types of customers:

- computer peripherals retailers,
- computer product distributors, and
- original equipment manufacturers (OEMs).

We recognize revenue for all three types of customers at the point when the customers take legal ownership of the delivered products. Legal ownership passes from Zoom to the customer based on the contractual FOB point specified in signed contracts and purchase orders, which are both used extensively. Many of our customer contracts or purchase orders specify FOB destination. Since it would be impractical to verify ownership change for each individual delivery to the FOB destination point, we estimate the day the customer receives delivery based on our ship date and the carrier's published delivery schedule specific to the freight class and location.

Our revenues are reduced by certain events which are characteristic of hardware sales to computer peripherals retailers. These events are product returns, price protection refunds, store rebates, and consumer mail-in rebates. Each of these is accounted for as a reduction of revenue based on careful management estimates, which are reconciled to actual customer or end-consumer refunds and credits on a monthly or quarterly basis. The estimates for product returns are based on recent historical trends plus estimates for returns prompted by new product introductions, announced stock rotations, announced customer store closings, etc. Management analyzes historical returns, current economic trends, and changes in customer demand and acceptance of our products when evaluating the adequacy of sales return allowances. Our estimates for price protection refunds require a detailed understanding and tracking by customer and by sales program. Estimated price protection refunds are recorded in the same period as the announcement of a pricing change. Information from customer inventory-on-hand reports or from direct communications with the customers is used to estimate the refund, which is recorded as a reserve against accounts receivable and a reduction of current period revenue. Our estimates for consumer mail-in rebates are comprised of actual rebate claims processed by the rebate redemption centers plus an accrual for an estimated lag in processing. Our estimates for store rebates are comprised of actual credit requests from the eligible customers.

In the quarter ending March 31, 2002, we adopted FASB Emerging Issues Task Force Issue No. 00-14 "Accounting for Certain Sales Incentives" and Issue No. 00-25 "Accounting for Consideration from a Vendor to a Retailer in Connection with the Purchase or Promotion of the Vendor's Products." The application of the guidance in Issue No. 00-14 and No. 00-25 resulted in a change in the manner in which we record certain types of discounts and sales and marketing incentives that are provided to our customers. We had historically recorded these incentives as marketing expenses. Under Issue No. 00-14 and No. 00-25, we are now recording

these incentives as reductions of revenue for the current and prior periods, which in turn, reduced gross margins. The offset was an equal reduction of selling expenses. EITF Issue No. 01-9, "Accounting for Consideration Given by a Vendor to a Customer (Including a Reseller of the Vendor's Products)," subsequently codified the guidance in Issue No. 00-14 and 00-25. There was no change in net income (loss) for either of the historical periods restated (see note 4 to the consolidated financial statements).

To ensure that the discounts and sales and marketing incentives are recorded in the proper period, we perform extensive tracking and documenting by customer, by period, and by type of marketing event. This tracking includes reconciliation to the accounts receivable records for deductions taken by our customers for these discounts and incentives.

Accounts Receivable Valuation. We establish accounts receivable reserves for product returns, store rebates, consumer mail-in rebates, price protection refunds, and bad debt. These reserves are drawn down as actual credits are issued to the customer's accounts. Our bad-debt write-offs have not been significant, and for 2001 and 2002 were .2% and .1% of total revenue, respectively.

Inventory Valuation and Cost of Goods Sold. Inventory is valued on a standard cost basis where the material standards are periodically updated for current material pricing. Reserves for obsolete inventory are established by management based on usability reviews performed each quarter. Our reserves against this inventory range from 0% to 100%, based on management's estimate of the probability that the material will not be consumed. In the second half of 2000, when industry expectations were very high for expansion of the broadband and wireless markets, we purchased parts to support our aggressive forecast for a ramp-up of sales of cable modems, ADSL modems, and wireless networking products. The subsequent slow down in the industry resulted in a significant excess inventory position of materials. During 2001, the market selling prices for the broadband and wireless products declined significantly because of an industry-wide oversupply. Starting in 2001 and to a lesser extent in 2002, the sales prices for some of the products dropped below our cost and, accordingly, we then valued our inventory on a "lower of cost or market" basis. Our valuation process is to compare our cost to the selling prices each quarter, and if the selling price of a product is less than the "if completed" cost of our inventory, we write-down the inventory on a "lower of cost or market" basis. In 2001 and 2002, we recorded charges against inventory of $4.6 million and $0.7 million, respectively, as a result of lower of cost or market valuation issues.

We have entered into supply arrangements with suppliers of some components that include price and other concessions, including no-charge components, for meeting certain purchase requirements or commitments. Under these arrangements, we are committed to purchase approximately $8.0 million of components over a period of approximately 30-months that commenced on January 1, 2002, provided that those components were offered at competitive terms and prices. We believe that at December 31, 2002, we are on track to meet the $8.0 million commitment. We are also required to purchase either a minimum percentage, as measured by unit purchases or dollar amount of components, from a supplier over a two-year period commencing on January 1, 2002, and we are currently exceeding that percentage. In connection with these arrangements, we became entitled to receive at least $3.0 million of no-charge components, based upon the supplier's market price for the components in late 2001 and early 2002, and other pricing concessions based on our purchase volumes. We received $1.2 million of these no-charge components in the fourth quarter of 2001. We received the remainder of the no-charge components in the first quarter of 2002. Through December 31, 2002, we consumed $1.8 million of these chips in our manufacturing process and they were shipped in finished products to customers in 2002. In 2002, our purchases and payments were approximately $2 million less than we would have expected without the no-charge components. Of the original $3.0 million chip valuation, $.3 million

has been written down as a result of a decline in the market value of the free chips. The favorable impact to our statement of operations is being recognized on a delayed basis as a purchase discount over the total number of components acquired through the 30 month supply agreement (see note 7(b) to the consolidated financial statements). Since the start of these arrangements in January 2002, the favorable impact to our statement operations was $.8 million.

