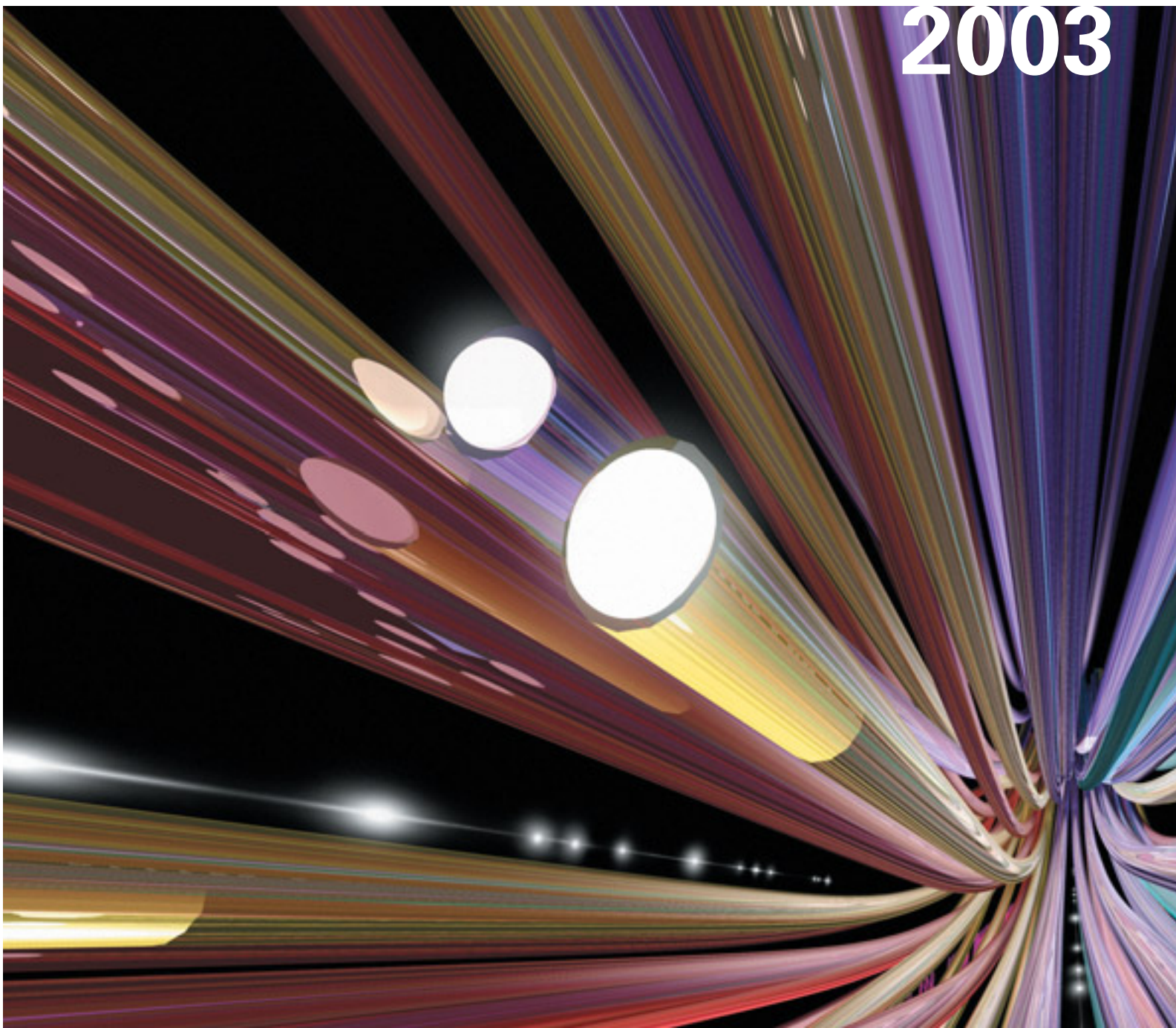




# The Edge in Broadband Communications

2003 Annual Report

# 2003



## Corporate Profile

Centillium Communications, Inc. is a leading provider of broadband access solutions with innovative systems-level products for the consumer, enterprise and service provider markets. The Company's high-performance and cost-effective infrastructure and service enabler products give its customers the winning edge in broadband access. Centillium Communications' products include digital and mixed-signal integrated circuits and related hardware and software applications for Digital Subscriber Line (DSL) and Optical Networking equipment deployed in central offices and customer premises and Voice-over-Internet Protocol (VoIP) products for carrier- and enterprise-class gateways and consumer telephony.

## Financial Highlights

	2003	2002	2001
Net Revenues	<b>\$124,976,000</b>	\$104,972,000	\$159,507,000
Gross Profit	<b>\$ 53,823,000</b>	\$ 45,472,000	\$ 79,726,000
Net Loss	<b>\$ (13,359,000)</b>	\$ (33,301,000)	\$ (19,693,000)
Net Loss Per Share	<b>\$ (0.37)</b>	\$ (0.96)	\$ (0.59)
Cash, Cash Equivalents and Short-term Investments	<b>\$ 89,626,000</b>	\$102,002,000	\$110,853,000
Employees	<b>361</b>	320	336



## To Our Shareholders

While Centillium faced several major business challenges in 2003, I am pleased to report that we also made substantial progress toward achieving a key company goal—building on our traditional technology strengths to diversify into new, high-growth markets and geographies. During the year, our position as a leading supplier of digital subscriber line (DSL) and Voice-over-IP (VoIP) solutions was reaffirmed and reinforced. Through major R&D investments, we have set the stage to become a key player in emerging and promising broadband access market segments. Finally, we have strengthened our presence and increased sales to customers outside our core market in Japan.

### Notable Sales Growth

The company posted a significant increase in sales over the previous year. For 2003, revenues totaled \$125 million, an increase of 19% from 2002's revenues of \$105 million. The net loss for the year improved to \$13.4 million, or \$0.37 per share, compared to a net loss of \$33.3 million, or \$0.96 per share, for fiscal 2002.

The sales increase was led by both a growing demand for new and faster DSL services in Japan and the improved diversification of our customer base as we

increased our revenues to customers outside of Japan. The number of DSL subscribers in Japan grew to 10.3 million at the end of 2003 compared to 5.6 million subscribers one year ago. Additionally, in 2003, service providers in Japan launched improved DSL offerings which deliver data rates of up to 40 or 24 megabits per second, compared to earlier services of up to 12 or 8 megabits per second. In many cases, the new services are requiring equipment upgrades by the service providers and are further requiring existing DSL users who want the latest service to replace their modem, driving additional sales for us. We also benefited from the success of our customer diversification efforts. Revenues from customers outside of Japan grew to \$26 million in 2003 compared to \$15 million in 2002.

Our increased sales led to another first for the company, when coupled with reductions in our operating expenses. During 2003's third quarter, we achieved GAAP (generally accepted accounting principles) profitability. For that period, net income was \$382,000, or \$0.01 per share.

### A Leading Broadband Access Company

As Centillium moves forward, the company is pursuing a growth strategy that capitalizes on our current

successes to diversify into emerging related technologies and growing markets. With this in mind, we have dedicated our energies and resources to become a leading broadband access company focused on providing our customers with the winning competitive edge. We will continue to build on our DSL foundation, developing and delivering valuable new solutions for existing and new customers. As we do, we will also capitalize on emerging broadband access opportunities in markets where it makes most sense for us to participate. During 2003, the company pursued this more expansive mission in a number of ways.

As a leading developer of advanced DSL solutions, we continued to make significant progress. Important achievements include the launch of eXtremeDSL<sup>MAX™</sup>, a technology that provides DSL data rates of up to 50 Mbps, conforms to the new ADSL2/2+ standard and enables service providers to provide subscribers with premium broadband services, such as HDTV and Video on Demand. With eXtremeDSL<sup>MAX</sup> technology, our new CO and CPE products, Maximus™ and Palladia 220™, can extend the reach of DSL services to up to 22,000 feet from the telephone company's central office, lowering costs and generating new revenue opportunities for service providers.

In 2003, Centillium also introduced Entropia III™, our fourth-generation Voice-over-IP processor for voice, media and wireless gateways. Supporting more than 1,000 VoIP channels on a single chip, Entropia III was—we are proud to note—the winner of INTERNET TELEPHONY® Magazine's "2003 Product of the Year" award.

In addition, the company has made major investments in the Fiber-to-the-Premises (FTTP) market, an emerging broadband access segment, which we believe will offer us considerable growth opportunities in the years ahead. Our product line, which includes both transceiver and protocol chips, will allow system vendors to offer very high speed broadband access services using passive optical network (PON) technology. To assure that we are making the right development decisions and getting the most from each R&D dollar, we are working closely on these products with customer sponsors noted for their insight and expertise in this market. These products will be introduced later in 2004, an excellent time, we believe, to capitalize on a major opportunity.

Finally, we are pursuing synergistic opportunities in other emerging broadband access markets. As we look in these directions, our strategy is to acquire and develop highly complementary, cost-competitive technologies and develop products that deliver greater functionality and enable more fully integrated data, voice and video capabilities.

### **Growing in New Geographic Markets**


In addition to expanding into new broadband access markets, Centillium took major steps during 2003 to develop new business with customers outside of Japan. In the fourth quarter, we saw that our efforts were beginning to bear fruit. For the period, revenues from customers outside of Japan increased to more than \$10 million, up more than 65% from approximately \$6 million in the third quarter. During the quarter, we also had several significant design wins with customers in the U.S. and Europe as well as in Asian nations outside of Japan. As we bolster our marketing and sales efforts in select world markets, we believe this trend toward greater geographic balance will continue.

### **Accelerating Growth through Diversification**

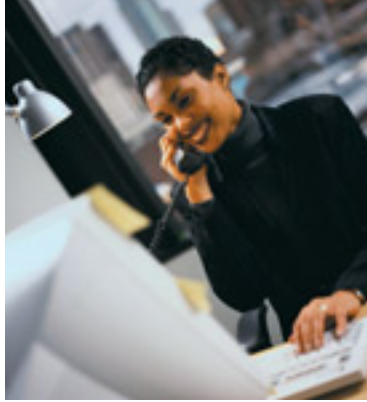
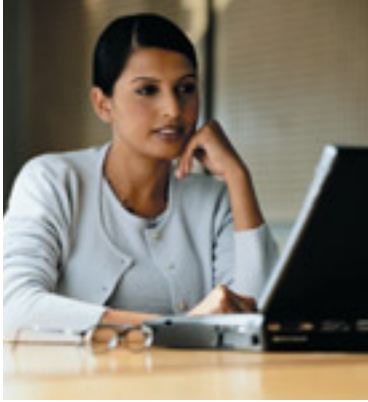
During the last couple of years, Centillium has addressed an array of market challenges due to the structural difficulties in the telecommunications markets. Despite these challenges and difficulties, we were able to grow our revenues, and I believe our efforts have prepared us well for the future. In the face of substantial economic pressures, we have continued to invest in the new technologies essential to our long-term growth and success. Already an industry leader in advanced DSL solutions, we are strategically diversifying our business—strengthening our position in Voice-over-IP, preparing to play a leadership role in the optical access market and looking closely at additional synergistic broadband access opportunities that hold great promise for us.

By setting our sights high, we have much to do. But, we believe, we also have much to look forward to.

Thank you for your continuing support,



**Faraj Aalaei**  
Chief Executive Officer and Co-founder



DSL

Voice-over-IP

Fiber-to-the-Premises

**“Already an industry leader in advanced DSL solutions, we are strategically diversifying our business—strengthening our position in Voice-over-IP, preparing to play a leadership role in the optical access market and looking closely at additional synergistic broadband access opportunities that hold great promise for us.”**

—Faraj Aalaei, CEO and Co-founder



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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549**

**FORM 10-K**

(Mark One)

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

**For the fiscal year ended December 31, 2003**

**OR**

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

**For the transition period from \_\_\_\_\_ to \_\_\_\_\_**

**Commission File Number: 000-30649**

**CENTILLIUM COMMUNICATIONS, INC.**

(Exact name of Registrant as Specified in its Charter)

**Delaware**  
(State or Other Jurisdiction of  
Incorporation or Organization)

**94-3263530**  
(I.R.S. Employer  
Identification Number)

**47211 Lakeview Boulevard**  
**Fremont, California 94538**  
(Address of Principal Executive Offices including Zip Code)

**(510) 771-3700**  
(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  No

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

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

The aggregate market value of the voting stock held by non-affiliates of the Registrant, as of June 30, 2003, the last business day of the Registrant's most recently completed second fiscal quarter, was approximately \$277,787,000 based upon the closing price for shares of the Registrant's Common Stock as reported by the Nasdaq National Market. Shares of Common Stock held by each executive officer, director and holder of 5% or more of the outstanding Common Stock have been excluded in that such persons may be deemed to be affiliates. This determination of affiliate status is not necessarily a conclusive determination for other purposes.

On February 13, 2004, approximately 37,900,336 shares of the Registrant's Common Stock, \$0.001 par value, were outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Part III incorporates certain information by reference from the registrant's definitive proxy statement (the "Proxy Statement") for the Annual Meeting of Stockholders to be held on June 11, 2004.

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**CENTILLIUM COMMUNICATIONS, INC.**

**FORM 10-K  
ANNUAL REPORT**

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## CAUTIONARY STATEMENT

*This report contains forward-looking statements which include, but are not limited to, statements concerning projected revenues, expenses, gross profit and income, the need for additional capital, market acceptance of our products, our ability to consummate acquisitions and integrate their operations successfully, our ability to achieve further product integration, the status of evolving technologies and their growth potential, and our production capacity. These forward-looking statements are based on our current expectations, estimates and projections about our industry, management's beliefs, and certain assumptions made by us. Words such as "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates," "may," "will" and variations of these words or similar expressions are intended to identify forward-looking statements. In addition, any statements that refer to expectations, projections or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. These statements are not guarantees of future performance and are subject to certain risks, uncertainties and assumptions that are difficult to predict. Therefore, our actual results could differ materially and adversely from those expressed in any forward-looking statements as a result of various factors. The section entitled "Risk Factors" set forth in Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," of this report, and similar discussions in our other Securities and Exchange Commission ("SEC") filings, discuss some of the important risk factors that may affect our business, results of operations and financial condition. You should carefully consider those risks, in addition to the other information in this report and in our other filings with the SEC, before deciding to invest in our company or to maintain or increase your investment. We undertake no obligation to revise or update publicly any forward-looking statements for any reason.*

## PART I

### ITEM 1. BUSINESS

#### COMPANY OVERVIEW

Centillium Communications, Inc. (Centillium or the Company) provides semiconductor products that enable broadband communications, which is the high-speed networking of data, voice and video signals, for consumers and business enterprises. Our product portfolio includes silicon integrated circuits and associated software that are used in communications equipment for several broadband markets including digital subscriber line (DSL) and Voice over Packet (VoP) applications. We are also developing a new line of broadband semiconductor products for optical access applications, which we plan to introduce in 2004.

