

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of the
Securities Exchange Act of 1934

April 5, 1999

Date of Report (Date of earliest event reported)

CIENA Corporation

(Exact name of registrant as specified in its charter)

Delaware 0-21969 23-2725311

(State or other jurisdiction (Commission (IRS Employer
of incorporation) File No.) Identification No.)

1201 Winterson Road, Linthicum, Maryland 21090

(Address of principal executive offices) (Zip Code)

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

Not applicable

(Former name or former address, if changed since last report)

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Item 5. Other Events.

In connection with the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, and following the closing of the acquisition of Lightera Networks, Inc., CIENA Corporation is filing cautionary statements identifying important factors that could cause CIENA's actual results to differ materially from those projected in forward-looking statements made by or on behalf of CIENA. A first group of these statements relates primarily to CIENA's business prior to the acquisition of Lightera Networks, Inc. and the pending acquisition of Omnia Communications, Inc.; a second group of these statements address the ways in which certain risks are magnified or newly introduced as a result of these acquisitions. These statements amend and supersede prior cautionary statements filed by CIENA to the extent that they are inconsistent with those statements, and are also being re-formatted in response to the new "plain English" requirements of the Securities and Exchange Commission.

ITEM 7. FINANCIAL STATEMENTS AND EXHIBITS.

(99) Additional Exhibits

- 99.1 Cautionary Statements for Purposes of the "Safe Harbor" Provisions of the Private Securities Litigation Reform Act of 1995.

SIGNATURES

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

CIENA CORPORATION

Date: April 5, 1999

By: /s/ G. Eric Georgatos

Sr. Vice President, General Counsel and
Secretary

EXHIBIT 99.1

CAUTIONARY STATEMENTS FOR PURPOSES OF THE "SAFE HARBOR" PROVISIONS OF THE
PRIVATE SECURITIES REFORM ACT OF 1995

RISK FACTORS

COMPETITION IN THE RAPIDLY GROWING TELECOMMUNICATIONS INDUSTRY COULD HURT OUR
SALES AND PROFITABILITY.

We believe we have been able to achieve early product and market leadership in the DWDM field because the global telecommunications industry had not anticipated the rapidly growing need for higher and more cost-effective bandwidth. We continue to believe that more than two years after our initial shipments in 1996, our MultiWave 1600 and MultiWave Sentry 1600 and 4000 systems are the only widely deployed and operational full 16-channel and 40-channel open architecture DWDM systems anywhere in the world. We further believe that the demonstrated commercial manufacturability of our MultiWave Sentry 4000 system gives our high-capacity product offerings a level of credibility that our competitors do not possess.

However, a small number of very large companies have historically dominated the global telecommunications industry. Each of those companies have greater financial, technical and marketing resources, greater manufacturing capacity, broader product lines and more extensive and established customer relationships with network operators than we do. Our competitors include Lucent, Alcatel, Nortel, NEC, Pirelli, Siemens, Ericsson, Fujitsu, and Hitachi. Most of these companies provide a full complement of switches, fiberoptic transmission terminals and fiberoptic signal regenerators in addition to DWDM equipment. Many of them have substantial economic interests in continuing sales of the legacy equipment which has dominated the historical network architecture designed for voice traffic. New market entrants like us, which achieve rapid and widespread market acceptance of new equipment that displaces legacy equipment, can represent a specific threat to these established companies. Our acquisitions of Lightera Networks, Inc. ("Lightera") (which is completed) and of Omnia Communications, Inc. ("Omnia") (which is expected to close in June or July), are likely to increase this perceived threat. See "Lightera and Omnia Risk Factors". As a result, we expect continued aggressive competitive moves from many of these industry participants. In the past, such moves have included the following:

- - early announcement of competing or alternative products;
- - substantial and increasing price discounting;
- - customer financing assistance;
- - packaged, "one-stop-shopping" deals combining DWDM equipment with other network equipment and supplies;
- - other tactics;

When competitors make early announcements of competing products, our customers may delay their purchasing decisions, particularly if they believe the truth of the claimed performance of the announced product, and the time within which it will be available. For example, in January, 1998, Lucent announced a proposed high-capacity DWDM system which it claimed would handle 400 Gb/s of capacity per fiber, and which it further claimed would be commercially available worldwide in the fourth quarter of 1998. We believe this announcement caused a delay in some customer purchasing decisions and influenced customer negotiating positions, which resulted in pressure on us to decrease prices.