Valuation and Impairment of Intangible Assets. We assess the impairment of our goodwill assets whenever events or changes in circumstances indicate that the carrying value may not be recoverable. We recorded goodwill for two acquisitions, Tribe Computer Works, Inc. in 1996 and certain assets of Hayes Microcomputer Products, Inc. in 1998. The goodwill values for Tribe and Hayes were being amortized over 13 years and 5 years, respectively. In 2001, we determined that based on our history of negative cash flows from operations, a forecast of future positive cash flows could not be sufficiently relied upon to justify retaining the remaining goodwill assets on the consolidated balance sheet. Therefore, we recorded an impairment charge of $2.3 million in 2001. As of December 31, 2001 and December 31, 2002, our net goodwill asset value on our consolidated balance sheet was zero.

Valuation and Impairment of Deferred Tax Assets. As part of the process of preparing our consolidated financial statements we are required to estimate our income taxes. This process involves the estimation of our actual current tax exposure together with assessing temporary differences resulting from differing treatment of items for tax and accounting purposes. These differences result in deferred tax assets and liabilities, which are included in our consolidated balance sheet. We must then assess the likelihood that our deferred tax assets will be recovered from future taxable income and to the extent we believe that recovery is not likely, we must establish a valuation allowance. To the extent we establish a valuation allowance or increase this allowance in a period, we must include an expense within the tax provision in the statement of operations.

Significant management judgment is required in determining our provision for income taxes and any valuation allowance recorded against our net deferred tax assets. In 2001, we recorded a $3.8 million income tax charge to reflect an additional increase in our deferred tax asset valuation allowance. Management's decision to record the valuation allowance was based on the uncertain recoverability of our deferred tax asset balance. At December 31, 2001, a portion of our net deferred tax asset was supported by our specific tax planning strategy to sell our appreciated headquarters building in Boston. The amount of the projected tax benefit from this sale was used to support the $2.0 million deferred tax asset that remained on our balance sheet as of December 31, 2001. In our first quarter ending March 31, 2002, we recorded an additional $2.0 income tax charge and valuation reserve, which reduced our net deferred tax asset balance to zero. This additional reserve reflected our decision to discontinue our specific tax planning strategy to sell our headquarters building in Boston in light of the less favorable market conditions for the sale of such building.

Results of Operations

The following table sets forth certain financial data for the periods indicated as a percentage of net sales:

	Years Ending December 31,		
	2000	2001	2002
Net sales	100.0%	100.0%	100.0%
Cost of goods sold	68.3	84.7	75.0

Gross profit.....	31.7	15.3	25.0
Operating expenses:			
Selling.....	18.5	18.0	15.7
General and administration.....	10.8	19.1	9.1
Research and development.....	10.8	12.8	9.5
Total operating expenses.....	40.1	49.9	34.3
Operating profit (loss).....	(8.4)	(34.6)	(9.3)
Other income (expense), net.....	.8	(.4)	.2
Loss before income taxes..	(7.6)	(35.0)	(9.1)
Income tax expense (benefit).....	(2.3)	9.1	5.4
Extraordinary Gain.....	-	-	.7
Net profit (loss)	(5.3)%	(44.1)%	(13.8)%

Year Ending December 31, 2002 Compared to Year Ending December 31, 2001

Net Sales. Our net sales decreased 10.3% to $37.3 million in 2002 from $41.6 million in 2001. Our sales decline resulted primarily from an 8%, $3.1 million year-over-year net sales decline in dial-up modem sales, a $2.1 million year-over-year net sales decline from an OEM modem contract, and a decline in camera sales, partially offset by increased sales in the broadband cable and ADSL modem categories.

Although our unit sales of dial-up modems were up slightly in 2002 compared to 2001, reflecting our increased unit and dollar market share at retail in North America and the U.K., our net sales of dial-up modems were down 8% in 2002 compared to 2001, primarily due to the lower average selling prices of our dial-up modems and a shift in our unit sales mix to lower-priced modems. Our dial-up modem sales in 2002 and 2001 were 84% and 83% of our total sales, respectively. In 2002, our sales in the broadband cable and ADSL modem categories represented 9% our of total sales compared to 3% of our total sales in 2001, reflecting an initial acceptance of these products into our retail sales channels.

Our net sales in the North America decreased by 12.4% to $22.2 million in 2002, compared to our net sales in 2001. Our 2002 international sales decreased by 7.0% to $15.1 million, compared to our net sales in 2001. These decreases were due primarily to the sales decline of dial-up modems and primarily resulting from a shift in demand to lower priced modems.

Gross Profit. Our gross profit was $9.3 million in 2002 compared to $6.4 million in 2001. Our gross profit as a percentage of net sales increased to 25.0% in 2002 from 15.3% in 2001. The primary reason for this improvement was a reduction of inventory write-downs for lower of cost of market and inventory obsolescence expenses totaling $4.0 million in 2001 compared to $.9 million in 2002. Excluding the charges for inventory write-downs and obsolescence in 2002 and 2001, our gross profit as a percentage of net sales improved approximately 2.8 percentage points from 2001 to 2002, primarily due to supplier cost reductions, and manufacturing expense reductions.

Selling Expenses. Selling expenses decreased by $1.6 million to $5.8 million in 2002, from $7.5 million in 2001. Selling expenses as a percentage of net sales decreased to 15.7% in 2002 from 18.0% in 2001. The $1.6 million decrease was primarily due to reduced personnel costs, marketing costs, freight delivery costs, and sales commissions.

General and Administrative Expenses. General and administrative expenses

decreased by $4.5 million to $3.4 million in 2002 from $7.9 million in 2001. The year-over-year $4.5 million decrease included a $2.3 million decrease from the fourth quarter 2001 write-off of all of our positive goodwill and a $.9 million decrease from related amortization charges. Excluding the effect of the goodwill write-offs and related amortization, general and administrative expenses decreased $1.3 million, or 28%, primarily from reductions in personnel and related expenses, bank fees, bad debt expense, and legal and audit expenses.

Research and Development Expenses. Research and development expenses decreased by $1.8 million to $3.5 million in 2002 from $5.3 million in 2001. Research and development expenses as a percentage of net sales decreased to 9.5% in 2002 from 12.8% in 2001. The $1.8 million decrease in research and development expenses was primarily due to reduced personnel costs and related expenses, industry and government approval costs associated with obtaining licenses, consulting, recruiting, and outside services.

