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 OCTOBER 31, 1997

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 0-21969

CIENA CORPORATION
(Exact name of registrant as specified in its charter)

DELAWARE	23-2725311
(State or other jurisdiction of incorporation or organization)	(I.R.S.Employer Identification No.)
920 ELKRIDGE LANDING ROAD, LINTHICUM, MD	21090
(Address of principal executive offices)	(Zip Code)

(410) 865-8500
(Registrant's telephone number, including area code)

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

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

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 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. [ ]

The aggregate market value of the 99,287,653 shares of Common Stock of the Registrant issued and outstanding as of October 31, 1997, excluding 3,968,894 shares of Common Stock held by affiliates of the Registrant was $5,230,616,900. This amount is based on the average bid and asked price of the Common Stock on the Nasdaq Stock Market of $54.875 per share on October 31, 1997.

DOCUMENTS INCORPORATED BY REFERENCE

Part III of the Form 10-K incorporates by reference certain portions of the Registrant's proxy statement for its 1998 annual meeting of stockholders to be filed with the Commission not later than 120 days after the end of the fiscal year covered by this report.

PART I

ITEM 1. BUSINESS

GENERAL

OVERVIEW

CIENA designs, manufactures and sells dense wavelength division multiplexing ("DWDM") systems for fiberoptic communications networks. CIENA's first DWDM solution, the MultiWave(R) 1600 system, alleviates capacity, or bandwidth, constraints in high traffic, long distance fiberoptic routes without requiring the installation of new fiber. In addition, the MultiWave 1600 system enables flexible provisioning of additional bandwidth without requiring an upgrade of existing network transmission equipment. The MultiWave 1600 system can increase the carrying capacity of a single optical fiber 16 fold by allowing simultaneous transmission of up to 16 optical channels per fiber. This permits fiber currently carrying signals at transmission speeds of up to 2.5 Gb/s to carry up to 40 Gb/s. CIENA's MultiWave 1600 system includes optical transmission terminals, optical amplifiers, optical add/drop multiplexers and network management software. The MultiWave 1600 system is designed with an open architecture that allows the MultiWave 1600 system to interoperate with carriers' existing fiberoptic transmission systems having a broad range of transmission speeds and signal formats. CIENA's MultiWave Sentry(TM), the second generation version of the MultiWave 1600, includes enhancements that significantly expand the ability of the MultiWave system to interface with data communications equipment in addition to other types of transmission equipment and increase the distance which can be spanned between transmission terminals. CIENA's MultiWave Firefly(TM), designed for point-to-point short-haul applications (distances of 65km or less) not requiring optical amplifiers, allows simultaneous transmission of up to 24 optical channels per fiber at transmission speeds of up to 2.5 Gb/s per channel.

The Company believes it is a worldwide market leader in field deployment of open architecture DWDM systems. For the fiscal year ended October 31, 1997, the Company recorded $373.8 million in revenue to a total of five customers, of which $179.4 million was from sales to Sprint Corporation ("Sprint") under a three-year non-exclusive supply agreement which expires in December 1998, and approximately $184.5 million was from sales to LDDS WorldCom ("WorldCom") under a five-year supply agreement which, subject to certain conditions, is exclusive through December 1997. Substantially all of the Company's fiscal 1997 revenue was derived from sales of the MultiWave 1600 system. The Company also recently announced a five year contract to supply MultiWave Sentry systems to AT&T Corporation ("AT&T"), subject to successful completion of rigorous testing and evaluation which are ongoing with AT&T and will continue over the next several months. The Company is actively seeking additional customers among long distance, local and interoffice fiberoptic network operators in the worldwide telecommunications market.

INDUSTRY BACKGROUND

THE LONG DISTANCE MARKET

The four largest long distance carriers in the United States, AT&T, MCI Communications Inc. ("MCI"), Sprint and WorldCom (MCI and WorldCom have announced an agreement to merge), as well as many international telecommunications carriers, have widely deployed fiberoptic cable forming the backbone of their long distance networks. Growth in utilization of long distance networks has increased in both type of traffic -- from voice alone to voice, data and video -- and volume of traffic. This growth in utilization has been caused by factors such as:

- the growing use of the Internet, as well as increased use of office automation, distributed computing, electronic mail, facsimile transmission, electronic transaction processing, video conferencing, remote access telecommuting, and local and wide area networking;

- widespread deregulation of the United States telecommunications industry and the consequent increase in competition among, and lowering of prices by, service providers in the long distance market; and

- development of high-bandwidth network access technologies, such as cable modems, hybrid fiber coaxial architectures and digital subscriber lines, that permit commercial and consumer users to transmit and receive high volumes of information.

Increased utilization creates transmission bottlenecks on heavily used routes that were originally designed for significantly less traffic. Although exact statistics are not available, the Company believes that this increase in type and volume of utilization has caused some long distance telecommunications carriers to handle traffic over certain long distance routes at or near the maximum capacity of the existing installed fiber and electronic-based transmission systems currently in use.

The growth in demand for, and the resulting strains on, capacity of the fiberoptic telecommunications networks have been coupled with an increasing need for network reliability to support mission critical data communications. As end-users become more dependent on around-the-clock network availability, they become less tolerant of service interruptions which can be caused by factors such as equipment failure, fiber cuts or high traffic volume.

This demand for greater reliability has led long distance carriers to adopt "ring architecture" in which long distance routes are linked in a ring configuration so that in the event of a fiberoptic cable cut or other equipment failure between two points of the ring, the signal can be immediately redirected through the reverse "protection path" of the ring. The service break associated with a fiber cut or other equipment failure in a network using ring architecture can be restored in approximately 50 milliseconds, which is essentially unnoticeable by the consumer. However, many ring architectures now being deployed demand twice as much fiber capacity (due to the need to maintain a redundant alternative path to serve as a protection path for each fiber in use) as non-ring based architectures. AT&T, Sprint and WorldCom have all announced an intention to implement ring architecture for their networks, which will place greater bandwidth demand on their existing fiberoptic networks.

THE INTEROFFICE AND LOCAL EXCHANGE MARKETS

The Company believes the factors driving growth in utilization of capacity and the increased demand for reliability converged soonest and with the greatest impact in the long distance "backbone" routes of fiberoptic networks. The Company believes the same convergence is occurring and may have a similar impact in other portions of fiberoptic networks. For example, the increasingly heavy flow of data communications is not limited to long distance routes, but affects local and interoffice routes as well. The local and interoffice traffic has historically been handled predominantly by the regional Bell operating companies ("RBOCs"), whose fiberoptic networks were designed primarily for voice communication with a localized, or shorter reach orientation. The Company believes transmission bottlenecks are beginning to be experienced by the RBOCs and competitive local exchange carriers, or "CLECs", in these shorter routes.

ALTERNATIVE HIGH-BANDWIDTH SOLUTIONS

The shortage of bandwidth available in existing fiberoptic networks can be addressed in several ways. One solution is to install additional fiberoptic cable along existing routes or in new fiberoptic routes. However, the installation of additional fiber, and particularly the creation of new fiberoptic routes, is a costly and time-consuming process, involving extensive negotiation and acquisition of necessary rights of way, as well as the actual construction effort. The Company believes that the average cost of creating new underground fiberoptic routes is approximately $43,400 per kilometer ($70,000 per mile). Another solution is to increase the transmission speed of the installed systems. However, this approach is also costly. Existing telecommunications routes generally use TDM fiberoptic transmission terminals at either end of the route to send and receive signals. In longer distance routes, opto-electronic signal regenerators ("regenerators") are placed between terminals along the fiberoptic cables, spaced at regular intervals of 35-50 kilometers (approximately 22 to 31 miles). These regenerators process, amplify and re-time the signal through a process that involves conversion of the optical signal to electronic form and back to optical form. However, terminals and regenerators are "bit-rate specific," meaning upgrade of a route segment to handle higher transmission speeds requires replacement of all terminals and regenerators. A large number of regenerators are needed on a route of significant length, and any upgrade of a route segment using time division multiplexing ("TDM") technology would require a significant investment in new equipment as well as significant installation costs.

Certain types of existing fiber have been shown to display incompatibility problems with very high speed TDM equipment. "Non-dispersion shifted" fiber constitutes the majority of fiber installed in North America and Europe, while "dispersion shifted" fiber has been popular in Japan. "Reduced dispersion" fiber is a recent development that is beginning to see applications in some new fiber installations. At lower transmission rates, such as 2.5 Gb/s, TDM-based equipment is technically viable for use with these fiber types and widely available commercially. As an

upgrade to existing telecommunications links with transmission rates below 2.5 Gb/s, TDM at 2.5 Gb/s can represent an alternative incremental approach to the enhancement of transmission capacity. However, at the 10 Gb/s transmission rate, transmission over non-dispersion shifted fiber can result in significant impairments to and distortion of the signal.

CIENA and others have observed that the potential for an alternative technological solution to laying new fiber or upgrading capacity to higher electronic transmission rates exists because the bandwidth intrinsic to existing fiber is vastly underutilized. For example, transmission systems which use TDM and transmit at 2.5 Gb/s use substantially less than one percent of the inherent bandwidth of the fiber currently deployed in United States fiberoptic networks. An optical multiplexing technology called wavelength division multiplexing ("WDM") has long been recognized for its potential to better utilize fiber bandwidth by enabling the simultaneous transmission of multiple optical signals on discrete channels on a single fiber. Until recently, however, technological barriers have limited exploitation of the potential of WDM as a commercially viable solution. DWDM is an extension of WDM technology and refers to the simultaneous transmission of more than four channels on a single fiber.

THE CIENA SOLUTION

CIENA's MultiWave DWDM systems enhance the transmission capacity of a single optical fiber, without requiring significant modification or upgrade to transmission equipment. All MultiWave systems are installed along fiber optic routes, the beginning and end of which are defined by the presence of the customer's transmission equipment.

DESIGN PRINCIPLES

CIENA's MultiWave DWDM systems incorporate the following design principles:

- OPEN ARCHITECTURE. MultiWave systems are designed with an open architecture that allows the products to interoperate with carriers' existing fiberoptic transmission systems having a broad range of transmission speeds and signal formats. This approach is distinguished from a closed architecture system design pursued by companies that manufacture other telecommunications equipment and may seek to preserve the market for their legacy network equipment.

- SCALEABILITY. The MultiWave system design is modular and allows capacity-specific configurations and the ability to add capacity through a modular upgrade without interrupting existing MultiWave traffic. This capability enables a customer to select the number of channels required on a particular fiber and preserves the customer's ability to respond quickly to increased demand for capacity without significant additional equipment purchases.

- FLEXIBILITY / EFFICIENCY. CIENA's MultiWave systems can be tactically implemented on a route-by-route basis, providing relief on capacity-constrained routes without mandating a network-wide architectural or transmission equipment change. In the context of new network construction, the Company believes that its ability to permit increased capacity per fiber, together with the elimination of multiple regenerators, make deployment of the MultiWave systems a cost-efficient alternative to more conventional TDM approaches. MultiWave systems configured with the Company's optical add drop multiplexer ("OADM") enable carriers to selectively direct portions of a route's traffic to various sites along the route without requiring extensive termination equipment or electronic add/drop multiplexers. The Company believes the resulting traffic route flexibility at the all optical layer of the fiberoptic network is also potentially attractive and cost effective to network planners.

- FIBER COMPATIBILITY. CIENA's DWDM Systems are compatible with the various kinds of fiber (dispersion shifted, reduced dispersion and non-dispersion shifted) deployed world-wide. The products currently perform optimally on non-dispersion shifted fiber, which comprises the majority of fiber installed in both North America and Europe.

ENABLING TECHNOLOGIES

CIENA developed its MultiWave DWDM systems based upon the use of three core enabling technologies that assist in overcoming many of the constraints that previously limited commercial introduction of DWDM

technology:

- ERBIUM-DOPED FIBER AMPLIFIERS ("EDFAS") enable the direct amplification of optical signals without the use of electronic regenerators;

- IN-FIBER BRAGG GRATINGS enable precise filtering of multiple optical signals in a single fiber; and

- WAVEWATCHER NETWORK MANAGEMENT SOFTWARE developed by the Company makes it possible for a network operator to manage effectively the status and functions of CIENA MultiWave systems in conjunction with the network operator's management of other parts of its network. The Company provides standards compliant network management systems based upon Simple Network Management Protocol (SNMP), Transmission Control Protocol/Internet Protocol (TCP/IP) and International Telecommunications Union (ITU) Telecommunications Management Network (TMN) standards.

CIENA'S STRATEGY

The Company's strategy is to maintain and build upon its market leadership in the deployment of DWDM systems and to leverage the Company's high-bandwidth technologies in order to provide solutions to both voice and data communications based network architectures. Important elements of the Company's strategy include:

- - - MAINTAIN LEADERSHIP IN DEPLOYMENT OF DWDM IN FIBEROPTIC NETWORKS. The Company believes that the technological, operational and cost benefits of the Company's DWDM systems, including the MultiWave 1600, MultiWave Sentry, and MultiWave Firefly, create competitive advantages for telecommunications carriers worldwide, which are being pressed by their customers to deliver more bandwidth to address the dramatic growth in Internet and other data communications traffic. The Company also believes that achieving early widespread operational deployment of its systems in a particular carrier's network will provide CIENA significant competitive advantages with respect to additional DWDM deployments and channel upgrades within that network and will enhance its marketing to other carriers as a field proven supplier. The Company therefore intends to continue aggressively serving its existing customers while actively pursuing additional DWDM deployment opportunities among fiberoptic carriers in domestic and foreign long distance, interoffice and local exchange markets.

- - - CONTINUE TO EMPHASIZE TECHNICAL SUPPORT AND CUSTOMER SERVICE. The Company markets technically advanced systems to sophisticated customers. The nature of the Company's systems and market require a high level of technical support and customer service, including installation assistance. The Company is developing a substantial customer service and installation support organization, including full-time customer support offices in Kansas City, Kansas (to support Sprint), Tulsa, Oklahoma (to support WorldCom), Atlanta, Georgia and Middletown, New Jersey (to support AT&T) and other selected locations where it develops significant customer relationships, to provide on-going support to its customers. Internationally, the Company is working to develop relationships with companies that can team with the Company to provide similar service and support outside the United States. The Company has a contract with BICC Cables, plc, to assist the Company in the delivery of service and support to Mercury in the U.K.

- - - CONTINUE TO ENHANCE WORLD CLASS MANUFACTURING CAPABILITY. The Company's MultiWave systems serve a mission critical role in its customers' networks. Quality assurance and manufacturing excellence are necessary for the Company to achieve success. CIENA believes it has developed and will continue to enhance a world class manufacturing capability. The Company invested $5.9 million in capital improvements in fiscal 1996 and hired 125 employees in that year to establish initial manufacturing capacity, and enhance efficiency and quality in its manufacturing processes. An additional $32.5 million in capital improvements were made, and 392 employees were hired in fiscal 1997 in support of this element of CIENA's strategy. Additional investment will be made in fiscal 1998, as the Company adds the MultiWave Sentry, MultiWave 4000 (the Company's 40-channel system) and MultiWave Firefly product lines to full scale production. The Company achieved ISO 9001 certification in July 1997 in further support of this element of its strategy. ISO 9001 is an internationally recognized documented standard prescribing quality assurance management. The Company believes that ISO 9001 certification not only serves as a guide for quality management but enhances the Company's competitive position, especially among potential customers who view such certification as an independent validation of quality assurance.

- - - EXPAND SALES AND MARKETING EFFORTS. The nature of the target customer base for all MultiWave product lines

requires a focused sales effort on a customer-by-customer basis. The Company will continue to increase its sales and marketing efforts by focusing on the worldwide market of fiberoptic carriers. In fiscal 1996, the Company increased its sales and marketing force by 12 persons, and increased it by another 78 persons in fiscal 1997. The Company will continue to strengthen its marketing programs and increase its international presence through both direct sales and international distributors.

- - - LEVERAGE THE COMPANY'S HIGH-BANDWIDTH TECHNOLOGIES AND KNOW-HOW. The Company believes the overall growth in demand for bandwidth in telecommunications networks will lead to transmission bottlenecks in other segments of the networks where the application of DWDM and other high bandwidth enabling technologies may provide solutions, either within existing network architectures, or as part of the design and development of alternative data communications based network architectures. The Company expects to leverage the core competencies it has developed in the design, development and manufacturing of the MultiWave product lines by pursuing new product development efforts, and strategic alliances or acquisitions, to address these expected opportunities.

CIENA'S PRODUCTS

LONG-DISTANCE APPLICATIONS

MULTIWAVE 1600 AND MULTIWAVE SENTRY SYSTEMS

The Company's first DWDM system, the MultiWave 1600, was designed to help long distance service providers alleviate the bandwidth constraints affecting their networks. The MultiWave 1600 system is a combination of equipment and software installed on long distance route segments of up to 600 kilometers (372 miles). For routes in excess of 600 kilometers, a conventional fiberoptic regenerator can be used to reconstruct the optical signals between successive MultiWave 1600 systems.

The MultiWave 1600 system enables simultaneous transmission of up to 16 optical channels on a single fiber at rates of up to 2.5 Gb/s per channel without opto-electronic regeneration. A MultiWave 1600 system consists of one MultiWave terminal on each end of a route segment, one or more MultiWave optical amplifiers along the route (depending on route length) and CIENA's WaveWatcher network management software. The CIENA MultiWave optical amplifier is a modular Erbium-doped fiber amplifier that provides direct composite optical amplification of the 16 optical channels carried by the MultiWave 1600 and MultiWave Sentry systems. Within a single MultiWave system, CIENA's MultiWave optical amplifiers take the place of the service provider's existing regenerators on routes of up to 600 kilometers (372 miles), and can be spaced as much as 120 kilometers (74 miles) apart. Unlike a TDM upgrade solution which involves replacement of all transmission equipment along a fiber route, a channel upgrade of a CIENA MultiWave system involves no replacement of existing transmission equipment until all 16 channels are in service. Similarly, increases in transmission rates up to a maximum of 2.5 Gb/s do not require replacement of or modification to the optical amplifiers.

CIENA's MultiWave Sentry, the second generation version of the MultiWave 1600 system, includes enhancements which significantly expand the ability of the MultiWave system to interface with data communications equipment in addition to other types of transmission equipment and increase the distance which can be spanned between transmission terminals. Up to eight MultiWave Sentry systems can be concatenated (deployed end-to-end) together allowing transport of up to 40 Gb/s over total route lengths of up to 4,800 kilometers (2,900 miles) without the need for conventional regenerators. The MultiWave Sentry system incorporates DWDM optimized long-reach receivers and uses standard low-cost short-reach input and output interfaces to connect to a customer's equipment. MultiWave Sentry also incorporates built-in performance monitoring capabilities which enable network operators to identify and measure specified channels and their characteristics. These added capabilities eliminate the need for conventional long-reach fiberoptic transmission terminals or traditional SONET multiplexers in data-centric networks, thereby simplifying the construction of cell- and packet-based (IP, ATM and Frame Relay) networks. The fully configured MultiWave Sentry is expected to be commercially available in the first half of calendar 1998.

MULTIWAVE OPTICAL ADD/DROP MULTIPLEXER.

When deployed as a component of a MultiWave 1600 or MultiWave Sentry system, the CIENA optical add/drop multiplexer ("OADM") enables carriers selectively to direct portions of a route's traffic to various sites along the route without requiring extensive termination equipment or electronic add/drop multiplexers. A network operator may optically remove (drop) and/or insert (add) up to four channels from or to the composite 16 channel signal at a point along a fiber route where the optical add/drop multiplexer is installed. The installation of an additional optical add/drop multiplexer at a different point along that route enables the network operator to reuse those channels. The optical add/drop multiplexer also provides optical amplification for up to 16 channels and when used in the MultiWave Sentry systems provides standard short-reach interfaces to either data communications equipment or conventional fiberoptic transmission terminals. The Company believes the resulting traffic routing flexibility at the all-optical layer of the fiberoptic network is potentially attractive and cost effective to network planners.