Competitors may make similar announcements of competing products in the future, which could influence customer purchasing decisions. Customer orders for our MultiWave systems may diminish if competitors are able to develop these announced products, if the products perform as advertised, and if they are manufactured in sufficient volume. If customers delay purchasing our equipment while they evaluate a competitor's product, we could experience substantial revenue swings and potentially material and adverse effects on our quarterly financial condition and results of operations.

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 scalability requirements, our customers are also under increasing competitive pressure to deliver bandwidth to their customers at the lowest possible cost. As a result of this pressure, the price of a DWDM system may become a more important factor in customer decisions. This may favor larger competitors who 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 ours.

Our customers generally prefer to have at least two sources for key network equipment such as DWDM systems, but we believe that until recently, we have been the only supplier of 16 channel, or greater than 16 channel, open architecture DWDM systems. As competitors catch up with manufacturable DWDM systems which are realistic alternatives to ours, our customers may reduce their DWDM purchases from us. For several quarters, Sprint has indicated it intends to establish a second vendor for DWDM equipment. Although we recently negotiated a contract with Sprint whereby we have "preferred vendor" status with them through 1999, the timing of Sprint's selection of a second vendor, and the impact a selection might have on Sprint's purchases from us, are out of our control. This decision may result in a reduction in future purchasing from us, which could in turn have a material adverse effect on our financial condition and results of operations.

Competitors may also engage in intellectual property disputes with us as part of their effort to reduce our leadership position and limit our ability to achieve greater market share. Some of our competitors are also key suppliers of components for our systems, and could harm us through delay, interruption or other failures to supply us with appropriate quality items. See "Certain of Our Suppliers are Also Our Competitors".

We may not be able to compete successfully with our larger competitors. Their aggressive competitive moves may result in lost sales, significantly lower prices for our products, additional decreases in gross profit margins, and otherwise have a material adverse effect on our business, financial condition and results of operations. We have also observed an increase in the funding of new companies intending to develop new products for the rapidly evolving telecom industry. Although these companies' business and product plans are not always well-known, they may nevertheless provide additional competition as to our existing product lines as well as potential future products.

WE DEPEND ON A RELATIVELY SMALL NUMBER OF CUSTOMERS.

Our business and revenue growth potential historically depended on two customers, Sprint and MCI WorldCom. While we expect that the scope of commercial applications of our MultiWave Firefly and MultiWave Metro products (and eventually, the products of Lightera and Omnia), will expand our potential number of customers, there are relatively few additional potential customers available to us. Our potential customers consist almost exclusively of telecommunications carriers which use fiberoptic networks, and of those, a very small number have revenue potential comparable to that of Sprint and MCI WorldCom. One possible customer, AT&T, has already told us it will not purchase our DWDM products at this time. Additionally, we expect that Sprint's purchasing volume in 1999 will fall substantially below what it was for the last two fiscal years, as Sprint focuses its purchases on filling out installed systems with additional channel cards.

There is presently a low likelihood that MCI WorldCom will purchase significant amounts of equipment from us in 1999. Our potential major customers may also decrease if and as customers merge with or acquire one another. In May 1998, SBC and Ameritech announced an agreement to merge; in July 1998, Bell Atlantic and GTE announced an agreement to merge. The distraction and/or reorganization sometimes attendant to such mergers could delay, limit or otherwise adversely affect the capital equipment purchasing patterns of the parties to them. It could also have a corresponding adverse effect on our sales, even if the customer is otherwise satisfied with or interested in our products.

Due to the size and complexity of our potential customers, and their typically long and unpredictable sales cycles, we have 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.

We also intend to invest in developing significant customer relationships with RBOCs and CLECs, as well as internationally. Over the last year, such investments have caused an increase in operating expenses and a rise in our manufacturing and general overhead structure. As a result, we may experience operating losses even if our revenues increase. If we are unable to generate significant revenue from these investment relationships, they could materially and adversely affect our business, financial condition and results of operations.

CHANGES IN OUR CUSTOMER MIX COULD IMPACT THE DEMAND FOR THE BANDWIDTH WE SUPPLY.

We are focusing our sales efforts on a greater number of smaller sales opportunities now that:

- - Sprint has installed our equipment in much of its network;
- - MCI WorldCom is purchasing at modest levels; and
- - There is little likelihood of any additional, comparably sized customer.