Other income (expense). Other income (expense), net improved from a loss of $.16 million in 2001 to income of $.07 million in 2002. Included in other income (loss) are interest income (expense), other income and non-interest income, equity losses of an affiliate, and rental income from leasing space at our headquarters.

- Interest Income. Interest income decreased to $.10 million in 2002 from $.20 million in 2001. The decrease was the result of our lower earned interest rate partially offset by the interest earned on higher average cash and cash equivalent balances during 2002 compared to 2001. The average interest rate earned in 2002 was approximately two percentage points lower in 2002 than in 2001.
- Interest expense. Interest expense decreased to $.29 million in 2002 from $.5 million in 2001. The interest expense decrease is the result of the interest rate decline from 7.76% in 2001 to 4.97% in 2002 on our variable rate $6.0 million mortgage taken out in January 2001 on our headquarters building, and lower mortgage debt balances. This interest is adjusted annually in January of each year.
- Equity in losses of affiliate. Our affiliate equity losses were $.06 million in 2002 compared to $.15 million in 2001. Our investment balance in the affiliate was reduced to zero at December 31, 2002.
- Other Income, Net. Other income and non-interest income increased from $.24 million in 2001 to $.31 million in 2002.

Income Tax Expense (Benefit). We did not record any net tax benefit to offset our $3.4 million pre-tax loss in 2002. In addition, in 2002 we recorded a $2.0 million income tax charge to increase our valuation allowance against our net deferred tax asset. This accounting treatment is also described in further detail under the caption "Critical Accounting Policies" above and in footnote 12 to the consolidated financial statements. An additional $.002 million in tax expense was recorded for income taxes incurred by our sales branch in the United Kingdom.

Extraordinary gain. In 2002 we recorded an extraordinary gain of $.26 million from the elimination of the remaining negative goodwill on our balance sheet related to a previous acquisition.

Net Loss. Our net loss for 2002 was $5.1 million or $.65 per share, versus a net loss of $18.3 million or $2.33 per share, for 2001.

Year Ending December 31, 2001 Compared to Year Ending December 31, 2000

Net Sales. Our net sales decreased 27.9% to $41.6 million in 2001 from $57.7 million in 2000. Our sales decline resulted primarily from our 22% year-over-year net sales decline of dial-up modem units combined with a 10% average sales price decline. Our sales mix shifted slightly away from dial-up

modems in 2001 compared to 2000. In 2000, 92% of our net sales were generated from sales of dial-up modem products. In 2001, 83% of our net sales were generated from sales of dial-up modem products. The change was due to an increased mix of sales for cable modems, embedded modems, and ISDN modems.

Our net sales in North America decreased by 37.4% to $25.3 million in 2001, compared to our net sales in 2000. Our 2001 international sales decreased by 6.2% to $16.2 million, compared to our net sales in 2000. The net sales decline in 2001 compared to 2000 in North America resulted from the overall dial-up modem U.S. market decline, the loss of Office Depot as a customer, and a decline in the average selling price of dial-up modems.

Gross Profit. Our gross profit was $6.4 million in 2001 compared to $18.3 million in 2000. Our gross profit as a percentage of net sales decreased to 15.3 % in 2001 from 31.7% in 2000. The primary reason for this decline of 16.4 percentage points was $4.6 million of obsolescence and inventory revaluation expenses in 2001 compared to $.3 million in similar types of expenses in 2000. The major portion of the $4.6 million expense was for "lower of cost or market" write-downs of broadband inventory. The inventories in question were purchased in 2000. Excluding the $4.6 million and $.3 million of inventory obsolescence and revaluation in 2001 and 2000, respectively, our gross profit as a percentage of net sales in 2001 was 26.4% compared to 32.2% in 2000. This year-over-year 4.6 percentage points drop was primarily due to a production volume decrease, which resulted in higher fixed manufacturing costs per unit shipped, and the 10% average selling price decline for dial-up modems.

Selling Expenses. Selling expenses decreased by 29.9% to $7.5 million in 2001 from $10.7 million in 2000. Selling expenses as a percentage of net sales decreased to 18.0% in 2001 from 18.5% in 2000. The $3.2 million decrease was the result of significant reductions in both variable and fixed selling expenses, including staff reductions, cooperative advertising, and sales commissions. The staff reductions took place throughout the year.

General and Administrative Expenses. General and administrative expenses increased by $1.7 million to $7.9 million in 2001 from $6.2 million in 2000. The year-over-year increase resulted from a $2.3 million write-off of all of our positive goodwill assets. Excluding the goodwill asset write-offs, general and administrative expenses decreased $.5 million, or 10%, to $5.6 million in 2001 from $6.2 million in 2000, or to 13.0% from 10.3% as a percentage of net sales, respectively. The $.5 million reduction of general and administrative expenses resulted primarily from reductions in personnel and related expenses, partially offset by increased legal expense and filing expenses associated with the recent change of our jurisdiction of incorporation from Canada to the United States. Staff reductions occurred throughout the year.

Research and Development Expenses. Research and development expenses decreased by 14.7% to $5.3 million in 2001 from $6.2 million in 2000. Research and development expenses as a percentage of net sales increased to 12.2% in 2001 from 10.5% in 2000. The dollar decrease in research and development expenses was due to reduced personnel and related expenses and industry and government approval costs, primarily associated with decreased engineering activity on broadband and wireless product development. Staff reductions occurred throughout the year.

Other income (expense). Other income (expense), net changed from income of $.47 million in 2000 to a loss of $.16 million in 2001. Included in other income (loss) are interest income (expense), other income and non-interest income, and equity losses of an affiliate and rent from the leasing of space at our headquarters.

- Interest Income. Interest income decreased to $.20 million in 2001 from $.5 million in 2000. The decrease was the result of our lower earned interest

rate and lower average invested cash balance during 2001 compared to 2000. The average interest rate earned in 2001 was approximately 250 basis points lower in 2001 than in 2000.