Centillium was incorporated in California on February 21, 1997. Our principal executive offices are located at 47211 Lakeview Boulevard, Fremont, CA 94538, and our telephone number at that location is (510) 771-3700. In the second quarter of 2004, we plan to move our principal executive offices to 215 Fourier Avenue, Fremont, CA 94539. Our Internet address is [www.centillium.com](http://www.centillium.com). We make available free of charge on or through our Internet website our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and all amendments to those reports as soon as reasonably practicable after such material is electronically filed with or furnished to the Securities and Exchange Commission. Our common stock trades on the Nasdaq National Market under the symbol "CTLM."

#### INDUSTRY ENVIRONMENT

Over the past two decades, communications technology has evolved from simple analog voice signals transmitted over networks of copper telephone lines to complex analog and digital voice and data signals transmitted over networks of media, such as copper wires, fiber optic strands and wireless transmission over radio frequencies. This evolution has been driven by substantial increases in the number of users and new data-intensive computing and communications applications, such as web-based commerce, streaming audio and video and telecommuting. In addition, information is increasingly available via wired and wireless networks through a

variety of access devices, including personal computers and handheld computing devices such as personal digital assistants, portable digital audio players, digital cameras and cellular phones. These applications and devices are continuing to require higher and more cost-efficient data transfer rates throughout the network communications infrastructures that serve them.

This evolution has inspired equipment manufacturers and service providers to develop and expand existing broadband communications markets and has created the need for new generations of integrated circuits. Broadband transmission of digital information over existing infrastructure requires highly integrated mixed-signal semiconductor products to perform critical systems functions such as complex signal processing and converting digital data to and from analog signals. Broadband communications equipment requires substantially higher levels of system performance, in terms of both speed and precision, which typically cannot be adequately addressed by traditional semiconductor products developed for low-speed transmission applications. Moreover, products that are based on multiple discrete analog and digital chipsets generally cannot achieve the cost-effectiveness, performance and reliability requirements demanded by today's broadband marketplace. These requirements are best addressed by new generations of highly-integrated mixed-signal and digital devices that combine complex system functions within high performance circuitry and can be manufactured in high volumes using cost-effective process technologies.

## STRATEGY

Our objective is to be a leading provider of semiconductor products for equipment manufacturers serving the broadband communications markets. Key elements of our strategy include the following:

*Grow and diversify the Company by leveraging our technical expertise to target complementary, high-growth broadband communications markets.* Our strategy is to focus on complementary, high-growth broadband communications markets and to develop products for applications in those markets. Our current products are designed for the DSL central office (CO) infrastructure equipment, DSL customer premises equipment (CPE) and VoP equipment markets. Additionally, we are developing technologies for the optical access market and plan to introduce products for this market in 2004. By targeting complementary markets which share common technologies and customers, we are able to more effectively utilize our existing engineering, sales and marketing resources.

*Extend technology leadership.* We have invested substantial resources to establish our technology leadership. We believe we were the first company to deliver integrated asymmetric digital subscriber line (ADSL) infrastructure products for the central office that support multiple ports. We also believe we are the first company to deliver an ADSL technology that enables transmission at rates of up to 50 megabits per second (Mbps). We call this technology eXtremeDSL<sup>MAX</sup>™ and this 50 megabit technology compares to the predominant worldwide ADSL technology standard which provides up to only 8 Mbps. Furthermore, we believe we are one of the first companies able to provide products that support the new worldwide ADSL2/ADSL2+ standard which enables higher-speed data transmission for consumers and businesses and allows more efficient network management for DSL service providers. An important element of our technological leadership is our programmable digital signal processor and associated processing instructions, or algorithms, which are optimized for high bandwidth communications applications. This core technology can be extended to develop multiple communications products for complementary markets. We intend to continue to invest our resources to extend our technology lead in our current target markets and to leverage this lead to enter complementary broadband communications markets.

*Accelerate the geographic diversification of our existing businesses.* In 2003, revenues from customers outside of Japan grew to \$26 million from \$15 million in 2002. This growth was due primarily to significant improvements in revenues from customers in North America, Taiwan and China. However, in spite of the significant growth in revenues from customers outside of Japan in 2003, our DSL customers in Japan still accounted for 79% of our 2003 revenues. As part of our strategy to accelerate the geographic diversification of our DSL business, in 2004 we plan to significantly increase our investment in the Company's sales and

marketing team outside of Japan. Our goal is to use these increased sales and marketing resources to increase market share by more quickly converting existing design wins into greater revenue and to secure more design wins at key DSL and VoP equipment manufacturers.

*Leverage system-level expertise.* Many of our system-level engineers have previous experience as employees of communications equipment manufacturers and are therefore very familiar with the requirements of, and challenges faced by, our customers. We combine this system-level engineering expertise with our expertise in integrated circuit, digital signal processor and software design to develop products that allow our customers to optimize time-to-market, performance and systems cost.

*Pursue strategic acquisitions.* Our strategy is to enhance our growth capability by pursuing selective acquisitions. This strategy allows us to more rapidly obtain complementary technologies and engineering talent and to access key markets and customer relationships. In 2003, we filed a shelf registration statement with the Securities and Exchange Commission which allows us to raise up to \$90 million dollars of additional capital through the issuance of registered securities. We believe that having the shelf registration statement in place can significantly improve our ability to obtain financing for general purposes and working capital requirements and/or fund possible investments in acquisitions of complimentary businesses, partnerships, minority investments, products or technologies. We believe completing selective acquisitions will be important to remaining competitive as a complete product solutions provider to manufacturers of broadband communications equipment.

## **TARGET MARKETS AND CENTILLIUM PRODUCTS**

We design, develop and supply a portfolio of products for a number of the key applications enabling broadband communications. Currently, our core markets include DSL CO infrastructure products for use in the service provider's central office, DSL CPE products for use in a DSL subscriber's home or business and VoP products for use in carrier- and enterprise-class voice gateways and switches. We are developing products which further expand our DSL and VoP product lines, and we are also developing a family of optical access products initially targeting the emerging opportunity for optical infrastructure in the Fiber-To-The-Premises (FTTP) market, which we will introduce in 2004.

### **Digital Subscriber Line (DSL)**

Digital subscriber line technologies, commonly known as DSL, represent a family of broadband technologies that use a greater range of frequencies of existing copper telephone lines than traditional telephone services which in turn allows greater bandwidth to send and receive information. DSL speeds range from 128 Kbps up to 50 Mbps depending on the distance between the central office and subscriber. These data rates enable DSL service providers to offer a wide range of new bundled broadband services. DSL continues to be a rapidly growing market that is driving demand for increasing amounts of semiconductor integrated circuits. According to the Dell'Oro Group, the number of worldwide DSL subscribers grew from less than 6 million at the end 2000 to 59 million at the end of 2003 and is projected to reach 150 million by the end of 2006.

Our DSL products are based on a type of DSL technology known as asymmetrical DSL or ADSL. ADSL technology provides substantially faster transmission of data from the network to the end-user than from the end-user to the network. This tradeoff works to the consumer's advantage in that most users typically download more data from the network than they send to the network. Each of our DSL products consists primarily of two semiconductor devices—a mixed-signal device and a digital device. The mixed-signal chip translates signals between analog and digital formats, and our digital chip incorporates our proprietary software programmable digital signal processor.

### ***DSL Central Office (CO) Infrastructure Products***

Our Maximus™ and CopperFlite™ families of DSL infrastructure products are used in various types of communications equipment that aggregate and process data traffic from a substantial number of individual

telephone lines for transmission through a data network. Our high performance, tightly-integrated infrastructure chipsets offer high port density coupled with low power consumption. High port density means that a service provider can serve more customers with fewer pieces of equipment, while a low power chipset leads to lower energy and operational costs for the service provider. These features effectively lower costs for service providers.

### ***DSL Customer Premises Equipment (CPE) Products***

Our Palladia™ family of products is used in various types of customer premises equipment that process data signals between a regular telephone line and a computer. It enables end-users to simultaneously connect to the Internet at very high data rates while talking on the telephone or sending a fax. Our high performance DSL CPE chipsets enable CPE equipment manufacturers to produce devices with high data throughput. In addition, the integration of various features, small form factor and low power consumption of our Palladia chipsets result in lower production and ownership costs.

### **Voice over Packet**

The increased demand from service providers and enterprises to deliver voice and data communications over a single integrated network has accelerated the trend towards the use of VoP technology. This technology provides the most bandwidth-efficient method of transmitting voice information in discrete packets over the traditional circuit-based infrastructure of the public switched telephone network. The convergence of voice and data traffic over internet networks delivered from a single multi-service network offers a major benefit through this simplified network solution.

Currently, most telephony service providers maintain two separate networks—one for legacy voice traffic and a second for data traffic. VoP technology compresses voice signals into discrete packets of data, thereby enabling the voice signals to be transmitted over lower-cost networks originally designed for data-only transmission. VoP technology is used in numerous new types of communications equipment, such as next generation carrier- and enterprise-class gateways and soft switches, digital loop carriers and IP DSL access multiplexers, and media terminal adapters and home gateways for use by consumers and small businesses. These VoP technology-based devices enable more efficient and cost-effective voice transmissions than their legacy circuit-switched equipment counterparts. In addition to significant cost savings, VoP also enables advanced services that traditional telephony could not support. VoP technology enables and enhances features such as unified messaging and managed services that provide additional value to consumers and businesses and allow service providers to enhance revenue opportunities.

### ***Voice over Packet Products***

We currently provide three products for the VoP market: Entropia III, Entropia II LP and Entropia II EG. Entropia III is our fourth generation VoP product and can process up to 1,008 voice channels per chip supporting Voice over Internet Protocol (VoIP) and Voice over ATM functionality. Entropia III is sold to manufacturers of broadband infrastructure products for use in central-office based voice-switching equipment such as trunking, access, and media gateways. Entropia II LP is our third generation VoP product and processes up to 336 voice channels per chip. Entropia II LP is marketed for use in central office and enterprise voice equipment that requires mid-level channel densities and central office equipment that processes both DSL and VoIP signals. Entropia II EG is our third generation VoP product that processes up to 96 voice channels per chip. Entropia II EP is marketed for use in central office access gateways and enterprise voice equipment that requires lower channel densities.

### **Fiber-To-The-Premises (FTTP)**

Like DSL, FTTP technologies provide high speed network access for both residential and business end users. FTTP offers speeds of service up to 1 Gbps without the limitations of distance or the symmetry/asymmetry profiles typical in DSL. In addition, FTTP also has the potential to virtually eliminate the cost of an entire class

of equipment in the provider's network: the outside plant electronics. This optical broadband infrastructure enables FTTP service providers to offer a wider range of next generation bundled services to potentially enhance their revenue streams. FTTP is still in its infancy and has a history of prolonged and painful introduction, but it is now a rapidly growing market in selected networks, which is driving demand for increasing amounts of semiconductor integrated circuits. The number of worldwide FTTP subscribers is growing at a fast pace, mainly fueled by growth in Japan and the United States markets. In Japan alone, the number of FTTP subscribers is approaching 1 million users, and it is anticipated to double over the next fiscal year.

Our FTTP products are based on a type of optical technology known as Passive Optical Networking (PON). In this market space, we plan to introduce Ethernet-based PON (EPON) products. Each of our FTTP products consists of one or two semiconductor devices either working independently or jointly—a mixed-signal device known as a protocol chipset and an analog device known as a transceiver. The mixed-signal chip translates signals between analog and digital formats, and our analog chip incorporates innovative technologies to bring photonic signals into the protocol device.

### *Planned introduction of FTTP products*

In 2004, we plan to introduce four classes of products for the FTTP market: central office (CO) transceivers, CO protocol processors, customer premise equipment (CPE) transceivers and CPE protocol processors. Transceivers are used to convert light signals contained in individual strands of optical fiber into electrical signals suitable for higher level data processing. Protocol processors pick up the data stream from a transceiver and manage the bi-directional flow of information for delivery to an end user. End users may then use these streams of data to access the Internet over high speed circuits or connect voice devices (VoP or traditional analog telephones), as well as receive video broadcasts. Our CO solutions will be characterized by high performance, high density and low power consumption, while our CPE solutions will showcase advanced integration of functions targeting cost and ease of design.

## **TECHNOLOGY**

Our primary competitive advantage is technology expertise in key areas including our system-level knowledge, programmable digital signal processor, signal processing algorithms, digital chip design capability, mixed-signal chip design capability and system-level software. Together, these capabilities have enabled us to provide system-level communications products that have:

- flexibility due to programmability;
- higher data throughput;
- low power consumption; and
- small size.

*Software programmable digital signal processor.* A cornerstone of our technology is our internally-developed software programmable digital signal processor. A digital signal processor, as it relates to communications applications, encodes digital data for transmission over bandwidth-limited media, such as copper telephone lines, and recovers the encoded data at the receiving end. Our software programmable digital signal processor is optimized for communications applications and provides high processing bandwidth with low power requirements. This digital signal processor can be programmed for several different applications, such as DSL and VoP networking. This software programmable digital signal processor technology gives us the advantage of field programmability of devices. Field programmability means that service providers can remotely upgrade their equipment to address new standards or enable improved features, thereby extending the life cycles of their equipment while incurring lower costs.

*Signal processing algorithms.* A key component of our continued success is the expertise that we have developed in communications algorithms. Communications algorithms are the processes and techniques used to transform a digital data stream into a specially conditioned analog signal suitable for transmission across copper telephone wires. We possess a thorough understanding of, and practical experience in, the process of transmitting and receiving a digital data stream in analog form. We also have significant experience developing algorithms to enable voice compression, echo cancellation and telephony signal processing. This expertise allows us to design highly efficient algorithms that in turn enable us to create products with high performance, re-programmability and low power consumption.

*Digital chip design.* We are experts in the area of highly complex, high-speed digital chip development. We perform both the logic design and the physical layout design for our products. This design expertise has enabled us to develop tightly integrated digital chips that have small form factors and consume low power.

*Mixed-signal chip design.* A mixed-signal chip translates signals between analog and digital formats. Our team of analog engineers has substantial experience in signal conversion techniques and analog circuit design, and we believe our mixed-signal DSL chip contains among the highest level of integration in the industry.