We believe the pace of bandwidth demand is strong enough to create a number of smaller opportunities sufficient to support revenue growth over the long-term. However, the smaller opportunities often represent new carriers working aggressively to establish bandwidth that they can sell. These new carriers face a number of problems which the established carriers do not. They must attempt to balance the need to build their own customer base, acquire all necessary rights of way and interconnections necessary to sell network service, and build out new capacity sufficient to meet anticipated needs, while working within capital budget constraints. These aspects of newer carriers tend to make them even less predictable as to either timing or volume of purchasing than the established carriers. This tends to exacerbate our problem of limited visibility, one with which we regularly struggle in conducting sales forecasting, materials and manufacturing planning, and in providing guidance to analysts as part of investor relations activities. See "Our Stock Price May Exhibit Volatility".

Unless and until our customer base broadens over the next several quarters, there is a continuing likelihood that unanticipated changes in customer purchasing plans could adversely impact our results relative to investor expectations. Most of our anticipated revenue over the next several quarters is comprised of less than \$25 million orders from each of several customers. Slips in timing of purchases, or changes in the amount of purchases by one or more of these customers could have a material adverse effect on our results of operations and relative to investor expectations.

WE CAN NOT PREDICT THE DEMAND FOR BANDWIDTH.

Our DWDM systems enable high capacity transmission over long distance, and our MultiWave Firefly and MultiWave Metro will allow transmission over certain short-haul portions of optical communications networks. Our customers and target customers, however, determine:

- - the quantity of bandwidth needed;
- - the timing of its deployment; and
- - the equipment configurations they want.

We have encountered a wide variety of customer views regarding the amount of bandwidth required over time, as well as how to convert bandwidth to revenue. Those views reflect our customers' differing competitive strategies and financial and marketing resources, and impact the patterns and timing of evaluation, purchase, and deployment of our systems, other DWDM systems, or other capacity solutions.

Certain carriers believe the deployment of large-scale bandwidth quickly is a competitive advantage. They believe the accelerating demand for bandwidth will continue, and that existing bandwidth will be utilized quickly. As a result, such carriers engage in prompt and widespread deployment of high-channel count DWDM systems. Other carriers have adopted a wait-and-see approach, which dictates a more gradual channel by channel deployment of higher capacity systems. New carriers sometimes try to combine these viewpoints. They favor rapid and widespread installation of the foundational elements of high capacity systems, but employ pricing and other supply agreement features which allow them to delay broader deployment until necessary.

Carriers' views in this regard are further influenced by the pace at which the higher bandwidth available over long distance routes is distributed or distributable over "the last mile" of the networks, and carriers' willingness to aggressively lower their charges for services as a means of accelerating consumption of the higher bandwidth. These views are also subject to abrupt change as a result of competition and the evolving marketplace. For example, in February, 1998, WorldCom informed us that it would require substantially less DWDM systems in 1998 than it had the year before. The previous year, WorldCom purchased \$184.5 million of systems from us. WorldCom told us that in 1997 it had purchased two years of DWDM systems requirements, and that it would purchase substantially less in 1998. This information from WorldCom demonstrates that there can be surprises as network operators and their purchasing groups grapple with unprecedented changes and challenges to network planning.

As a further example of the impact of the evolving marketplace, in 1998 we shipped equipment to and recognized revenue from several new customers attempting to build out new networks. We had not even identified these customer opportunities a year earlier. Under these circumstances, therefore, as long as we depend on a few customers, we remain vulnerable to significant quarterly fluctuations, and to difficulty in predicting the direction or magnitude of future demand for our systems.

We believe growth in data communications and in commercial and consumer use of the Internet remains solid. This growth causes an increased market demand for bandwidth, which in turn fuels demand for DWDM systems and other high-bandwidth solutions. We are also confident that our products are well targeted toward the visible emerging choke points in the networks. We are less certain whether we can accurately anticipate changes in direction or magnitude of demand. Unanticipated reductions in demand would adversely affect our profitability. Depending on the size of the gap between actual demand, reduced demand, and investor expectation of such demand, we could experience changes in our stock price, irrespective of our overall competitive position and long term prospects.

CUSTOMER CAPITAL EQUIPMENT SPENDING AND THE ECONOMY MAY ALSO AFFECT OUR PROFITABILITY.