- o Interest expense. Interest expense increased to $.5 million in 2001 from $0 in 2000. The interest expense increase is due to the interest payments for the $6.0 million mortgage taken out in January 2001 on our headquarters building.
- o Equity in losses of affiliate. Our affiliate equity losses were $.15 million in 2001 compared to $.22 million in 2000. Our investment balance in the affiliate has been reduced to $.06 million at December 31, 2001.
- o Other Income, Net. Other income and non-interest income remained constant at $.24 million in 2001 and 2000. Activity in this account includes other income of $.12 million for an unexpected recovery of funds in a dispute. There was slightly lower rental income in 2001 compared to 2000.

Income Tax Expense (Benefit). We did not record any net tax benefit to offset our $14.5 million pre-tax loss in 2001. In addition, we recorded a $3.8 million income tax charge to increase our valuation allowance against our net deferred tax asset due to our operating results, both recent and projected, and the lower market value of our real estate. This accounting treatment is described in further detail under the caption "Critical Accounting Policies" above and in footnote 12 to the audited consolidated financial statements.

Net Loss. Our net loss for 2001 was $18.3 million or $2.33 per share versus a net loss of $3.1 million or $.40 per share for 2000.

Liquidity and Capital Resources

On December 31, 2002, we had working capital of $15.3 million, including $7.6 million in cash and cash equivalents.

In 2002 operating activities generated $2.9 million in cash. Our net loss in 2002 was $5.1 million, which included significant non-cash charges for a write-off of net deferred tax assets of $2.0 million, a cost of sales charge for obsolescence and lower of cost or market write-downs of $.9 million, and depreciation and amortization of $.8 million. These non-cash charges were partially offset by an extraordinary non-cash gain on the elimination of negative goodwill of $.3 million. Sources of cash from operations included a reduction of inventory, excluding the above-mentioned obsolescence and lower of cost or market adjustments, of $3.4 million, and a decrease in accounts receivable of $2.1 million. Uses of cash included a decrease of accounts payable and accrued expenses of $1.0 million and a decrease of prepaid expenses and other current assets of $.04 million.

Our $3.4 million year over year inventory reduction excluding the above-mentioned obsolescence and lower of cost or market adjustments, was primarily the result of reduced inventory purchases attributable to the delivery of no-charge components from our key component vendors, reduced inventory to support lower sales activity in 2002 compared to 2001, and improved inventory turnover.

In 2002 our net cash used in investing activities was $.2 million, which was used to purchase plant and equipment. The investment in an affiliate was our 20% investment in the Zoom Group, LLC, a limited liability company formed by certain affiliates of Zoom to purchase the building which we refer to as the Drydock Building. In January 2003, we exercised our right to sell our interest in the Zoom Group, LLC to the remaining members of the Zoom Group, LLC. In March 2003, we received the proceeds from the sale of our interest from the remaining members of the Zoom Group, LLC, in the amount of approximately $.48 million, which represents our investment amount less the non-refundable deposit and a negotiated portion of losses in the Zoom Group, LLC plus interest earned on our original deposit. This action terminates our participation in the ownership of

the Drydock building. The Drydock transaction and other commitments are discussed in further detail under the caption "Commitments" below. We do not have any significant capital commitments, and we anticipate that we will continue with modest investments in equipment and in improvement to our facilities during the year.

In 2002 we used cash for financing activities of $.35 million consisting of $.17 million for monthly principal payments plus a one-time principal reduction payment of $.18 million on our $6.0 million mortgage on our headquarters facility. The one time principal reduction payment was requested by the mortgage holder in September 2002, following an appraisal of our headquarters building of $9.3 million, in order to maintain the 60% maximum loan-to-value ratio specified in the mortgage agreement. Our mortgage is a 5-year balloon mortgage that is amortized on a 20-year basis. The interest rate is adjusted annually in January of each year based on the Federal Home Loan Bank rate plus 2.5 % per annum. In 2002, the interest rate was 4.97%. As of January 10, 2003, the rate of interest was changed to 3.81%.

Currently we do not have a debt facility from which we can borrow, and we do not expect to obtain one on acceptable terms unless there is operating performance improvement. However, we believe we would be able to obtain funds, if and when required, by factoring accounts receivable. We do not plan to put a factoring arrangement in place until and unless it is necessary since there would be an up-front cost to finalize the arrangement.

To conserve cash and manage our liquidity, we implemented expense reductions throughout 2002 and in the first quarter of 2003. Our employee headcount was 215 at December 31, 2001, which has been reduced to 185 at December 31, 2002. We will continue to assess our cost structure as it relates to our revenues and cash position in 2003, and we may make further reductions if the actions are deemed necessary.

Trends including the bundling of dial-up modems into computers and the increased popularity of broadband modems lower the total available market through our sales channels. Because of this, our dial-up modem sales are unlikely to grow unless we continue to grow our market share, or the new V.92 and V.44 modem standards grow sales through our channels. If our dial-up modem sales do not grow, our future success will depend in large part on our ability to successfully penetrate the broadband modem, networking and dialer markets. Sales may also decline due to market trends.

Management believes it has sufficient resources to fund its planned operations over the next 12 months. However, if we are unable to increase our revenues, reduce our expenses, or raise capital, our longer-term ability to continue as a going concern and achieve our intended business objectives could be adversely affected. See "Risk Factors" below, for further information with respect to events and uncertainties that could harm our business, operating results, and financial condition.

Commitments

During 2001, we entered into an agreement to purchase the ground lease for a manufacturing facility located at 27 Drydock Avenue in Boston, Massachusetts (the "Drydock Building"). In connection with the proposed purchase of the Drydock Building, we paid $513,500 which was held in escrow as a deposit pending the closing of the transaction. Of this deposit, $25,000 was nonrefundable. When Zoom was unable to obtain acceptable financing the Seller (the current leaseholder) retained the deposit pending resolution of some disputed facts concerning Zoom's withdrawal from the transaction under the terms of the Purchase and Sale Agreement. While we believed that we were entitled to a return of the $488,500 refundable portion of the deposit plus interest, the seller directed the escrow agent to hold the funds pending resolution of the dispute.