*System software.* We have expertise in developing software that addresses the needs of network equipment manufacturers and service providers. Our knowledge of network operation and architectures allows us to write software that ensures that our products are interoperable with communications equipment vendors' products. In addition, our understanding of various operating systems and personal computer environments allows us to create software that provides for simple installation and operation.

## **CUSTOMERS AND STRATEGIC RELATIONSHIPS**

We sell our products to leading manufacturers of broadband communications equipment in our target markets. Because we leverage our technologies across different markets, certain of our integrated circuits may be incorporated into equipment used in different markets.

As part of our business strategy, we periodically establish strategic relationships with certain key customers. From time to time, we have also entered into development agreements with certain key customers to co-develop products.

A small number of customers have historically accounted for a substantial portion of our revenue. Sales to NEC represented approximately 49% of our net revenue in 2003 and approximately 45% of our net revenue in 2002. Sales to Sumitomo Electric Industries represented approximately 31% of our net revenue in 2003 and approximately 41% of our net revenue in 2002. The loss of a key customer could materially and adversely affect our business, financial condition and results of operations. We expect that our key customers will continue to account for a substantial portion of our net revenue in 2004 and in the foreseeable future. These customers and their respective contributions to our net revenue have varied and will likely continue to vary from period to period. We typically sell products pursuant to purchase orders that customers can generally cancel or defer on short notice and do not have agreements with any of our key customers that contain long-term commitments to purchase specified volumes of our products.

## **SALES AND MARKETING**

Our sales and marketing strategy is to achieve design wins with technology leaders in each of our targeted broadband communications markets by, among other things, providing superior design-in engineering support. We believe that providing comprehensive design-in service and support is critical to shortening our customers' design cycles and maintaining a competitive position in our targeted markets. We market and sell our products through our direct sales force and through independent sales representatives. Our sales managers are dedicated to our principal customers to promote close cooperation and communication. Representatives support the sales



managers by providing leads, nurturing customer relationships, closing design wins and securing customer orders.

We manage a number of marketing programs designed to communicate our capabilities and benefits to broadband access equipment manufacturers. Our web site is an important marketing tool where a wide range of information is available, including product information, white papers, application notes, press releases and contributed articles. In addition, we participate in industry trade shows, technical conferences and technology seminars, conduct press tours and publish technical articles in industry journals.

## **BACKLOG**

In many cases we manufacture our products in advance of receiving firm product orders from our customers based upon our forecasts of worldwide customer demand. Our sales are made primarily pursuant to standard purchase orders for delivery of products. Due to industry practice, which allows customers to cancel or change orders prior to shipment, we believe that backlog is not a reliable indicator of future revenue levels. All backlog orders can be filled within the next fiscal year.

## **RESEARCH AND DEVELOPMENT**

We have assembled a core team of experienced engineers and technologists, many of whom are leaders in their particular field or discipline. As of December 31, 2003, we employed 224 engineers in Research and Development. These employees are involved in advancing our core technologies, as well as applying these core technologies to product development activities in our target markets.

We believe that the achievement of higher levels of integration, functionality and performance and the introduction of new products in our target markets are essential to our growth. Our current plans are to increase our research and development staffing levels in 2004. In addition to our principal design facilities in Fremont, California, we also have design centers in India and France.

Research and development expense for 2003, 2002 and 2001 was approximately \$46.2 million, \$50.8 million and \$59.0 million, respectively.

## **OPERATIONS AND MANUFACTURING**

We outsource the fabrication, assembly and testing of our semiconductor devices. This fabless model allows us to focus our resources on the design, development and marketing of our products. We manage the production of our devices through our operations and manufacturing group, which consists of technology engineering, test engineering, logistics, quality assurance and reliability.

### ***Wafer Fabrication***

We source our semiconductor fabrication from some of the world's largest foundries, including but not limited to, our principal suppliers: Taiwan Semiconductor Manufacturing Company, United Microelectronics Corporation and Semiconductor Manufacturing International Corporation. Our manufacturing strategy is to qualify and utilize multiple facilities within a given foundry partner for the fabrication of a given semiconductor integrated circuit. This second source strategy seeks to ensure production and performance consistency, both of which are critical for our products, while maintaining multiple channels of supply. Any inability of one of our independent foundry subcontractors to provide the necessary capacity or output for our products could result in significant production delays and could materially and adversely affect our business, financial condition and results of operations. While we currently believe we have adequate capacity to support our current sales levels, we continue to work with our existing foundries to assure production capacity, and we intend to qualify new foundries to provide additional production capacity. It is possible that adequate foundry capacity may not be

available on acceptable terms, if at all. In the event a foundry experiences financial difficulties, or if a foundry suffers any damage or destruction to its facilities, or in the event of any other disruption of foundry capacity, we may not be able to qualify alternative manufacturing sources for existing or new products in a timely manner.

### ***Assembly and Test***

Foundry subcontractors conduct our silicon wafer testing. Following completion of the silicon wafer tests, the dies are assembled into packages and the finished semiconductor products are tested by one of our four key subcontractors: Advanced Semiconductor Engineering, Amkor Technology, ST Assembly Test Services, and United Test and Assembly Center Ltd. While we have not experienced any material disruption in supply from assembly subcontractors to date, we could experience assembly problems in the future. The availability of assembly and testing services from these subcontractors could be materially and adversely affected in the event a subcontractor experiences financial difficulties, if a subcontractor suffers any damage or destruction to its respective facilities, or in the event of any other disruption of assembly and testing capacity.

### ***Quality Assurance***

Manufacturers of broadband communications equipment demand high quality and reliable semiconductors for incorporation into their products. We focus on product reliability from the initial stage of the design cycle through each specific design process, including layout and production test design. In addition, we subject our designs to in-depth circuit simulation at temperature, voltage and processing extremes before initiating the manufacturing process.

We prequalify our assembly and foundry subcontractors. This prequalification process consists of a series of industry standard environmental product stress tests, as well as an audit and analysis of the subcontractor's quality system and manufacturing capability. We also participate in quality and reliability monitoring through each stage of the production cycle by reviewing electrical and parametric data from our wafer foundry and assembly subcontractors. We closely monitor wafer foundry production to ensure consistent overall quality, reliability and yield levels. In cases where we purchase wafers on a fixed cost basis, any improvement in yields can reduce our cost per chip.

## **COMPETITION**

Although we produce system-level products, we primarily compete with vendors of semiconductor devices for the DSL and VoP markets. We believe that the principal factors of competition for semiconductor vendors to these markets are product capabilities, level of integration, rate of data throughput, performance and reliability, power consumption, price, time-to-market, system cost, intellectual property rights, customer support and reputation. We believe we compete favorably with respect to each of these factors.

We compete with a number of major domestic and international suppliers of semiconductors for both DSL central office and customer premises equipment and with suppliers of semiconductors for equipment enabling VoP networks. Our principal competitors that supply semiconductors to these markets include Analog Devices, Broadcom, Conexant Systems, Infineon, ST Microelectronics and Texas Instruments.

Many of our competitors operate their own fabrication facilities and have longer operating histories and presence in key markets, greater name recognition, access to larger customer bases and significantly greater financial, sales and marketing, manufacturing, distribution, technical and other resources. As a result, our competitors may be able to adapt more quickly to new or emerging technologies and changes in customer requirements or devote greater resources to the promotion and sale of their products. Current and potential competitors have established or may establish financial or strategic relationships among themselves or with existing or potential customers, resellers or other third parties. Accordingly, it is possible that new competitors or alliances among competitors could emerge and rapidly acquire significant market share. In addition, our

competitors may in the future develop technologies that more effectively address our markets at a lower cost. We cannot assure you that we will be able to compete successfully against current or potential competitors, or that competition will not have a material adverse effect on our business, financial condition and results of operations.

## INTELLECTUAL PROPERTY

We rely on a combination of copyright, patent, trademark, trade secret and other intellectual property law, nondisclosure agreements and other protective measures to protect our proprietary rights. We also utilize unpatented proprietary know-how and trade secrets and employ various methods to protect such intellectual property.

Although we employ a variety of intellectual property in the development and manufacturing of our products, we believe that none of that intellectual property is individually critical to our current operations. However, taken as a whole, we believe our intellectual property rights are significant and that the loss of all or a substantial portion of such rights could have a material adverse effect on our results of operations. We cannot assure you that our intellectual property protection measures will be sufficient to prevent misappropriation of our technology. In addition, the laws of many foreign countries do not protect our intellectual properties to the same extent as the laws of the United States. From time to time, third parties have or may assert infringement claims against us or against our customers in connection with their use of our products. In addition, we may desire or be required to renew or to obtain licenses from others in order to further develop and market commercially viable products effectively. We cannot assure you that any necessary licenses will be available on reasonable terms.

## EMPLOYEES

As of December 31, 2003, we had a total of 361 employees, of whom 257 are engineers. None of our employees is represented by a labor union. However, certain of our foreign employees are subject to collective bargaining agreements mandated by local country law. We do not anticipate that the results of future negotiations under these collective bargaining agreements will have a material adverse financial impact on our business. We have not experienced any work stoppages and we consider our relations with our employees to be good. Our future performance depends in significant part upon the continued service of our key personnel, none of whom is bound by an employment agreement requiring service for any definite period of time. Our future success also depends on our continued ability to attract, integrate, retain and motivate highly qualified sales, technical and managerial personnel. Competition for such qualified personnel is intense. To date, we believe that we have been successful in recruiting qualified employees, but there is no assurance that we will continue to be successful in the future. In fiscal 2004, we intend to increase our overall workforce, primarily in research and development and sales and marketing, from the level of employees as of December 31, 2003.

## REVENUES BY GEOGRAPHIC AREA

The following is a summary of net revenues by major geographic area (in thousands):

	<b>Years ended December 31,</b>		
	<b>2003</b>	<b>2002</b>	<b>2001</b>
Japan .....	\$ 99,137	\$ 90,260	\$138,948
North America .....	14,470	11,431	16,710
Asia—Excluding Japan .....	9,806	2,660	3,108
All other .....	1,563	621	741
Total .....	<u>\$124,976</u>	<u>\$104,972</u>	<u>\$159,507</u>

**ITEM 2. PROPERTIES**

We lease two buildings in Fremont, California that comprise our corporate headquarters and include our administration, sales and marketing, research and development, and operations departments. Internationally, we lease one engineering design center in France and two in India, and we also lease sales offices in Japan, China, Taiwan and South Korea.

During the fourth quarter of fiscal 2003, we entered into a seven-year lease agreement to lease approximately 104,000 square feet of office space in Fremont. The lease agreement commences in March 2004 and the lease agreements for the two main office buildings in Fremont, California terminate in April 2004.

We believe that our current facilities, together with planned expansions, will be adequate for at least the next twelve months and that additional leased space can be obtained on commercially reasonable terms if needed.

**ITEM 3. LEGAL PROCEEDINGS**

We are not currently a party to any material litigation. Discussion regarding potential litigation can be found in Section 7, "Risk Factors" of this Form 10-K.

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

No matters were submitted to the vote of the security holders during the quarter ended December 31, 2003.

## PART II

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

#### Price Range of Common Stock

Our Common Stock has traded on the Nasdaq National Market under the symbol "CTLM" since our initial public offering in May 2000. The following table sets forth, for the periods indicated, the high and low closing bid prices for the common stock on the Nasdaq National Market:

<u>Quarter</u>	<u>High</u>	<u>Low</u>
Year ended December 31, 2003:		
First quarter . . . . .	\$ 4.75	\$2.35
Second quarter . . . . .	\$11.03	\$4.13
Third quarter . . . . .	\$12.14	\$6.60
Fourth quarter . . . . .	\$ 8.16	\$4.90
Year ended December 31, 2002:		
First quarter . . . . .	\$13.97	\$8.12
Second quarter . . . . .	\$14.38	\$6.37
Third quarter . . . . .	\$ 7.87	\$1.20
Fourth quarter . . . . .	\$ 3.33	\$1.34

On February 13, 2004, there were approximately 142 record holders of the Company's Common Stock, and the last reported sale price of the Company's common stock was \$4.79. There were approximately 5,990 beneficial stockholders as of February 13, 2004.

#### Dividend Policy

We have never declared or paid cash dividends on shares of our capital stock. We currently intend to retain all of our earnings, if any, for use in our business and in acquisitions of other businesses, products or technologies and do not anticipate paying any cash dividends in the foreseeable future.

#### Stockholder Rights Plan

In December 2002, the Company's Board of Directors approved the adoption of a stockholder rights plan. The plan is designed to assure that Centillium stockholders receive fair value in the event of a future unsolicited business combination or similar transaction involving Centillium in a manner or on terms not approved by the Centillium Board of Directors.

Under the plan, Centillium issued a dividend of one right for each outstanding share of common stock of the Company held by stockholders of record as of the close of business on January 9, 2003. Each right will initially entitle stockholders to purchase a fractional share of the Company's preferred stock for \$25.00. However, the rights will become exercisable only after the occurrence of certain specified events, including the acquisition of 15% or more of Centillium's outstanding common stock by an unsolicited third party acquiror. Upon the occurrence of any such event, under the terms specified in the plan, each right entitles the holder, other than the unsolicited third party acquiror, to purchase a certain number of shares of common stock of the Company, at a fifty percent discount to the then-current market price. The rights expire on January 9, 2013, under the terms of the plan. Centillium's Board of Directors may redeem outstanding rights at a price of \$0.001 per right, with certain exceptions. The terms of the rights and the plan may be amended by Centillium's Board of Directors at any time without the approval of the rights holders as set forth in the plan.

## ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following selected consolidated financial data below is not necessarily indicative of results of future operations and should be read in conjunction with the consolidated financial statements and related notes thereto and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” appearing elsewhere in this Annual Report on Form 10-K.