Our business depends on large scale commitments to capital equipment acquisition, which in turn depend upon the condition of the world and U.S. economy. The overall economy, particularly in the U.S., has been very strong from the time CIENA first began shipping equipment; however, hostilities in Kosovo or other areas, if they escalate or spread, could create an element of economic uncertainty. Established carriers may delay or reduce capital equipment acquisition during times of economic uncertainty. New competitive carriers may be less likely to delay or reduce capital equipment acquisition because their ability to generate revenue depends on the prompt deployment of service-providing equipment. But if the new competitive carrier lacks adequate financing, economic uncertainty can limit its access to new financing sources and cause a delay in capital equipment purchasing.

Deterioration of current economic conditions which negatively impacts the purchasing decisions of established or new carriers, or both, will adversely affect our business. Deteriorating economic conditions may also result in demands for vendor-supplied financing, particularly among less well-financed new carriers. Our larger competitors may be able to provide more attractive financing than we can, which may give them a competitive advantage over us in this segment of the market. Additionally, if deflationary expectations become broadly embedded in the world economy, they could magnify our pricing and gross margin pressures.

DELAYS IN THE DEVELOPMENT OF NEW PRODUCTS COULD IMPACT OUR ABILITY TO REMAIN A MARKET LEADER.

Our ability to remain a market leader in the DWDM field depends on our ability to:

- - anticipate changes in technology, industry standards, customer requirements, and product offerings; and
- - develop and introduce new and enhanced products in a timely fashion relative to customer expectations of increasingly short product development cycles.

We could also experience unanticipated delays as a result of the complexity of technology involved in product development efforts in the DWDM and related optical communications fields, including product customization efforts for individual customers. Qualification and ramping up of new suppliers for new or customized products requires extensive planning and can result in unanticipated delays which affect our ability to deliver such products in a timely fashion. The software certification process for new telecom equipment used in RBOC networks, which is a process traditionally conducted by Telcordia (formerly, Bellcore) on behalf of the RBOCs, can also result in unanticipated delays, and has somewhat delayed the commercial introduction of MultiWave Sentry and Firefly for the RBOC market. Our failure to deliver new and improved products or appropriately customized products, in a timely fashion relative to customer expectations can be influenced by our competitors' announcements of competing products. Failure to deliver new and improved products would have a material adverse effect on our competitive position and financial condition. See "Competition in the Rapidly Growing Telecommunications Industry Could Hurt Our Sales and Profitability".

We have committed to producing MultiWave Metro within the next several months, and expect that Omnia's complementary "edge services" delivery product will become available at about the same time. We have also indicated we will have OC-192 capability in our MultiWave Sentry line of products in the second half of the year. Enhanced optical amplifiers necessary for the operation of a fully-configured 96-channel MultiWave system are also expected to be available in the second half of this year. Our ability to meet customer expectations relative to these commitments will likely have a material impact on our ability to further solidify our position in the communications industry as a credible, long-term supplier of multiple products and successive next-generation solutions. We believe we will succeed in this effort, but make no assurance of that. There will likely be few objective "leading indicators" of our success or failure, other than the level of purchasing by customers.

OUR NEW PRODUCTS COULD EXPERIENCE OCCASIONAL PROBLEMS AS THEIR TECHNOLOGY AND MANUFACTURING METHODS MATURE.

The MultiWave 1600 has been operational and carrying live traffic for approximately two years. The MultiWave Sentry 1600 and MultiWave Sentry 4000 have been operational for about a year, and the MultiWave Firefly has recently been introduced into the field. The in-service reliability of our equipment has to date substantially exceeded statistical standards for equipment of this kind. However, the production of new fiberoptic systems with high technology content involves occasional problems as the technology and manufacturing methods mature.

Our history of installation activity indicates that the newness and high precision nature of DWDM equipment may require us to provide enhanced customer training and installation support. We are aware of instances domestically and internationally, of delayed installation and activation of certain MultiWave systems due to faulty components found in certain portions of these systems. We are 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. Those effects include:

- - 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 we maintain accruals for product warranties, we can not make any assurances that actual costs will not exceed these amounts. The pace at which the customer requires upgrades from 16 to 40 to higher channel count systems can further complicate the assessment of appropriate product warranty reserves.

From time to time, we expect to experience interruptions or delays in the activation of the systems and the addition of channels, particularly because we do not control all aspects of the installation and activation activities. We believe we have a good track record to date of problem identification, diagnosis and resolution. However, in the event we experience significant interruptions or delays that we can not promptly identify, diagnose and resolve, confidence in the MultiWave systems could be undermined. Undermined confidence in the MultiWave systems would have a material adverse effect on our customer relationships, business, financial condition and results of operations.