A typical MultiWave 1600 or MultiWave Sentry system, including end terminals, EDFAs, OADMs and WaveWatcher network management software ranges in price from $500,000 to $2,000,000, depending on such factors as customer needs for number of channels, route length (which affects the number of optical amplifiers required), network management software configuration and other negotiated terms and conditions. MultiWave systems initially configured for less than the maximum number of channels can be upgraded to carry up to the maximum at additional cost.

MULTIWAVE 4000

CIENA's MultiWave 4000, the third generation of the MultiWave 1600, is currently scheduled for general commercial availability in the first half of calendar 1998. The MultiWave 4000 incorporates the basic features of both the MultiWave 1600 and the MultiWave Sentry, but is scaleable to allow simultaneous transmission of up to 40 optical channels per fiber at rates of up to 2.5 Gb/s per channel for a total maximum throughput of 100 Gb/s.

SHORT-DISTANCE APPLICATIONS

MULTIWAVE FIREFLY

CIENA's MultiWave Firefly is targeted toward point-to-point short haul applications of 65 kilometers (40 miles) or less, which do not require signal amplification via EDFAs or channel add-drop capability. The product is designed to handle up to 24 channels at rates of 622 Mb/s and 2.5 Gb/s and is compatible with the Company's WaveWatcher network management software.

CIENA believes the product is well-suited to applications at RBOCs and CLECs as well as for certain international applications where route lengths tend to be shorter.

The fully configured MultiWave Firefly is expected to be commercially available for volume shipments during the first half of calendar 1998 and will range in price from $200,000 to $900,000, depending primarily on the number of channels deployed. As may be required, MultiWave Firefly systems initially configured for less than the maximum number of channels can be upgraded to carry up to the maximum at additional cost.

WAVEWATCHER NETWORK MANAGEMENT SYSTEM

WaveWatcher is the MultiWave system's integrated network management software package. The Company's commitment to providing standards compliant network management interfaces at all levels, from individual network elements to the element management system, affords rapid integration into existing telecommunication management operations.

WaveWatcher operates on a UNIX platform and has been designed to adhere to both existing and evolving open system network management standards such as Simple Network Management Protocol (SNMP), Transmission Control Protocol/Internet Protocol (TCP/IP) and the International Telecommunications Union (ITU) Telecommunications Management Network (TMN) standards.

WaveWatcher's network element manager uses a separate out-of-band optical service channel to communicate network management information and provides a single view of multiple CIENA systems through graphical user interfaces and supported operating system interfaces. It provides customers with early warnings of network problems and allows them to manage and monitor network performance. WaveWatcher provides fault, performance, security and configuration management of optical networking systems. When used with MultiWave Sentry systems, WaveWatcher provides additional monitoring capabilities for channel identification and transmission quality throughout a customer's MultiWave network.

PRODUCT DEVELOPMENT

The Company expects to continue during fiscal 1998 to enhance and refine its MultiWave systems, while adding operational features designed to make all of the Company's products attractive to a wide range of network operators.

The Company plans to invest considerable engineering and related resources to developing its MultiWave Metro system, which targets campus and interoffice rings and high bandwidth local loop services, using DWDM technology with as many as 16 different wavelengths. MultiWave Metro is designed to provide high aggregate bandwidth capacity for multiple applications and data rates. The product is expected to simultaneously aggregate multiple traffic types, including SONET/SDH (at both the SONET levels of 622 Mb/s and 2.5 Gb/s), ATM and fast IP in a ring environment, providing network survivability and the ability to add or drop traffic at various locations around the ring.

The Company has signed a letter of intent to enter into an Agreement and Plan of Merger with Astracom, Inc. ("Astracom"). Astracom is a start-up telecommunications company located in Atlanta, Georgia. The transaction is expected to be completed by the end of December 1997. The Company intends for the 15 employees of Astracom to assist in the development of its MultiWave Metro product.

The Company believes the overall growth in utilization of fiberoptic telecommunications networks will lead to transmission bottlenecks in other segments of the networks where the application of DWDM technologies may provide solutions. The Company also believes there may be opportunities for it to develop products and technologies complementary to DWDM technologies which may broaden the Company's ability to provide, facilitate and/or interconnect with high bandwidth solutions offered throughout fiberoptic networks. The Company intends to focus its product development efforts and possibly pursue strategic alliances or acquisitions to address expected opportunities in these areas.

As of October 31, 1997, there were 128 persons working in the Company's research and development area. The Company's research and development expenditures were $6.4 million, $8.9 million and $23.3 million for fiscal 1995, 1996 and 1997, respectively.

CUSTOMERS

SPRINT RELATIONSHIP

In December 1995, the Company entered into a three-year supply agreement with Sprint, with the option for Sprint to extend the term of the agreement for an additional year. Prices for all equipment purchased by Sprint under the terms of the supply agreement are fixed for the initial three-year term but the prices charged to Sprint for any deliverable under the supply agreement will not at any time be higher than the Company's final net price to any "similarly situated customer". The supply agreement does not obligate Sprint to make any minimum purchases from the Company. The agreement requires that the Company set up and maintain, at the Company's expense, certain test facilities for a period of 10 years.

The Company warrants each deliverable provided by the Company for 60 months from the date of delivery, with Sprint having the right until December 2005 to purchase an unlimited number of one-year extensions of any or all warranties. Upgrades are provided at no cost to Sprint during the warranty or extended warranty periods. The supply agreement contains penalties for failure to respond to various types of system failures in a timely manner. The supply agreement with Sprint also provides Sprint with a perpetual, non-exclusive license to certain software and a license to use, modify and enhance the Company's source code under certain conditions. The Company must maintain two years of backwards compatibility for any enhancements or upgrades to the software.

WORLDCOM RELATIONSHIP

In September 1996, the Company entered into a five-year supply agreement with WorldCom. Pursuant to the terms of the supply agreement, the Company will be, subject to certain conditions, the exclusive supplier of DWDM systems for WorldCom through December 31, 1997. The agreement does not require a minimum purchase commitment; if WorldCom, however, does not purchase a certain minimum amount of equipment, all prices for equipment purchased under the agreement increase. As of May 31, 1997, the minimum threshold had been exceeded, and pursuant to another contract provision, the Company implemented an approximate 5% price reduction on future purchases. WorldCom may terminate all or any part of an outstanding purchase order upon the payment of a termination fee.

The Company has granted to WorldCom, pursuant to the supply agreement, a license to use certain software. The Company has also granted WorldCom the option to purchase the source code for certain software at any time during the term of the agreement for a one-time payment. If WorldCom exercises this option, the Company has no further obligation to provide support or maintenance services or to provide upgrades or enhancements with respect to this software.

Under product and pricing attachments currently in effect, the Company provides WorldCom with software upgrades at no charge for a period of 10 years from installation and provides a five-year warranty for products.

AT&T RELATIONSHIP

In August 1997, the Company entered into a five year agreement to supply MultiWave Sentry systems to AT&T beginning in fiscal 1998. Due to the size and complexity of the AT&T network, the Company has invested and expects to continue to invest considerable financial, engineering, manufacturing and logistics support resources in positioning the commercial relationship to be successful, but has done so and will continue to do so without any assurance as to the volume, duration or timing of any purchases which might ensue from AT&T. Specifically, the agreement does not require any minimum purchase commitment; however, certain price concessions are not available unless a certain minimum amount of equipment is purchased under the agreement. Prices for all equipment purchased by AT&T under the terms of the supply agreement are fixed for the initial five-year term, but the prices charged to AT&T under the supply agreement must be no less favorable than those offered to other commercial customers for like products and volume of business during the term of the agreement.

The Company warrants the equipment provided by the Company for six years from the date of final installation, and the agreement contemplates that installation will be provided by the Company on the terms set forth in the agreement. The supply agreement contains penalties for failure to respond to various types of system failures in a timely manner. The supply agreement with AT&T also provides AT&T with a perpetual, non-exclusive license to certain software and a license to use, modify and enhance the Company's source code under certain conditions.

NISSHO RELATIONSHIP

The Company has entered into a two-year agreement with NISSHO Electronics Corporation ("NISSHO") whereby NISSHO is a distributor of the Company's MultiWave systems in Japan. Through NISSHO, the Company has shipped MultiWave systems to Teleway Japan Corporation ("Teleway") and Japan Telecom Co., Ltd. ("Japan Telecom").

DIGITAL TELEPORT, INC. RELATIONSHIP

In April 1997, the Company signed a supply agreement with Digital Teleport, Inc. ("DTI") of St. Louis, Missouri and has delivered MultiWave 1600 systems for installation in certain long distance routes in a fiberoptic network being built in the Midwest. These installations represent the Company's first deployment of the MultiWave 1600 as part of a newly built long distance fiberoptic route.

MERCURY COMMUNICATIONS RELATIONSHIP

In June 1997, the Company signed an agreement to supply MultiWave 1600 systems to Mercury Communications Limited ("Mercury"), a U.K. based subsidiary of Cable and Wireless Communications Group. The Company also entered into an agreement with BICC Cables, plc, to assist the Company in the delivery of service and support to Mercury in connection with this installation and operation of MultiWave 1600 systems.

OTHER POTENTIAL CUSTOMER RELATIONSHIPS

The RBOCs are very active in interoffice and local exchange markets and, under the Telecommunications Act of 1996, RBOCs are newly eligible to enter the long distance market once they have met certain requirements for opening their local markets to competition. The Company anticipates that one or more of the RBOCs will move aggressively to offer long distance services, although the timing of that move is uncertain, and the question of how such a move will be implemented is unclear -- e.g., through the establishment of owned network facilities, through the purchase of long distance capacity from other long distance carriers, or through some combination of the two. Regardless of the timing of any such move, the Company believes there may be limited opportunities for in-region deployment of the Company's long distance MultiWave 1600 or Sentry systems in certain RBOCs. Additionally, with the introduction of MultiWave Firefly, the Company's DWDM system targeted toward short-haul, point-to-point applications, the Company has expanded its direct and indirect sales efforts to include the interoffice and local exchange markets traditionally served by the RBOCs. The Company has signed trial evaluation agreements with certain RBOCs for testing of the MultiWave 1600 and MultiWave Firefly systems. The Company believes the CLECs are also developing interest in DWDM solutions like MultiWave Firefly.

The Company intends to invest considerable financial, engineering, manufacturing and logistics support resources in positioning commercial relationships with the RBOCs and CLECs to be successful, but has done so and will continue to do so without any assurance as to the volume, duration or timing of any purchases which might ensue.

Internationally, the market for DWDM systems is still developing. The deregulation and competition which have characterized the United States long distance market are much less pronounced in most international markets, and the data communications applications which fuel the demand for high bandwidth transmission systems in the United States are not as widely used in most international markets. The Company intends to concentrate its international sales and marketing efforts in countries or regions where there is competition among two or more long distance carriers, where there are significant bandwidth constraints and where there is significant potential for near term growth in telecommunications services.

MARKETING AND DISTRIBUTION

The Company's systems require a relatively large investment, and the Company's target customers in the fiberoptic telecommunications market -- where network capacity and reliability are critical -- are highly demanding and technically sophisticated. There are only a small number of such customers in any country or geographic market. Also, every network operator has unique configuration requirements which impact the integration of DWDM systems with existing transmission equipment. The convergence of these factors leads to a very long sales cycle for MultiWave systems, often more than a year between initial introduction to the Company and commitment to purchase, and has further led CIENA to pursue sales efforts on a focused, customer-by-customer basis.

The Company has organized its resources for the separate but coordinated approach to United States and international customers. In the United States market, a sales team, comprised of an account manager, systems engineers and technical support and training personnel, is assigned responsibility for each customer account, and for the coordination and pursuit of sales contacts. In the international market, the Company currently pursues prospective customers through direct sales efforts, as well as through distributors, independent marketing representatives and independent sales consultants. The Company has established CIENA Communications, Inc. as a wholly-owned subsidiary in the U.S. to coordinate sales and marketing and customer service and installation support functions. The Company has established CIENA Limited as a wholly-owned subsidiary in the U.K. to facilitate U.K. and European sales. The Company has distributor or marketing representative arrangements covering Austria, Germany, Italy and Switzerland in Europe, and the Republic of Korea and Japan in Asia. The Company has established a direct sales presence in Belgium and intends to establish a similar presence in Asia over the next 12 to 18 months. The Company has representative support in Brazil.

In support of its worldwide selling efforts, the Company conducts marketing programs intended to position and promote its products within the telecommunications industry. Marketing personnel coordinate the Company's participation in trade shows and conduct media relations activities with trade and general business publications.

CUSTOMER SERVICE AND SUPPORT

The Company is developing a customer service and support organization to provide its customers with a high level of technical support and customer service. The Company believes that as deployment of MultiWave systems broadens within customer networks, installation services or assistance from the Company will increasingly be requested by customers. Additionally, as the installed base of MultiWave systems has increased, customer needs for prompt technical support and service as well as on site assistance, have materially increased. The Company is developing a separate customer service and support organization to be responsive to these needs. The Company has full-time customer support offices in Kansas City, Kansas (to support Sprint), Tulsa, Oklahoma (to support WorldCom), Atlanta, Georgia and Middletown, New Jersey (both to support AT&T) and the Company intends to establish customer support offices in other selected locations where it develops significant customer relationships, to provide on-going support to its customers. Internationally, the Company is working to develop relationships with companies which can team with the Company to provide similar service and support outside the U.S. The Company has a contract with BICC Cables, plc, to assist the Company in the delivery of service and support to Mercury.

MANUFACTURING

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The Company manufactures the in-fiber Bragg gratings and Erbium-doped fiber amplifiers used in all MultiWave product lines, and conducts all optical assembly, final assembly and final component, module and system test functions, at its manufacturing facilities in Maryland. The Company believes its manufacturing technologies and processes represent a key competitive advantage. The Company has accordingly invested significantly in automated production capabilities and manufacturing process improvements and expects to further enhance its manufacturing process with additional production process control systems. Certain critical functions, including aspects of fiber splicing, also require a highly skilled manual work force, and the Company puts significant efforts into training and maintaining the quality of its manufacturing work force.

Electronic board assemblies are currently produced both at the Company and by third party subcontractors. The Company has not experienced any significant delays or material unanticipated costs resulting from the use of subcontractors; however, such a strategy involves certain risks, including the potential absence of adequate capacity, the unavailability of or interruptions in access to certain process technologies, and reduced control over delivery schedules, manufacturing yields, quality and costs. In the event that any significant subcontractor were to become unable or unwilling to continue to manufacture and/or test the Company's assemblies in required volumes, the Company would have to identify and qualify acceptable replacements. This qualification process could also be lengthy and no assurance can be given that any additional sources would become available to the Company on a timely basis. A delay or reduction in component shipments, or a delay or increase in costs in the assembly and testing of components by third party subcontractors, could materially and adversely affect the Company's business, financial condition and results of operations. The Company has installed additional electronic board assembly equipment in its facility in Savage, Maryland, and intends to significantly reduce its reliance on subcontractors for this work.

The Company's MultiWave product lines utilize in excess of 1,400 parts, many of which are customized for the Company. Component suppliers in the specialized, high technology end of the optical communications industry are generally not as plentiful or, in some cases, as reliable, as component suppliers in more mature industries. Some of the component suppliers for the MultiWave Sentry and MultiWave Firefly systems are new and have not yet had an opportunity to demonstrate the ability to increase their production to keep pace with the Company's needs. Certain key optical and electronic components used in the Company's MultiWave 1600, MultiWave Sentry, MultiWave 4000, and MultiWave Firefly systems are currently available only from sole sources. The Company has from time to time experienced minor delays in the receipt of these components, and the lead times for some components have been lengthening. Any future difficulty in obtaining sufficient and timely delivery of components could result in delays or reductions in product shipments which, in turn, could have a material adverse effect on the Company's business, financial condition and results of operations. While alternative suppliers have been identified for certain other key optical and electronic components, those alternative sources have not been qualified. The time and expense involved in qualifying each additional source are significant. Accordingly, the Company will for the near term continue to be dependent on sole and single source suppliers of certain key components. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations-Risk Factors."

COMPETITION

Competition in the telecommunications equipment industry generally is intense, particularly in that portion of the industry devoted to delivering higher and more cost effective bandwidth throughout the telecommunications network. However, the Company believes that its position as a leading supplier of open architecture DWDM systems and the field-tested design and technology of its products give it a current competitive advantage.

The competition faced by the Company is dominated by a small number of very large, usually multinational, vertically integrated companies, each of which has substantially greater financial, technical and marketing resources, and greater manufacturing capacity as well as more established customer relationships with long distance carriers than the Company. Included among the Company's competitors are Lucent Technologies Inc., formerly part of AT&T ("Lucent"), Northern Telecom Inc. ("Nortel"), Alcatel Alsthom Group ("Alcatel"), NEC Corporation ("NEC"), Pirelli SpA ("Pirelli"), Siemens AG ("Siemens") and Telefon AB LM Ericsson ("Ericsson"). Each of the Company's major competitors is believed to be in various stages of development, introduction or deployment of DWDM products directly competitive with the Company's MultiWave systems. Pirelli, in particular, is known to have deployed open architecture WDM equipment and has announced a 32-channel DWDM system. A U.S. affiliate of Pirelli is currently pursuing patent infringement litigation against the Company. See Item 3. "Legal Proceedings". Lucent has an especially prominent role in the market because of its historical affiliation with AT&T. Lucent has announced it is supplying closed architecture DWDM system equipment to AT&T, and has announced an intention to introduce in the near future an open architecture DWDM system. Although Lucent's prior affiliation with AT&T may have inhibited its relationships as a supplier to other carriers, the spin-off of Lucent into a separate company may make it more attractive to potential customers as a supplier.

In addition to DWDM suppliers, traditional TDM-based transmission equipment suppliers compete with the Company in the market for transmission capacity. Lucent, Alcatel, Nortel and NEC are already providers of a full complement of such equipment. These and other competitors have introduced or are expected to introduce equipment which will offer 10 Gb/s transmission capability, and MCI has recently announced limited deployment of such equipment. The Company believes the viability of widescale deployment of 10 Gb/s TDM based equipment has yet to be demonstrated. Because of the transmission rate employed, the 10 Gb/s TDM equipment requires digital multiplexing circuits operating at microwave frequencies, which can lead to instability. This can complicate reproducibility, which may in turn result in delays in introduction and higher manufacturing costs. More significantly, at the 10 Gb/s transmission rate, dispersion distortion effects in the fiber can result in significant impairments and limitations, particularly in transmission over non-dispersion shifted fiber, which comprises most of the installed fiber in current long distance networks in the United States. However, at lower rates, such as 2.5 Gb/s, TDM-based equipment is technically viable and widely available commercially, and, as an upgrade to existing lower transmission rate telecommunications links, can represent an alternative incremental approach to the enhancement of transmission capacity.

Additionally, while the Company believes the open architecture of its MultiWave systems is attractive to some customers, certain of the Company's competitors are able to offer more extensive TDM-based product lines under closed architectures which may provide perceived network-wide cost and operating efficiencies not available from the Company. For example, Lucent, Alcatel, Nortel, NEC, Pirelli, Siemens, Ericsson and others are expected to move aggressively to capture market share in the DWDM market. The Company expects aggressive competitive moves from these industry participants, which to date have included early announcement of competing or alternative products, and significant price discounting and intellectual property disputes. While competition in general is broadly based on varying combinations of price, manufacturing capacity, timely delivery, system reliability, service commitment and installed customer base, as well as on the comprehensiveness of the system solution in meeting immediate network needs and foreseeable scaleability requirements, the Company's customers are themselves under increasing competitive pressure to deliver their services at the lowest possible cost. This pressure may result in pricing for DWDM systems becoming a more important factor in customer decisions, which may favor larger competitors which can spread the effect of price discounts in their DWDM product lines across an array of products and services, and a customer base, which are larger than the Company's.

PATENTS AND OTHER INTELLECTUAL PROPERTY RIGHTS

The Company has licensed certain key enabling technologies with respect to the production of in-fiber Bragg gratings, utilized publicly available technology associated with Erbium-doped fiber amplifiers, and applied its design, engineering and manufacturing skills to develop its MultiWave 1600, MultiWave Sentry, MultiWave 4000 and MultiWave Firefly systems. These licenses expire when the last of the licensed patents expires or is abandoned. The Company also licenses from third parties certain software components for its network management software. These software licenses are perpetual but will generally terminate after an uncured breach of the agreement by the Company. The Company has applied for trademark registration for CIENA, MultiWave, and MultiWave Sentry and has a registered trademark for WaveWatcher. The Company also relies on contractual rights, trade secrets and copyrights to establish and protect its proprietary rights in its products.