	<u>2003</u>	<u>2002</u>	<u>2001</u>	<u>2000</u>	<u>1999</u>
	(In thousands, except per share data)				
<b>Consolidated Statement of Operations Data:</b>					
Total net revenues . . . . .	\$124,976	\$104,972	\$159,507	\$ 56,474	\$ 3,744
Gross profit . . . . .	\$ 53,823	\$ 45,472	\$ 79,726	\$ 24,223	\$ 626
Operating loss . . . . .	\$(14,298)	\$(35,630)	\$(21,847)	\$(49,826)	\$(20,781)
Net loss . . . . .	\$(13,359)	\$(33,301)	\$(19,693)	\$(45,998)	\$(19,749)
Net loss per share—basic and diluted . . . . .	\$ (0.37)	\$ (0.96)	\$ (0.59)	\$ (2.00)	\$ (2.23)
Shares used to compute basic and diluted net loss per share . . . . .	36,433	34,641	33,495	22,950	8,842
<b>Consolidated Balance Sheet Data:</b>					
Cash and cash equivalents and short-term investments . . . . .	\$ 89,626	\$102,002	\$110,853	\$ 87,684	\$ 28,313
Working capital . . . . .	\$ 88,284	\$ 83,795	\$103,663	\$ 94,739	\$ 26,043
Total assets . . . . .	\$125,624	\$122,439	\$144,208	\$127,943	\$ 35,587
Long-term debt and capital lease obligations, less current portion . . . . .	\$ —	\$ 525	\$ —	\$ 221	\$ 549
Total stockholders’ equity . . . . .	\$ 96,037	\$ 93,823	\$121,158	\$106,870	\$ 30,055

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

### *Cautionary Statement*

You should read the following discussion and analysis in conjunction with the consolidated financial statements and related notes thereto contained elsewhere in this report. The information in this report is not a complete description of our business or the risks associated with an investment in our common stock. We urge you to carefully review and consider the various disclosures made by us in this report and in our other reports filed with the SEC.

The section entitled “Risk Factors” set forth in this report, and similar discussions in our other SEC filings, discuss some of the important risk factors that may affect our business, results of operations and financial condition. You should carefully consider those risks, in addition to the other information in this report and in our other filings with the SEC, before deciding to invest in our company or to maintain or increase your investment.

### *Critical Accounting Policies*

*General.* Our discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires that we make assumptions, estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities reported in the Consolidated Financial Statements and accompanying notes. On an on-going basis, we evaluate our estimates based on historical experience and on various other assumptions that we believe to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities. Actual results may differ from these estimates under different assumptions or conditions.

We believe that, of the significant accounting policies used in the preparation of our consolidated financial statements (see Note 1 of Notes to Consolidated Financial Statements), the following are critical accounting policies, which may involve a higher degree of judgment and complexity.

*Revenue Recognition.* Revenues related to product sales are generally recognized when the products have been shipped and risk of loss has passed to the customer, collection of the resulting receivable is reasonably assured, persuasive evidence of an arrangement exists and the price is fixed or determinable. Sales arrangements may contain customer-specific acceptance requirements for both products and development revenues. In such cases, revenue is deferred at the time of delivery of the product or service and is recognized upon receipt of customer acceptance.

*Sales Returns and Allowances.* We establish, upon shipment of our products, a provision for estimated returns. Under certain circumstances, we allow our customers to return products and a provision is made for such returns. Our estimate of product returns is based on contractual terms or sales agreements, historical experience and expectation of future conditions. Additional provisions and allowances may be required, resulting in decreased net revenue and gross profit, should we experience increased product returns.

*Allowance for Doubtful Accounts.* We record allowances for doubtful accounts for estimated losses based upon specifically identified amounts that we believe to be uncollectible. We record additional allowances based on certain percentages of our aged receivables, which are determined based on historical experience and our assessment of the general financial condition of our customer base. If our actual collections experience changes, revisions to our allowances may be required. We have a limited number of customers with individually large amounts due at any given balance sheet date. Any unanticipated change in one of those customers' creditworthiness or other matters affecting the collectibility of amounts due from such customers could have a material effect on our results of operations in the period in which such changes or events occur.

*Inventories.* Inventories are stated at the lower of standard cost, which approximates cost, or net realizable value. Cost is based on a first-in, first-out basis. We perform detailed reviews of the net realizable value of inventories, both on hand as well as inventories that we are committed to purchase, with consideration given to deterioration, obsolescence and other factors. We may record charges to write down inventories that are excess, obsolete or slow-moving inventory based on an analysis of the impact of changes in technology, the timing of these changes and our estimate of forecasted demand for our products. We typically use a six- or nine-month rolling forecast based on the type of products, anticipated product orders, product order history, forecasts and backlog. We compare our current or committed inventory levels to these forecasts on a regular basis and any adverse changes to our future product demand may result in increased writedowns, resulting in decreased gross profit.

*Warranty.* A limited warranty is provided on our products for a period of one year and allowances for estimated warranty costs are recorded during the period of sale. The determination of such allowances requires us to make estimates of product return rates and expected costs to repair or replace the products under warranty. If actual return rates and/or repair and replacement costs differ significantly from our estimates, adjustments to recognize additional cost of sales may be required.

*Litigation and Contingencies.* From time to time, we receive various inquiries or claims in connection with patent and other intellectual property rights. In certain cases, we have accrued estimates of the amounts we expect to pay upon resolution of such matters. Should we not be able to secure the terms we expect, these estimates may change and may result in increased accruals, resulting in decreased profit.

#### *Overview*

We provide semiconductor products that enable broadband communications, which is the high-speed networking of data, voice and video signals, for consumers and business enterprises. Our product portfolio includes silicon integrated circuits and associated software that are used in communications equipment for

several broadband markets including digital subscriber line (DSL) and Voice over Packet (VoP) applications. We are also developing a new line of broadband semiconductor products for optical access applications which we plan to introduce in 2004.

To date, our revenues have been derived primarily from the sale of our DSL semiconductor products which include the CopperFlite CO, CopperFlite CPE, Palladia and Maximus families of products and, to a small degree, our Entropia VoP semiconductor products. We have generated a substantial portion of our revenues from sales to a limited number of customers. For the year ended December 31, 2003, NEC and Sumitomo Electric Industries represented 49% and 31% of our revenues, respectively. For the year ended December 31, 2002, NEC and Sumitomo Electric Industries represented 45% and 41% of our revenues, respectively. For the year ended December 31, 2001, Sumitomo Electric Industries and NEC represented 48% and 38% of our revenues, respectively. We expect that our largest customers will continue to account for a substantial portion of our revenues in 2004 and for the foreseeable future.

During the years ended December 31, 2003, 2002, and 2001, 87%, 89% and 89% of our revenues, respectively, were from customers in Asia, primarily Japan. The absolute dollar amount of our revenues from customers in Asia increased in 2003 compared to 2002 primarily due to the increased number of DSL subscriber additions in Japan. Both our revenues and the percentage of revenues from our customers in North America increased in 2003 due to increases in spending in the communications equipment industry. We currently sell through our direct sales force in China, France, Japan, North America, South Korea and Taiwan. We also utilize sales representatives in China, Germany, Hong Kong, Israel, Italy, Japan, North America, South Korea and Taiwan. All of our revenues are denominated solely in U.S. dollars, which reduces our exposure to foreign currency exchange risks.

It often takes more than one year for us to realize volume shipments of our products after we first contact a customer. We first work with customers to achieve a design win, which may take six months or longer. Our customers then complete the design, testing and evaluation of their systems and begin the marketing process, a period which typically lasts an additional three to six months or longer. As a result, a significant period of time may elapse between our sales efforts and our realization of revenues, if any, from volume purchases of our products by our customers. Our customers are not obligated by long-term contracts to purchase our products and can generally cancel or reschedule orders on short notice. Due to this lengthy sales cycle, we may experience significant delays from the time we incur expenses for research and development, selling, general and administrative efforts and investments in inventory, and the generation of corresponding revenue, if any. We anticipate that the rate of new orders may vary significantly from month to month. If anticipated sales and shipments in any quarter do not occur when expected, expenses and inventory levels could be disproportionately high, and our results of operations for that quarter, and potentially for future quarters, could be materially and adversely affected.

We outsource the fabrication, assembly and testing of our products. Accordingly, a significant portion of our cost of revenues consists of payments to our manufacturing partners. Costs of revenues also encompass our internal manufacturing and operations functions and a portion of our information systems and facilities costs.

Research and development expenses consist primarily of salaries and related personnel costs, fees paid to consultants and outside service providers, prototype costs related to the fabrication of our silicon chips, depreciation associated with software development tools and amortization of deferred compensation. We expense our research and development costs as they are incurred. Several components of our research and development effort require significant expenditures, the timing of which can cause significant quarterly variability in our expenses. For example, we require a substantial number of prototypes to build and test our complex products and therefore incur significant prototype costs. Research and development is key to our future success. We anticipate that research and development expense may increase in both the near-term and the long-term as we incur additional costs related to the growth of our Company.



Sales and marketing expenses consist primarily of salaries, commissions and related expenses for personnel engaged in marketing, sales, customer service and applications engineering support functions, costs associated with promotional and other marketing expenses, as well as amortization of deferred compensation. In addition, the complexity of our products and the applications support necessary for successful interoperability and customer specific applications requires highly trained customer service and support personnel. We anticipate that sales and marketing expense will increase in the near-term and long-term as we add personnel to support our customers and expand our sales force outside of the Japan market.

General and administrative expenses consist primarily of salaries and related expenses for executives, finance, accounting, facilities, information services, human resources, recruiting expenses, legal and other professional fees, other corporate expenses, and amortization of deferred compensation. In addition, general and administrative expenses include management's estimate of potential bad debt expense. General and administrative expenses are expected to increase in the near-term and the long-term as we incur additional costs related to the growth of our business and address the requirements of the Sarbanes-Oxley Act.

In connection with the grant of certain stock and other stock-based compensation to our employees, technical advisors and directors, we have recorded stock-based compensation expense of \$1.4 million, \$3.8 million and \$15.3 million for the years ended December 31, 2003, 2002 and 2001, respectively. Deferred compensation is recorded upon grant and represents the difference between the grant price and the fair value of our common stock options granted during these periods. Deferred compensation expense is being amortized using the graded vesting method, in accordance with Statement of Financial Accounting Standards No. 123 (SFAS 123) and FASB Interpretation No. 28, over the vesting period of each respective option, generally four years. Under the graded vesting method, each option grant is separated into portions based on its vesting terms, which results in acceleration of amortization expense for the overall award. The accelerated amortization pattern results in expensing approximately 59% of the total award in year one, 25% in year two, 12% in year three and 4% in year four. Deferred compensation is presented as a reduction of stockholders' equity. As required by APB 25, we record an adjustment to stock-based compensation when employees forfeit options for which compensation expense had been recognized using the graded vesting method, but which were unvested on the date their employment terminated. See Notes 1 and 7 of notes to consolidated financial statements for more information about our equity-based compensation programs.

We have not reported an operating profit for any year since our incorporation and have experienced net losses of approximately \$13.4 million, \$33.3 million and \$19.7 million for the years ended December 31, 2003, 2002 and 2001, respectively.

As we enter fiscal 2004, we continue to face significant challenges with respect to revenue, gross margin, and operating expenses. We are taking a number of steps to address these challenges. To increase revenues, we plan to expand our DSL and VoP product portfolio and introduce products that enable optical access applications. Also, in order to geographically diversify our existing business and drive increased sales from these new products, we are increasing our investment in our sales and marketing resources. To accommodate the difficult pricing environment that we expect to face for the foreseeable future, we are making efforts to reduce the manufacturing costs and expenses of our products.

In the near term, we expect that some of the steps that we are taking will result in continuing downward pressure on income from operations. For example, sales and marketing expenses will increase as a result of increased personnel resources. Also, research and development expenses will increase due to additions to our engineering team and purchasing of additional software development tools. However, we believe that the steps that we are taking are necessary to achieve our goals of diversifying our business, increasing our revenues and eventually reaching sustained profitability.

Our planned actions for fiscal 2004 are based on certain assumptions concerning the adoption of broadband technologies, the rate of DSL subscriber growth and the cost and expense structure of our business. These

assumptions could prove to be inaccurate. If current economic conditions deteriorate to an unexpected degree, or if our planned actions are not successful in achieving our goals, there could be additional adverse impacts on our financial position, revenues, profitability or cash flows. In that case, we might need to modify our strategic focus and restructure our business to realign our resources and achieve additional cost and expense savings.

## Results of Operations

The following table sets forth, for the periods presented, certain data from our consolidated statements of operations expressed as a percentage of total revenues.

	<u>Years ended December 31,</u>		
	<u>2003</u>	<u>2002</u>	<u>2001</u>
Total net revenues . . . . .	100%	100%	100%
Cost of revenues . . . . .	<u>57</u>	<u>57</u>	<u>50</u>
Gross profit . . . . .	<u>43</u>	<u>43</u>	<u>50</u>
Operating expenses:			
Research and development . . . . .	37	48	37
Sales and marketing . . . . .	10	14	11
General and administrative . . . . .	8	9	9
Amortization of goodwill and other acquisition-related intangibles . . . . .	—	—	2
Impairment of goodwill . . . . .	—	6	—
In-process research and development . . . . .	<u>—</u>	<u>—</u>	<u>5</u>
Total operating expenses . . . . .	<u>55</u>	<u>77</u>	<u>64</u>
Operating loss . . . . .	(12)	(34)	(14)
Interest income, net . . . . .	1	2	2
Gain (loss) on non-current investment . . . . .	—	—	(1)
Benefit (provision) for income taxes . . . . .	<u>—</u>	<u>—</u>	<u>—</u>
Net loss . . . . .	<u>(11)%</u>	<u>(32)%</u>	<u>(13)%</u>

### *Years ended December 31, 2003 and 2002*

*Total Net Revenues:* Total net revenues in 2003 were \$125.0 million, compared with \$105.0 million in 2002, an increase of \$20 million or 19%. The growth in revenue was due to a 70% increase in the number of DSL ports shipped, offset by a 29% decrease in the average selling price of our DSL products. Voice over Packet unit sales increased 88%, but were offset by a 56% decrease in the average selling price. Revenue from our DSL products accounted for \$122.1 million or 98% of total net revenues in 2003, as compared to \$100.9 million or 96% of total net revenues in 2002. Revenues from Voice over Packet products accounted for \$2.5 million of revenues in 2003 as compared to \$3.0 million in 2002, or 2% and 3% of total net revenues, respectively. We anticipate that revenues from our DSL products will continue to account for greater than 80% of our total net revenues in 2004. We expect our revenues in the first six months of 2004 to be lower than the same period of 2003 as our customers work through their existing inventories and implement transition plans to our next generation of products to be introduced in the second quarter of 2004.

Competition and technological change in the rapidly evolving DSL market has and may continue to influence our quarterly and annual net revenues and results of operations. Average selling prices of our DSL and Voice over Packet products tend to be higher at the time we introduce new products and decline over time due to competitive pressures. We expect this pattern to continue with existing and future products. Our average selling prices are also impacted by our customer concentration and product mix.

Our major customers for the year ended December 31, 2003 were NEC and Sumitomo who represented 49% and 31% of net revenues, respectively. For the year ended December 31, 2002, NEC and Sumitomo represented

45% and 41% of net revenues, respectively. Revenues from international customers, who were primarily located in Japan, comprised 88% and 89% of our net revenues in each of the years ended December 31, 2003 and 2002.