As an alternative to pursing legal remedies to obtain a return of the deposit, we pursued an arrangement to acquire the Drydock Building in partnership with the following individuals: Frank B. Manning, President and a director of Zoom; Peter R. Kramer, Executive Vice President and a director of Zoom; Bruce M. Kramer, Peter Kramer's brother; and a third party. Under this arrangement, these individuals, either directly or through entities controlled by them, joined together with us as of March 29, 2002 to form the Zoom Group LLC, a Massachusetts limited liability company ("Zoom Group") to purchase the Drydock Building. Zoom and each of the investors owned a 20% interest in the Zoom Group. The managers of the Zoom Group are Peter Kramer and the third party. There are no special allocations among the members of the Zoom Group, and each member is required to contribute his or its proportionate amount of capital in return for its 20% interest.

Effective as of March 29, 2002, we entered into a Reinstatement Agreement, Assignment Agreement and Second Amendment to Agreement of Purchase and Sale with the Zoom Group and the owner of the Drydock ground lease. Under this Reinstatement Agreement, the original purchase agreement for the Drydock Building was amended and reinstated, and we assigned our rights under the purchase agreement to the Zoom Group, together with rights to the $488,500 refundable portion of the deposit. In connection with this transaction, under a separate letter agreement, the other members of the Zoom Group paid us $390,800 ($97,700 each), representing their proportionate share of the deposit assigned to the Zoom Group.

Under the Reinstatement Agreement, the Zoom Group purchased the Drydock Building for a purchase price of $6.1 million. The Zoom Group obtained a mortgage of $4.2 million, less closing costs and legal fees. Each member of the Zoom Group contributed $482,577 for their share of the investment plus initial working capital. These initial capital contributions include each member's share of the deposit.

Under the Zoom Group Operating Agreement, we had both the right to sell our interest in the Zoom Group to the other members of the Zoom Group, and the right to purchase the other members' entire interests in the Zoom Group.

In December 2002, the special committee of our board of directors appointed to review the Drydock transactions, after consideration of numerous factors, determined that it was advisable and in the best interest of Zoom to exercise its right to sell its interest in the Zoom Group to the other members of the Zoom Group. Accordingly, effective January 5, 2003, we exercised our right to sell our interest to the remaining members of the Zoom Group for approximately $.48 million, which equals our investment less the non-refundable deposit and our negotiated portion of the losses in the Zoom Group plus interest earned on our original deposit. In March 2003, we received the proceeds from the sale of our interest from the remaining members of the Zoom Group, LLC. By exercising our option to sell our interest, we believe we have improved our liquidity position and reduced our exposure to the current unfavorable conditions in the Boston real estate market.

The following table summarizes our contractual obligations and commitments as of December 31, 2002.

	Contractual Obligations Payments Due by Period				
	TOTAL	LESS THAN 1 YEAR	1-3 YEARS	4-5 YEARS	AFTER 5 YEARS
Long Term Debt (1)	$ 5,533,607	$ 191,550	$ 412,440	$ 4,929,617	-

Capital Lease Obligations	-	-	-	-	-
Operating Leases (2)	2,756,704	739,836	1,484,847	532,021	-
Unconditional Purchase Orders	-	-	-	-	-
Purchase Commitments (3)	5,442,467	3,600,000	1,842,467	-	-
Other Long Term Obligations	-	-	-	-	-
Total	$ 13,732,778	$ 4,531,386	$ 3,739,754	$ 5,461,638	-

(1) Represents the mortgage on our corporate headquarters. In January 2001, we received $6.0 million in financing by securing a mortgage on this property. Our mortgage is a 5-year balloon mortgage that is amortized on a 20-year basis.
(2) Represents anticipated minimum lease payments, excluding executory costs to be made under leases for our manufacturing facility in Boston, MA, our office facility in Camberley, U.K., and our technical support facility in Boca Raton, FL.
(3) See discussion of purchase commitments for chipsets under the section entitled "Critical Accounting Policies" above.

Recently Issued Accounting Standards

FASB Emerging Issues Task Force Issue No. 00-14 "Accounting for Certain Sales Incentives" addresses the recognition, measurement, and income statement classification for certain types of sales incentives. The application of the guidance in Issue No. 00-14 results in a change in the manner in which we record certain types of discounts and sales and marketing incentives that are provided to its customers. Zoom has historically recorded certain types of these incentives as marketing expenses. Under Issue No. 00-14, we will record these discounts and incentives as reductions of revenue. In April 2001, the FASB Emerging Issues Task Force reached a consensus on Issue No. 00-25 "Accounting for Consideration from a Vendor to a Retailer in Connection with the Purchase or Promotion of the Vendor's Products". Issue No. 00-25 addresses whether certain consideration offered by a vendor to a distributor, including slotting fees, cooperative advertising arrangements and "buy-down" programs, should be characterized as operating expenses or reductions of revenue. The requirements of Issue No. 00-14 and 00-25 were implemented in the first fiscal quarter of 2002, at which time prior period reported amounts were reclassified to conform to the new presentation. There is no current year or historical impact on our consolidated balance sheets. EITF Issue No. 01-9, "Accounting for Consideration Given by a Vendor to a Customer (Including a Reseller of the Vendor's Products)," subsequently codified the guidance in Issue No. 00-14 and 00-25. Prior year reclassifications have been made to conform to current presentation and are as follows:

	Years ending December 31, 2000	2001
Revenues:		
As previously reported	$ 59,750,187	$ 43,709,528
As reclassified	57,708,456	41,570,276

Sales and Marketing expenses:		
As previously reported	12,713,756	9,619,549
As reclassified	10,672,025	7,480,297

In June 2002, the FASB issued SFAS No. 146, "Accounting for Costs Associated with Exit or Disposal Activities" (SFAS 146). SFAS 146 requires companies to recognize costs associated with exit or disposal activities when they are incurred rather than at the date of a commitment to an exit or disposal plan. This statement is effective for restructuring activities commencing after December 31, 2002. We do not believe that the impact of adopting SFAS 146 will have a material impact on the consolidated financial statements.

In November 2002, the FASB issued Interpretation No. 45 (FIN 45), "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others", which clarifies disclosure and recognition/measurement requirements related to certain guarantees. The disclosure requirements are effective for financial statements issued after December 15, 2002 and the recognition/measurement requirements are effective on a prospective basis for guarantees issued or modified after December 31, 2002. The application of the requirements of FIN 45 did not have a material impact on our financial position or results of operations.