The Company intends to enforce vigorously its intellectual property rights if infringement or misappropriation occurs. However, the Company does not expect its proprietary rights in its technology will prevent competitors from developing technologies and equipment functionally similar to the Company's.

The Company's practice is to require its employees and consultants to execute non-disclosure and proprietary rights agreements upon commencement of employment or consulting arrangements with the Company. These agreements acknowledge the Company's exclusive ownership of all intellectual property developed by the individual during the course of his work with the Company and require that all proprietary information disclosed to the individual will remain confidential.

As of October, 1997, the Company had received ten United States patents, had received notice of allowance of eleven more, and had twenty-three pending patent applications. The issued patents relate to (i) an optical monitoring channel for WDM systems capable of surviving failure of an optical amplifier, (ii) an in-fiber Bragg grating system for optical cable television systems that allows the network operator to remove and insert different optical frequencies and switch video signals on demand, (iii) a WDM optical communication system with remodulators to carry multiple optical signals of different wavelengths simultaneously, (iv) a WDM system that can be expanded with additional optical signals, (v) an optical system which uses optical amplifiers with flattened gain curves, (vi) a method for removing and inserting optical carriers in a WDM system, (vii) an optical system with tunable in-fiber gratings (viii) an optical amplifier with add/drop capability, (ix) switch and insertion networks in optical cable TV systems, and (x) WDM optical communication systems with wavelength stabilized optical selectors. Allowed patent applications relate to other aspects of in-fiber Bragg gratings technology and other aspects of WDM system design. Patents afford the holder the right to exclusive use for 17 years. Of the ten United States patents that have been issued, one will expire in 2012, five will expire in 2013, and the remaining four will expire in 2014. Pursuant to an agreement between the Company and General Instrument Corporation dated March 10, 1997, the Company is a co-owner with General Instrument Corporation of a portfolio of 27 United States and foreign patents relating to optical communications, primarily for video-on-demand applications. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations-Risk Factors" and Item 3. "Legal Proceedings."

COMPANY

The Company was incorporated in Delaware in November 1992. The Company's principal executive offices are located at 920 Elkridge Landing Road, Linthicum, Maryland 21090, and its telephone number is (410) 865-8500.

EMPLOYEES

As of October 31, 1997, the Company and its subsidiaries employed 841 persons, of whom 128 were primarily engaged in research and development activities, 527 in manufacturing, 98 in sales, marketing, customer support and related activities and 88 in administration. None of the Company's employees are currently represented by a labor union. The Company considers its relations with its employees to be good.

DIRECTORS AND EXECUTIVE OFFICERS

The table below sets forth certain information concerning each of the directors and executive officers of the Company:

Name	Age	Position
Patrick H. Nettles, Ph.D	54	President, Chief Executive Officer and Director
Steve W. Chaddick	46	Senior Vice President, Products and Technologies
Lawrence P. Huang	46	Senior Vice President, Sales and Marketing
Joseph R. Chinnici	43	Senior Vice President, Finance and Chief Financial Officer
Mark Cummings	46	Senior Vice President, Operations
Stephen B. Alexander	38	Vice President, Transport Products
G. Eric Georgatos	42	Vice President, General Counsel and Secretary
Rebecca K. Seidman	51	Vice President, Human Resources Development
Andrew C. Petrik	34	Vice President, Controller and Treasurer
Jon W. Bayless, Ph.D.(1)(2)	57	Chairman of the Board of Directors
Harvey B. Cash	59	Director
Clifford H. Higgerson(2)	58	Director
Billy B. Oliver(1)	72	Director
Michael J. Zak(1)(2)	44	Director

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(1) Member of the Compensation Committee
(2) Member of the Audit Committee

PATRICK H. NETTLES, PH.D., has served as Chief Executive Officer of the Company since February 1994, as President and Chief Executive Officer since April 1994 and as Director since February 1994. From 1992 until 1994, Dr. Nettles served as Executive Vice President and Chief Operating Officer of Blyth Holdings Inc., a publicly-held supplier of client/server software. From late 1990 through 1992, Dr. Nettles was President and Chief Executive Officer of Protocol Engines Inc., a development stage enterprise, formed as an outgrowth of Silicon Graphics Inc., and targeted toward very large scale integration based solutions for high-performance computer networking. From 1989 to 1990, Dr. Nettles was Chief Financial Officer of Optilink, a venture start-up which was acquired by DSC Communications. Dr. Nettles received his B.S. degree from the Georgia Institute of Technology and his Ph.D. from the California Institute of Technology.

STEVE W. CHADDICK has served as Senior Vice President, Products and Technologies since September 1996, and was previously Vice President of Product Development for the Company since joining it in 1994. Prior to joining the Company, Mr. Chaddick was Vice President of Engineering at AT&T Tridom, a company he co-founded in 1983 and which was acquired by AT&T in 1988. AT&T Tridom focused on the development of very small aperture satellite terminal systems. Mr. Chaddick was responsible for all product development at AT&T Tridom, including hardware, embedded systems software and network management software. Mr. Chaddick received both his B.S. and M.S. degrees in electrical engineering from the Georgia Institute of Technology.

LAWRENCE P. HUANG has served as Senior Vice President, Sales and Marketing of the Company since November 1996 and served as Vice President, Sales and Marketing of the Company since joining it in April 1994. Prior to joining CIENA, Mr. Huang was Vice President/General Manager and Vice President of Sales and Marketing of AT&T Tridom, which he co-founded with Mr. Chaddick in 1983. Mr. Huang holds a B.S. in industrial management from the Georgia Institute of Technology and an M.B.A. from Georgia State University.

JOSEPH R. CHINNICI joined the Company in September 1994 as Controller, and became Vice President, Finance and Chief Financial Officer in May 1995 and was promoted to Senior Vice President Finance and Chief Financial Officer in August 1997. From 1993 through 1994, Mr. Chinnici served as a financial consultant for Halston Borghese Inc. From 1977 to 1993, Mr. Chinnici held a variety of accounting and finance assignments for Playtex Apparel Inc. (now a division of Sara Lee Corporation), ending this period as Director of Operations Accounting and Financial Analysis. Mr. Chinnici holds a B.S. in accounting from Villanova University and an M.B.A. from Southern Illinois University.

MARK CUMMINGS joined the Company in May 1996 as Vice President, Manufacturing and was promoted to

Senior Vice President, Operations in August 1997. From 1985 to 1996, Mr. Cummings was Vice President, Operations for Cray Communications, Inc., an international manufacturer of communications equipment. From 1975 to 1985, Mr. Cummings was Manager of Manufacturing Engineering at Taylor Instruments, and from 1973 to 1975, an Industrial Engineer at Siemens Stromberg Carlson Inc. Mr. Cummings holds a B.S. in electronic technology from the State University of New York at Buffalo, and is currently in the Masters program in advanced manufacturing systems at the University of Maryland.

STEPHEN B. ALEXANDER has served as Vice President, Transport Products since September 1996, and was previously Director of Lightwave Systems at the Company since joining it in 1994. From 1982 until joining the Company, he was employed at MIT Lincoln Laboratory, where he last held the position of Assistant Leader of the Optical Communications Technology Group. Mr. Alexander is an Associate Editor for the Journal of Lightwave Technology and a General Chair of the conference on Optical Fiber Communication (OFC) for 1997. He is author of the tutorial text Optical Communication Receiver Design. Mr. Alexander received both his B.S. and M.S. degrees in electrical engineering from the Georgia Institute of Technology.

G. ERIC GEORGATOS has served as the Company's Vice President, General Counsel and Secretary since February 1996. From 1980 to 1995, Mr. Georgatos was an attorney and member of Gray Cary Ware & Friedenrich, a Professional Corporation, a law firm based in California, where he served as outside general corporate counsel for a variety of emerging companies. Mr. Georgatos holds a B.S. degree in business administration from the University of Southern California and a J.D. from the University of California Los Angeles.

REBECCA K. SEIDMAN joined the Company in April 1996 as Director of Human Resources Development, and was promoted to Vice President, Human Resources Development in June 1996. From 1984 until joining the Company, Ms. Seidman served consecutively as Director of Marketing, Vice President, Administration, and Principal of Walpert, Smullian & Blumenthal, P.A., a regional accounting and consulting firm. Ms. Seidman is a Phi Beta Kappa graduate of Goucher College and co-author of Total Quality Distribution, a book discussing practical applications of Total Quality in the wholesale distribution industry.

ANDREW C. PETRIK joined the Company in July 1996 as Controller, and became Treasurer in December 1996 and was promoted to Vice President in August 1997. From 1989 to 1996, Mr. Petrik was employed by Microdyne Corporation where he was the Assistant Controller from 1989 to 1994 and Assistant Vice President of Marketing and Product Planning from 1994 to 1996. Mr. Petrik holds a B.S. in Accounting from the University of Maryland and is a Certified Public Accountant.

JON W. BAYLESS, PH.D. has been a Director of the Company since April 1994 and has served as Chairman of the Board of Directors since November 1996. Dr. Bayless is a general partner of various venture capital funds associated with Sevin Rosen Funds where, since 1981, he has focused on developing business opportunities in the fields of telecommunications and computers. Mr. Bayless is also the controlling stockholder and sole director of Jon W. Bayless, Inc., the general partner of Atlantic Partners L.P., which is the general partner of Citi Growth Fund L.P., a venture capital investment firm. Dr. Bayless currently serves as a director of 3DX Technologies Inc. and of several private companies. Dr. Bayless is also Chairman of the Board of Directors of Shared Resource Exchange, Inc. Shared Resource Exchange, Inc. filed for reorganization under Chapter 11 of the Federal Bankruptcy Code in August 1996. A plan under Chapter 11 has been approved. Dr. Bayless has held faculty positions at Southern Methodist University, Virginia Polytechnic Institute, and the Catholic University of America. He holds patents in the field of digital telecommunications, and is a senior member of the Institute of Electronic Engineers. Dr. Bayless earned his B.S. degree in electrical engineering at the University of Oklahoma. He earned his M.S. degree in electrical engineering at the University of Alabama, and his Ph.D. in electrical engineering at Arizona State University.

HARVEY B. CASH has been a Director of the Company since April 1994. Mr. Cash is a general partner of InterWest Partners, a venture capital firm in Menlo Park, California which he joined in 1985. Mr. Cash serves on the board of directors of Benchmarq Microelectronics, Liberte Inc., AMX Corporation, i2 Technologies Inc. and Aurora Electronics, Inc. He is also an advisor to Austin Ventures. Mr. Cash received a B.S. in electrical engineering from Texas A&M University and an M.B.A. from Western Michigan University.

CLIFFORD H. HIGGERSON has been a Director of the Company since April 1994. Mr. Higgerson has since 1991 been a general partner of Vanguard Venture Partners, a venture capital firm specializing in high technology start-

ups, located in Palo Alto, California. Prior to joining Vanguard in July 1991, Mr. Higgerson was the managing partner of Communications Ventures, Inc. and prior to that was a Managing Partner of Hambrecht & Quist. Mr. Higgerson is also a director of Advanced Fibre Communications and Digital Microwave Corp. Mr. Higgerson earned his B.S. in electrical engineering from the University of Illinois and an M.B.A. in finance from the University of California at Berkeley.

BILLY B. OLIVER has been a Director of the Company since June 1996. Since his retirement in 1985 after nearly 40 years of services at AT&T, Mr. Oliver has worked as a self-employed communications consultant. During his last 15 years with AT&T, he held the position of Vice President, Engineering Planning and Design, where he was directly involved in and had significant responsibility for the evolution of AT&T's long distance network during that period. He was a co-recipient of the Alexander Graham Bell Medal for the conception and implementation of Nonhierarchical Routing in AT&T's network. Mr. Oliver is also a director of Digital Microwave Corp., Communications Network Enhancement Inc. and Enterprise Network Services Inc. Mr. Oliver earned his B.S.E.E. degree from North Carolina State University.

MICHAEL J. ZAK has been a Director of the Company since December 1994. He has been employed by Charles River Ventures of Boston, Massachusetts since 1991 and has been a general partner of the general partner of Charles River Partnership VII and its related entities since 1993. From 1986 through 1991, he was a founder and corporate officer of Concord Communications, Inc., a manufacturer of data communications systems. He is a director of ON Technology Corporation as well as seven other private companies. Mr. Zak has a B.S. degree in engineering from Cornell University and an M.B.A. from Harvard Business School.

SECTION 16(a) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Andrew C. Petrik filed a late Form 3 reporting his initial statement of beneficial ownership of the Company's stock. Joseph R. Chinnici filed a late Form 4 reporting two transactions. Mark R. Cummings and Harvey B. Cash each filed a late Form 4 each reporting a single transaction and Clifford H. Higgerson filed a late Form 4 reporting four transactions.

ITEM 2. PROPERTIES

The Company's principal executive offices, sales, marketing and product development functions are located in Linthicum, Maryland in a 96,000 square foot facility. The Company's manufacturing facilities are located in Savage, Maryland and consist of approximately 50,500 square feet under a lease that will expire in December 2001, absent exercise of a renewal option for an additional five years. The Company's systems integration and test, pilot production and customer service and support functions are conducted in an approximately 57,000 square foot facility near the Linthicum headquarters. The Company has leased additional facilities of approximately 68,000 square feet in the Linthicum area, where the Company intends to transfer its principal executive offices in the second or third quarter of fiscal 1998. The Company's current 96,000 square foot facility would then be converted almost entirely to research and development functions. The Company added leased non-manufacturing facilities during the fourth quarter of fiscal 1997 in Atlanta, Georgia and in Middletown, New Jersey to be used for product development, sales and marketing, and customer support activities. The Company also expects to lease additional manufacturing facilities in the Linthicum area of approximately 50,000 to 100,000 square feet during fiscal 1998.

ITEM 3. LEGAL PROCEEDINGS

Pirelli Litigation. On December 20, 1996, a U.S. affiliate of Pirelli SpA ("Pirelli") filed suit in U.S. District Court in Delaware, alleging willful infringement by the Company of five U.S. patents held by Pirelli. The lawsuit seeks treble damages, attorneys' fees and costs, as well as preliminary and permanent injunctive relief against the alleged infringement. On February 10, 1997, the Company filed its answer denying infringement, alleging inequitable conduct on the part of Pirelli in the prosecution of certain of its patents, and stating a counterclaim against the relevant Pirelli parties for a declaratory judgment finding the Pirelli patents invalid and/or not infringed. Following the filing of the Company's answer, Pirelli dedicated to the public and withdrew from the lawsuit all infringement claims relating to one of the five patents. In September 1997, Pirelli withdrew another patent from the suit, leaving three patents at issue. Expert discovery proceedings are ongoing, and are currently expected to be completed by January 31, 1998, with trial expected no earlier than mid-1998.

In February, 1997, the Company filed a complaint against Pirelli with the International Trade Commission ("ITC"), based on the Company's belief that a 32 channel DWDM system announced by Pirelli infringed at least two of the Company's patents. The Company's complaint sought a ban on the importation by Pirelli into the U.S. of any infringing 32 channel system. A formal investigative proceeding was instituted by the ITC on April 3, 1997. On November 24, 1997, the parties settled the matter by entry of a Consent Order, which is currently being reviewed by the ITC. Under the Consent Order, Pirelli has agreed not to import into the United States WDM components and or systems which infringe the Company's patented in fiber Bragg gratings-based WDM systems.

On March 14, 1997, the Company filed suit against Pirelli in U.S. District Court in the Eastern District of Virginia, alleging willful infringement by Pirelli of three U.S. patents held or co-owned by the Company. In September 1997, the Company withdrew one of the three patents from the suit. The lawsuit seeks treble damages, attorneys' fees and costs, as well as permanent injunctive relief against the alleged infringement. The two patents now at issue relate to certain of Pirelli's cable television equipment, and to certain Pirelli fiberoptic communications equipment announced by Pirelli in January 1997 as being deployed in a field trial in the MCI network. Motions for summary judgment by both parties are currently pending on the issue of infringement as it relates to the cable television patent, and Pirelli has also filed a motion for summary judgment of invalidity on this patent. As to the second of the two patents, on December 5, 1997, the court issued an order granting partial summary judgment for Pirelli on the issue of non-infringement, and denying Pirelli's motion for summary judgment of invalidity of this patent. Trial is currently scheduled for January 1998. There is no assurance that the Company's pending motion as to the cable television patent will be granted, or that Pirelli's motions will be denied. In the event Pirelli's motions are granted, the Company may appeal.

The Company continues to believe its MultiWave 1600 system does not infringe any valid claim of the three remaining Pirelli patents and believes certain of the Pirelli patents and/or claims are invalid. The Company is defending itself vigorously, and is planning on all remaining litigation proceeding through trial. In light of the complexity and likely time-consuming nature of the litigation, including the Company's counterclaim, the ITC proceeding, and the Company's patent infringement lawsuit against Pirelli in the Eastern District of Virginia, the Company recorded a charge of approximately $7.5 million in estimated legal and related costs associated with these proceedings during fiscal 1997. While the Company believes its estimate of legal and related costs is adequate based on its current understanding of the overall facts and circumstances, the estimate may be increased in future periods depending on the course of the legal proceedings.

The Pirelli proceedings have been and will continue to be costly and involve a substantial diversion of the time and attention of some members of management. Further, the Company believes Pirelli and other competitors have used the existence of the Delaware litigation to raise questions in customers' and potential customers' minds as to the Company's ability to manufacture and deliver the MultiWave 1600 system. There can be no assurance that such efforts by Pirelli and others will not disrupt the Company's existing and prospective customer relationships.

In the Delaware litigation, the so-called "Markman" hearing was conducted in September 1997. Markman hearings are pre-trial proceedings required in all patent infringement litigation, and result in rulings by the trial judge on certain issues of patent claim construction. These rulings then become the basis for later jury determination of the infringement claims, and can be very influential in determining the outcome of the litigation. The Delaware court's Markman ruling was issued in November. The Company believes the Markman ruling is generally favorable to the Company's position, and nothing in the ruling has changed the Company's view that its MultiWave 1600 system does not infringe any valid claim of the three remaining Pirelli patents and believes certain of the Pirelli patents and/or claims are invalid. Pirelli has filed a motion for reargument of certain portions of the court's ruling.

As the Delaware proceeding approaches trial, the Company expects pre-trial motions, including motions for summary judgment like those filed in the Virginia litigation, will be filed by both parties with a view to narrowing or disposing of one or more of the claims. The Company believes that rulings on such motions, whether the motions are made by CIENA or Pirelli, may but most likely will not result in complete disposition of all litigation, and continues to plan on going to trial in all litigation. The Company also anticipates that as the proceedings converge toward trial, either or both parties may take actions to amend or add to the patent infringement claims already pending. The Company continues to believe that its MultiWave systems do not infringe any valid claims of any patents held by Pirelli.

There can be no assurance that the Company will be successful in the Pirelli litigation, and an adverse determination in the Delaware court, either on a motion for summary judgment or in trial, could result from a finding of infringement of only one claim of a single patent. The Company may settle the case due to the costs and uncertainties associated with litigation in general and patent infringement litigation in particular and due to the fact that an adverse determination in the litigation could preclude the Company from producing MultiWave 1600 system until it was able to implement a non-infringing alternative design to any portion of the system to which such a determination applied. However, there can be no assurance that any settlement will be reached by the parties. The Company is planning on all litigation proceeding through trial. An adverse determination in, or settlement of, the Pirelli litigation could involve the payment of significant amounts, or could include terms in addition to such payments, which could have a material adverse effect on the Company's business, financial condition and results of operations.