*Cost of Revenues, Gross Profit and Gross Profit Margin:* Cost of revenues includes the cost of purchasing the finished silicon wafers manufactured by independent foundries, costs associated with assembly, packaging, test and quality assurance for semiconductor products, royalties related to purchased technology, and manufacturing overhead, including costs of personnel and equipment associated with manufacturing support. Cost of revenues was \$71.2 million in 2003 and \$59.5 million in 2002 resulting in gross profit of \$53.8 million in 2003 and \$45.5 in 2002. Gross profit margin was 43% for both 2003 and 2002. The increase in gross profit in absolute dollars was primarily due to increased sales volumes offset by decreased average selling prices. We maintained our gross profit margin from 2002 to 2003 through improved yields, lower subcontractor costs, increased absorption of manufacturing overhead costs as a result of the increased volumes, and lower stock-based compensation expense. Our future gross profit margins may be affected by competitive pricing strategies, fluctuation in the volume of our product sales, fluctuations in silicon wafer costs, possible changes in product mix and the introduction of certain lower margin products, among other factors.

*Research and Development Expenses:* Research and development expenses consist primarily of salaries and related personnel costs, fees paid to consultants and outside service providers, prototype costs related to the fabrication of our silicon chips, depreciation associated with software development tools, and amortization of deferred stock-based compensation. We expense our research and development costs as they are incurred. Several components of our research and development effort require significant expenditures, the timing of which can cause significant quarterly variability in our expenses. Research and development expenses in 2003 were \$46.2 million, compared to \$50.8 million in 2002, a decrease of 9%. This decrease was primarily due to a \$2.0 million decrease in salaries and personnel related expenses, a \$2.7 million decrease in software rental expense and amortization of software leases and maintenance contracts, and a \$1.6 million decrease in stock based compensation expense, partially offset by a \$1.5 million increase in consulting expense. We expect that research and development expenses will increase in fiscal 2004 as a result of the planned headcount increases supporting new development programs, salary and bonus plan increases, prototype costs, and depreciation on purchased software development tools.

*Sales and Marketing Expenses:* Sales and marketing expenses consist primarily of salaries, commissions, and related expenses for personnel engaged in marketing, sales, customer service and applications engineering support functions, costs associated with promotional and other marketing expenses, as well as amortization of deferred stock-based compensation. Sales and marketing expenses in 2003 were \$12.1 million, compared to \$14.7 million in 2002, a decrease of 17%. The decrease was due primarily to a \$2.2 million decrease in items such as salaries and personnel related expenses, severance pay expense, expatriate allowance and travel expenses, and a decrease of \$900,000 in depreciation, partially offset by a \$500,000 increase in amortization of deferred compensation. We expect that sales and marketing expenses will increase in fiscal 2004 as we expand our sales force and marketing personnel to support growth of our business outside of Japan as well as our newly developed products.

*General and Administrative Expenses:* General and administrative expenses consist primarily of salaries and personnel related expenses for executives, finance, accounting, facilities, information services, and human resources; corporate insurance, amortization of deferred stock-based compensation, recruiting expenses, legal, audit and other professional fees, and other corporate expenses. General and administrative expenses were \$9.7 million in both 2003 and 2002. While expense levels remained relatively constant year over year there was a decrease in stock based compensation expense of \$1.1 million and a \$600,000 decrease in legal and professional fees, offset by an increase of \$600,000 in bonus expense. In addition, net bad debt expense increased by \$700,000 in 2003 compared to 2002 primarily as a result of reducing our bad debt reserve in the prior year. We expect general and administration expenses to increase in 2004 as we incur additional costs related to further investments in our business and as we continue to implement the requirements of the Sarbanes-Oxley Act.

*Amortization of Deferred Compensation and Non-Cash Stock Compensation:* Deferred compensation represents the difference between the grant price and the fair value for financial statement reporting purposes of the Company's common stock option grants. Amortization of deferred compensation was \$1.4 million in 2003 compared to \$3.8 million in 2002, a decrease of \$2.4 million. The decrease is primarily related to the use of the graded vesting method, which results in accelerated amortization of deferred compensation expense in the earlier years of the awards' expected life, as well as adjustments in 2002 related to forfeited options. As required by APB 25, we record an adjustment to stock-based compensation expense related to employees who forfeit options for which compensation expense had been recognized using the graded vesting method, but which are unvested on the date their employment terminated. The expense for the amortization of deferred compensation is expected to decrease substantially in 2004 as we enter the last year of the graded vesting method which generally represents only 4% of the total expense to be incurred.

*Interest Income, Net:* Interest income, net was \$1.1 million in 2003, compared to \$1.8 million in 2002, a decrease of 40%. This decrease was primarily due to lower interest rates obtained on our cash, cash equivalents and short-term investment portfolio.

*Benefit (Provision) for Income Taxes:* We recorded a tax provision of \$133,000 for the year ended December 31, 2003, which represents state income taxes and foreign income taxes. We recorded a benefit for income taxes of \$95,000 for the year ended December 31, 2002, which represents a refund of U.S. Federal Income Taxes, offset by foreign income taxes.

As of December 31, 2003, we have \$75 million and \$33 million of net operating loss carryforwards for federal and state purposes, respectively. We also have federal and state research and development tax credit carryforwards of approximately \$3.8 million and \$3.7 million respectively. The federal net operating losses and federal credit carryforwards will expire at various dates beginning in 2018, if not utilized. The California net operating losses are not available to offset income until 2008 due to recent state law changes.

Utilization of net operating loss and credit carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, and similar state provisions. The annual limitation may result in the expiration of net operating losses and tax credit carryforwards before full utilization.

Financial Accounting Standards Board Statement No. 109, "Accounting for Income Taxes", provides for the recognition of deferred tax assets if realization of such assets is more likely than not. Based upon the weight of available evidence, which includes our historical operating performance and our reported cumulative net losses to date, we have provided a full valuation allowance against our deferred tax assets.

*Net Losses:* We incurred net losses of \$13.4 million in 2003 compared to \$33.3 million in 2002. The decrease in net loss of \$19.9 million is primarily the result of higher gross profit of \$8.4 million, lower salary and related personnel expenses of \$4.4 million, lower amortization of acquisition related intangibles and the absence of a prior year charge for impairment of goodwill of \$5.9 million, lower software rental expense and amortization of software leases and maintenance expense of \$2.8 million and lower expense for stock-based compensation expense of \$2.4 million, partially offset by higher consulting expense of \$1.8 million and higher bonus expense of \$700,000. Net loss per common share was \$0.37 in 2003 and \$0.96 in 2002.

#### ***Years ended December 31, 2002 and 2001***

*Total Net Revenues:* Total net revenues in 2002 were \$105.0 million, compared with \$159.5 million in 2001, a decrease of \$54.5 million or 34%. The decrease in revenues is primarily due to a 40% decrease in the average selling prices of our DSL products which accounted for approximately \$65 million of the decrease. This was partially offset by a 4% increase in unit volume shipments that provided approximately \$10 million of revenue in 2002. Revenue from our DSL products accounted for \$100.9 million or 96% of total net revenues in

2002, as compared to \$155.7 million or 98% of total net revenues in 2001. Revenues from Voice over Packet products accounted for \$3.0 million of revenues in 2002 as compared to \$2.5 million in 2001, or 3% and 2% of total net revenues, respectively.

Our major customers for the years ended December 31, 2002 were NEC and Sumitomo who represented 45% and 41% of net revenues, respectively. For the year ended December 31, 2001, Sumitomo and NEC represented 48% and 38% of net revenues, respectively. Revenues from international customers, who were primarily located in Japan, comprised 89% of our net revenues in each of the years ended December 31, 2002 and 2001.

*Cost of Revenues:* Cost of revenues, which reflects costs of product revenues, was \$59.5 million in 2002 and \$79.8 million in 2001 resulting in gross profit as a percentage of revenues of 43% and 50%, respectively. The decrease in gross profit and gross profit percentage was primarily due to lower average selling prices per unit, partially offset by lower per unit product costs. Our gross margins in the future may be affected by competitive pricing strategies and the future introduction of certain lower margin items.

*Research and Development Expenses:* Research and development expenses in 2002 were \$50.8 million, compared to \$59.0 million in 2001, a decrease of 14%. This decrease was primarily due to a \$5.5 million decrease in the amortization of deferred stock-based compensation and a decrease in software expense.

*Sales and Marketing Expenses:* Sales and marketing expenses in 2002 were \$14.7 million, compared to \$18.0 million in 2001, a decrease of 18%. The decrease was due primarily to a \$2.8 million decrease in the amortization of deferred stock-based compensation, a decrease in customer evaluation board costs and a decrease in sales commissions, partially offset by increases in salary and severance costs.

*General and Administrative Expenses:* General and administrative expenses in 2002 were \$9.7 million, compared to \$13.9 million in 2001, a decrease of 30%, which was primarily due to a decrease in the amortization of deferred stock-based compensation of \$2.7 million, a decrease in bad debt expense of \$800,000 and decreases in expensed software and legal and stock administration fees, offset by increases in business insurance costs.

*Amortization of Deferred Compensation and Non-Cash Stock Compensation:* Amortization of deferred stock-based compensation, which is allocated among the above expense categories, was \$3.8 million in 2002 compared to \$15.3 million in 2001, a decrease of \$11.5 million. The decrease is primarily related to the use of the graded vesting method, which results in accelerated amortization of deferred compensation expense in the earlier years of the awards' expected life, as well as adjustments in 2002 related to forfeited options. As required by APB 25, we record an adjustment to stock-based compensation related to employees who forfeit options for which compensation expense had been recognized using the graded vesting method, but which are unvested on the date their employment terminated.

*Amortization of Goodwill and Other Acquisition-Related Intangibles:* Amortization of goodwill and other acquisition-related intangibles decreased to \$167,000 for the year ended December 31, 2002 from \$3.3 million for the year ended December 31, 2001. This was due to the adoption of Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets" (SFAS 142), which required us to discontinue the amortization of goodwill effective January 1, 2002. In addition, in accordance with SFAS 142 we reclassified assembled workforce to goodwill, which eliminated the amortization of assembled workforce effective January 1, 2002.

*Impairment of Goodwill:* During the fourth quarter of 2002, we completed our annual goodwill impairment test. Based upon this test, we recorded a charge of \$5.8 million to fully write down the value of goodwill associated with our purchase transactions. No comparable charges were incurred in 2001.

*In-Process Research and Development Expense:* In 2002, we did not have any acquired in-process research and development. In the first quarter of fiscal 2001, we wrote off \$7.4 million of acquired in-process

research and development (IPR&D) related to our acquisition of vEngines, Inc. The entire IPR&D charge of \$7.4 million related to one project. This project related to the development of high-density voice processing semiconductor products, which bridge circuit switched voice and data networks. The write off was necessary because the acquired technology had not yet reached technological feasibility and there were no alternative future uses for the technology.

*Gain (Loss) on Long-Term Investment:* We monitor and evaluate the realizable value of our long-term equity investment and if events and circumstances indicate that a decline in value of this asset is other than temporary, we write down the carrying value to its estimated fair value. In June 2001, in connection with the ongoing evaluation and review of our only long-term equity investment, we recorded a non-cash charge of \$990,000 to write down the basis of this investment to zero as a result of this impairment. In January 2002, we sold this equity investment for \$440,000 and reported this as a gain in the first quarter of 2002.

*Interest Income, net:* Interest income, net was \$1.8 million in 2002, compared to \$3.5 million in 2001, a decrease of 49%. This decrease was primarily due to lower interest rates obtained on our cash, cash equivalents and short-term investment portfolio, and slightly lower average invested balances.

*Benefit (Provision) for Income Taxes:* We recorded a tax benefit of \$95,000 for the year ended December 31, 2002, which represents a refund of U.S. Federal Income Taxes, offset by foreign income taxes. We recorded a provision for income taxes of \$400,000 for the year ended December 31, 2001, which represents federal and state minimum taxes as well as foreign income taxes.

*Net Losses:* We incurred net losses of \$33.3 million in 2002 compared to \$19.7 million in 2001. The increase in net loss of \$13.6 million or 69% is primarily the result of lower gross profit of \$34.3 million, the write off of goodwill of \$5.8 million, and higher depreciation and amortization expense of \$3.0 million partially offset by lower expenses for deferred stock-based compensation of \$11.5 million, in-process research and development of \$7.4 million, goodwill amortization of \$3.1 million, bad debt expense of \$800,000 and lower interest income of \$1.7 million. Net loss per common share was \$0.96 in 2002 and \$0.59 in 2001.

## **Liquidity and Capital Resources**

At December 31, 2003, we had \$89.6 million in cash, cash equivalents and short-term investments as compared to \$102.0 million at December 31, 2002. Short term investments are defined as income yielding securities with no maturity dates or maturity dates greater than 90 days when purchased that can be readily converted into cash.

Cash and cash equivalents decreased to \$24.7 million at December 31, 2003 from \$93.5 million at December 31, 2002. The decrease was primarily due to our investing \$56.4 million of our cash in short term investments and the use of \$21.6 million in operations, offset by proceeds of \$13.3 million from employee stock plans.

Operating activities during 2003 used \$21.6 million in cash. This was primarily the result of the net loss of \$13.4 million, an increase in our accounts receivable of \$9.6 million, an increase in our inventories of \$7.8 million, an increase of \$1.1 million in other prepaids and current assets, and a decrease in accounts payable of \$1.1 million, offset by the non-cash impact of a \$6.4 million of depreciation and amortization and \$1.4 million in amortization of deferred stock-based compensation and an increase in accrued liabilities and accrued payroll and related expenses of \$3.8 million. Net cash used by operating activities increased significantly in the fourth quarter of 2003 compared to the third quarter of 2003. This was due largely to the decline in revenues and gross margins without a commensurate decrease in operating expenses for the quarter. We expect to increase operating expenses and use additional cash in 2004 as we add planned headcount and incur additional expenses to support new PON and VoP product lines.

Accounts receivable increased from \$2.9 million at December 31, 2002 to \$12.5 million at December 31, 2003. The increase in accounts receivable resulted primarily from the timing of shipments, as a significant portion of the 2003 fourth quarter's shipments were made in the last month of the quarter. In addition, accounts receivable in 2002 were lower due to an early payment from a significant customer at the end of the year.

Inventories increased \$7.8 million to \$11.9 million at December 31, 2003. In 2003, lead times at our major foundry subcontractor increased to between 16 and 18 weeks for several of our key products compared to 12 and 14 weeks in 2002. The extended lead time required us to place orders with the foundry based on sales forecast well ahead of firm purchase commitments. As our sales fell below sales forecast in the fourth quarter, we ended the quarter with higher inventories.