In December 2002, the FASB issued SFAS No. 148 "Accounting for Stock-Based Compensation -- Transition and Disclosure" (SFAS 148). SFAS 148 amends SFAS No. 123 "Accounting for Stock Based Compensation", to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, SFAS 148 amends the disclosure requirements of SFAS 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results. The transition guidance and annual disclosure provisions of SFAS 148 are effective for fiscal years ending after December 15, 2002. The interim disclosure provisions are effective for financial reports containing financial statements for interim periods beginning after December 15, 2002. As we did not make a voluntary change to the fair value based method of accounting for stock-based employee compensation in 2002, the adoption of SFAS 148 did not have a material impact on our financial position and results of operations.

In January 2003, the FASB issued Interpretation No. 46, "Consolidation of Variable Interest Entities" ("VIEs"). This Interpretation addresses the consolidation of variable interest entities in which the equity investors lack one or more of the essential characteristics of a controlling financial interest or where the equity investment at risk is not sufficient for the entity to finance its activities without subordinated financial support from other parties. The Interpretation applies to VIEs created after January 31, 2003 and to VIEs in which an interest is acquired after that date. Effective July 1, 2003, it also applies to VIEs in which an interest is acquired before February 1, 2003. We may apply the Interpretation prospectively, with a cumulative effect adjustment as of July 1, 2003, or by restating previously issued financial statements with a cumulative effect adjustment as of the beginning of the first year restated. We are in the process of evaluating the effects of applying Interpretation No. 46 in 2003. Based on our preliminary analysis, we do not anticipate that adoption of Interpretation No. 46 will have a material effect on our consolidated financial statements.

RISK FACTORS

This report contains forward-looking statements that involve risks and uncertainties, such as statements of our objectives, expectations and intentions. The cautionary statements made in this report should be read as applicable to all forward-looking statements wherever they appear in this report. Our actual results could differ materially from those discussed herein.

Factors that could cause or contribute to such differences include those discussed below, as well as those discussed elsewhere in this report.

Our revenues have declined and we have incurred significant losses and used significant cash in operations over the last three years.

We incurred a net loss of $5.1 million in 2002 and net losses of approximately $18.3 million in 2001, and $3.1 million in 2000. Our revenue has declined from $57.7 million in 2000, to $41.6 million in 2001 and to $37.3 million in 2002. The cash used in operations during 1999 through 2001 was $2.6 million in 2001, $8.0 million in 2000, and $2.7 million in 1999. In 2002, our cash provided from operations was positive, at $2.9 million. As of December 31, 2002 we had net working capital of $15.3 million including cash of $7.6 million.

We attribute the decline of our business primarily to a decline in the retail dial-up modem market and delays in the roll-out of the V.92 modem standard. We anticipate that we will continue to incur significant expenses for the foreseeable future as we:

- continue to develop and seek appropriate approvals for our dial-up modem, broadband access, Internet gateway, and dialer products; and
- continue to make efforts to expand our sales channels internationally, and into new channels appropriate to our new product areas.

Although we have reduced our operating expense levels significantly, our revenues must increase or we will probably continue to incur operating losses. We cannot guarantee that our expenditure reductions will continue or that we will be able to halt the decline in our revenues. Although we believe that we have sufficient resources to fund our planned operations over the next year, if we fail to increase our revenues, our longer-term ability to stay in business and to achieve our intended business objectives could be adversely effected. Our continuing losses and use of cash could also adversely affect our ability to fund the growth of our business should our strategies prove successful.

To stay in business we may require future additional funding which we may be unable to obtain on favorable terms, if at all.

Over the next twelve months, we may require additional financing for our operations either to fund losses beyond those we anticipate or to fund growth in our inventory and accounts receivable should growth occur. We currently do not have a debt facility from which we can borrow and we do not expect to obtain one on acceptable terms unless our operating performance improves. Additional financing may not be available to us on a timely basis if at all, or on terms acceptable to us. If we fail to obtain acceptable additional financing when needed, we may be required to further reduce planned expenditures or forego business opportunities, which could reduce our revenues, increase our losses, and harm our business. Moreover, additional equity financing could dilute the per share value of our common stock held by current shareholders, while additional debt financing could restrict our ability to make capital expenditures or incur additional indebtedness, all of which would impede our ability to succeed.

Our existing indebtedness could prevent us from obtaining additional financing and harm our liquidity.

In January 2001, we obtained a $6 million, 20 year direct reduction mortgage from a bank, secured by our owned real estate in Boston, Massachusetts. Our outstanding indebtedness could adversely affect our ability to obtain additional financing for working capital, acquisitions, or other purposes. Our existing indebtedness could also make us more vulnerable to economic downturns and competitive pressures, make it more difficult to obtain additional debt financing, and adversely affect our liquidity. In the event of a cash shortfall,

we could be forced to reduce other expenditures to meet our requirements with respect to our outstanding debt. Our ability to meet our obligations will be dependent upon our future performance, which will be subject to financial, business and other factors affecting our operations. Many of these factors are beyond our control. If we are unable to generate sufficient cash flow from operations in the future to service our debt, we may be required to refinance all or a portion of these obligations or obtain additional financing in order to stay in business.

Our revenues and operating results have been adversely affected because of a decline in average selling prices for our dial-up modems and because of the decline in the retail market for dial-up modems.

The dial-up modem industry has been characterized by declining average selling prices and a declining retail market. The decline in average selling prices is due to a number of factors, including technological change, lower component costs, and competition. The decline in the size of the retail market for dial-up modems is primarily due to the inclusion of dial-up modems as a standard feature contained in new PCs, and the advent of broadband products. As the market for cable and ADSL modems matures and competition between cable and ADSL service providers intensifies, it is likely that there will be increased retail distribution of cable and ADSL modems. While increased retail sale of broadband modems could increase our sales of these products, it could further reduce demand for our dial-up modems. Decreasing average selling prices and reduced demand for our dial-up modems would result in decreased revenue for dial-up modems, which has been our primary source of revenue.