Kimberlin Litigation. Kevin Kimberlin and parties controlled by him (the "Kimberlin Parties") are owners of Common Stock of the Company, the substantial majority of which has been derived from the conversion at the time of the Company's IPO of Series A, Series B and Series C Preferred Stock then owned by them. On November 20, 1996, the Kimberlin Parties filed suit in U.S. District Court for the Southern District of New York against the Company, and certain directors of the Company, alleging that the Kimberlin Parties were entitled to purchase additional shares of Series C Preferred Stock at the time of the closing of the Series C Preferred Stock financing, but were denied that opportunity by the defendants. The lawsuit alleges that certain rights of first refusal existing under the Series B Preferred Stock Purchase Agreement entitled the Kimberlin Parties to purchase more shares of Series C Preferred Stock than were in fact purchased by them at the time of the closing of the Series C Preferred Stock financing in December 1995. The lawsuit claims breach of contract, breach of fiduciary duty and violation of Securities and Exchange Commission Rule 10b-5 by the defendants. On January 6, 1997, the Company filed its answer to the Kimberlin Parties complaint, and filed a counterclaim for rescission of the sale of the shares of Series C Preferred Stock purchased by the Kimberlin Parties in the Series C Preferred Stock financing. The Kimberlin Parties amended their complaint in May 1997, alleging that the same facts and conduct with respect to the private placement of Series C Preferred Stock represent a violation of federal insider trading laws.

The number of shares to be purchased by each party to the Series C Preferred Stock financing was communicated in writing to the Kimberlin Parties in December 1995 prior to the Series C closing. Further, as permitted under the Series B Preferred Stock Purchase Agreement, the Series C Preferred Stock Purchase Agreement expressly stated that all rights of first refusal referred to in the lawsuit were waived. The required number of Series B investors, including the Kimberlin Parties, signed the Series C Preferred Stock Purchase Agreement containing that waiver. In July 1996, the Kimberlin Parties reaffirmed to the Company in writing that their beneficial ownership of shares did not include any shares which they have subsequently claimed in the lawsuit they were entitled to purchase. The Kimberlin Parties allege that they were misled into waiving their right of first refusal, and did not discover that they had been misled until October 1996.

The Company believes that the Kimberlin Parties' claims, brought as the Company's IPO was being prepared, and the amended claims, are without merit and intends to defend itself vigorously. The Company has moved for summary judgment on the entire matter, including the Company's counterclaim for rescission. The Company believes the motion for summary judgment should be granted, but there is no assurance of that outcome. If the motion is not granted the Company intends to proceed to trial.

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

No matters were submitted to a vote of security holders during fiscal 1997.

PART II

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

The Company's Common Stock has been traded on the Nasdaq National Market since the Company's initial public offering on February 7, 1997 under the Nasdaq symbol CIEN. The following table sets forth for the fiscal periods indicated the high and low sales prices of the Common Stock, as reported on the Nasdaq National Market.

	Price Range of Common Stock	
	High	Low
Fiscal Year 1997		
Period of February 7, 1997 to April 30, 1997....	$44.00	$22.25
Third Quarter ended July 31, 1997.....	$57.25	$28.50
Fourth Quarter ended October 31, 1997.....	$63.62	$43.00

The closing sale price for the Common Stock on October 31, 1997 was $55.00.

The market price of the Company's Common Stock has fluctuated significantly and may be subject to significant fluctuations in the future. See Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations-Risk Factors."

As of October 31, 1997, there were approximately 557 holders of record of the Company's Common Stock and 99,287,653 shares of Common Stock outstanding.

The Company has never paid cash dividends on its capital stock. The Company currently intends to retain earnings for use in its business and does not anticipate paying any cash dividends in the foreseeable future.

ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data should be read in conjunction with Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the consolidated financial statements and the notes thereto included in Item 8. "Financial Statements and Supplementary Data".

	FOR THE PERIOD FROM INCEPTION (NOVEMBER 2, 1992) THROUGH OCTOBER 31, 1993(1)	YEAR ENDED OCTOBER 31,(1)			
		1994	1995	1996	1997
	(in thousands except share and per share data)				
STATEMENT OF OPERATIONS DATA:					
Revenue	$ -	$ -	$ -	$ 54,838	$ 373,827
Cost of goods sold	-	-	-	21,844	136,187
Gross Profit	-	-	-	32,994	237,640
Operating expenses					
Research and development	-	1,287	6,361	8,922	23,308
Selling and marketing	-	295	481	3,780	20,899
General and administrative	123	787	896	3,905	16,731
Total operating expenses	123	2,369	7,738	16,607	60,938
Income (loss) from operations	(123)	(2,369)	(7,738)	16,387	176,702
Other income (expense), net	-	(38)	109	581	7,256
Income (loss) before income Taxes	(123)	(2,407)	(7,629)	16,968	183,958
Provision for income taxes	-	-	-	2,250	71,013
Net income (loss)	$ (123)	$ (2,407)	$ (7,629)	$ 14,718	$ 112,945
Pro forma net income per common and common equivalent share (2)				$ 0.15	$ 1.09

	October 31,(1)				
	1993	1994	1995	1996	1997
	(in thousands)				
BALANCE SHEET DATA:					
Cash and cash equivalents	$ 10	$ 1,908	$ 5,032	$ 22,557	$ 263,085
Working capital	(35)	932	3,069	35,856	325,050
Total assets	13	2,497	7,383	67,301	447,228
Long-term obligations, excluding current portion	-	392	856	2,673	1,200
Mandatorily redeemable preferred stock	-	3,492	14,454	40,404	-
Stockholders' equity (deficit)	(35)	(2,388)	(9,930)	4,970	363,584

(1) The Company has a 52 or 53 week fiscal year which ends on the Saturday nearest to the last day of October in each year. For purposes of financial statement presentation, each fiscal year is described as having ended on October 31. Fiscal 1994, 1995, and 1997 comprised 52 weeks and fiscal 1996 comprised 53 weeks.

(2) The pro forma weighted average common and common equivalent shares outstanding for year ended October 31, 1996 and 1997 was 99,111,000 and 103,765,000, respectively. Net income per common and common equivalent share is computed using the pro forma weighted average number of common and common equivalent shares outstanding. Pro forma weighted average common and common equivalent shares outstanding include Common Stock, stock options and warrants using the treasury stock method and the assumed conversion of all outstanding shares of Convertible Preferred Stock into Common Stock.

See Note 1 of Notes to Consolidated Financial Statements.

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 "Selected Consolidated Financial Data" and the Company's consolidated financial statements and notes thereto included elsewhere in this report on Form 10-K. The information in this Form 10-K contains certain forward-looking statements that involve risks and uncertainties. The Company's actual results may differ materially from the results discussed in the forward-looking statements. Factors that might cause such a difference include, but are not limited to, those discussed in "Management's Discussion and Analysis of Financial Condition and Results of Operations-Risk Factors" and "Business" as well as those discussed elsewhere in this Form 10-K.

OVERVIEW

CIENA Corporation is a leading supplier of DWDM systems for fiberoptic communications networks. CIENA's DWDM systems alleviate capacity constraints and enable flexible provisioning of additional bandwidth on high-traffic routes in carriers' networks.

The Company completed its initial public offering of 5,750,000 shares, inclusive of 750,000 shares from the exercise of the underwriters' over-allotment option, at a price of $23 per share on February 12, 1997. Net proceeds from the initial public offering were approximately $121.8 million with an additional $0.6 million received from the exercise of certain outstanding warrants. On July 8, 1997 the Company completed a public offering of 10,477,216 shares of which 1,252,060 shares were sold by the Company, inclusive of 252,060 shares from the exercise of the underwriters' over-allotment option, at a price of $44 per share. Net proceeds to the Company from the July public offering were approximately $52.2 million. The Company has added the net proceeds from the public offerings and from the exercise of the warrants to working capital. Pending use of the net proceeds, the Company has invested such funds in short-term, interest bearing investment grade obligations.

The Company recognizes product revenue in accordance with the shipping terms specified. For transactions where the Company has yet to obtain customer acceptance, revenue is deferred until the terms of acceptance are satisfied. Revenue for installation services is recognized as the services are performed unless the terms of the supply contract combine product acceptance with installation, in which case revenues for installation services are recognized when the terms of acceptance are satisfied and installation is completed. Amounts received in excess of revenue recognized are recorded as deferred revenue. For distributor sales where risks of ownership have not transferred, the Company recognizes revenue when the product is shipped through to the end user.

All of the Company's revenue of $54.8 million through October 31, 1996 was derived from MultiWave 1600 system sales to Sprint. Revenue for the fiscal year ended October 31, 1997 was $373.8 million and consisted primarily of MultiWave 1600 systems sales to Sprint, WorldCom, DTI, and through the Company's Japanese distributor Nissho, to Teleway. The DTI installation represented the Company's first deployment of the MultiWave 1600 as part of a newly built long distance fiberoptic route.

In June 1997, the Company signed an agreement to supply MultiWave 1600 systems to Mercury, a U.K. based subsidiary of Cable and Wireless Communications Group. The agreement calls for delivery and installation beginning in August 1997 and continuing through December 1997. The Company also entered into an agreement with BICC Cables, plc, to assist the Company in the delivery of service and support to Mercury in connection with this installation and operation. Revenue recognition for the entirety of the Mercury shipments has been deferred until completion of field testing.

In June 1997, the Company announced a next generation version of the MultiWave 1600 system, the MultiWave Sentry, which includes enhancements that significantly expand the ability of the MultiWave system to interface with data communications equipment in addition to other types of transmission equipment and increase the distance which can be spanned between transmission terminals. The Company also announced a trial evaluation agreement with AT&T, which calls for the Company to supply six 16-channel MultiWave Sentry systems for laboratory interoperability testing. In August 1997, the Company reached agreement on a five-year supply contract with AT&T. The supply agreement does not obligate AT&T to make any minimum purchases from the Company.

In September 1997, the Company signed an agreement through Nissho to supply MultiWave Sentry to Japan Telecom. The agreement calls for delivery and installation over several months beginning in October 1997. Revenue recognition for the Japan Telecom shipments has been deferred until completion of field testing and product acceptance.

The Company is engaged in continuing efforts to expand its manufacturing capabilities. In April 1997 the Company moved its non-manufacturing operating functions to an approximately 96,000 square foot facility near the Baltimore/Washington International Airport in Linthicum, Maryland. During the third quarter ended July 1997, the Company completed the process of renovating the vacated areas of the 50,500 square foot facility in Savage, Maryland for manufacturing capabilities. In March 1997, the Company signed a lease for an additional facility of approximately 57,000 square feet located in Linthicum to be used for manufacturing and support functions.

In September 1997 the Company leased an additional non-manufacturing facility of approximately 68,000 square feet in the Linthicum area, which it will use to transfer its principal executive offices in the second and third quarter of fiscal 1998. The Company's current 96,000 square foot facility would then be converted almost entirely to research and product development functions. The Company added leased non-manufacturing facilities during the fourth quarter of fiscal 1997 in Atlanta, Georgia and in Middletown, New Jersey. These facilities will be used for product development, customer support and other selling and marketing activities. The Company also expects to lease additional manufacturing facilities in the Linthicum area of approximately 50,000 to 100,000 square feet during fiscal 1998.

As of October 31, 1997 the Company and its subsidiaries employed 841 persons, which was an increase of 616 persons over the 225 employed on October 31, 1996.

RESULTS OF OPERATIONS

FISCAL YEARS ENDED 1995, 1996 AND 1997

REVENUE. During the fiscal year ended October 31, 1995 the Company was in the development stage and generated no revenue. The Company recognized $373.8 million and $54.8 million in MultiWave 1600 system revenue for the years ended October 31, 1997 and 1996, respectively. Revenue from installation services was $0.3 million for fiscal 1997 compared to no installation service revenue in fiscal 1996. The Company began shipping the MultiWave 1600 system for field testing in May 1996 with customer acceptance by Sprint occurring in July 1996. The MultiWave 1600 system began carrying live traffic in the Sprint network in October 1996. Initial field trials, customer acceptance, and the carrying of live traffic each occurred during fiscal 1997 in the WorldCom, Teleway, and DTI networks.

Sprint and WorldCom accounted for $179.4 million (48.0%) and $184.5 million (49.4%), respectively of the Company's revenue during fiscal 1997. Revenue derived from foreign sales accounted for less than 2% of the Company's revenues during fiscal 1997. The Company expects fiscal 1998 revenue from both Sprint and WorldCom to account for a lower percentage of the Company's total fiscal 1998 revenue and also expects an increase over the fiscal 1997 in the percentage of 1998 revenue derived from foreign sales.

The Company expects a decrease in the amount of revenues from MultiWave 1600 systems in fiscal 1998 as compared to fiscal 1997. The Company expects this decline in MultiWave 1600 revenue will be offset by the initial product acceptance and revenue recognition from system sales of MultiWave Sentry, MultiWave FireFly, MultiWave 4000 and additional installation services but given the recent introduction of these products, there can be no assurance that this will be the case. See"-Risk Factors."

GROSS PROFIT. Cost of goods sold consists of component costs, direct compensation costs, warranty and other contractual obligations, royalties, license fees, and overhead related to the Company's manufacturing and installation operations. Gross profit was $237.6 million and $33.0 million for fiscal years 1997 and 1996, respectively, with no comparable gross profit for fiscal 1995. Gross margin was 63.6% and 60.2% for fiscal 1997 and 1996, respectively. The increase in gross margin was affected by fixed overhead costs being allocated over a larger revenue base, an improvement in manufacturing efficiencies, and reductions in component costs.

The Company's gross margins in the future may be under pressure by a number of factors, including competitive market pricing, manufacturing volumes and efficiencies and fluctuations in component costs. See "-Risk Factors". During fiscal 1998 the Company expects that future gross margins may be affected by the mix of product features and configurations sold in a period as well as the extent of installation services provided.

RESEARCH AND DEVELOPMENT EXPENSES. Research and development expenses were $23.3 million, $8.9 million, and $6.4 million for fiscal 1997, 1996, and 1995, respectively. The approximate $14.4 million or 161% increase from fiscal 1996 to 1997 and the approximate $2.6, million or 40% increase from fiscal 1995 to fiscal 1996 in research and development expenses related to increased staffing levels, purchases of materials used in development of new or enhanced product prototypes, and outside consulting services in support of certain developments and design efforts. During fiscal 1997 and 1996 , research and development expenses were 6.2% and 16.3% of revenue, respectively. The Company expects that its research and development expenditures will continue to increase in absolute dollars and perhaps as a percentage of revenue during fiscal 1998 to support the continued development of the various DWDM products, the exploration of new or complementary technologies, and the pursuit of various cost reduction strategies. The Company has expensed research and development costs as incurred.

SELLING AND MARKETING EXPENSES. Selling and marketing expenses were $20.9 million, $3.8 million, and $0.5 million for fiscal 1997, 1996, and 1995, respectively. The approximate $17.1 million or 453% increase from fiscal 1996 to 1997 and the approximate $3.3 million or 686% increase from fiscal 1995 to fiscal 1996 in selling and marketing expenses was primarily the result of increased staffing levels in the areas of sales, technical assistance and field support, and increases in commissions earned, trade show participation and promotional costs. During fiscal 1997 and 1996, selling and marketing expenses were 5.6% and 6.9% of revenue, respectively. The Company anticipates that its selling and marketing expenses will increase in absolute dollars and perhaps as a percentage of revenue during fiscal 1998 as additional personnel are hired and additional offices are opened to allow the Company to pursue new market opportunities. The Company also expects the portion of selling and marketing expenses attributable to technical assistance and field support will increase as the Company's installed base of operational MultiWave systems increases.

GENERAL AND ADMINISTRATIVE EXPENSES. General and administrative expenses were $16.7 million, $3.9 million, and $0.9 million for fiscal 1997, 1996, and 1995, respectively. The approximate $12.8 million or 328% increase from fiscal 1996 to 1997 in general and administrative expenses was primarily the result of a $7.5 million charge for actual and estimated legal and related costs associated with ongoing and pending litigation. See Item 3. "Legal Proceedings". The remaining $5.3 million increase was primarily the result of increased staffing levels and outside consulting services. The approximate $3.0 million or 336% increase from fiscal 1995 to 1996 in general and administrative expenses was also the result of increased staffing levels and outside consulting services. During fiscal 1997 and 1996, general and administrative expenses were 4.5% and 7.1% of revenue, respectively. The Company believes that its general and administrative expenses will increase in absolute dollars and perhaps as a percentage of revenue during fiscal 1998 as a result of the expansion of the Company's administrative staff required to support its expanding operations and legal expenses associated with pending litigation.

OPERATING PROFIT. During fiscal 1995 the Company was in the development stage and generated no revenue and had a loss from operations of $7.7 million. The Company's operating profit for fiscal 1997 and 1996 was $176.7 million or 47.3% of revenue and $16.4 million or 29.9% of revenue, respectively. The Company expects that its operating profit will decrease as a percentage of revenue as it continues to hire additional personnel and increase operating expenses to support its business.

OTHER INCOME (EXPENSE), NET. Other income (expense), net, consists of interest income earned on the Company's cash and cash equivalents, net of interest expense associated with the Company's debt obligations. Other income (expense), net, was $7.3 million, $0.6 million, and $0.1 million for fiscal 1997, 1996, and 1995, respectively. The year to year increase in other income (expense), net, was primarily the result of the investment of the net proceeds of the Company's stock offerings.

PROVISION (BENEFIT) FOR INCOME TAXES. During fiscal 1995, a valuation allowance had been recorded to offset the Company's net deferred tax assets, including possible future benefit from realization of tax operating loss carryforwards. The recording of such valuation allowance was based upon management's determination that realization of the net deferred tax assets was not "more likely than not" (as defined in Statement of Financial Accounting Standards No. 109, " Accounting for Income Taxes"). During fiscal 1996, the Company received product acceptance from its initial customer and started profitable operations, at which time the Company fully reversed its previously established deferred tax valuation allowance. The provision for income taxes for fiscal 1996 of $2.3 million is net of an approximate tax benefit of $4.6 million related to the reversal of the deferred tax valuation allowance. See Note 7 of Notes to Consolidated Financial Statements. The Company's provision for income taxes was 38.6% of pre-tax earnings, or $71.0 million for fiscal 1997.