Net cash used by investing activities was \$59.7 million for the year ended December 31, 2003, and was primarily related to net purchases of short-term investments of \$56.4 million and purchases of fixed assets of \$3.4 million. As of December 31, 2003, our short term securities were invested primarily in government agency instruments totaling \$30.8 million, auction rate securities totaling \$32.6 million, and municipal and corporate bonds totaling \$1.0 million.

Cash provided by financing activities was \$12.6 million for the year ended December 31, 2003, and was related to the net proceeds from issuance of common stock under employee stock plans of \$13.3 million and \$900,000 from proceeds required to be disgorged by a shareholder, offset by \$1.5 million of capital lease payments.

Our stock option program is a broad-based, long-term retention program that is intended to attract and retain talented employees and align stockholder and employee interests. We consider our option program critical to our operations and productivity. All of our full-time employees participate in this program. The program consists of two plans; one under which officers, directors and employees may be granted options to purchase shares of our stock and a broad-based plan under which options may be granted to all employees other than directors.

Our principal source of liquidity as of December 31, 2003 consisted of \$89.6 million of cash and cash equivalents, and short-term investments. There are no assurances that we can reduce losses from operations and avoid negative cash flow or raise capital as needed to fund the operations. However, based on current plans and business conditions, but subject to the discussion in the "Business" section and "Risk Factors" section, we believe our current cash, cash equivalents and marketable securities will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least 12 months. The rate at which we will consume cash will be dependent on the cash needs of future operations, which will, in turn, be directly affected by the levels of demand for our products.

Significant cash-based operating commitments in future periods include lease payments and inventory purchase commitments. As of December 31, 2003, future obligations totaled \$15.1 million, \$7.2 million of which will be paid in fiscal 2004. Inventory purchase commitments of approximately \$3.1 million as of December 31, 2003 will be paid in the first six months of fiscal 2004.

Significant contractual obligations and commercial commitments are shown in the table below (in thousands):

	<u>Total</u>	<u>Less than 1 Year</u>	<u>1-3 Years</u>	<u>After 3 Years</u>
Operating leases—facilities . . . . .	\$ 7,720	\$1,439	\$3,083	\$3,198
Capital leases—software . . . . .	527	527	—	—
Operating leases—software . . . . .	3,780	2,184	1,596	—
Inventory purchases . . . . .	<u>3,077</u>	<u>3,077</u>	<u>—</u>	<u>—</u>
Total cash obligations . . . . .	<u>\$15,104</u>	<u>\$7,227</u>	<u>\$4,679</u>	<u>\$3,198</u>

If we are able to sustain our current business plan and general economic conditions stabilize, we hope to achieve profitability in 2005. We believe our revenue forecast and the steps we have taken to increase revenue while controlling spending will allow us to achieve that objective. Our future capital requirements depend on many factors that affect our research, development, collaboration and sales and marketing activities. We believe that existing cash and investment securities and anticipated cash flow from operations will be sufficient to support our current operating plan for 2004. These cash flow and profitability expectations are subject to numerous assumptions, many of which may not actually occur. If some or all of such assumptions do not occur, our results may be substantially lower or different than expected. Such assumptions include, without limitation, assumptions that new product introductions will occur on a timely basis and achieve market acceptance, that our existing and potential customer base will continue to grow and that our industry’s competitive landscape will not change adversely. For more information about the risks relating to our business, please read carefully the Risk Factors set forth below.

We expect to devote capital resources to continue our research and development efforts, to support our sales, marketing, and product development programs, to establish additional facilities worldwide and to fund other general corporate activities. From time to time, we receive various inquiries or claims in connection with intellectual property and other rights and may become party to associated claims. In certain cases, management has accrued estimates of the amounts it expects to pay upon resolution of such matters. Depending on the amount and timing of the resolutions of these claims, our future cash flows could be materially adversely affected in a particular period.

If our existing resources and cash generated from operations are insufficient to satisfy our liquidity requirements, we may seek to raise additional funds through public or private debt or equity financings. The sale of equity or debt securities could result in additional dilution to our stockholders, and we cannot be certain that additional financing will be available in amounts or on terms acceptable to us, if at all. If we are unable to obtain this additional financing, we may be required to reduce the scope of our planned product development and sales and marketing efforts, which could harm our business, financial condition and operating results.

### **Recent Accounting Pronouncements**

In January 2003, the FASB issued EITF No. 00-21, “Revenue Arrangements with Multiple Deliverables” (EITF 00-21). EITF 00-21 provides guidance on how to determine whether an arrangement involves multiple deliverables and contains more than one unit of accounting. EITF 00-21 was effective for arrangements entered into after June 15, 2003. The adoption of EITF 00-21 did not have a material effect on the Company’s consolidated results of operations or financial position.

In January 2003, the FASB issued Interpretation No. 46, “Consolidation of Variable Interest Entities, an Interpretation of Accounting Research Bulletin No. 51, Consolidated Financial Statements” (FIN 46). FIN 46 establishes accounting guidance for consolidation of variable interest entities (VIE’s) that function to support the activities of the primary beneficiary. FIN 46 applies to any business enterprise, both public and private, that has a variable interest in a VIE. The Company does not have any variable interests in VIE’s and therefore the adoption did not have any impact on the Company’s consolidated financial position or results of operations.



## **Risk Factors**

You should carefully consider the risks described below and all of the information contained in this Form 10-K. If any of the following risks actually occur, our business, financial condition and results of operations could be harmed, the trading price of our common stock could decline, and you may lose all or part of your investment in our common stock.

### ***WE HAVE A HISTORY OF LOSSES AND WE MAY NOT ACHIEVE PROFITABILITY.***

We have not reported an operating profit for any year since our incorporation and have experienced net losses of approximately \$13.4 million, \$33.3 million and \$19.7 million for the years ended December 31, 2003, 2002 and 2001, respectively.

### ***WE ANTICIPATE LOWER MARGINS, WHICH COULD ADVERSELY AFFECT OUR PROFITABILITY.***

We expect the average selling prices of our products to decline as they mature. Historically, competition in the semiconductor industry has driven down the average selling prices of products. If we price our products too high, our customers may use a competitor's product or an in-house solution. To maintain profit margins, we must reduce our costs sufficiently to offset declines in average selling prices or successfully sell proportionately more new products with higher average selling prices. Yield or other production problems or shortages of supply may preclude us from lowering or maintaining current product costs.

We have also experienced more aggressive price competition from competitors in market segments in which we are attempting to expand our business. These circumstances may make some of our products less competitive, and we may be forced to decrease our prices significantly to win a design. We may lose design opportunities or may experience overall declines in gross margins as a result of increased price competition.

### ***OUR STOCK PRICE MAY CONTINUE TO BE VOLATILE.***

The market price of our common stock has been volatile and will likely continue to fluctuate significantly in response to the following factors, some of which are beyond our control:

- variations in our quarterly operating results;
- changes in financial estimates of our revenues and operating results by securities analysts;
- changes in market valuations of integrated circuit companies;
- announcements by us, our competitors or others in related market segments of significant contracts, acquisitions, strategic partnerships, joint ventures or capital commitments;
- loss or decrease in sales to a major customer or failure to complete significant transactions;
- loss or reduction in manufacturing capacity from one or more of our key suppliers;
- additions or departures of key personnel;
- future sales of our common stock;
- inconsistent or low levels of trading volume of our common stock;
- commencement of or involvement in litigation;

- announcements by us or our competitors of key design wins and product introductions;
- a decrease in the average selling price of our products;
- ability to achieve cost reductions; and
- fluctuations in the timing and amount of customer requests for product shipments.

***A GENERAL ECONOMIC SLOWDOWN, AND A SLOWDOWN IN SPENDING IN THE TELECOMMUNICATIONS INDUSTRY, HAS AFFECTED AND MAY CONTINUE TO NEGATIVELY AFFECT OUR BUSINESS AND OPERATING RESULTS.***

There have been announcements throughout the worldwide telecommunications industry of current and planned reductions in component inventory levels and equipment production volumes, and of delays in the build-out of new infrastructure. Any of these trends, if continued, could result in lower than expected demand for our products, which could have a material adverse effect on our revenues and results of operations generally, and could cause the market price of our common stock to decline. Specifically, we have experienced:

- reduced demand for our products;
- increased price competition for our products;
- increased risk of excess and obsolete inventories;
- excess facilities and manufacturing capacity; and
- higher general and administrative costs, as a percentage of revenue.

Recent geopolitical and social turmoil in many parts of the world, including actual incidents and potential future acts of terrorism and war, may continue to put pressure on global economic conditions. These geopolitical and social conditions, together with the resulting economic uncertainties, make it extremely difficult for our company, our customers and our vendors to accurately forecast and plan future business activities. This reduced predictability challenges our ability to operate profitably or to increase revenues. In particular, it is difficult to develop and implement strategies to create sustainable business models and efficient operations, and to effectively manage outsourced relationships for services such as contract manufacturing and information technology. If the current uncertain economic conditions continue or deteriorate, there could be additional material adverse impact on our financial position, revenues, results of operations, or cash flow.

***A SLOWDOWN IN DEPLOYMENT OF DSL IN JAPAN WOULD ADVERSELY AFFECT OUR BUSINESS AND OPERATING RESULTS.***

Sales to customers located in Japan accounted for 79% of net revenues for the year ended December 31, 2003, compared to 86% of net revenues for year ended December 31, 2002. Our sales are dependent on the continuous additions to DSL subscribers in Japan and a slow down in new DSL subscribers may cause our revenue to decline. Our sales have been historically denominated in U.S. dollars and major fluctuations in currency exchange rates could materially affect our Japanese customers' demand, thereby forcing them to reduce their orders, which could adversely affect our operating results.

***WE DERIVE A SUBSTANTIAL AMOUNT OF OUR REVENUES FROM JAPAN, AND OUR FAILURE TO DIVERSIFY THE GEOGRAPHIC SOURCES OF OUR REVENUE COULD HARM OUR BUSINESS AND OPERATING RESULTS.***

Because a substantial portion of our revenues have been derived from sales into Japan, our revenues have been heavily dependent on developments in the Japan market. While part of our strategy is to diversify the geographic sources of our revenues, failure to further penetrate markets outside of Japan could harm our business and results of operations.

***COMPETING DSL TECHNOLOGIES WHICH HAVE BEEN DEPLOYED IN JAPAN MAY ADVERSELY IMPACT THE DEMAND FOR OUR DSL PRODUCTS, MARKET SHARE AND OPERATING RESULTS.***

We have worked in partnership with local telecommunications companies to develop the Annex C standard for the DSL market in Japan and have been able to achieve the majority market share of DSL equipment purchases, based on our products, in Japan. In July 2001, a certain service provider announced plans to deploy lower priced competing DSL technologies in Japan and has subsequently deployed these competing technologies. If these competing technologies continue to be successful, our market share in the DSL market in Japan may decline, and our business and operating results may be adversely affected.

***WE DERIVE A SUBSTANTIAL AMOUNT OF OUR REVENUES FROM INTERNATIONAL SOURCES, AND DIFFICULTIES ASSOCIATED WITH INTERNATIONAL OPERATIONS COULD HARM OUR BUSINESS.***

A substantial portion of our revenues has been derived from customers located outside of the United States. For 2003 and 2002, 87% and 89%, respectively, of our net revenues were to customers located in Asia. We may be unable to successfully overcome the difficulties associated with international operations. These difficulties include:

- staffing and managing foreign operations;
- changes in regulatory requirements;
- licenses, tariffs and other trade barriers;
- political and economic instability;
- difficulties in protecting intellectual property rights in some foreign countries;
- a limited ability to enforce agreements and other rights in some foreign countries;
- obtaining governmental approvals for products; and
- complying with a wide variety of complex foreign laws and treaties.

Because sales of our products are denominated exclusively in United States dollars, increases in the value of the United States dollar could increase the price of our products so that they become relatively more expensive to customers in the local currency of a particular country, leading to a reduction in sales and profitability in that country.

***WE DEPEND ON A FEW CUSTOMERS, AND IF WE LOSE ANY OF THEM OUR SALES AND OPERATIONS WILL SUFFER.***

We sell DSL products primarily to network equipment manufacturers. Our top two customers for the year ended December 31, 2003 were NEC and Sumitomo, accounting for 49% and 31% of our net revenues, respectively. For the year ended December 31, 2002, NEC and Sumitomo accounted for 45% and 41% of our net revenues, respectively. We do not have contractual volume commitments with these customers but rather sell our products to them on an order-by-order basis. We expect to be dependent upon a relatively small number of large customers in future periods, although the specific customers may vary from period to period. If we are not successful in maintaining relationships with key customers and winning new customers, our business and results of operations will suffer.

***WE ARE SUBJECT TO ORDER AND SHIPMENT UNCERTAINTIES, AND ANY SIGNIFICANT ORDER CANCELLATIONS OR DEFERRALS COULD ADVERSELY AFFECT OUR BUSINESS.***

We typically sell products pursuant to purchase orders that customers can generally cancel or defer on short notice without incurring a significant penalty. Any significant cancellations or deferrals in the future could

materially and adversely affect our business, financial condition and results of operations. In addition, cancellations or deferrals of product orders, the return of previously sold products or the overproduction of products due to the failure of anticipated orders to materialize could cause us to hold excess or obsolete inventory, which could reduce our profit margins, increase product obsolescence and restrict our ability to fund our operations. Furthermore, we generally recognize revenue upon shipment of products to a customer. If a customer refuses to accept shipped products, we could incur significant charges against our revenue.

***OUR CUSTOMERS MAY DEMAND PREFERENTIAL TERMS OR DELAY OUR SALES CYCLE, WHICH WOULD ADVERSELY AFFECT OUR RESULTS OF OPERATIONS.***

Our customers are in most cases larger than us and are able to exert a high degree of influence over us. These customers may have sufficient bargaining power to demand low prices and other terms and conditions that may materially adversely affect our business, financial condition and results of operations. In addition, prior to selling our products to such customers, we must typically undergo lengthy product approval processes, often taking up to one year. Accordingly, we are continually submitting successive versions of our products, as well as new products, to our customers for approval. The length of the approval process can vary and is affected by a number of factors, including customer priorities, customer budgets and regulatory issues affecting telecommunications service providers. Delays in the product approval process could materially adversely affect our business, financial condition and results of operations. While we have been successful in the past in obtaining product approvals from our customers, such approvals and the ensuing sales of such products may not continue to occur. Delays can also be caused by late deliveries by other vendors, changes in implementation priorities and slower-than-anticipated growth in demand for the services that our products support. A delay in, or cancellation of, the sale of our products could adversely affect our results from operations or cause them to significantly vary from quarter to quarter.