OUR QUARTERLY AND ANNUAL RESULTS HAVE FLUCTUATED IN RECENT PERIODS.

Our revenue and operating results have varied and are likely to continue 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, have caused and may continue to cause material fluctuations in revenue. See "Competition in the Rapidly Growing Telecommunications Industry Could Impact Our Sales and Profitability" and "Changes in Our Customer Mix Could Impact the Demand For The Bandwidth We Supply". Delays or deferrals in purchasing decisions may increase as competitors introduce new competing products, customers change purchasing practices, and we develop and introduce new DWDM products or move to next-generation versions of existing products, such as the MultiWave Sentry 1600, MultiWave Sentry 4000, MultiWave Firefly and MultiWave Metro. Consolidation among our customers and target customers, and the distraction and/or reorganization attendant to such consolidation and after its consummation, may also lead to delay or deferral of purchasing decisions. We believe our present limited visibility into MCI WorldCom's purchasing plan is in part a reflection of this phenomenon. See "We Depend on a Relatively Small Number of Customers".

Changes in our customers' approaches to bandwidth deployment can also materially impact our purchasing decisions. See "We Can Not Predict the Demand for Bandwidth". The ongoing shift in our customer mix also affects the likelihood of fluctuating results, as do general economic conditions. See "Changes in Our Customer Mix Could Impact the Demand For The Bandwidth We Supply"; "Customer Capital Equipment Spending and the Economy May Also Affect Our Profitability". The fact that we depend on a small number of existing and potential customers increases the revenue impact of each customer's actions relative to these factors. Our expense levels in the future will be partially based on our expectations of long term future revenue and net income for any quarterly period in which material orders are delayed or not forthcoming. Our expense levels to some extent reflect our substantial investment in financial, engineering, manufacturing and logistics support resources to position ourselves for successful commercial relationships with large potential customers, even though there is no assurance as to the volume, duration or timing of any purchases which might ensue from them. See "We Depend on a Relatively Small Number of Customers". As a result of this investment of resources over the near term, we have experienced:

- - increased inventory levels and operating expenses;
- - a rise in manufacturing and general overhead and expense structure.

Accordingly, near term results of operations may be only modestly profitable or may involve operating losses, even if revenues sequentially increase. In general, quarter-to-quarter sequential revenue and operating results over the next 12 months are likely to fluctuate and therefore may not be reliable indicators of annual performance. The addition of Lightera and Omnia will likely increase the potential for fluctuating results. See "Lightera and Omnia Acquisition Risk Factors".

OUR SUCCESS LARGELY DEPENDS ON OUR ABILITY TO RETAIN KEY PERSONNEL.

Our success has always depended in large part on our ability to attract and retain highly-skilled technical, managerial, sales and marketing personnel, particularly those skilled and experienced with optical communications equipment. We believe our heritage as an entrepreneurial startup has been an important factor in our success in attracting and retaining key personnel. However, as we have grown and matured, competitors' efforts to entice our employees to leave have intensified, particularly among competitive startups and other early stage companies seeking to replicate CIENA's experience. We can make no assurances that we will be able to retain all of our key contributors or attract new personnel to add to or replace them. The loss of key personnel would likely have a material adverse effect on our business, financial condition and results of operations.

LEGAL PROCEEDINGS COULD HAVE AN ADVERSE EFFECT ON OUR BUSINESS.

Recently, shareholder class action lawsuits were filed against us and certain of our officers and directors. A discussion of these lawsuits can be found in our Form 10-Q for the quarter ended January 31, 1999. We believe the lawsuits are without merit and are defending vigorously against them. However, because the lawsuits are at an early stage, it is not possible to predict the outcome at this time; therefore, they could have a material adverse effect on our financial condition and results of operations.

CERTAIN OF OUR SUPPLIERS ARE ALSO OUR COMPETITORS.

Certain of our component suppliers are both primary sources for such components and major competitors in the market for system equipment. For example, we buy certain key components from:

- - Lucent
- - Alcatel
- - Nortel
- - NEC and
- - Siemens.

Each of these companies offers optical communications systems and equipment which are competitive with our MultiWave 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 MultiWave systems. NEC is a supplier of certain testing equipment. A decline in reliability or other adverse change in these supply relationships could materially and adversely affect our business, financial condition and results of operations. To date, we have not experienced any general decline in reliability among these vendors, but the intensifying competition described above makes this risk factor increasingly important.