QUARTERLY RESULTS OF OPERATIONS

The tables below set forth the operating results and percentage of revenue represented by certain items in the Company's statements of operations for each of the eight quarters in the period ended October 31, 1997. This information is unaudited, but in the opinion of the Company reflects all adjustments (consisting only of normal recurring adjustments) that the Company considers necessary for a fair presentation of such information in accordance with generally accepted accounting principles. The results for any quarter are not necessarily indicative of results for any future period. Operating results as a percentage of revenue for the quarters ended January 31 and April 30, 1996 are excluded due to the absence of revenue for those periods:

	Fiscal Quarter Ended				
	Jan. 31, 1996	Apr. 30, 1996	Jul. 31, 1996	Oct. 31, 1996	Jan. 31, 1997
	(in thousands, except per share data)				
Revenue	$ -	$ -	$ 16,923	$ 37,915	$ 53,933
Cost of goods sold	-	-	7,346	14,498	20,832
Gross profit	-	-	9,577	23,417	33,101
Operating expenses:					
Research and development	2,473	1,746	1,964	2,739	3,050
Selling and marketing	491	700	1,130	1,459	2,598
General and administrative	499	526	1,064	1,816	6,295
Total operating expenses	3,463	2,972	4,158	6,014	11,943
Income (loss) from operations	(3,463)	(2,972)	5,419	17,403	21,158
Other income (expense), net	129	237	75	140	290
Income (loss) before income taxes	(3,334)	(2,735)	5,494	17,543	21,448
Provision (benefit) for income taxes	-	-	(4,600)	6,850	8,365
Net income (loss)	$ (3,334)	$ (2,735)	$ 10,094	$ 10,693	$ 13,083
Pro forma net income (loss) per common and common equivalent share (1) (2)	$ (0.03)	$ (0.03)	$ 0.10	$ 0.11	$ 0.13
Pro forma weighted average common and common equivalent shares outstanding (1)	99,111	99,111	99,111	99,111	99,425

	Fiscal Quarter Ended		
	April 30, 1997	Jul. 31, 1997	Oct. 31 1997
	(in thousands, except per share data)		
Revenue	$ 86,669	$ 112,189	$ 121,036
Cost of goods sold	32,008	40,158	43,189
Gross profit	54,661	72,031	77,847
Operating expenses:			
Research and development	4,699	7,245	8,314
Selling and marketing	4,485	6,315	7,501
General and administrative	2,106	2,630	5,700
Total operating expenses	11,290	16,190	21,515
Income (loss) from operations	43,371	55,841	56,332
Other income (expense), net	1,877	1,453	3,636
Income (loss) before income taxes	45,248	57,294	59,968
Provision (benefit) for income taxes	17,646	22,345	22,657
Net income (loss)	$ 27,602	$ 34,949	$ 37,311
Pro forma net income (loss) per common and common equivalent share (1) (2)	$ 0.26	$ 0.33	$ 0.35

Pro forma weighted average common and common equivalent shares outstanding (1)	104,457	105,296	106,308

	Fiscal Quarter Ended							
	Jan. 31, 1996	Apr. 30, 1996	Jul. 31, 1996	Oct. 31, 1996	Jan. 31, 1997	Apr. 30, 1997	Jul. 31, 1997	Oct. 31, 1997
	(as a percentage of revenue)							
Revenue	-	-	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %
Cost of goods sold	-	-	43.4	38.2	38.6	36.9	35.8	35.7
Gross profit	-	-	56.6	61.8	61.4	63.1	64.2	64.3
Operating expenses:								
Research and development	-	-	11.6	7.2	5.7	5.5	6.5	6.9
Selling and marketing	-	-	6.7	3.8	4.8	5.2	5.6	6.2
General and administrative	-	-	6.3	4.8	11.7	2.4	2.3	4.7
Total operating expenses	-	-	24.6	15.8	22.2	13.1	14.4	17.8
Income (loss) from operations	-	-	32.0	46.0	39.2	50.0	49.8	46.5
Other income (expense), net	-	-	0.4	0.3	0.6	2.2	1.3	3.0
Income (loss) before income taxes	-	-	32.4	46.3	39.8	52.2	51.1	49.5
Provision (benefit) for income taxes	-	-	(27.2)	18.1	15.5	20.3	19.9	18.7
Net income (loss)	-	-	59.6 %	28.2 %	24.3 %	31.9 %	31.2 %	30.8 %

(1) The pro forma net income (loss) per common and common equivalent share are presented on a pro forma basis for all periods stated, except for the quarters ended July 31, 1997 and October 31, 1997, which is presented on a historical basis. Pro forma weighted average common and common equivalent shares outstanding include Common Stock, stock options and warrants using the treasury stock method and the assumed conversion of all outstanding shares of Convertible Preferred Stock into Common Stock. See Note 1 of Notes to Consolidated Financial Statements.

(2) The sum of the quarterly earnings per share for fiscal 1997 does not equal the reported annual earnings per share for fiscal 1997 due to the effect of the Company's stock issuances during the year.

QUARTERLY RESULTS OF OPERATIONS CONTINUED

The Company's quarterly operating results have varied and are expected to vary significantly in the future. These fluctuations may be caused by many factors, including, among others, the size and timing of customer orders and the related field testing and product acceptance cycle times; increases in manufacturing and operating expenses in anticipation of expected customer demand; effective transition and market acceptance of new and multiple product lines; competitive pricing pressures; mix of products and services sold; intellectual property litigation; and general economic conditions. As a result of the foregoing and other factors, the Company believes that period-to-period comparisons of its results of operations are not necessarily meaningful and should not be relied upon as indications of future performance. See "-Risk Factors".

The Company's revenue increased significantly on a quarter-to-quarter basis since the Company's initial customer acceptance during the quarter ended July 31, 1996 to the quarter ended July 31, 1997. The fourth quarter ended October 31, 1997 posted an increase in revenue as compared to the third quarter ended July 31, 1997 with moderating sequential growth in percentage terms as compared to the previous quarters. The moderating revenue growth in the fourth quarter of fiscal 1997 was attributable to a year-end wind-down of the annual capital equipment procurement cycle of one of the two primary customers of the Company.

The Company currently expects revenue for the first quarter of fiscal 1998 to show sequential growth, with the rate to be comparable or perhaps modestly above that experienced between the third and fourth quarters of fiscal 1997. However, due to the evolving nature of the markets for the Company's products and other factors, there can be no assurance that the Company's revenues will increase on a quarter-to-quarter basis or at all in future periods. See "-Risk Factors".

Operating expenses have generally increased in absolute dollars over the quarters shown as the Company has increased staffing and related infrastructure costs in its research and development, selling and marketing, and administrative functions. Quarter-to-quarter growth in research and development was primarily attributable to increased staffing levels, purchases of materials used in the development of new or enhanced prototypes, and outside services in support of certain developments and design efforts. Quarter-to-quarter growth in selling and marketing was primarily the result of increased staffing levels in the areas of sales, technical assistance and field support, and increases in commissions earned, trade show participation and promotional costs. For the quarters ended January 31, 1997 and October 31, 1997, the increases in general and administrative costs were primarily the result of a $5.0 and $2.5 million charge, respectively, to accrue estimated legal and related costs associated with pending litigation. See Item 3."Legal Proceedings".

LIQUIDITY AND CAPITAL RESOURCES

The Company financed its operations and capital expenditures from inception through fiscal 1996 principally through the sale of Convertible Preferred Stock for proceeds totaling $40.6 million and capital lease financing totaling $4.1 million. The Company completed its initial public offering of Common Stock in February 1997 and realized net proceeds of approximately $121.8 million with an additional $0.6 million received from the exercise of certain outstanding warrants. In July 1997, the Company completed a public offering of Common Stock and realized net proceeds of approximately $52.2 million. During fiscal 1997 the Company also realized approximately $53.1 million in tax benefits from the exercise of stock options and certain stock warrants. As of October 31, 1997, the Company had $263.1 million in cash and cash equivalents.

The Company's operating activities used cash of $6.6 million in fiscal 1995 and provided cash of $80.1 million and $0.6 million for fiscal 1997 and 1996, respectively. The cash used in operations in fiscal 1995 was accounted for primarily by the Company's development stage operating losses. Cash provided by operations in fiscal 1997 and 1996 was principally attributable to net income adjusted for the non-cash charges of depreciation, amortization, provisions for inventory obsolescence and warranty, increases in accounts payable, accrued expenses and income tax payable; offset by increases in accounts receivable and inventories due to increased revenue and to the general increase in business activity.

Cash used in investing activities in fiscal 1995, 1996 and 1997 were $2.0 million, $11.5 million and $66.6 million, respectively. Included in investment activities were capital equipment expenditures in fiscal 1995, 1996 and 1997 of $1.9 million, $9.8 million and $51.7 million, respectively. These capital equipment expenditures were primarily for test, manufacturing and computer equipment. The Company expects additional capital equipment expenditures to be made during fiscal 1998 to support selling and marketing, manufacturing and product development activities. In addition, since its inception the Company's investing activities have included the use of

$17.3 million for the construction of leasehold improvements and expects to use an additional $9.9 million of capital in the construction of leasehold improvements for its new facilities. See Item 2. "Properties". The Company intends lease additional facilities of 50,000 to 100,000 square feet in mid-1998 and may spend up to $5.0 million to $10.0 million in improving such facilities as and to the extent necessary to meet expansion requirements.

The Company believes that its existing cash balance and cash flows expected from future operations will be sufficient to meet the Company's capital requirements for at least the next 18 to 24 months.

RISK FACTORS

Concentration of Potential Customers; Dependence on Major Customers. The Company is currently dependent on two customers and has relatively few potential customers, consisting almost exclusively of long distance and other telecommunications carriers using fiberoptic networks. The number of potential customers may also decrease if and as customers merge with or acquire one another. In November 1997, WorldCom and MCI announced an agreement to merge. The distraction sometimes attendant to such mergers could delay, limit or otherwise adversely affect the capital equipment purchasing patterns of the parties to them, with a corresponding adverse effect on the Company's sales. While the Company has seen little evidence of such an effect to date, the Company's business will in any case for the foreseeable future be dependent on a small number of existing and potential customers. Substantially all of the Company's revenue for fiscal 1997 was derived from Sprint and WorldCom; a substantial majority of the Company's revenue for fiscal 1998 is expected to be derived from Sprint, WorldCom and, depending on the results of ongoing testing and evaluation, AT&T. WorldCom may terminate all or any part of an outstanding purchase order upon the payment of a termination fee and the Company's agreement with WorldCom does not require minimum purchase commitments. Although the Company now has five customers, there can be no assurance that the Company will be able to develop additional customers or that the Company will not continue to be dependent on Sprint and WorldCom.

Although the Company has previously announced a trial evaluation agreement and a five year supply agreement with AT&T, before AT&T would become a purchasing customer, the Company will have to be successful in rigorous testing and evaluation which are ongoing over the next several months. The Company believes it will be successful in such testing and evaluation, but there is no assurance of that outcome, nor is there assurance as to when the period of testing will be completed. Even if testing is successfully completed, the Company does not expect shipments to begin until late in the first half of 1998 (with acceptance and revenue recognition to follow in the second half), and in any event the Company is unable to predict the volume, duration or timing of any purchases which might ensue from AT&T. The reduction, delay or cancellation of orders, or a delay in shipment of the Company's products to Sprint or WorldCom, or the inability to develop AT&T as a significant customer, as well as additional customers in the telecommunications market, could and likely would have a material adverse affect on the Company's business, financial condition and results of operations.

The Company's dependence on sizable orders from very few customers makes the relationship between the Company and each customer critically important to the Company's business. While each customer relationship is typically structured around a detailed, heavily negotiated contract, as the relationship evolves over time, adjustments to such items as product specifications, laboratory and field testing plans, customer forecasts and delivery timetables, and installation and field support requirements may be required in response to customer demands and expectations. The inability of the Company to manage its customer relationships successfully would have a material adverse effect on the Company's business, financial condition and results of operations.

Additionally, the size and complexity of the Company's potential customers, and the typically long and unpredictable sales cycles associated with them, require the Company to make considerable early investments in account management personnel, product customization efforts in both engineering and manufacturing, and in some cases, facilities in proximity to the customer's locations, without assurance of future revenues. For example, due to the size and complexity of the AT&T network, the Company has invested and expects over fiscal 1998 to continue to invest considerable financial, engineering, manufacturing and logistics support resources in positioning the commercial relationship to be successful, but has done so and will continue to do so without any assurance as to the volume, duration or timing of any purchases which might ensue from AT&T. The Company intends to make similar investments in developing customer relationships with the RBOCs and CLECs, as well as internationally. Over the near term, this investment of resources will be evident in increased operating expenses and in a rise in the Company's general overhead structure, with the result that the Company's near term earnings may moderate or decline, even if revenues increase. If the Company is unable to convert these investments into significant revenue generating relationships by the second half of fiscal 1998, the Company's business, financial condition and results

of operations for the year could be materially and adversely affected.

Dependence on Effective Transition to Multiple Product Lines. Substantially all the Company's revenues in fiscal 1997 were derived from sales of its original product, the MultiWave 1600 system. The Company believes the enhanced features of the 16 channel MultiWave Sentry, as well as long distance carriers' increased interest in higher capacity systems, will result in the largest portion of production capacity in fiscal 1998 being shifted to the MultiWave Sentry and, to a lesser extent, the MultiWave 4000 and MultiWave Firefly systems. While much of the manufacturing process for these systems is identical to that involved in the manufacture of the MultiWave 1600, there are important differences in raw materials and components, as well as even more precise performance specifications. Manufacturing yields in the first several months of production may be adversely impacted as the transition is made to full production of these new systems. Additionally, not all of the component suppliers for these new systems have demonstrated the ability to ramp up their production to keep pace with the Company's needs. The Company must effectively manage the transition in manufacturing with a minimum of delay or disruption in product deliveries. The failure to do so would likely have an adverse effect on the Company's customer relationships, with attendant risk of adverse effects on the level and timing of ongoing customer orders, as well as on the development of new customers. The Company believes that its experience in accomplishing the ramp up of manufacturing capacity for the MultiWave 1600 will facilitate an effective manufacturing transition to the MultiWave Sentry, MultiWave 4000, and MultiWave Firefly, but there can be no assurance of that the Company will be successful in doing so.

Management of Expansion. The Company is experiencing rapid expansion in all areas of its operations, particularly in manufacturing, and the Company anticipates that this expansion will continue in the near future. Total personnel grew from 225 at October 31, 1996 to 841 at October 31, 1997. Total facilities' space will have increased from 50,500 square feet in one facility as of the fiscal year ended October 31, 1996, to approximately 360,000 square feet in six facilities in Maryland by mid-1998. The Company has leased approximately 40,000 square feet near Atlanta, Georgia to establish a research and development support organization.

This expansion, and the attendant separation and relocation of various functions to different facilities, has placed strains on the material, financial and personnel resources of the Company and will continue to do so. The pace of the Company's expansion, in combination with the complexity of the technology involved in the manufacture of the Company's systems, demands an unusually high level of managerial effectiveness in anticipating, planning, coordinating and meeting the operational needs of the Company and the needs of the Company's customers, who are among the most demanding customers in the world in terms of requirements for quality, reliability, timely delivery and post-installation field support. The rapid pace and volume of new hiring, the timely build out of new facilities, and the accelerated ramp up in manufacturing capacity, if not effectively managed, could adversely affect the quality or efficiency of the Company's manufacturing process. The conversion to full scale production in fiscal 1998 of the Company's new MultiWave Sentry, MultiWave 4000 and MultiWave Firefly product lines will also present substantial management and manufacturing challenges, as the scope of material planning and labor involvement are different and more expansive than was the case with the Company's original MultiWave 1600 product line.

Additionally, as the Company's installed base of equipment expands, the Company must keep up the rapid pace and volume of new hiring and employee training in important areas such as customer support. The Company's success internationally may depend as much on the successful build up of support and service functions as on product performance. Further, as the Company's base of customers expands, particularly internationally, the number and breadth of expertise of Company personnel needed to manage and, ultimately, satisfy the unique requirements of each customer also increases.

The Company also continues to increase its flow of materials, optical assembly, final assembly and final component module and system test functions, as well as the size of its sales and marketing organization for all product lines, in anticipation of a level of customer orders that has not been historically experienced by the Company and that may not be achieved. The Company is also encountering increased demands for test systems from various potential customers domestically and internationally. Manufacturing capacity must be planned, and customer account management personnel added, to accommodate these demands even though revenue for test systems may not be realized until later, if at all.

Given the small number of existing and potential customers for the Company's systems, as well as the widely varying volume requirements they may have once a purchasing decision has been made, the adverse effect on the

Company resulting from a lack of effective management in any of these areas will be magnified. Inability to manage the expansion of the Company's business would have a material adverse effect on its business, financial condition and results of operations.

Recent Product Introduction. The Company first began commercial shipments of its MultiWave 1600 systems in May 1996 and its first operational systems began carrying live traffic in October 1996. Accordingly, the Company's MultiWave 1600 systems do not have a history of live traffic operation over an extended period of time and the fully featured MultiWave Sentry and MultiWave Firefly systems are not yet commercially deployed. The Company's history of installation activity indicates that the newness and high precision nature of DWDM 1600 equipment may require enhanced customer training and installation support from the Company. The Company is aware of instances in which installation and activation of certain MultiWave systems have been delayed due to faulty modules or components used in these systems and, in a few cases, due to interoperability adjustments required in the field to accommodate certain customer operated transmission equipment. The Company is aware of few performance issues once the systems are installed and operational. However, if recurring or material reliability, quality or network monitoring problems should develop, a number of material and adverse effects could result, including manufacturing rework costs, high service and warranty expense, high levels of product returns, delays in collecting accounts receivable, reduced orders from existing customers and declining level of interest from potential customers. Although the Company maintains accruals for product warranties, there can be no assurance that actual costs will not exceed these amounts. There is a considerable number of the Company's systems scheduled to be turned up for live traffic operation over the next several months, and many already activated systems may be scheduled to add new operating channels. The Company expects there will be interruptions or delays from time to time in the activation of the systems and the addition of channels, particularly because the Company does not control all aspects of the installation and activation activities. If significant interruptions or delays occur, or if their cause is not promptly identified, diagnosed and resolved, confidence in MultiWave systems could be undermined. An undermining of confidence in MultiWave systems would have a material adverse effect on the Company's customer relationships, business, financial condition and results of operations.

New Product Development Delays. The Company's ability to anticipate changes in technology, industry standards, customer requirements and product offerings and to develop and introduce new and enhanced products will be significant factors in the Company's ability to remain a market leader in the deployment of DWDM systems, and to maintain its financial strength. The complexity of the technology involved in product development efforts in the DWDM field, including product customization efforts for individual customers, can result in unanticipated delays. The qualification and ramping up of new suppliers for new or customized products requires extensive planning and can result in unanticipated delays which affect the Company's ability to deliver such products in a timely fashion. The failure in the future to deliver new and improved products, or appropriately customized products, in a timely fashion relative to customer expectations, including specifically the delivery of MultiWave Sentry, MultiWave 4000 and MultiWave Firefly in the first half of calendar 1998 so as to assure revenue recognition in the second half, would have a material adverse effect on the Company's competitive position and financial condition.

Competition. The Company believes the rapid pace at which the need for higher and more cost-effective bandwidth has developed was not widely anticipated in the global telecommunications industry. However, competition in the global telecommunications industry historically has been dominated by a small number of very large companies, each of which have greater financial, technical and marketing resources, greater manufacturing capacity and more extensive and established customer relationships with network operators than the Company. Each of Lucent, Alcate, Nortel, NEC, Pirelli, Siemens and Ericsson are expected to move aggressively to capture market share in the DWDM market. The Company expects aggressive competitive moves from these industry participants, which have to date included early announcement of competing or alternative products, and significant price discounting. In addition, Lucent, Alcatel, Nortel, NEC and Siemens are already providers of a full complement of switches, fiberoptic transmission terminals and fiberoptic signal regenerators and thereby can position themselves as vertically integrated, "one-stop shopping" solution providers to potential customers. Further, in certain cases, competitors have offered the Company's target customers, on an immediate delivery basis, off-the-shelf TDM transmission equipment at comparatively lower prices, with a promise to upgrade to DWDM or other improved equipment in the future. Competitors have also offered the newest TDM equipment, referred to as OC-192 (capable of 10 gigabit per second transmission), with similar promises of upgrade.

The substantial system integration resources, sales and support staff and manufacturing capability of the TDM suppliers, in combination with any difference in timeliness of delivery, can be important to network operators. As and when these competitors are able to offer DWDM systems in combination with their own fiberoptic transmission terminals, they can be expected to press further on the attractiveness of a "one-stop shopping" solution. While

competition in general is broadly based on varying combinations of price, manufacturing capacity, timely delivery, system reliability, service commitment and installed customer base, as well as on the comprehensiveness of the system solution in meeting immediate network needs and foreseeable scaleability requirements, the Company's customers are themselves under increasing competitive pressure to deliver their services at the lowest possible cost. This pressure may result in pricing for DWDM systems becoming a more important factor in customer decisions, which may favor larger competitors which can spread the effect of price discounts in their DWDM product lines across an array of products and services, and a customer base, which are larger than the Company's.

Intellectual property disputes may also be asserted as part of a competitive effort to reduce the Company's leadership position and limit its ability to achieve greater market share, even if the merits of specific disputes are doubtful. See "Proprietary Rights".

There can be no assurance that the Company will be able to compete successfully with its competitors or that aggressive competitive moves faced by the Company will not result in lower prices for the Company's products, decreased gross profit margins, and otherwise have a material adverse effect on its business, financial condition and results of operations.

Pirelli Litigation; Other Legal Proceedings. On December 20, 1996, a U.S. affiliate of Pirelli SpA ("Pirelli") filed suit in U.S. District Court in Delaware, alleging willful infringement by the Company of five U.S. patents held by Pirelli. The lawsuit seeks treble damages, attorneys' fees and costs, as well as preliminary and permanent injunctive relief against the alleged infringement. On February 10, 1997, the Company filed its answer denying infringement, alleging inequitable conduct on the part of Pirelli in the prosecution of certain of its patents, and stating a counterclaim against the relevant Pirelli parties for a declaratory judgment finding the Pirelli patents invalid and/or not infringed. Following the filing of the Company's answer, Pirelli dedicated to the public and withdrew from the lawsuit all infringement claims relating to one of the five patents. In September 1997, Pirelli withdrew another patent from the suit, leaving three patents at issue. Expert discovery proceedings are ongoing, and are currently expected to be completed by January 31, 1998, with trial expected no earlier than mid-1998.