***SALES OF OUR PRODUCTS DEPEND ON THE WIDESPREAD ADOPTION OF BROADBAND ACCESS SERVICES, ESPECIALLY DSL. IF THE DEMAND FOR BROADBAND ACCESS SERVICES DOES NOT INCREASE, WE MAY NOT BE ABLE TO GENERATE SUBSTANTIAL SALES.***

Sales of our products depend on the increased use and widespread adoption of broadband access services, and DSL services in particular, and the ability of telecommunications service providers to market and sell broadband access services. Our business would be harmed, and our results of operations and financial condition would be adversely affected, if the use of broadband access services does not increase as anticipated. Certain critical factors will likely continue to affect the development of the broadband access service market. These factors include:

- inconsistent quality and reliability of service;
- lack of availability of cost-effective, high-speed service;
- lack of interoperability among multiple vendors' network equipment;
- congestion in service providers' networks;
- inadequate security; and
- slow deployment of new broadband services over DSL lines.

***BECAUSE OTHER BROADBAND TECHNOLOGIES MAY COMPETE EFFECTIVELY WITH DSL SERVICES OR OTHER SERVICES ADDRESSED BY OUR PRODUCTS, A SLOWDOWN IN DEPLOYMENT OF DSL SERVICES, THE LACK OF SIGNIFICANT GROWTH IN NON-DSL MARKETS THAT WE ARE TARGETING AND OUR LACK OF SUCCESS IN PENETRATING SUCH MARKETS WOULD ADVERSELY AFFECT OUR BUSINESS AND OPERATING RESULTS.***

Our revenues are heavily dependent on the increase in demand for DSL services. DSL services are competing with a variety of different broadband data transmission technologies, including cable modems,

satellite and other wireless technologies. While part of our strategy is to diversify our product markets beyond DSL into such areas as optical access and VoP, if any technology that is competing with the technologies that we offer is more reliable, faster and/or less expensive or has any other advantages over the technologies for which we have products, then the demand for our products may decrease. The lack of significant growth in those markets we are targeting in general and the lack of success of our products in particular would also adversely affect our business and results of operations.

***BECAUSE THE SALES CYCLE FOR OUR PRODUCTS TYPICALLY LASTS UP TO ONE YEAR AND MAY BE SUBJECT TO DELAYS, IT IS DIFFICULT TO FORECAST SALES FOR ANY GIVEN PERIOD.***

If we fail to realize forecasted sales for a particular period, our stock price could decline significantly. The sales cycle of our products is lengthy and typically involves a detailed initial technical evaluation of our products by our prospective customers, followed by the design, construction and testing of prototypes incorporating our products. Only after these steps are complete will we receive a purchase order from a customer for volume shipments. This process generally takes from 9 to 12 months and may last longer. Given this lengthy sales cycle, it is difficult to accurately predict when sales to a particular customer will occur. In addition, we may experience unexpected delays in orders from customers, which may prevent us from realizing forecasted sales for a particular period. Our products are typically sold to equipment manufacturers, who incorporate our products in the products that they in turn sell to consumers or to network service providers. As a result, any delay by our customers, or by our customers' customers, in the manufacture or distribution of their products will result in a delay in obtaining orders for our products, which could cause our business and results to suffer.

***RAPID CHANGES IN THE MARKET FOR DSL CHIPSETS MAY RENDER OUR CHIPSETS OBSOLETE OR UNMARKETABLE.***

The market for chipsets for DSL products is characterized by:

- intense competition;
- rapid technological change;
- frequent new product introductions by our competitors;
- changes in customer demands; and
- evolving industry standards.

Any of these factors could make our products obsolete or unmarketable. In addition, the life cycles of some of our products may depend upon the life cycles of the end products into which our products will be designed. Products with short life cycles require us to closely manage production and inventory levels. Unanticipated changes in the estimated total demand for our products and/or the estimated life cycles of the end products into which our products are designed may result in obsolete or excess inventories, which in turn may adversely affect our operating results. To compete, we must innovate and introduce new products. If we fail to successfully introduce new products on a timely and cost-effective basis that meet customer requirements and are compatible with evolving industry standards, then our business, financial condition and results of operations will be seriously harmed.

***OUR MARKETS ARE HIGHLY COMPETITIVE, AND MANY OF OUR COMPETITORS ARE ESTABLISHED AND HAVE GREATER RESOURCES THAN WE HAVE.***

The market for communications semiconductor and software products is intensely competitive. Given our stage of development, there is a substantial risk that we will not have the financial resources, technical expertise or marketing and support capabilities to compete successfully. In addition, a number of other semiconductor companies have announced their intent to enter the market segments adjacent to or addressed by our products.

These competitors have longer operating histories, greater name recognition, larger installed customer bases and significantly greater financial, technical and marketing resources than we have. We may also face competition from customers' or prospective customers' own internal development efforts. Any of these competitors may be able to introduce new technologies, respond more quickly to changing customer requirements or devote greater resources to the development, promotion and sale of their products than we can.

***BECAUSE OUR PRODUCTS ARE COMPONENTS OF OTHER EQUIPMENT, IF BROADBAND EQUIPMENT MANUFACTURERS DO NOT INCORPORATE OUR PRODUCTS IN THEIR EQUIPMENT, WE MAY NOT BE ABLE TO GENERATE SALES OF OUR PRODUCTS IN VOLUME QUANTITIES.***

Our products are not sold directly to the end-user; they are components of other products. As a result, we rely upon equipment manufacturers to design our products into their equipment. We further rely on the manufacturing and deployment of the equipment to be successful. If equipment that incorporates our products is not accepted in the marketplace, we may not achieve sales of our products in volume quantities, which would have a negative impact on our results of operations.

***BECAUSE MANUFACTURERS OF COMMUNICATIONS EQUIPMENT MAY BE RELUCTANT TO CHANGE THEIR SOURCES OF COMPONENTS, IF WE DO NOT ACHIEVE DESIGN WINS WITH SUCH MANUFACTURERS, WE MAY BE UNABLE TO SECURE SALES FROM THESE CUSTOMERS IN THE FUTURE.***

Once a manufacturer of communications equipment has designed a supplier's semiconductor into its products, the manufacturer may be reluctant to change its source of semiconductors due to the significant costs associated with qualifying a new supplier. Accordingly, our failure to achieve design wins with equipment manufacturers, who have chosen a competitor's semiconductor could create barriers to future sales opportunities with these manufacturers.

***THIRD-PARTY CLAIMS REGARDING INTELLECTUAL PROPERTY MATTERS COULD CAUSE US TO STOP SELLING OUR PRODUCTS, PAY MONETARY DAMAGES OR OBTAIN LICENSES ON ADVERSE TERMS.***

There is a significant risk that third parties, including current and potential competitors, will claim that our products, or our customers' products, infringe on their intellectual property rights. The owners of these intellectual property rights may bring infringement claims against us or our customers. Any such litigation, whether or not determined in our favor or settled by us, would be costly and divert the attention of our management and technical personnel. Inquiries with respect to the coverage of our intellectual property could develop into litigation. In the event of an adverse ruling for an intellectual property infringement claim, we could be required to obtain a license or pay substantial damages or have the sale of our products stopped by an injunction. Such a license may not be available on reasonable terms, or at all. In addition, if a customer of our products cannot acquire a required license on commercially reasonable terms, that customer may choose not to use our products. We have obligations to indemnify our customers under some circumstances for infringement of third-party intellectual property rights. If any intellectual property claims from third parties against one of our customers whom we have indemnified is held to be valid, the costs to us could be substantial and our business could be harmed.

We have received correspondence from certain parties, including Texas Instruments, Alcatel and Ricoh, requesting us to discuss the potential need for non-exclusive licenses permitting us to utilize technology covered by various patents held by these parties. We could be subject to claims similar to the Texas Instruments, Alcatel and Ricoh claims in the future. Depending on the amount and timing of any unfavorable resolutions of these claims, our future results of operations or cash flows could be materially adversely affected.

***IF WE DELIVER PRODUCTS WITH DEFECTS, OUR CREDIBILITY WILL BE HARMED, AND THE SALES AND MARKET ACCEPTANCE OF OUR PRODUCTS WILL DECREASE.***

Our products are complex and have contained errors, defects and bugs when introduced and revised. If we deliver products with errors, defects or bugs or products that have reliability, quality or compatibility problems, our credibility and the market acceptance and sales of our products could be harmed, which could adversely affect our ability to retain existing customers or attract new customers. Further, if our products contain errors, defects and bugs, then we may be required to expend significant capital and resources to alleviate such problems and may have our sales to customers interrupted or delayed. If any of these problems are not found until we have commenced commercial production, we may be required to incur additional development costs and product repair or replacement costs. Defects could also lead to potential liability as a result of product liability lawsuits against us or against our customers. We have agreed to indemnify our customers in some circumstances against liability from defects in our products. A successful product liability claim could seriously harm our business, financial condition and results of operations, and may divert our technical and other resources from other development efforts.

***WE DEPEND ON SOLE SOURCE SUPPLIERS FOR SEVERAL KEY COMPONENTS OF OUR PRODUCTS.***

We obtain certain parts, components and packaging used in the delivery of our products from sole sources of supply. For example, we obtain semiconductor wafers from Taiwan Semiconductor Manufacturing Co., Ltd, Semiconductor Manufacturing International Corporation and United Microelectronics Corporation. If we fail to obtain components in sufficient quantities when required or if we cannot adequately control manufacturing process quality, product yields or production costs, our business could be harmed. Developing and maintaining these strategic relationships with our vendors is critical for us to be successful.

Any of our sole source suppliers may:

- enter into exclusive arrangements with our competitors;
- stop selling their products or components to us at commercially reasonable prices;
- refuse to sell their products or components to us at any price; or
- be subject to production disruptions such as earthquakes.

***WE MAY EXPERIENCE DIFFICULTIES IN TRANSITIONING TO SMALLER GEOMETRY PROCESS TECHNOLOGIES OR IN ACHIEVING HIGHER LEVELS OF DESIGN INTEGRATION AND THAT MAY RESULT IN REDUCED MANUFACTURING YIELDS, DELAYS IN PRODUCT DELIVERIES AND INCREASED EXPENSES.***

In order to remain competitive, we expect to continue to transition our products to increasingly smaller line width geometries. This transition will require us to modify the manufacturing processes for our products and redesign some products. We periodically evaluate the benefits, on a product-by-product basis, of migrating to smaller geometry process technologies to reduce our costs, and we have designed some of our products to be manufactured in .35 micron, .25 micron, .18 micron and .13 micron geometry processes. In the past, we have experienced some difficulties in shifting to smaller geometry process technologies or new manufacturing processes, which resulted in reduced manufacturing yields, delays in product deliveries and increased expenses. We may face similar difficulties, delays and expenses as we continue to transition our products to smaller geometry processes. We are dependent on our relationships with our foundries to transition to smaller geometry processes successfully. We cannot assure you that our foundries will be able to effectively manage the transition or that we will be able to maintain our foundry relationships. If our foundries or we experience significant delays in this transition or fail to efficiently implement this transition, our business, financial condition and results of operations could be materially and adversely affected. As smaller geometry processes become more prevalent, we expect to continue to integrate greater levels of functionality, as well as customer and third party intellectual property, into our products. However, we may not be able to achieve higher levels of design integration or deliver new integrated products on a timely basis, or at all.

***FUTURE CONSOLIDATION IN THE TELECOMMUNICATIONS EQUIPMENT INDUSTRY MAY INCREASE COMPETITION THAT COULD HARM OUR BUSINESS.***

The markets in which we compete are characterized by increasing consolidation both within the telecommunications equipment sector and by companies combining or acquiring data communications assets and assets for delivering voice-related services. We cannot predict with certainty how industry consolidation will affect our competitors. We may not be able to compete successfully in an increasingly consolidated industry. Increased competition and consolidation in our industry may require that we reduce the prices of our products or result in a loss of market share, which could materially adversely affect our business, financial condition and results of operations. Additionally, because we are now, and may in the future be, dependent on certain strategic relationships with third parties in our industry, any additional consolidation involving these parties could reduce the demand for our products and otherwise harm our business prospects.

***WE MAY MAKE FUTURE ACQUISITIONS AND ACQUISITIONS INVOLVE NUMEROUS RISKS.***

Our business is highly competitive and, as such, our growth is dependent upon market growth, our ability to enhance our existing products and our ability to introduce new products on a timely basis. One of the ways we have addressed and may continue to address the need to develop new products is through acquisitions of other companies. Acquisitions involve numerous risks, including the following:

- difficulties in integration of the operations, technologies and products of the acquired companies;
- the risk of diverting management's attention from normal daily operations of the business;
- potential difficulties in completing projects associated with purchased in-process research and development;
- risks of entering markets in which we have no or limited direct prior experience and where competitors in such markets have stronger market positions; and
- the potential loss of key employees of the acquired company.

Mergers and acquisitions of high-technology companies are inherently risky, and no assurance can be given that our previous or future acquisitions will be successful and will not materially adversely affect our business, operating results or financial condition.

We must also maintain our ability to manage such growth effectively. Failure to manage growth effectively and successfully integrate acquisitions could harm our business and operating results.

***OUR EXECUTIVE OFFICERS AND KEY PERSONNEL ARE CRITICAL TO OUR BUSINESS, AND THESE OFFICERS AND PERSONNEL MAY NOT REMAIN WITH US IN THE FUTURE.***

We depend upon the continuing contributions of our key management, sales, customer support and product development personnel. The loss of such personnel could seriously harm us. In addition, we have not obtained key-man life insurance on any of our executive officers or key employees.

***OUR FUTURE SUCCESS WILL DEPEND IN PART ON OUR ABILITY TO PROTECT OUR PROPRIETARY RIGHTS AND THE TECHNOLOGIES USED IN OUR PRINCIPAL PRODUCTS, AND IF WE DO NOT ENFORCE AND PROTECT OUR INTELLECTUAL PROPERTY, OUR BUSINESS WILL BE HARMED.***

We rely on a combination of patent, copyright and trademark laws, trade secrets, confidentiality agreements and other contractual provisions to protect our proprietary rights. However, these measures afford only limited protection. Our failure to adequately protect our proprietary rights may adversely affect us. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or to obtain and use trade secrets or other information that we regard as proprietary.