WE ARE SUBJECT TO RISKS ASSOCIATED WITH OUR LONG AND UNPREDICTABLE SALES CYCLES.

Network operators typically purchase network equipment such as DWDM equipment pursuant to multiyear purchasing programs which may increase or decrease annually as the operators adjust their capital equipment budgets and purchasing priorities. Our customers often do not share detailed information on the duration or magnitude of planned purchasing programs, nor do they consistently give us advance notice of contemplated changes in their capital equipment budgets and purchasing priorities. Such changes may occur due to factors unique to the individual customer or in response to general economic conditions. See "Customer Capital Equipment Spending and the Economy May Also Affect Our Profitability".

Additionally, to the extent that our customers follow budgeting cycles which generally correspond to the calendar year, we may experience a slow down in demand toward the calendar year end. Further, we are experiencing a shift in our customer mix which may add to the length and unpredictable nature of the sales cycle. See "Changes in Our Customer Mix Could Impact the Demand For The Bandwidth We Supply". These uncertainties

substantially complicate our manufacturing planning, and may cause substantial and unanticipated fluctuations in the timing of orders and revenue. We have in fact experienced unanticipated fluctuations in prior quarters. However, until the third fiscal quarter of 1998, any unanticipated reduction in orders from one customer was offset in part or in whole by unanticipated increases in orders for other routes with the same customer or in orders from another customer. We can make no assurances that we will be able to offset such reductions in the future. The following could also have a material adverse effect on the predictability of our business and on our financial condition and results of operations:

- - any curtailment or termination of customer purchasing programs;
- - decreases in customer capital budgets;
- - reduction in the purchasing priority assigned to equipment such as DWDM equipment, particularly if significant and unanticipated by us and not offset by increased purchasing from other customers.

Further, as is the case with most manufacturing companies, we have manufactured, and likely will continue to manufacture a portion of our finished products on the basis of non-binding customer forecasts rather than actual purchase orders. However, unlike most manufacturing companies, we depend on very few customers, and our DWDM systems are relatively costly. As a result, the financial consequences of mismatches between what is built and what is actually ordered can be magnified.

Customers 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, deferral or unanticipated change in the configuration of orders for MultiWave systems, could materially fluctuate the timing of orders and revenue, and could have a material adverse effect on our business, financial condition and results of operations.

OUR STOCK PRICE MAY EXHIBIT VOLATILITY.

Our common stock price has experienced substantial volatility in the past, and is likely to remain volatile in the future. Volatility can arise as a result of the activities of short sellers and risk arbitrageurs, and may have little relationship to our financial results or prospects. Volatility can also result from any divergence between our actual or anticipated financial results and published expectations of analysts, and announcements we may make. This occurred in 1998. We attempt to address this possible divergence through our public announcements and reports; however, the degree of specificity we can offer in such announcements, and the likelihood that any forward-looking statements we make will prove correct in actual results, can and will vary. This is due primarily to:

- - the uncertainties associated with our dependence on a small number of existing and potential customers;
- - the impact of changes in the customer mix;
- - the actions of competitors;
- - long and unpredictable sales cycles and customer purchasing programs;
- - the absence of unconditional minimum purchase commitments from any customer;
- - a lack of visibility into our 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.

This uncertainty is exemplified by the February 1998 communication from WorldCom that its DWDM system requirements for 1998 would be substantially less than its purchases for 1997, due to a change in its purchasing policies. See "We Depend on a Relatively Small Number of Customers". A further example of this uncertainty occurred the third fiscal quarter of 1998, as an expected order of \$25 million or more from a customer was unexpectedly delayed late in the quarter. This delayed order was later withheld entirely as the result of the customer's new commitments to purchase DWDM equipment from a competitor. See "Competition in the Rapidly Growing Telecommunications Industry Could Hurt Our Sales and Profitability" and "Changes in Our Customer Mix Could Impact the Demand For the Bandwidth We Supply".

The WorldCom example in 1998, and the example of the third fiscal quarter indicate that our actual or anticipated financial results can diverge from published expectations of stock analysts notwithstanding our efforts to address those expectations through public announcements and reports. Such divergence will likely occur from time to time in the future, with resulting stock price volatility, irrespective of our overall year to year performance or long term prospects. As long as we continue to depend on few customers, and particularly in years like 1998, when a substantial majority of their purchases consist of newly-introduced products such as MultiWave Sentry 4000, and MultiWave Firefly, there is substantial risk of widely varying quarterly results, including the so-called "missed quarter" relative to investor expectations. Because these quarterly results do not account for factors such as our dependence on a few customers and for years like 1998, they pose an attendant risk of higher volatility in our stock price. See "We Depend on a Relatively Small Number of Customers"; and "We Can Not Predict the Demand for Bandwidth".