In February, 1997, the Company filed a complaint against Pirelli with the International Trade Commission ("ITC"), based on the Company's belief that a 32 channel DWDM system announced by Pirelli infringed at least two of the Company's patents. The Company's complaint sought a ban on the importation by Pirelli into the U.S. of any infringing 32 channel system. A formal investigative proceeding was instituted by the ITC on April 3, 1997. On November 24, 1997, the parties settled the matter by entry of a Consent Order, which is currently being reviewed by the ITC. Under the Consent Order, Pirelli has agreed not to import into the United States WDM components and or systems which infringe the Company's patented in fiber Bragg gratings-based WDM systems.

On March 14, 1997, the Company filed suit against Pirelli in U.S. District Court in the Eastern District of Virginia, alleging willful infringement by Pirelli of three U.S. patents held or co-owned by the Company. In September 1997, the Company withdrew one of the three patents from the suit. The lawsuit seeks treble damages, attorneys' fees and costs, as well as permanent injunctive relief against the alleged infringement. The two patents now at issue relate to certain of Pirelli's cable television equipment, and to certain Pirelli fiberoptic communications equipment announced by Pirelli in January 1997 as being deployed in a field trial in the MCI network. Motions for summary judgment by both parties are currently pending on the issue of infringement as it relates to the cable television patent, and Pirelli has also filed a motion for summary judgment of invalidity on this patent. As to the second of the two patents, on December 5, 1997, the court issued an order granting partial summary judgment for Pirelli on the issue of non-infringement, and denying Pirelli's motion for summary judgment of invalidity of this patent. Trial is currently scheduled for January 1998. There is no assurance that the Company's pending motion as to the cable television patent will be granted, or that Pirelli's motions will be denied. In the event Pirelli's motions are granted, the Company may appeal.

The Company continues to believe its MultiWave 1600 system does not infringe any valid claim of the three remaining Pirelli patents and believes certain of the Pirelli patents and/or claims are invalid. The Company is defending itself vigorously, and is planning on all remaining litigation proceeding through trial. In light of the complexity and likely time-consuming nature of the litigation, including the Company's counterclaim, the ITC proceeding, and the Company's patent infringement lawsuit against Pirelli in the Eastern District of Virginia, the Company recorded a charge of approximately $7.5 million in estimated legal and related costs associated with these proceedings during fiscal 1997. While the Company believes its estimate of legal and related costs is adequate based on its current understanding of the overall facts and circumstances, the estimate may be increased in future periods depending on the course of the legal proceedings.

The Pirelli proceedings have been and will continue to be costly and involve a substantial diversion of the time

and attention of some members of management. Further, the Company believes Pirelli and other competitors have used the existence of the Delaware litigation to raise questions in customers' and potential customers' minds as to the Company's ability to manufacture and deliver the MultiWave 1600 system. There can be no assurance that such efforts by Pirelli and others will not disrupt the Company's existing and prospective customer relationships.

In the Delaware litigation, the so-called "Markman" hearing was conducted in September 1997. Markman hearings are pre-trial proceedings required in all patent infringement litigation, and result in rulings by the trial judge on certain issues of patent claim construction. These rulings then become the basis for later jury determination of the infringement claims, and can be very influential in determining the outcome of the litigation. The Delaware court's Markman ruling was issued in November. The Company believes the Markman ruling is generally favorable to the Company's position, and nothing in the ruling has changed the Company's view that its MultiWave 1600 system does not infringe any valid claim of the three remaining Pirelli patents and believes certain of the Pirelli patents and/or claims are invalid. Pirelli has filed a motion for reargument of certain portions of the court's ruling.

As the Delaware proceeding approaches trial, the Company expects pre-trial motions, including motions for summary judgment like those filed in the Virginia litigation, will be filed by both parties with a view to narrowing or disposing of one or more of the claims. The Company believes that rulings on such motions, whether the motions are made by CIENA or Pirelli, may but most likely will not result in complete disposition of all litigation, and continues to plan on going to trial in all litigation. The Company also anticipates that as the proceedings converge toward trials, either or both parties may take actions to amend or add to the patent infringement claims already pending. The Company continues to believe that its MultiWave systems do not infringe any valid claims of any patents held by Pirelli.

There can be no assurance that the Company will be successful in the Pirelli litigation, and an adverse determination in the Delaware court, either on a motion for summary judgment or in trial, could result from a finding of infringement of only one claim of a single patent. The Company may settle the case due to the costs and uncertainties associated with litigation in general and patent infringement litigation in particular and due to the fact that an adverse determination in the litigation could preclude the Company from producing MultiWave 1600 system until it was able to implement a non-infringing alternative design to any portion of the system to which such a determination applied. However, there can be no assurance that any settlement will be reached by the parties. The Company is planning on all litigation proceeding through trial. An adverse determination in, or settlement of, the Pirelli litigation could involve the payment of significant amounts, or could include terms in addition to such payments, which could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company and certain directors are defendants in another lawsuit brought by entities controlled by a stockholder of the Company concerning alleged entitlement to additional shares of Convertible Preferred Stock. No assurance can be given that this lawsuit will not result in an adverse effect on the Company's business, financial condition and results of operations. See Item 3. "Legal Proceedings".

Proprietary Rights. The Company relies on patents, contractual rights, trade secrets, trademarks and copyrights to establish and protect its proprietary rights in its product. While the Company does not expect that its proprietary rights in its technology will prevent competitors from developing technologies and products functionally similar to the Company's, the Company believes many aspects of its DWDM technologies and know-how are proprietary, and intends to monitor closely the DWDM products introduced by competitors for any infringement of the Company's proprietary rights. Additionally, the Company expects that DWDM technologies and know-how in general will become increasingly valuable intellectual properties as the competition to achieve higher and more cost effective bandwidth intensifies. The Company believes this increasing value in an industry marked by a few very large competing suppliers represents a competitive environment where intellectual property disputes are likely. On December 20, 1996, a U.S. affiliate of Pirelli filed a lawsuit against the Company alleging infringement of certain U.S. patents held by Pirelli (the "Pirelli Litigation"). Intellectual property disputes may be initiated by competitors against the Company for tactical purposes to gain competitive advantage or overcome competitive disadvantage, even if the merits of specific disputes are doubtful. In the future, the Company may be required to bring or defend against other litigation to enforce any patents issued or assigned to the Company, to protect trademarks, trade secrets and other intellectual property rights owned by the Company, to defend the Company against claimed infringement of the rights of others and to determine the scope and validity of the proprietary rights of others. Any litigation, including the Pirelli Litigation, could be costly and a diversion of management's attention, which could have a material adverse effect on the company's business, financial condition and results of operations. Adverse

determinations in litigation, including in the Pirelli Litigation, could result in the loss of the Company's proprietary rights, subject the Company to significant liabilities, require the Company to seek licenses from third parties or prevent the Company from manufacturing or selling its products, any of which could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company has received, and may receive in the future, notices from holders of patents in the optical technology field that raise issues as to possible infringement by the Company's products. Pirelli sent a notice in December 1995 identifying eleven patents it possesses in the field of optical communications. The Company believes the MultiWave 1600 system does not infringe any valid patents cited in any notices received. However, questions of infringement in the field of DWDM technologies involve highly technical and subjective analyses. There can be no assurance that any such patent holders or others will not in the future initiate legal proceedings against the Company or that, if any such proceedings were initiated, the Company would be successful in defending against these actions. On December 20, 1996, a U.S. affiliate of Pirelli filed a lawsuit against the Company alleging infringement of certain U.S. patents. Even if the Company is successful in defending against the Pirelli Litigation or any other such actions, these actions could have an adverse effect on existing and potential customer relationships and therefore could have a material adverse effect on the Company's business, financial condition and results of operations. The Company's existing customer agreements provide for indemnification of customers for liability that may be incurred in connection with the infringement of a third party's intellectual property rights, and the Company expects that it will be requested to agree to indemnify other potential customers in the future. There can be no assurance that such indemnification against alleged liability will not be required from the Company in the future.

Patent applications in the United States are not publicly disclosed until the patent issues. The Company anticipates, based on the size and sophistication of its competitors and the history of rapid technological advances in its industry, that several competitors may have patent applications in progress in the United States that, if issued, could relate to the Company's products. If such patents were to issue, there can be no assurance that the patent holders or licensees will not assert infringement claims against the Company or that such claims will not be successful. The Company could incur substantial costs in defending itself and its customers against any such claims, regardless of the merits of such claims. Parties making such claims may be able to obtain injunctive or other equitable relief which could effectively block the Company's ability to sell its products, and each claim could result in an award of substantial damages. In the event of a successful claim of infringement, the Company and its customers may be required to obtain one or more licenses from third parties. There can be no assurance that the Company or its customers could obtain necessary licenses from third parties at a reasonable or acceptable cost or at all.

Substantial inventories of intellectual property are held by a few industry participants, such as Bell Laboratories (now owned by Lucent) and major universities and research laboratories. This concentration of intellectual property in the hands of few major entities also poses certain risks to the Company in seeking to hire qualified personnel. The Company has on a few occasions recruited such personnel from competitors. The Company in the past received letters from counsel to Lucent asserting that the hiring of their personnel compromises Lucent's intellectual property. There can be no assurance that other companies will not claim the misappropriation or infringement of their intellectual property, particularly when and if employees of these companies leave to work for the Company. To date, the Company has not experienced litigation concerning the assertions by Lucent, and believes there is no basis for claims against the Company. Nevertheless, there can be no assurance that the Company will be able to avoid litigation in the future, particularly if new employees join the Company after having worked for a competing company. Such litigation could be very expensive to defend, regardless of the merits of the claims.

The successful resolution of intellectual property disputes may depend, in part, on the extent of the Company's portfolio of intellectual property rights which could be available for cross-licensing as a means of settling disputes. The Company's current portfolio of patents is not as broad or extensive as those of its major competitors, and there is no assurance the Company will be able to add to its patent portfolio.

As the Company seeks to expand internationally, the Company will need to take steps to protect its proprietary rights under foreign patent and trademark laws. Many of these laws are not as well developed or do not afford the same degree of protection as United States laws and no assurance can be given that the Company will not encounter difficulties in protecting its proprietary rights outside the United States or will not infringe the rights of others outside the United States.

Fluctuation in Quarterly and Annual Results. The Company's revenue and operating results are likely to vary significantly from quarter to quarter and from year to year as a result of a number of factors, including the size and timing of orders, product mix and shipments of systems. The timing of order placement, size of orders, satisfaction of contractual customer acceptance criteria, as well as order delays or deferrals and shipment delays and deferrals, may cause material fluctuations in revenue. Delays or deferrals in purchasing decisions may increase as the Company develops or introduces other DWDM products, such as the MultiWave Sentry, MultiWave 4000, MultiWave Firefly and the MultiWave Metro. The Company's dependence on a small number of existing and potential customers increases the revenue impact of each customer's actions relative to these factors. Delivery of new equipment for installation may also be deferred during the high telecommunications traffic periods in November and December so as not to risk network reliability problems. The Company's expense levels in the future will be partially based on its expectations of long term future revenue and as a result net income any quarterly period in which material orders are shipped or delayed or not forthcoming could vary significantly. The Company's expense levels for the next two quarters are expected to reflect substantially increased investment in financial, engineering, manufacturing and logistics support resources in positioning the AT&T and other potential commercial relationships to be successful, even though there is no assurance as to the volume, duration or timing of any purchases which might ensue from AT&T or others. Over the near term, this investment of resources will be evident in increased operating expenses and in a rise in the Company's general overhead structure, with the result that the Company's near term earnings may moderate or decline, even if revenues increase. In general, quarter-to-quarter sequential revenue growth rates in the first two or three years of operations are likely to vary widely and therefore may not be reliable indicators of annual performance.

Dependence on Suppliers. Suppliers in the specialized, high technology sector of the optical communications industry are generally not as plentiful or, in some case, as reliable, as suppliers in more mature industries. The Company is dependent on a limited number of suppliers for components of the MultiWave systems as well as equipment used to manufacture the MultiWave systems. The MultiWave 1600 system has over 600 components, and the commencement of full production of the MultiWave Sentry, MultiWave Firefly and MultiWave 4000 systems will increase the number by more than double (to approximately 1400 parts) and also the variety of components significantly. Not all of the component suppliers for these new systems have demonstrated the ability to ramp up their production to keep pace with the Company's needs. Certain key optical and electronic components are currently available only from a sole source, where the Company has identified no other suppliers for the component. While alternative suppliers have been identified for certain other key optical and electronic components, those alternative sources have not been qualified by the Company. The Company has to date conducted the majority of its business with suppliers through the issuance of conventional purchase orders against the Company's forecasted requirements. The Company is seeking to negotiate long term supply agreements with key suppliers, but currently has only a few such agreements. The Company has from time to time experienced minor delays in the receipt of key components, and has noticed a lengthening of lead times in the ordering of certain components. Any future difficulty in obtaining sufficient and timely delivery of components could and likely would result in delays or reductions in product shipments which, in turn, could have a material adverse effect on the company's business, financial condition and results of operations. In addition, the Company's strategy to have portions of its product assembled and, in certain cases, tested by third parties involves certain risks, including the potential absence of adequate capacity, the unavailability of or interruptions in access to certain process technologies, and reduced control over delivery schedules, manufacturing yields, quality and costs. In the event that any significant supplier or subcontractor were to become unable or unwilling to continue to manufacture and/or test the Company's systems in required volumes, the Company would have to identify and qualify acceptable replacements. This process could also be lengthy and no assurance can be given that any additional sources would become available to the Company on a timely basis. A key item of equipment, the E-2000 Diamond connector, which is used to manufacture a portion of the MultiWave system, is available only from a sole source--the Diamond Company. A delay or reduction in component or equipment shipments, an increase in component or equipment costs or a delay or increase in costs in the assembly and testing of products by third party subcontractors could materially and adversely affect the Company's business, financial condition and results of operations.

Competitors as Suppliers. Certain of the Company's component suppliers are both primary sources for such components and major competitors in the market for system equipment. For example, the Company buys certain key components from Lucent, Alcatel, Nortel, NEC and Siemens, each of which offers optical communications systems and equipment which are competitive with the Company's DWDM systems. Lucent is the sole source of two integrated circuits and is one of two suppliers of Erbium-doped fiber. Alcatel and Nortel are suppliers of lasers used in the MultiWave system. NEC is a supplier of certain testing equipment. The Company's business, financial condition and results of operations could be materially and adversely affected if these supply relationships were to

decline in reliability or otherwise change in any manner adverse to the Company. Although the Company has not experienced to date any decline in reliability among these vendors, this risk factor increases in importance given the Company's expansion efforts, new products, and the increasingly competitive environment in which the Company operates.

Stock Price Volatility. The Company's Common Stock price has experienced substantial price volatility, and is likely to continue to do so. Such volatility can arise as a result of any divergence between the Company's actual or anticipated financial results and published expectations of analysts and as a result of announcements by the Company and its competitors. The Company attempts to address this possible divergence through its public announcements; however, the degree of specificity the Company can offer in such announcements, and the likelihood that any forward-looking statements made by the Company will prove correct in actual results, can and will vary, due primarily to the uncertainties associated with the Company's dependence on a small number of existing and potential customers, long and unpredictable sales cycles and customer purchasing programs, the absence of unconditional minimum purchase commitments from any customer, a declining level of visibility into its customers' deployment plans over the course of the capital equipment procurement year, and the lack of reliable data on which to anticipate core demand for high bandwidth transmission capacity. Such divergence may therefore occur from time to time, with resulting stock price volatility, irrespective of the Company's overall year to year performance or long term prospects. In addition, the market prices of the common stock of many technology companies have experienced extreme price and volume fluctuations while trending downward in the recent stock market, and the Company's stock price may be similarly impacted, irrespective of the Company's operating performance or long term prospects.

Long and Unpredictable Sales Cycles. The purchase of network equipment such as DWDM equipment is typically carried out by network operators pursuant to multiyear purchasing programs which may increase or decrease annually as the operators adjust their capital equipment budgets and purchasing priorities. The Company's customers do not typically share detailed information on the duration or magnitude of planned purchasing programs, nor do they consistently provide to the Company advance notice of contemplated changes in their capital equipment budgets and purchasing priorities. Additionally, a typical year end wind-down of customers' annual capital equipment procurement cycles, or a seasonal slow down in purchasing at year end, neither of which was experienced by the Company in its first year of product shipments, may be experienced in this and future years. These uncertainties substantially complicate the Company's manufacturing planning, and may lead to substantial and unanticipated fluctuations in the timing of orders and revenue. Curtailment or termination of customer purchasing programs, decreases in customer capital budgets or reduction in the purchasing priority assigned to equipment such as DWDM equipment, particularly if significant and unanticipated by the Company, could have a material adverse effect on the Company's business, financial condition and results of operations. Long distance carriers may also encounter delays in their build out of new routes or in their installation of new equipment in existing routes, with the result that orders for the MultiWave systems may be delayed or deferred. Any such delay with any major customer, as well as any other delay or deferral of orders for MultiWave systems, could result in material fluctuations in the timing of orders and revenue, and could have material adverse effect on the Company's business, financial condition and results of operations.

Anticipating Demand for Bandwidth. The Company's systems enable high capacity transmission over long distance, and with the introduction of MultiWave Firefly, certain short-haul portions of, optical communications networks; however, the Company's customers and target customers determine how much capacity will be deployed by what time using what equipment configurations. The Company has encountered a wide variety of customer views of how much capacity will be needed over what periods of time and, more importantly, how to convert such capacity into revenue. Those views reflect the carriers' differing competitive strategies and financial and marketing resources, and result in widely varying patterns and timing of evaluation, purchase and deployment of the Company's systems. Certain carriers have believed the deployment of maximum capacity quickly will be a competitive advantage--i.e., they have assumed the accelerating demand for bandwidth will continue and the capacity will be utilized quickly. This viewpoint leads to prompt and widespread deployment of high-channel count DWDM systems. Other carriers have adopted more of a wait-and-see approach, which dictates a more gradual channel by channel deployment of higher capacity systems. These views are also subject to abrupt change, as competition and the evolving marketplace may demand.

Under these circumstances, for so long as the Company remains dependent on two or even three customers, the Company will be vulnerable to quarterly fluctuations, and to misreading the direction or magnitude of future demand for the Company's systems. While the Company remains very positive about the year to year outlook for

growth in demand for DWDM systems, the Company is less certain whether it will be able to accurately anticipate changes in direction or magnitude of near term demand. Unanticipated reductions in demand would adversely affect the Company's profitability and, depending on the size of the gap between actual, reduced demand, and investor expectation of such demand, could result in further stock price volatility irrespective of the Company's overall competitive position and long term prospects.

Technological Change and New Products. The Company expects that new technologies will emerge as competition in the telecommunications industry increases and the need for higher and more cost efficient bandwidth expands. The Company's ability to anticipate changes in technology, industry standards, customer requirements and product offerings and to develop and introduce new and enhanced products will be significant factors in the Company's ability to remain the leader in the deployment of open architecture DWDM systems. The market for telecommunications equipment is characterized by substantial capital investment and diverse and competing technologies such as fiberoptic, cable, wireless and satellite technologies. The accelerating pace of deregulation in the telecommunications industry will likely intensify the competition for improved technology. Many of the Company's competitors have substantially greater financial, technical and marketing resources and manufacturing capacity with which to compete for new technologies and for market acceptance of their products. The introduction of new products embodying new technologies or the emergence of new industry standards could render the Company's existing product uncompetitive from a pricing standpoint, obsolete or unmarketable. Any of these outcomes would have a material adverse effect on the Company's business, financial condition and results of operations.

Dependence on Key Personnel. The Company's success will also depend in large part upon its ability to attract and retain highly-skilled technical, managerial, sales and marketing personnel, particularly those skilled and experienced with optical communications equipment. Competition for such personnel is intense and there can be no assurance that the Company will be successful in retaining its existing key personnel and in attracting and retaining the personnel it requires. Failure to attract and retain key personnel will have a material adverse effect on the Company's business, financial condition and results of operations.