We believe that our future success will depend in large part on our ability to more successfully penetrate the broadband modem markets, which have been challenging markets, with significant barriers to entry.

With the shrinking of the dial-up modem market, we believe that our future success will depend in large part on our ability to more successfully penetrate the broadband, cable and ADSL, modem markets. These markets have been challenging markets, with significant barriers to entry, that have adversely affected our sales to these markets. Although some cable and ADSL modems are sold at retail, the high volume purchasers of these modems are concentrated in a relatively few large cable, telecommunications, and Internet service providers which offer broadband modem services to their customers. These customers, particularly cable services providers, also have extensive and varied approval processes for modems to be approved for use on their network. These approvals are expensive, time consuming, and continue to evolve. Successfully penetrating the broadband modem market therefore presents a number of challenges including:

- the current limited retail market for broadband modems;
- the relatively small number of cable, telecommunications and Internet service provider customers that make up a substantial part of the market for broadband modems;
- the significant bargaining power of these large volume purchasers;
- the time consuming, expensive, uncertain and varied approval process of the various cable service providers; and
- the strong relationships with cable service providers enjoyed by incumbents cable equipment providers like Motorola and Scientific Atlanta.

Our initial sales of broadband products have been adversely affected by all of these factors. We cannot assure that we will be able to successfully penetrate these markets.

Our customer base is concentrated and the loss of one or more of our customers could harm our business.

Relatively few customers have accounted for a significant portion of our

net sales. In fiscal 2001, approximately 53% of our net sales were attributable to four customers, each of whom accounted for more than 10% of our net sales. In 2002, 43% of our net sales were attributable to three customers, each of whom accounted for 10% or more of our net sales. Because our customer base is concentrated, a loss of one or more of these significant customers or a reduction or delay in orders or a default in payment from any of our top customers could significantly reduce our sales which would materially harm our business, results of operations, and financial condition.

Our failure to meet changing customer requirements and emerging industry standards would adversely impact our ability to sell our products.

The market for PC communications products and high-speed broadband access products is characterized by aggressive pricing practices, continually changing customer demand patterns, rapid technological advances, emerging industry standards and short product life cycles. Some of our product developments and enhancements have taken longer than planned and have delayed the availability of our products, which adversely affected our sales and profitability in the past. Any significant delays in the future may adversely impact our ability to sell our products, and our results of operations and financial condition may be adversely affected. Our future success will depend in large part upon our ability to:

- identify and respond to emerging technological trends in the market;
- develop and maintain competitive products that meet changing customer demands;
- enhance our products by adding innovative features that differentiate our products from those of our competitors;
- bring products to market on a timely basis;
- introduce products that have competitive prices;
- manage our product transitions, inventory levels and manufacturing processes efficiently; and
- respond effectively to new technological changes or new product announcements by others.

Our product cycles tend to be short, and we may incur significant non-recoverable expenses or devote significant resources to sales that do not occur when anticipated. Therefore, the resources we devote to product development, sales and marketing may not generate material revenues for us. In addition, short product cycles have resulted in and may in the future result in excess and obsolete inventory, which has had and may in the future have an adverse affect on our results of operations. In an effort to develop innovative products and technology, we have incurred and may in the future incur substantial development, sales, marketing, and inventory costs. If we are unable to recover these costs, our financial condition and operating results could be adversely affected. In addition, if we sell our products at reduced prices in anticipation of cost reductions and we still have higher cost products in inventory, our business would be harmed and our results of operations and financial condition would be adversely affected.

Our operating results have been adversely affected because of price protection programs.

Our operating results have been adversely affected by reductions in average selling prices because we gave credits to some of our customers as a result of contractual price protection guarantees. Specifically, when we reduce the price for a product, the customer receives a credit for the difference between the customer's most recent purchase price and our reduced price for the product, for all unsold product at the time of the price reduction. For fiscal 2002, we recorded a reduction of revenue of $.7 million for customer price protection.

We may be subject to product returns resulting from defects, or from

overstocking of our products. Product returns could result in the failure to attain market acceptance of our products, which would harm our business.

If our products contain undetected defects, errors, or failures, we could face:

- delays in the development of our products;
- numerous product returns; and
- other losses to us or to our customers or end users.

Any of these occurrences could also result in the loss of or delay in market acceptance of our products, either of which would reduce our sales and harm our business. We are also exposed to the risk of product returns from our customers as a result of contractual stock rotation privileges and our practice of assisting some of our customers in balancing their inventories. Overstocking has in the past led and may in the future lead too higher than normal returns.

Our failure to effectively manage our inventory levels could materially and adversely affect our liquidity and harm our business.

During fiscal 2000, in anticipation of future sales of our broadband access products, particularly cable modems, we significantly increased our inventory for these products. We also built up this inventory in response to shortages of components for these products earlier in that year. We have also had difficulty in generating significant orders for some of our products, particularly broadband products, and as a result, we experienced a significant increase in our inventory, to $21.7 million on December 31, 2000 from $14.3 million on December 31, 1999. During fiscal 2001, we were able to reduce our inventory levels to $11.1 million as a result of sales, raw material returns to suppliers, and the write-down of value of some of our inventory. At December 31, 2002, our inventory level is $6.8 million, a reduction of $4.3 million from December 31, 2001 primarily attributable to reduced inventory purchases attributable to the delivery of no-charge components from our key component vendors, lower inventory levels to support the reduced sales activity in 2002, improved inventory turnover, inventory write-downs for lower of cost or market adjustments and obsolescence, and sales of excess broadband and wireless inventory. Our failure to effectively manage our inventory may adversely affect our liquidity and increases the risk of inventory obsolescence, a decline in market value of the inventory, or losses from theft, fire, or other casualty.

We may be unable to produce sufficient quantities of our products because we depend on third party manufacturers. If these third party manufacturers fail to produce quality products in a timely manner, our ability to fulfill our customer orders would be adversely impacted.