TECHNOLOGICAL CHANGE AND NEW PRODUCTS COULD RESULT IN COMPETITION.

We expect that new technologies will emerge, and existing technologies will rapidly evolve, as competition in the telecommunications industry increases and the need for higher and more cost efficient bandwidth expands. Our ability to anticipate changes in technology, industry standards, customer requirements and product offerings, and to develop and introduce new and enhanced products will impact our ability to remain the leader in the deployment of open architecture DWDM systems and other high-capacity solutions. We can not make any assurances that we will succeed in doing so.

The telecommunications equipment market 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 our competitors have substantially greater financial, technical and marketing resources and manufacturing capacity with which to develop or acquire new technologies. As a result, they are better able to compete for market acceptance of their products. As new products embodying new technologies or new industry standards emerge, they could render our existing products uncompetitive from a pricing standpoint, obsolete or unmarketable. Any of these outcomes would have a material adverse effect on our business, financial condition and results of operations.

WE DEPEND ON A LIMITED NUMBER OF SUPPLIERS FOR KEY COMPONENTS FOR OUR SYSTEMS.

Suppliers in the specialized, high technology sector of the optical communications industry are generally not as plentiful or as reliable as suppliers in more mature industries. We depend on a limited number of suppliers for key components of our MultiWave systems as well as equipment used to manufacture the MultiWave systems. Our highest capacity Sentry product, capable of 96-channel configurations, includes several higher capacity components for which reliable, high volume suppliers are particularly limited. MultiWave systems collectively utilize approximately 1,400 components, and certain key optical and electronic components are currently available only from a sole source. While we have identified alternative suppliers for certain key optical and electronic components, we have not yet qualified all of them. To date, we have conducted most of our business with suppliers by issuing conventional purchase orders against our forecasted requirements. We also pursue long-term supply agreements with some key suppliers, but we continue to conduct a large majority of our business with vendors without such agreements. On occasion, we have experienced delays in receipt of key components. Any future difficulty in obtaining sufficient and timely delivery of them could result in delays or reductions in product shipments which, in turn, could have a material adverse effect on our business, financial condition and results of operations. Uniphase Corporation and JDS FITEL, Inc., both of which are our significant suppliers, recently announced a planned merger. We have enjoyed positive relationships with both companies, and believe the merger can be beneficial to our interests as a customer. If, however, the merger and related integration activities were to result in delayed deliveries of key components from either of these sources, such delays could have a material adverse effect on our near-term results of operations.

LIGHTERA AND OMNIA ACQUISITION RISK FACTORS

OUR ACQUISITIONS OF LIGHTERA AND OMNIA REPRESENT AGGRESSIVE STRATEGIC MOVES THAT CARRY CERTAIN RISKS.

We believe that our acquisitions of Lightera Networks, Inc. (which is now completed) and Omnia Communications, Inc. (which is currently expected to be completed in June or July) represent aggressive strategic moves which can position us as a more complete provider of revolutionary high capacity solutions for the operators of fiberoptic networks worldwide. The moves are aggressive because the prices paid are on the high side of the valuations traditionally assigned to development stage companies which, like Lightera and Omnia, do not yet have their products ready for sale, installation and operation in a customer network. These are strategic moves because we believe the fit of the two companies' intended products with CIENA's will create a first-to-market, optically-centered, cost-effective and broad-based solution for transporting, managing and delivering high bandwidth capacity through the access, local exchange and long distance segments of fiberoptic networks.

We believe that if we can effectively execute product rollout and delivery with Lightera and Omnia, within two to three years the combined contribution of these two acquisitions will account for more than 25% of our revenues and earnings. If so, we believe the prices we paid for the two companies will be amply returned. But effective execution of product rollout and delivery is subject to a number of risks in addition to those we already faced in our continuing operations. Set forth below is a summary of the key new risks.

We encourage investors to review these new risks in the context of the risks we already face, as set forth elsewhere in this Form 8-K.

WE MAY NOT BE ABLE TO RETAIN KEY EMPLOYEES OF LIGHTERA AND OMNIA.