Effect of Certain Charter, Bylaw and Other Provisions. Certain provisions of the Company's Third Amended and Restated Certificate of Incorporation, as amended (the "Certificate of Incorporation"), and bylaws and certain other contractual provisions could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from attempting to acquire, control of the Company. Such provisions could limit the price that certain investors might be willing to pay in the future for shares of the Company's Common Stock. Certain of these provisions allow the Company to issued preferred stock with rights senior to those of the Common Stock without any further vote or action by the stockholders, provide for a classified board of directors, eliminate the right of the stockholders to call a special meeting of stockholders, eliminate the right of stockholders to act by written consent, and impose various procedural and other requirements which could make it difficult for stockholders to effect certain corporate actions.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Reporting requirements are not applicable to the registrant.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The following is an index to the consolidated financial statements and supplementary data :

REPORT OF INDEPENDENT ACCOUNTANTS

To the Board of Directors and
Stockholders of CIENA Corporation

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of operations, of cash flows and of changes in stockholders' equity (deficit) present fairly, in all material respects, the financial position of CIENA Corporation and subsidiaries at October 31, 1997 and 1996, and the results of their operations and their cash flows for each of the three years in the period ended October 31, 1997, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

PRICE WATERHOUSE LLP

Falls Church, VA
November 26, 1997

CIENA CORPORATION
CONSOLIDATED BALANCE SHEETS
(IN THOUSANDS, EXCEPT SHARE DATA)

	October 31, 1996	October 31, 1997
ASSETS		
Current assets:		
Cash and cash equivalents	$ 22,557	$ 263,085
Accounts receivable (net of allowance of $ - and $200)	16,759	63,227
Inventories, net	13,228	41,109
Deferred income taxes	1,834	9,006
Prepaid expenses and other	634	2,220
Total current assets	55,012	378,647
Equipment, furniture and fixtures, net	11,863	67,412
Other assets	426	1,169
Total assets	$ 67,301	$ 447,228
LIABILITIES, MANDATORILY REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 6,278	$ 20,373
Accrued liabilities	5,242	31,463
Income taxes payable	3,342	-
Deferred revenue	3,265	776
Other current obligations	1,029	985
Total current liabilities	19,156	53,597
Deferred income taxes	-	28,167
Other long-term obligations	2,771	1,880
Total liabilities	21,927	83,644
Commitments and contingencies	-	-
Mandatorily redeemable preferred stock - par value $.01, 16,250,000 shares authorized:		
Series A - 4,500,000 shares authorized; 3,590,157 and zero shares issued and outstanding	3,492	-
Series B - 8,000,000 shares authorized; 7,354,092 and zero shares issued and outstanding	10,962	-
Series C - 3,750,000 shares authorized; 3,718,899 and zero shares issued and outstanding	25,950	-
Stockholders' equity:		
Preferred stock - par value $.01; 20,000,000 shares authorized; zero shares issued and outstanding	-	-
Common stock - par value $.01; 180,000,000 shares authorized; 13,191,585 and 99,287,653 shares issued and outstanding	132	993
Additional paid-in capital	339	245,151
Notes receivable from stockholders	(60)	(64)
Retained earnings	4,559	117,504
Total stockholders' equity	4,970	363,584
Total liabilities, mandatorily redeemable preferred stock and stockholders' equity	$ 67,301	$ 447,228

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

CIENA CORPORATION

CONSOLIDATED STATEMENTS OF OPERATIONS
(IN THOUSANDS, EXCEPT PER SHARE DATA)

	Year Ended October 31,		
	1995	1996	1997
Revenue	$ -	$ 54,838	$ 373,827
Cost of goods sold	-	21,844	136,187
Gross profit	-	32,994	237,640
Operating expenses:			
Research and development	6,361	8,922	23,308
Selling and marketing	481	3,780	20,899
General and administrative	896	3,905	16,731
Total operating expenses	7,738	16,607	60,938
Income (loss) from operations	(7,738)	16,387	176,702
Interest and other income (expense), net	195	877	7,599
Interest expense	(86)	(296)	(343)
Income (loss) before income taxes	(7,629)	16,968	183,958
Provision for income taxes	-	2,250	71,013
Net income (loss)	$ (7,629)	$ 14,718	$ 112,945
Pro forma net income per common and common equivalent share		$ 0.15	$ 1.09
Pro forma weighted average common and common equivalent shares outstanding		99,111	103,765

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

CIENA CORPORATION
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)
(DOLLARS IN THOUSANDS)

	COMMON STOCK		ADDITIONAL PAID-IN-CAPITAL	NOTES RECEIVABLE FROM STOCKHOLDERS	RETAINED EARNINGS (DEFICIT)	TOTAL STOCKHOLDERS' EQUITY (DEFICIT)
	SHARES	AMOUNT				
BALANCE AT OCTOBER 31, 1994	10,816,665	$ 108	$ 99	$ (65)	$ (2,530)	$ (2,388)
Exercise of warrants	1,075,000	11	11	-	-	22
Exercise of stock options	43,750	-	-	-	-	-
Repayment of receivables from stockholders	-	-	-	65	-	65
Net loss	-	-	-	-	(7,629)	(7,629)
BALANCE AT OCTOBER 31, 1995	11,935,415	119	110	-	(10,159)	(9,930)
Exercise of warrants	676,425	7	-	-	-	7
Exercise of stock options	579,745	6	71	(60)	-	17
Compensation cost of stock options	-	-	2	-	-	2
Issuance of warrant for settlement of certain equity rights	-	-	156	-	-	156
Net income	-	-	-	-	14,718	14,718
BALANCE OF OCTOBER 31, 1996	13,191,585	132	339	(60)	4,559	4,970
Issuance of common stock, net of issuance costs	7,002,060	70	173,947	-	-	174,017
Conversion of Preferred Stock	74,815,740	748	40,256	-	-	41,004
Exercise of warrants	666,086	7	-	-	-	7
Exercise of stock options	3,612,182	36	859	(73)	-	822
Tax benefit from the exercise of stock options	-	-	29,709	-	-	29,709
Repayment of receivables from stockholders	-	-	-	69	-	69
Compensation cost of stock options	-	-	41	-	-	41
Net income	-	-	-	-	112,945	112,945
BALANCE AT OCTOBER 31, 1997	99,287,653	$ 993	$ 245,151	$ (64)	$ 117,504	$ 363,584

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

CIENA CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(IN THOUSANDS)

	YEAR ENDED OCTOBER 31,		
	1995	1996	1997
Cash flows from operating activities:			
Net income (loss)	$ (7,629)	$ 14,718	$ 112,945
Adjustments to reconcile net income (loss) to net cash provided by (used in) operating activities:			
Non-cash charges from equity transactions	-	158	41
Write down of leasehold improvements and equipment	-	883	923
Depreciation and amortization	355	1,007	10,155
Provision for doubtful accounts	-	-	200
Provision for inventory excess and obsolescence	-	1,937	7,585
Provision for warranty and other contractual obligations	-	1,584	11,866
Changes in assets and liabilities:			
Increase in accounts receivable	(8)	(16,753)	(46,668)
Increase in inventories	-	(15,165)	(35,466)
Increase in deferred income tax assets	-	(1,834)	(7,172)
Increase in prepaid expenses and other assets	(72)	(955)	(2,329)
Increase in accounts payable and accruals	757	8,311	28,450
(Decrease) increase in income taxes payable	-	3,342	(3,342)
Increase in deferred income tax liabilities	-	-	4,793
(Decrease) increase in deferred revenue and other obligations	(11)	3,353	(1,907)
Net cash provided by (used in) operating activities	(6,608)	586	80,074
Cash flows from investing activities:			
Additions to equipment, furniture and fixtures	(2,036)	(11,514)	(66,627)
Net cash used in investing activities	(2,036)	(11,514)	(66,627)
Cash flows from financing activities:			
Net proceeds from (repayment of) other obligations	719	2,479	(1,517)
Net proceeds from issuance of or subscription to mandatorily redeemable preferred stock	10,962	25,950	-
Net proceeds from issuance of common stock	22	24	175,446
Tax benefit related to exercise of stock options and warrants	-	-	53,083
Repayment of notes receivable from stockholders	65	-	69
Net cash provided by financing activities	11,768	28,453	227,081
Net increase in cash and cash equivalents	3,124	17,525	240,528
Cash and cash equivalents at beginning of period	1,908	5,032	22,557
Cash and cash equivalents at end of period	$ 5,032	$ 22,557	$ 263,085
SUPPLEMENTAL DISCLOSURE OF CASH FLOW INFORMATION:			
Cash paid during the period for:			
Interest	$ 86	$ 296	$ 343
Income taxes	$ -	$ 742	$ 24,825
SUPPLEMENTAL DISCLOSURE OF NON-CASH FINANCING ACTIVITIES:			
Issuance of common stock for notes receivable from stockholders	$ -	$ 60	$ 73

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

CIENA CORPORATION

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) THE COMPANY AND SIGNIFICANT ACCOUNTING POLICIES

Description of Business

CIENA Corporation (the "Company" or "CIENA"), a Delaware corporation, designs, manufactures and sells dense wavelength division multiplexing systems for fiberoptic telecommunications networks. During the period from November 2, 1992 to October 31, 1995, CIENA was a development stage company as defined in Statement of Financial Accounting Standards No. 7, "Development Stage Enterprises". Planned principal operations commenced during fiscal 1996 and, accordingly, CIENA is no longer considered a development stage company.

Principles of Consolidation

During the fiscal year ended October 31, 1997, the Company formed four wholly owned subsidiaries for the purpose of segregating aspects of the Company's business. The accompanying consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All material intercompany accounts and transactions have been eliminated in consolidation.

Fiscal Year

The Company has a 52 or 53 week fiscal year which ends on the Saturday nearest to the last day of October in each year (November 1, 1997; November 2, 1996; and October 28, 1995). For purposes of financial statement presentation, each fiscal year is described as having ended on October 31. Fiscal 1997 and 1995 comprised 52 weeks and fiscal 1996 comprised 53 weeks.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires the Company to make estimates, judgments and assumptions that affect the reported amounts of assets, liabilities, revenue and expenses, together with amounts disclosed in the related notes to the financial statements. Particularly sensitive estimates include reserves for warranty and other contractual obligations and for excess and obsolete inventories. Actual results could differ from the recorded estimates.

Cash and Cash Equivalents

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

Inventories

Inventories are stated at the lower of cost or market, with cost determined on the first-in, first-out basis. The Company records a provision for excess and obsolete inventory whenever such an impairment has been identified.

Equipment, Furniture and Fixtures

Equipment, furniture and fixtures are recorded at cost. Depreciation and amortization are computed using the straight-line method over useful lives of 2-5 years for equipment, furniture and fixtures and of 6-10 years for leasehold improvements.

Concentrations

Substantially all of the Company's cash and cash equivalents are custodied with four major U.S. financial institutions. The majority of the Company's cash equivalents include U.S. Government Federal Agency Securities and overnight repurchase agreements. Deposits held with banks may exceed the amount of insurance provided on such deposits. Generally these deposits may be redeemed upon demand and therefore, bear minimal risk.

Historically, the Company has relied on a limited number of customers for a substantial portion of its revenue. In terms of total revenue, the Company's largest two customers have been Sprint and WorldCom who combined for greater than 90% of the Company's fiscal 1997 revenue. The Company expects that a significant portion of its future revenue will continue to be generated by a limited number of customers. The loss of any of these customers or any substantial reduction in orders by any of these customers could materially adversely affect the Company's operating results. Additionally, the Company's access to certain raw materials is dependent upon single and sole source suppliers. The inability of any supplier to fulfill supply requirements of the Company could impact future results.

The Company performs ongoing credit evaluations of its customers and generally does not require collateral from its customers. The Company maintains allowances for potential losses, and has not incurred any significant losses to date. As of October 31, 1996 all of the Company's trade accounts receivable were derived from Sprint, and both Sprint and WorldCom accounted for more than 90% of the trade accounts receivable as of October 31, 1997.

Revenue Recognition

The Company recognizes product revenue in accordance with the shipping terms specified. For transactions where the Company has yet to obtain customer acceptance, revenue is deferred until the terms of acceptance are satisfied. Revenue for installation services is recognized as the services are performed unless the terms of the supply contract combine product acceptance with installation, in which case revenues for installation services are recognized when the terms of acceptance are satisfied and installation is completed. Amounts received in excess of revenue recognized are recorded as deferred revenue. For distributor sales where risks of ownership have not transferred, the Company recognizes revenue when the product is shipped through to the end user.

Revenue-Related Accruals

The Company provides for the estimated costs to fulfill customer warranty and other contractual obligations upon the recognition of the related revenue. Such reserves are determined based upon actual warranty cost experience, estimates of component failure rates, and management's industry experience. The Company's contractual sales arrangements generally do not permit the right of return of product by the customer after the product has been accepted.

Research and Development

The Company charges all research and development costs to expense as incurred.

Income Taxes

The Company accounts for income taxes in accordance with Statement of Financial Accounting Standards No. 109 (SFAS No. 109), "Accounting for Income Taxes". SFAS No. 109 is an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences attributable to differences between the carrying amounts of assets and liabilities for financial reporting purposes and their respective tax bases, and for operating loss and tax credit carryforwards. In estimating future tax consequences, SFAS No. 109 generally considers all expected future events other than the enactment of changes in tax laws or rates. Tax savings resulting from deductions associated with stock options and certain stock warrants are credited directly to additional paid in capital when realization of such benefit is fully assured and to deferred tax liabilities prior to such point. See Note 7.

Foreign Currency Translation

The Company's foreign branches and subsidiaries use the U.S. dollar as their functional currency as the U.S. parent exclusively funds the branches and subsidiaries' operations with U.S. dollars. The net gain (loss) on foreign currency remeasurement and exchange rate changes for fiscal 1995 , 1996, and 1997 was immaterial.

Computation of Pro Forma Net Income per Share

Pro forma net income per common and common equivalent share is computed using the pro forma weighted average number of common and common equivalent shares outstanding. Pro forma weighted average common and common equivalent shares include Common Stock, stock options and warrants using the treasury stock method and the assumed conversion of all outstanding shares of Convertible Preferred Stock into Common Stock. Since the conversion of the Convertible Preferred Stock at the initial public offering date had a significant effect on the earnings per share calculation, historical loss per share for the fiscal year ended October 31, 1995 has not been calculated on the basis that it is irrelevant.

Pursuant to the rules and regulations of the Securities and Exchange Commission, Common Stock, stock options, warrants and Convertible Preferred Stock issued by the Company during the twelve months immediately preceding the filing of the initial registration statement and through the effective date of such registration statement have been included in the calculation of the pro forma weighted average shares outstanding using the treasury stock method based on the initial public offering price.

Software Development Costs

Statement of Financial Accounting Standards No. 86, "Accounting for the Costs of Computer Software to be Sold, Leased or Otherwise Marketed", requires the capitalization of certain software development costs incurred subsequent to the date technological feasibility is established and prior to the date the product is generally available for sale. The capitalized cost is then amortized over the estimated product life. The Company defines technological feasibility as being attained at the time a working model is completed. To date, the period between achieving technological feasibility and the general availability of such software has been short and software development costs qualifying for capitalization have been insignificant. Accordingly, the Company has not capitalized any software development costs.

Accounting for Stock Options

In October 1995, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 123 (SFAS No. 123), "Accounting for Stock-Based Compensation," which is effective for the Company's consolidated financial statements for fiscal years 1996 and 1997. SFAS No. 123 allows companies to either account for stock-based compensation under the new provision of SFAS No. 123 or using the intrinsic value method provided by Accounting Principles Board Opinion No. 25 (APB No. 25), "Accounting for Stock Issued to Employees," but requires pro forma disclosure in the footnotes to the financial statements as if the measurement provisions of SFAS No. 123 had been adopted. The Company has elected to continue to account for its stock based compensation in accordance with the provisions of APB No.25 and present pro forma disclosures required by SFAS No. 123. See Note 6.

Newly Issued Accounting Standards

In February 1997, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 128, "Earnings per Share" (SFAS No. 128). SFAS No. 128 simplifies the earnings per share (EPS) computation and replaces the presentation of primary EPS with a presentation of basic EPS. This statement also requires dual presentation of basic and diluted EPS on the face of the income statement for entities with a complex capital structure and requires a reconciliation of the numerator and denominator used for the basic and diluted EPS computations. The Company will implement SFAS No. 128 in fiscal 1998, as required. Accordingly, all prior period EPS data will be restated. To illustrate the effect of adoption, the Company has elected to disclose pro forma basic and diluted EPS amounts computed using SFAS No. 128, as permitted by the standard. On a pro forma basis, the weighted average shares outstanding for basic EPS and the resulting EPS would be 12,840,000 and $1.15 for the fiscal year ended October 31, 1996, and 95,357,000 and $1.18 for the fiscal year ended October 31, 1997. Diluted

EPS under SFAS No. 128 would be the same as currently presented.

In June 1997, the FASB issued SFAS No. 130, "Comprehensive Income." SFAS No. 130 becomes effective for the Company's fiscal year 1999 and requires reclassification of earlier financial statements for comparative purposes. SFAS No. 130 requires that changes in the amounts of certain items, including foreign currency translation adjustments and gains and losses on certain securities be shown in the financial statements. SFAS No. 130 does not require a specific format for the financial statement in which comprehensive income is reported, but does require that an amount representing total comprehensive income be reported in that statement. The Company believes the adoption of SFAS No. 130 will not have a material effect on the consolidated financial statements.

Also in June 1997, the FASB issued SFAS No. 131, "Disclosures about Segments of an Enterprise and Related Information." This Statement will change the way public companies report information about segments of their business in annual financial statements and requires them to report selected segment information in their quarterly reports issued to stockholders. It also requires entity-wide disclosures about the products and services an entity provides, the material countries in which it holds assets and reports revenues, and its major customers. The Statement is effective for the Company's fiscal year 1999. The Company believes the adoption of SFAS No. 131 will not have a material effect on the consolidated financial statements.

Reclassification

Certain prior year amounts have been reclassified to conform to current year consolidated financial statement presentation.

(2) INVENTORIES

Inventories are comprised of the following (in thousands):

	October 31,	
	1996	1997
Raw materials	$ 8,585	$ 27,716
Work-in-process	3,629	5,679
Finished goods	2,951	15,180
	15,165	48,575
Less reserve for excess and obsolescence	(1,937)	(7,466)
	$ 13,228	$ 41,109

The following is a table depicting the activity in the Company's reserve for excess and obsolescence (in thousands):

	October 31,	
	1996	1997
Beginning balance	$ -	$ 1,937
Provision charged to operations	1,937	7,585
Amounts written off to reserve	-	(2,056)
Ending balance	$ 1,937	$ 7,466

(3) EQUIPMENT, FURNITURE AND FIXTURES

Equipment, furniture and fixtures are comprised of the following (in thousands):

	October 31,	
	1996	1997
Equipment, furniture and fixtures	$ 11,647	$ 64,502
Leasehold improvements	1,141	13,953
	12,788	78,455
Accumulated depreciation and amortization	(1,388)	(11,543)
Construction-in-progress	463	500
	$ 11,863	$ 67,412

(4) ACCRUED LIABILITIES

Accrued liabilities are comprised of the following (in thousands):

	October 31,	
	1996	1997
Warranty and other contractual obligations ...	$ 1,584	$ 12,205
Accrued compensation	2,314	7,725
Legal and related costs	300	4,577
Consulting and outside services	-	3,219
Unbilled construction-in-process and leasehold improvements	50	1,427
Other	994	2,310
	$ 5,242	$ 31,463

(5) LINE OF CREDIT

In November 1996, the Company entered into an unsecured line of credit agreement with a bank, which provided for borrowings of up to $15,000,000. The Company had no borrowings against the line of credit during fiscal 1997. In November 1997, the line of credit agreement expired.

(6) STOCKHOLDERS' EQUITY

Changes in and Conversion of Mandatorily Redeemable Convertible Preferred Stock

As a result of the February 1997 initial public offering, all shares of Convertible Preferred Stock converted into 73,315,740 shares of Common Stock and warrants to purchase 300,000 shares of Convertible Preferred Stock were exercised for $600,000 and converted into 1,500,000 shares of Common Stock.