We use contract manufacturers to partially manufacture our products. We use these third party manufacturers to help ensure low costs, rapid market entry, and reliability. Any manufacturing disruption could impair our ability to fulfill orders, and failure to fulfill orders would adversely affect our sales. Although we currently use six contract manufacturers for the bulk of our purchases, in some cases a given product is only provided by one of these companies. The loss of the services of any of our significant third party manufacturers or a material adverse change in the business of or our relationships with any of these manufacturers could harm our business. Since third parties manufacture our products and we expect this to continue in the future, our success will depend, in part, on the ability of third parties to manufacture our products cost effectively and in sufficient quantities to meet our customer demand.

We are subject to the following risks because of our reliance on third party manufacturers:

- reduced management and control of component purchases;
- reduced control over, delivery schedules;
- reduced control over quality assurance;
- reduced control over manufacturing yields;
- lack of adequate capacity during periods of excess demand;
- limited warranties on products supplied to us;
- potential increases in prices;
- interruption of supplies from assemblers as a result of a fire, natural calamity, strike or other significant event; and
- misappropriation of our intellectual property.

We may be unable to produce sufficient quantities of our products because we obtain key components from, and depend on, sole or limited source suppliers.

We obtain certain key parts, components, and equipment from sole or limited sources of supply. For example, we purchase dial-up and broadband modem chipsets from Conexant Systems and Agere Systems. Integrated circuit product areas covered by one or both companies include dial-up modems, ADSL modems, cable modems, networking, routers, and gateways. In the past, we have experienced delays in receiving shipments of modem chipsets from our sole source suppliers. We may experience similar delays in the future. In addition, some products may have other components that are available from only one source. If we are unable to obtain a sufficient supply of components from our current sources, we could experience difficulties in obtaining alternative sources or in altering product designs to use alternative components. Resulting delays or reductions in product shipments could damage relationships with our customers and our customers could decide to purchase products from our competitors. Inability to meet our customers' demand or a decision by one or more of our customers to purchase products from our competitors could harm our operating results.

Our failure to satisfy minimum purchase requirements or commitments we have with our sole source suppliers could have an adverse affect on our results of operations.

We have entered into supply arrangements with suppliers of some components that include price and other concessions, including no-charge components, for meeting minimum purchase requirements or commitments. Our business and results of operations could be harmed if we fail to satisfy the minimum purchase requirements or commitments contained in our supply arrangements.

The market for high-speed communications products and services has many competing technologies and, as a result, the demand for our products and services is uncertain.

The market for high-speed communications products and services has a number of competing technologies. For instance, Internet access can be achieved by:

- using a standard telephone line and appropriate service for dial-up modems, ISDN modems, or ADSL modems, possibly in combination;
- using a cable modem with a cable TV line and cable modem service;
- using a router and some type of modem to service the computers connected to a local area network; or
- other approaches, including wireless links to the Internet.

Although we currently sell products that include these technologies, the market for high-speed communication products and services is fragmented and still in its development stage. The introduction of new products by competitors, market acceptance of products based on new or alternative technologies, or the emergence of new industry standards could render and have in the past rendered our products less competitive or obsolete. If any of these events occur, we may be unable to sustain or grow our business. In addition, if any of one or more of the alternative technologies gain market share at the expense of another

technology, demand for our products may be reduced, and we may be unable to sustain or grow our business.

We face significant competition, which could result in decreased demand for our products or services.

We may be unable to compete successfully. A number of companies have developed, or are expected to develop, products that compete or will compete with our products. Furthermore, many of our current and potential competitors have significantly greater resources than we do. Intense competition, rapid technological change and evolving industry standards could decrease demand for our products or make our products obsolete. Our competitors by product group include the following:

- Dial-up modem competitors: Actiontec, Askey, Best Data, Creative Labs, GVC, Intel, Sitecom, SONICblue, and US Robotics.
- Cable modem competitors: Com21, D-Link, Linksys, Motorola, Netgear, Scientific Atlanta, SMC, Terayon, Thomson, and Toshiba.
- ADSL modem competitors: 3Com, Alcatel, Siemens (formerly Efficient Networks), Thomson, US Robotics, and Westell.

Our business is dependent on the Internet and the development of the Internet infrastructure.

Our success will depend on the continued growth of the use of the Internet by businesses, particularly for applications that utilize multimedia content and that require high bandwidth. The recent growth in the use of the Internet has caused frequent periods of performance degradation. This has required the upgrade of routers, telecommunications links and other components forming the infrastructure of the Internet by Internet service providers and other organizations with links to the Internet.

Any perceived degradation in the performance of the Internet as a whole could undermine the benefits of our products. Potentially increased performance provided by our products and the products of others ultimately is limited by and reliant upon the speed and reliability of the Internet backbone itself. Consequently, the emergence and growth of the market for our products will depend on improvements being made to the entire Internet infrastructure to alleviate overloading.

Changes in current or future laws or governmental regulations that negatively impact our products and technologies could harm our business.

The jurisdiction of the Federal Communications Commission, or the FCC, extends to the entire United States communications industry including our customers and their products and services that incorporate our products. Our products are also required to meet the regulatory requirements of other countries throughout the world where our products are sold. Obtaining government regulatory approvals is time-consuming and very costly. In the past, we have encountered delays in the introduction of our products, such as our cable modems, as a result of government certifications. We may face further delays if we are unable to comply with governmental regulations. Delays caused by the time it takes to comply with regulatory requirements may result in cancellations or postponements of product orders or purchases by our customers, which would harm our business.

Our international operations are subject to a number of risks inherent in international activities.

Our international sales accounted for approximately 30% in fiscal 2000 and 38% in fiscal 2001. In 2002 our international sales accounted for approximately 40% of our revenues. Currently our operations are significantly

dependent on our international operations, and may be materially and adversely affected by many factors including:

- international regulatory and communications requirements and policy changes;
- favoritism toward local suppliers;
- local language and technical support requirements;
- difficulties in inventory management, accounts receivable collection and the management of distributors or representatives;
- difficulties in staffing and managing foreign operations;
- political and economic changes and disruptions;
- governmental currency controls;
- shipping costs;
- currency exchange rate fluctuations; and
- tariff regulations.

We anticipate that our international sales will continue to account for a significant percentage of our revenues. If foreign markets for our current and future products develop more slowly than currently expected, our future results of operations may be harmed.

Fluctuations in the foreign currency exchange rates in relation to the U.S. dol