Because of the high valuation we placed on Lightera and Omnia, their key founders and employees have received or will receive a substantial number of CIENA shares and can sell these shares at substantial gains. In many cases, these individuals could become financially independent through these sales, before the products of either company have fully matured into commercially deliverable products commanding reasonable market share. Additionally, startup and other companies will seek out these individuals due to the financial result they have achieved for their investors. Under the circumstances, we face a difficult and significant task of retaining and motivating the key personnel of both companies to stay committed to us. We do not have employment contracts with these personnel. We may not be successful in retaining them.

OUR ABILITY TO MANUFACTURE LIGHTERA AND OMNIA PRODUCTS COULD IMPACT THE SPEED AND SCOPE OF THEIR INTRODUCTION TO THE MARKET.

Both Lightera and Omnia's products are in the laboratory testing phase but the products have not matured into commercially manufacturable units suitable for field deployment. We expect that field deployable units of Omnia's products will be available in the second half of calendar 1999, and Lightera's products by the end of the first quarter of calendar 2000. The maturing process from laboratory prototype to manufacturable units involves a number of steps, including:

- - the qualification and multiple sourcing of critical components, including application specific integrated circuit ("ASIC's") which are not yet finalized;
- - validation of manufacturing methods;
- - extensive quality assurance and reliability testing;
- - software validation, and
- - establishment of systems integration and burn in requirements.

Each of these steps in turn presents serious risks of failure, rework or delay, any one of which could materially and adversely affect the speed and scope of product introduction and marketplace acceptance of the products. Specialized ASIC's, in particular, are key to the timely introduction of Lightera's and Omnia's products, and schedule delays are common in the final testing and manufacture of such components. In addition, unexpected intellectual property disputes, failure of critical design elements, and a host of other execution risks may delay or even prevent the introduction of these products.

THE SUCCESS OF OUR ACQUISITIONS DEPENDS ON OUR ABILITY TO SUCCESSFULLY INTEGRATE LIGHTERA, OMNIA, AND CIENA.

Lightera is based in Cupertino, California and has approximately 75 employees; Omnia is based in Boston, Massachusetts and has approximately 80 employees; and CIENA is based in Linthicum, Maryland and has approximately 1000 employees in Maryland (1400 employees overall). We face the significant task of efficiently integrating the people at these sites operationally and culturally, while preserving the focus and momentum of their individual efforts. Our ability to do so will be a key determiner of the success or failure of the acquisitions. We have limited experience with this type of integration, and can make no assurances that we will succeed in so doing.

WE MAY FACE GREATER COMPETITION AS A RESULT OF OUR ACQUISITIONS OF LIGHTERA AND OMNIA.

The telecom equipment industry is intensely competitive, and dominated by very large, long-established suppliers such as Lucent, Northern Telecom, Alcatel, Fujitsu, NEC and others. We believe our acquisitions of Lightera and Omnia give us a broader, state-of-the-art product line that can be a significant and economically attractive alternative to the legacy equipment suppliers. If so, we expect the competitive response to be intense and wide-ranging, and more intensive than the competition we faced when we were more narrowly focused on the DWDM transport sector of the market. Competitive responses may include, among other things:

- - early announcement of new or different competing products
- - substantial price discounting
- - customer financing assistance
- - intellectual property disputes
- - packaged, "one-stop-shopping" deals combining next generation equipment with legacy equipment and supplies, and
- - other tactics

We can make no assurances that we will succeed against the kind of tactics large competitors may employ.

WE EXPECT THAT OUR ACQUISITIONS OF LIGHTERA AND OMNIA WILL MAKE OUR STOCK PRICE MORE VOLATILE.

We have historically experienced substantial stock price volatility. The range of stock prices has not tracked with valuations based on traditional price/earnings multiples, and takeover speculation appears to have been an influence on the stock price at various times. However, both Lightera and Omnia are at a development stage, and we do not expect either of them to generate any revenue or earnings for at least several months. As a result, we expect to report no better than breakeven results of operations, and may report operating losses, for the next three or four quarters. Under these circumstances, we can expect significant volatility over the next several quarters as investors make judgments as to our relative progress in:

- - bringing the Lightera and Omnia products to market
- - integrating the two companies
- - managing retention issues, and
- - generally executing on the strategic vision.

Additionally, the vast majority of the shares issued to Lightera and Omnia shareholders are likely to become eligible for sale in the May to July 1999 time period. Together, these shares will account for approximately 25% of the outstanding shares of CIENA. If a large proportion of these shares are sold during that time period, the stock price will likely experience further volatility and may decline.