Public Offerings

In February 1997, the Company successfully completed its initial public offering of Common Stock. The Company sold 5,750,000 shares, inclusive of 750,000 shares from the exercise of the underwriters over-allotment option, at a price of $23 per share. Net proceeds from the offering were approximately $121,800,000 with an additional $600,000 received from the exercise of 300,000 shares of outstanding Convertible Preferred Stock warrants.

In July 1997 the Company completed a public offering of 10,477,216 shares of Common Stock of which 1,252,060 shares were sold by the Company inclusive of 252,060 shares from the exercise of the underwriters over-

allotment option, at a price of $44 per share. Net proceeds to the Company from the public offering were approximately $52,200,000.

Stock Incentive Plans

The Company has an Amended and Restated 1994 Stock Option Plan (the "1994 Plan"). Under the 1994 Plan, 20,050,000 shares of the Company's authorized but unissued Common Stock are reserved for options issuable to employees. These options are immediately exercisable upon grant, and both the options and the shares issuable upon exercise of the options generally vest to the employee over a four year period. The Company has the right to repurchase any exercised and non-vested shares at the original purchase price from the employees upon termination of employment. In June 1996 the Company approved the 1996 Outside Directors Stock Option Plan (the "1996 Plan"). Under the 1996 Plan, 750,000 shares of the Company's authorized but unissued Common Stock are reserved for options issuable to outside members of the Company's Board of Directors. These options vest to the director over periods from one to three years, depending on the type of option granted, and are exercisable once vested. Under the 1994 Plan and the 1996 Plan, options may be incentive stock options or non-statutory options, and the exercise price for each option shall be established by the Board of Directors provided, however, that the exercise price per share shall not be not less than the fair market value for incentive stock options and not less than 85% of fair market value for non-statutory stock options.

Following is a summary of the Company's stock option activity:

	Shares (in thousands)	Weighted Average Exercise Price
Balance at October 31, 1994	3,560	$ 0.02
Granted	3,856	0.03
Exercised	(44)	0.02
Canceled	(431)	0.02
Balance at October 31, 1995	6,941	0.03
Granted	5,901	1.85
Exercised	(579)	0.14
Canceled	(1,180)	0.18
Balance at October 31, 1996	11,083	0.97
Granted	1,737	32.81
Exercised	(3,612)	0.27
Canceled	(98)	0.52
Balance at October 31, 1997	9,110	$ 7.33

At October 31, 1997 approximately 156,000 shares of Common Stock subject to repurchase by the Company had been issued upon the exercise of options and approximately 1.7 million of the total outstanding options were vested and not subject to repurchase by the Company upon exercise.

The following table summarizes information with respect to stock options outstanding at October 31, 1997:

Options Outstanding				Options Not Subject to Repurchase Upon Exercise	
Range of Exercise Price	Number Outstanding at Oct. 31, 1997	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number at Oct. 31, 1997	Weighted Average Exercise Price
$ 0.02 - $ 0.03	2,586,000	7.14	$ 0.03	1,203,000	$ 0.03
$ 0.06 - $ 0.40	810,000	8.22	$ 0.26	165,000	$ 0.28
$ 0.52 - $ 1.66	983,000	8.53	$ 1.18	152,000	$ 1.21
$ 2.34 - $ 4.34	2,839,000	8.66	$ 2.52	89,000	$ 3.12
$ 4.44 - $18.00	935,000	9.07	$15.52	47,000	$ 9.17
$23.88 - $58.88	957,000	9.71	$45.61	-	$ -
	9,110,000	8.33	$ 7.33	1,656,000	$ 0.58

Pro forma Stock-Based Compensation

The Company has elected to continue to follow the provisions of APB No. 25 for financial reporting purposes and has adopted the disclosure-only provisions of SFAS No. 123. Accordingly, no compensation cost has been recognized for the Company's stock option plans. Had compensation cost for the Company's stock option plans been determined based on the fair value at the grant date for awards in fiscal years 1996 and 1997 consistent with the provisions of SFAS No. 123, the Company's net income and net income per share for fiscal years 1996 and 1997 would have been decreased to the pro forma amounts indicated below (in thousands, except per share amounts):

	Fiscal Years	
	1996	1997
Net income applicable to common stockholders - as reported	$ 14,718	$ 112,945
Net income applicable to common stockholders - pro forma	$ 14,225	$ 107,382
Net income per share - as reported	$ 0.15	$ 1.09
Net income per share - pro forma	$ 0.14	$ 1.03

The above pro forma disclosures are not necessarily representative of the effects on reported net income or loss for future years.

The aggregate fair value and weighted average fair value of each option granted in fiscal years 1996 and 1997 were approximately $6.7 million and $33.6 million, and $1.14 and $19.33, respectively. The fair value of each option grant is estimated on the date of grant using the Black-Scholes Option Pricing Model with the following weighted average assumptions for fiscal years 1996 and 1997:

	1996	1997
Expected volatility	60%	60%
Risk-free interest rate	6.1%	5.8%
Expected life	3 yrs.	3 yrs.
Expected dividend yield	0%	0%

(7) INCOME TAXES

Income before income taxes and the provision for income taxes consists of the following (in thousands):

	October 31,	
	1996	1997
Income before income taxes	$ 16,968	$ 183,958
Provision for income taxes:		
Current:		
Federal	$ 3,452	$ 66,154
State	632	7,238
Total current	4,084	73,392
Deferred:		
Federal	(1,690)	(1,882)
State	(144)	(497)
Total deferred	(1,834)	(2,379)
Provision for income taxes	$ 2,250	$ 71,013

In fiscal 1995, the tax provision was comprised primarily of a tax benefit of approximately $3.1 million which was offset by a valuation allowance of the same amount.

In fiscal 1995, the tax provision differed from the expected tax benefit, computed by applying the U.S. federal statutory rate of 35% to the loss before income taxes, principally due to the effect of increases in the valuation allowance. In fiscal 1997 and 1996, the tax provision reconciles to the amount computed by multiplying income before income taxes by the U.S. federal statutory rate of 35% as follows:

	October 31,	
	1996	1997
Provision at statutory rate	35.0%	35.0%
Reversal of valuation allowance	(24.3)	-
State taxes, net of federal benefit	2.9	2.6
Other	(0.3)	1.0
	13.3%	38.6%

The significant components of deferred tax assets and liabilities were as follows (in thousands):

	October 31,	
	1996	1997
Deferred tax assets:		
Reserves and accrued liabilities	$ 1,452	$ 9,006
Depreciation and other	382	-
Deferred tax assets	$ 1,834	$ 9,006
Deferred tax liabilities:		
Equipment leases	$ -	$ 3,985
Services	-	19,389
Depreciation and other	-	4,793
Deferred tax liabilites	$ -	$ 28,167

The income tax provisions do not reflect the tax savings resulting from deductions associated with the Company's stock option plans or the exercise of certain stock warrants. Tax benefits of approximately $29.7 million and $23.4 million from exercises of stock options and certain stock warrants, respectively, were credited directly to additional paid-in-capital and to long-term deferred income taxes for fiscal 1997, respectively.

(8) EMPLOYEE BENEFIT PLANS

In January 1995, the Company adopted a 401(k) defined contribution profit sharing plan. The plan covers all full-time employees who are at least 21 years of age, have completed three months of service and are not covered by a collective bargaining agreement where retirement benefits are subject to good faith bargaining. Participants may contribute up to 15% of pre-tax compensation, subject to certain limitations. The Company may make discretionary annual profit sharing contributions of up to the lesser of $30,000 or 25% of each participant's compensation. In fiscal 1997 the Company revised the plan to include an employer matching contribution equal to 100% of the first 3% of participating employee contributions, with a five year vesting plan applicable to the Company's contribution. The Company has made no profit sharing contributions to date. During fiscal 1997 the Company made matching contributions of approximately $300,000.

(9) COMMITMENTS AND CONTINGENCIES

Operating Lease Commitments

The Company has certain minimum obligations under noncancelable operating leases expiring on various dates through 2006 for equipment and facilities. Future annual minimum rental commitments under noncancelable operating leases at October 31, 1997 are as follows (in thousands):

Fiscal year ending October 31,	
1998	$ 4,429
1999	4,900
2000	4,805
2001	4,627
2002	4,003
Thereafter	13,015
	$ 35,779

Rental expense for fiscal 1995, 1996 and 1997 was approximately $111,000, $602,000 and $2,511,000, respectively.

Litigation

Pirelli Litigation. On December 20, 1996, a U.S. affiliate of Pirelli SpA ("Pirelli") filed suit in U.S. District Court in Delaware, alleging willful infringement by the Company of five U.S. patents held by Pirelli. The lawsuit seeks treble damages, attorneys' fees and costs, as well as preliminary and permanent injunctive relief against the alleged infringement. On February 10, 1997, the Company filed its answer denying infringement, alleging inequitable conduct on the part of Pirelli in the prosecution of certain of its patents, and stating a counterclaim against the relevant Pirelli parties for a declaratory judgment finding the Pirelli patents invalid and/or not infringed. Two of the five patents in suit have since been removed from the litigation. Discovery proceedings are ongoing, and are currently expected to be completed by January 31, 1998, with trial expected no earlier than mid 1998.

On March 14, 1997, the Company filed suit against Pirelli in U.S. District Court in the Eastern District of Virginia, alleging willful infringement by Pirelli of three U.S. patents held or co-owned by the Company, one of which was withdrawn in September 1997. The lawsuit seeks treble damages, attorneys' fees and costs, as well as permanent injunctive relief against the alleged infringement. The patents relate to certain of Pirelli's cable television equipment and fiberoptic communications equipment. Motions for summary judgment by both parties are currently pending on the issue of infringement as it relates to the cable television patent, and Pirelli has also filed a motion for summary judgment of invalidity on this patent. As to the second of the two patents, on December 5, 1997, the court issued an order granting partial summary judgment for Pirelli on the issue of non-infringement, and denying Pirelli's motion for summary judgment of invalidity of this patent. Trail is currently scheduled for January 1998.

In February 1997, the Company filed a complaint against Pirelli with the International Trade Commission ("ITC"), based on the Company's belief that a 32 channel DWDM system announced by Pirelli infringed at least two of the Company's patents. The Company's complaint sought a ban on the importation of this product into the U.S. A formal investigative proceeding was instituted by the ITC on April 3, 1997. On November 24, 1997, the parties settled the matter by entry of a Consent Order. Under the Consent Order, Pirelli has agreed not to import into the United States WDM systems which infringe upon the Company's patented in fiber Bragg gratings-based WDM systems.

The Company has accrued $7.5 million for legal fees associated with their involvement in the above litigation; $4.3 million of that accrual is remaining at October 31, 1997, which the Company considers sufficient to account for all anticipated legal fees. The Company continues to believe its MultiWave systems do not infringe any valid claim of the three remaining Pirelli patents and believes certain Pirelli patents and/or claims are invalid. The Company is defending itself vigorously and is planning on all remaining litigation proceeding through trial.

However, there can be no assurance that the Company will be successful in the Pirelli litigation, and an adverse determination in the Delaware court could result from a finding of infringement of only one claim of a single patent. The Company may consider settlement due to the costs and uncertainties associated with litigation in general and patent infringement litigation in particular and due to the fact that an adverse determination in the litigation could preclude the Company from producing the MultiWave 1600 system until it were able to implement a non-infringing alternative design to any portion of the system to which such determination applied. There can be no assurance that any settlement will be reached by the parties. An adverse determination in, or settlement of, the Pirelli litigation could involve the payment of significant amounts, or could include terms in addition to such payments, which could have a material adverse effect on the Company's business, financial condition and results of operations.

Kimberlin Litigation. On November 20, 1996, a stockholder and entities controlled by that stockholder (the "plaintiffs") who provided initial equity capital during the formation of the Company and participated in the Series C Preferred Stock financing, filed suit in U. S. District Court for the Southern District of New York against the Company and certain directors of the Company (the "defendants"), alleging that the plaintiffs were entitled to purchase additional shares of Series C Preferred Stock at the time of the closing of the Series C Preferred Stock financing, but were denied that opportunity by the defendants. The lawsuit claims breach of contract, breach of fiduciary duty and violation of Securities Commission Rule 10b-5 by the defendant. On January 6, 1997, the Company filed its answer to the plaintiffs' complaint, and filed a counterclaim. The plaintiffs amended their complaint in May 1997 alleging a violation of federal insider trading laws. There has not been a trial date set by the judge.

The Company believes that the Plaintiffs' claims and amended claims are without merit and intends to defend itself vigorously. The Company has moved for summary judgment on the entire matter, but there is no assurance the judgment will be granted.

The Company has agreed to indemnify its customers for liability incurred in connection with the infringement of a third-party's intellectual property rights. Although the Company has not received notice from any customer advising the Company of any alleged infringement of a third-party's intellectual property rights, there can be no assurance that such indemnification of alleged liability will not be required from the Company in the future.

(10) FOREIGN SALES

The Company has sales and marketing operations located outside the United States in the United Kingdom, Belgium and Japan. The Company has distributor or marketing representative arrangements covering Austria, Germany, Italy and Switzerland in Europe, and the Republic of Korea and Japan in Asia. The Company also has representative support in Brazil. Included in revenues are export sales of approximately $0 and $5.5 million in fiscal years 1996 and 1997, respectively.

(11) SUBSEQUENT EVENTS (UNAUDITED)

Acquisitions

The Company has signed a letter of intent to enter into an Agreement and Plan of Merger with Astracom, Inc. ("Astracom"), an early stage telecommunications company which was incorporated on November 20, 1996, and is located in Atlanta, Georgia. The transaction is expected to be completed during the December 1997 period. The purchase price is expected to be approximately $13.1 million and consists of the issuance of 169,754 shares of CIENA common stock, the payment of $2.4 million in cash, and the assumption of certain stock options. Based on preliminary estimates, the Company believes the purchase price represents approximately $11.4 million in goodwill and other intangibles, and approximately $1.7 million in net assets assumed, and that the amortization period for the intangibles, based on management's estimate of the useful life of the acquired technology, is between five to seven years.

The operations of the acquired company are not material to the consolidated financial statements of the Company, and accordingly, separate pro forma financial information has not been presented for fiscal year 1997 as if Astracom had been acquired as of November 20, 1996.

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

None.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

Information relating to the directors and executive officers of the Company is set forth in Part I of this report under the caption Item 1. Business- "Directors, and Executive Officers" and is incorporated by reference herein.

ITEM 11. EXECUTIVE COMPENSATION

The information is incorporated herein by reference to the Company's definitive 1998 Proxy Statement.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The information is incorporated herein by reference to the Company's definitive 1998 Proxy Statement.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

The information is incorporated herein by reference to the Company's definitive 1998 Proxy Statement.

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

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

1. Financial Statement Schedules:
   All schedules are omitted because they are not applicable or the required information is shown in the consolidated financial statements or notes thereto.

2. Exhibits: See Index to Exhibits on page 53. The Exhibits listed in the accompanying Index to Exhibits are filed or incorporated by reference as part of this report.

(b) Reports on Form 8-K

On August 6, 1997, and September 22, 1997, the Company filed a report on Form 8-K supplementing its report on Form 8-K dated February 19, 1997, relating to risk factors to be considered in connection with the disclosure of forward-looking statements.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Linthicum, County of Anne Arundel, State of Maryland, on the 10th day of December 1997.

CIENA CORPORATION

By: /s/ Patrick H. Nettles

Patrick H. Nettles
President, Chief Executive Officer
and Director

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

Signatures	Title	Date
/s/ Patrick H. Nettles Patrick H. Nettles	President, Chief Executive Officer and Director (Principal Executive Officer)	December 10, 1997
/s/ Joseph R. Chinnici Joseph R. Chinnici	Sr. Vice President, Finance and Chief Financial Officer (Principal Financial Officer)	December 10, 1997
/s/ Andrew C. Petrik Andrew C. Petrik	Vice President, Controller and Treasurer (Principal Accounting Officer)	December 10, 1997
/s/ Jon W. Bayless Jon W. Bayless	Director	December 10, 1997
/s/ Harvey B. Cash Harvey B. Cash	Director	December 10, 1997
/s/ Clifford H. Higgerson Clifford H. Higgerson	Director	December 10, 1997
/s/ Billy B. Oliver Billy B. Oliver	Director	December 10, 1997
/s/ Michael J. Zak Michael J. Zak	Director	December 10 ,1997

INDEX TO EXHIBITS

Exhibit Number	Description
3.1*	Certificate of Amendment to Third Restated Certificate of Incorporation
3.2*	Third Restated Certificate of Incorporation
3.3*	Amended and Restated Bylaws
4.1*	Specimen Stock Certificate
10.1*	Form of Indemnification Agreement for Directors and Officers
10.2*	Amended and Restated 1994 Stock Option Plan
10.3*	Form of Employee Stock Option Agreements
10.4*	1996 Outside Directors Stock Option Plan
10.5*	Forms of 1996 Outside Directors Stock Option Agreement
10.6*	Series C Preferred Stock Purchase Agreement dated December 20, 1995
10.7*	Lease Agreement dated October 5, 1995 between the Company and CS Corridor-32 Limited Partnership
10.8+*	Purchase Agreement Between Sprint/United Management Company and the Company dated December 14, 1995
10.9+*	Basic Purchase Agreement between WorldCom Network Services, Inc. and the Company dated September 19, 1996
10.10*	Settlement Agreement and Mutual Release, between the Company and William K. Woodruff & Company, dated August 26, 1996
10.13*	Employment Agreement dated April 9, 1994 between the Company and Patrick Nettles
10.14*	Lease Agreement dated November 1, 1996 by and between the Company and Aetna Life Insurance Company
10.15*	Revolving Note and Business Loan Agreement dated November 25, 1996 between the Company and Mercantile-Safe Deposit & Trust Company
10.16+*	First Addendum to Procurement Agreement between the Registrant and Sprint/United Management Company dated December 19, 1996
11.1	Statement of Computation of Per Share Earnings
21**	Subsidiaries of registrant
23.1	Consent of Independent Accountants
27	Financial Data Schedule

* Incorporated by reference from the Company's Registration Statement on Form S-1 (333-17729).

** Incorporated by reference from the Company's Registration Statement on Form S-1 (333-28525).

\+ Confidential treatment has been granted by the Securities and Exchange Commission with respect to certain portions of these exhibits. The confidential portions have been filed separately with the Securities and Exchange Commission.

Exhibit 11.1

CIENA CORPORATION
COMPUTATION OF EARNINGS PER SHARE

	Year Ended October 31, 1996	Year Ended October 31, 1997
Net income	$ 14,718,000	$112,945,000
Weighted average shares of common stock outstanding	12,840,000	94,890,000
Weighted average effect of common stock equivalents	80,352,000	8,408,000
Staff Accounting Bulletin No. 83 issuances and grants:		
Common shares issued within one year of initial filing	352,000	467,000
Common stock equivalents issued within one year of initial filing	5,567,000	-
	99,111,000	103,765,000
Pro forma net income per common and common equivalent share	$ 0.15	$ 1.09

EXHIBIT 23.1

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-27131) of CIENA Corporation of our report dated November 26, 1997 appearing on page 35 of this Annual Report on Form 10-K.

PRICE WATERHOUSE LLP

Falls Church, VA
December 9, 1997

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THIS SCHEDULE CONTAINS SUMMARY FINANCIAL INFORMATION EXTRACTED FROM THE CONSOLIDATED BALANCE SHEET, CONSOLIDATED STATEMENT OF OPERATION AND CONSOLIDATED STATEMENT OF CASH FLOWS INCLUDED IN THE COMPANY'S FORM 10-K FOR THE PERIOD ENDING OCTOBER 31, 1997, AND IS QUALIFIED IN ITS ENTIRETY BY REFERENCE TO SUCH FINANCIAL STATEMENTS.

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12-MOS
OCT-31-1997
NOV-01-1996
OCT-31-1997
263,085
0
63,227
200
41,109
378,647
78,956
11,543
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53,597
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112,945
1.09
1.09