The laws of some foreign countries do not protect our proprietary rights to the same extent as do the laws of the United States, and many U.S. companies have encountered substantial infringement problems in these countries. There is a risk that our efforts to protect proprietary rights may not be adequate. For example, our competitors may independently develop similar technology, duplicate our products or design around our patents or our other intellectual property rights. If we fail to adequately protect our intellectual property or if the laws of a foreign jurisdiction do not effectively permit such protection, it would be easier for our competitors to sell competing products.

***WE MAY NEED TO RAISE ADDITIONAL CAPITAL WHICH MIGHT NOT BE AVAILABLE OR WHICH, IF AVAILABLE, COULD BE ON TERMS ADVERSE TO OUR COMMON STOCKHOLDERS.***

We expect that our current cash and cash equivalents and short-term investment balances will be adequate to meet our working capital and capital expenditure needs for at least twelve months. After that, we may need to raise additional funds, and we cannot be certain that we will be able to obtain additional financing on favorable terms, if at all. We may also require additional capital for the acquisition of businesses, products and technologies that are complementary to ours. Further, if we issue equity securities, the ownership percentage of our stockholders would be reduced, and the new equity securities may have rights, preferences or privileges senior to those existing holders of our common stock. If we cannot raise needed funds on acceptable terms, we may not be able to develop or enhance our products, take advantage of future opportunities or respond to competitive pressures or unanticipated requirements, which could seriously harm our business, operating results and financial condition.

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

The primary objective of our investment activities is to preserve principal while concurrently maximizing the income we receive from our investments without significantly increasing risk. Some of the securities that we may invest in may be subject to market risk. This means that a change in prevailing interest rates may cause the principal amount of the investment to fluctuate. For example, if we hold a security that was issued with a fixed interest rate at the then-prevailing rate and the prevailing interest rate later rises, the current value of the principal amount of our investment will decline. To minimize this risk in the future, we intend to maintain our portfolio of cash equivalents and short-term investments in a variety of securities, including commercial paper, money market funds, government and non-government debt securities and certificates of deposit. In general, money market funds are not subject to market risk because the interest paid on such funds fluctuates with the prevailing interest rate. As of December 31, 2003, all of our investments were in money market funds, high quality commercial paper, government and non-government debt securities and auction rate preferred securities. A hypothetical 100 basis point increase in interest rates would result in an approximate \$165,000 decrease in the fair value of our available-for-sale securities as of December 31, 2003. See Note 5 of Notes to the Consolidated Financial Statements.

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

**CENTILLIUM COMMUNICATIONS, INC.**

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## REPORT OF ERNST & YOUNG LLP, INDEPENDENT AUDITORS

The Board of Directors and Stockholders  
Centillum Communications, Inc.

We have audited the accompanying consolidated balance sheets of Centillum Communications, Inc. as of December 31, 2003 and 2002, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2003. Our audits also included the financial statement schedule listed in the Index at Item 15(a). These financial statements and schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and schedule based on our audits.

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

In our opinion, the financial statements referred to above present fairly, in all material respects, the consolidated financial position of Centillum Communications, Inc. at December 31, 2003 and 2002, and the consolidated results of its operations and its cash flows for each of the three years in the period ended December 31, 2003, in conformity with accounting principles generally accepted in the United States. Also, in our opinion, the related financial statement schedule, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects the information set forth therein.

As discussed in Note 4 to the consolidated financial statements, effective January 1, 2002, the Company adopted Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets."

/s/ ERNST & YOUNG LLP

San Jose, California  
January 28, 2004

**CENTILLIUM COMMUNICATIONS, INC.**  
**CONSOLIDATED STATEMENTS OF OPERATIONS**  
(In thousands, except per share data)

	Year ended December 31,		
	2003	2002	2001
Total product revenues . . . . .	\$124,863	\$104,784	\$159,207
Technology development revenues . . . . .	113	188	300
Total net revenues . . . . .	124,976	104,972	159,507
Cost of revenues . . . . .	71,153	59,500	79,781
Gross profit . . . . .	53,823	45,472	79,726
Operating expenses:			
Research and development . . . . .	46,162	50,754	59,034
Sales and marketing . . . . .	12,142	14,686	17,953
General and administrative . . . . .	9,734	9,660	13,879
Amortization of goodwill and other acquisition-related intangibles . . . . .	83	167	3,285
Impairment of goodwill . . . . .	—	5,835	—
In-process research and development . . . . .	—	—	7,422
Total operating expenses . . . . .	68,121	81,102	101,573
Operating loss . . . . .	(14,298)	(35,630)	(21,847)
Interest income, net . . . . .	1,072	1,794	3,544
Gain (loss) on non-current investment . . . . .	—	440	(990)
Loss before benefit (provision) for income taxes . . . . .	(13,226)	(33,396)	(19,293)
Benefit (provision) for income taxes . . . . .	(133)	95	(400)
Net loss . . . . .	\$ (13,359)	\$ (33,301)	\$ (19,693)
Basic and diluted net loss per share . . . . .	\$ (0.37)	\$ (0.96)	\$ (0.59)
Shares used to compute basic and diluted net loss per share . . . . .	36,433	34,641	33,495

See accompanying notes.

**CENTILLIUM COMMUNICATIONS, INC.**  
**CONSOLIDATED BALANCE SHEETS**  
(In thousands, except share and per share data)

	December 31,	
	2003	2002
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents .....	\$ 24,734	\$ 93,513
Short-term investments .....	64,892	8,489
Accounts receivable—net of allowance for doubtful accounts of \$109 at December 31, 2003 and \$160 at December 31, 2002 .....	12,476	2,864
Inventories .....	11,908	4,130
Prepays and other current assets .....	3,718	2,622
Total current assets .....	117,728	111,618
Property and equipment, net .....	7,385	10,389
Other assets .....	511	432
Total assets .....	\$ 125,624	\$ 122,439
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities:		
Accounts payable .....	\$ 7,434	\$ 8,485
Accrued payroll & related expenses .....	5,315	3,991
Accrued liabilities .....	16,168	13,819
Capital lease—current portion .....	527	1,528
Total current liabilities .....	29,444	27,823
Capital lease—long-term portion .....	—	525
Other liabilities .....	143	268
Commitments and contingencies		
Stockholders' equity:		
Common stock; \$0.001 par value:		
Authorized shares: 100,000,000; Issued and outstanding shares: 37,831,085 at December 31, 2003, 35,245,171 at December 31, 2002 .....	38	35
Additional paid-in capital .....	242,348	228,847
Deferred compensation .....	(292)	(2,333)
Accumulated other comprehensive income .....	36	8
Accumulated deficit .....	(146,093)	(132,734)
Total stockholders' equity .....	96,037	93,823
Total liabilities and stockholders' equity .....	\$ 125,624	\$ 122,439

See accompanying notes.

**CENTILLIUM COMMUNICATIONS, INC.**

**CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
(In thousands, except share data)

	Common Stock Shares	Common Stock Amount	Additional Paid-In Capital	Deferred Compensation	Stockholders' Notes Receivable	Accumulated Deficit	Accumulated Other Comprehensive Income	Total Stockholders' Equity
<b>BALANCE AT DECEMBER 31, 2000</b>								
Noncash issuance of common stock for services	33,030,114	\$33	\$208,520	\$(21,521)	\$(430)	\$ (79,740)	\$ 8	\$106,870
Exercise of options to purchase common stock for cash	10,000	—	70	—	—	—	—	70
Cash proceeds from payments on stockholder note receivable	557,412	1	2,394	—	430	—	—	2,395
Issuance of shares under employee stock purchase plan	164,621	—	1,883	—	—	—	—	430
Deferred compensation related to stock option grants, net of terminations	—	—	(1,958)	1,958	—	—	—	1,883
Stock-based compensation expense, net	—	—	—	15,346	—	—	—	—
Common stock issued in connection with acquisition	813,915	1	18,315	(4,517)	—	—	—	15,346
Acquisition related deferred compensation	—	—	—	—	—	(19,693)	—	18,316
Net loss	—	—	—	—	—	—	—	(4,517)
Unrealized gain on available-for-sale investments	—	—	—	—	—	—	58	(19,693)
Total comprehensive loss	—	—	—	—	—	—	—	58
<b>BALANCE AT DECEMBER 31, 2001</b>								
Noncash issuance of common stock for services	34,576,062	35	229,224	(8,734)	—	(99,433)	66	121,158
Exercise of options to purchase common stock for cash net of repurchases	208,610	—	498	—	—	—	—	10
Common stock repurchased	(1,565)	—	—	—	—	—	—	498
Issuance of shares under employee stock purchase plan	460,064	—	1,719	—	—	—	—	—
Reversal of deferred compensation	—	—	(2,604)	2,604	—	—	—	1,719
Stock-based compensation expense, net	—	—	—	3,797	—	—	—	—
Net loss	—	—	—	—	—	(33,301)	—	3,797
Unrealized loss on available-for-sale investments	—	—	—	—	—	—	(58)	(33,301)
Total comprehensive loss	—	—	—	—	—	—	—	(58)
<b>BALANCE AT DECEMBER 31, 2002</b>								
Exercise of options to purchase common stock for cash net of repurchases	35,245,171	35	228,847	(2,333)	—	(132,734)	8	93,823
Proceeds from contribution by stockholder	2,129,049	3	11,743	—	—	—	—	11,746
Issuance of shares under employee stock purchase plan	456,865	—	1,516	—	—	—	—	857
Reversal of deferred compensation	—	—	(615)	615	—	—	—	1,516
Stock-based compensation expense, net	—	—	—	1,426	—	—	—	—
Net loss	—	—	—	—	—	(13,359)	28	1,426
Unrealized gain on available-for-sale investments	—	—	—	—	—	—	—	(13,359)
Total comprehensive loss	—	—	—	—	—	—	—	28
<b>BALANCE AT DECEMBER 31, 2003</b>								
	37,831,085	\$38	\$242,348	\$(292)	\$—	\$(146,093)	\$36	\$96,037

See accompanying notes.

**CENTILLIUM COMMUNICATIONS, INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(In thousands)

	<u>Years ended December 31,</u>		
	<u>2003</u>	<u>2002</u>	<u>2001</u>
<b>OPERATING ACTIVITIES</b>			
Net loss	\$(13,359)	\$(33,301)	\$(19,693)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization expense	6,350	7,223	4,245
Stock based compensation expense	1,426	3,797	15,346
Loss on retirements of property and equipment	19	36	472
Amortization of goodwill and other acquisition-related intangibles	83	167	3,285
Issuance of common stock for services and other	—	10	70
Loss (gain) on non-current investment	—	(440)	990
Impairment of goodwill	—	5,835	—
Amortization of warrants issued in conjunction with financings	—	—	4
In-process research and development	—	—	7,422
Changes in operating assets and liabilities:			
Accounts receivable	(9,612)	1,178	12,841
Inventories	(7,778)	5,226	(173)
Prepays and other current assets	(1,096)	(475)	(1,045)
Other assets	(162)	(107)	(146)
Accounts payable	(1,051)	631	(5,280)
Accrued payroll and related expenses	1,324	672	647
Accrued liabilities	2,349	2,521	6,708
Other liabilities	(125)	(47)	95
Net cash provided by (used in) operating activities	<u>(21,632)</u>	<u>(7,074)</u>	<u>25,788</u>
<b>INVESTING ACTIVITIES</b>			
Purchases of short-term investments	(90,131)	(16,967)	(28,642)
Sales and maturities of short-term investments	33,756	25,549	28,015
Purchases of property and equipment	(3,365)	(4,112)	(7,252)
Acquisitions, net of cash acquired	—	—	258
Proceeds from sale of non-current investment	—	440	—
Net cash provided by (used in) investing activities	<u>(59,740)</u>	<u>4,910</u>	<u>(7,621)</u>
<b>FINANCING ACTIVITIES</b>			
Principal payments on capital lease obligations	(1,526)	—	—
Principal payments on long-term debt obligations	—	(264)	(391)
Proceeds from issuance of common stock, net of repurchases	13,262	2,217	4,278
Proceeds from contribution by stockholder	857	—	—
Proceeds from stockholder note receivable	—	—	430
Net cash provided by financing activities	<u>12,593</u>	<u>1,953</u>	<u>4,317</u>
Net increase (decrease) in cash and cash equivalents	<u>(68,779)</u>	<u>(211)</u>	<u>22,484</u>
Cash and cash equivalents at beginning of period	<u>93,513</u>	<u>93,724</u>	<u>71,240</u>
Cash and cash equivalents at end of period	<u>\$ 24,734</u>	<u>\$ 93,513</u>	<u>\$ 93,724</u>
<b>SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION</b>			
Cash paid for interest	\$ 49	\$ 203	\$ 76
Cash paid (received) for income taxes	\$ 51	\$ (210)	\$ 331
<b>SUPPLEMENTAL DISCLOSURES OF NON-CASH TRANSACTIONS</b>			
Property and equipment purchases through capital lease	\$ —	\$ 2,053	\$ —
Deferred compensation related to stock option grants, net of terminations	\$ (615)	\$ (2,604)	\$ 2,559

See accompanying notes.

**CENTILLIUM COMMUNICATIONS, INC.**  
**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**

**Note 1. Summary of Significant Accounting Policies**

*Centillum Communications, Inc.:* Centillum (“the Company”) was incorporated in California on February 21, 1997 for the purpose of developing and marketing semiconductor devices for equipment manufacturers serving the broadband communications markets. The Company develops products designed for the Digital Subscriber Line (DSL) and Voice over Packet (VoP) markets and is also developing products for optical access applications, which it expects to introduce in 2004.

The Company’s revenues are currently derived from the sale of its DSL and VoP products, which include the CopperFlite, Maximus, Palladia and Entropia families of products.

*Principles of Consolidation:* The consolidated financial statements include all the accounts of the Company and those of its wholly owned subsidiaries. All intercompany accounts and transactions have been eliminated in consolidation.

*Use of Estimates:* The preparation of the consolidated financial statements in conformity with accounting principles generally accepted in the United States of America requires Centillum to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of sales and expenses during the reporting periods. Such management estimates include allowances for doubtful accounts receivable, provisions for inventories to reflect net realizable value, sales returns and allowances, product warranty and other liabilities. Actual results could differ from those estimates.

*Revenue Recognition:* Revenues related to product sales are generally recognized when the products have been shipped and risk of loss has passed to the customer, collection of the resulting receivable is reasonably assured, persuasive evidence of an arrangement exists, and the price is fixed or determinable. Sales arrangements may contain customer-specific acceptance requirements for both products and development revenues. In such cases, revenue is deferred at the time of delivery of the product or service and is recognized upon receipt of customer acceptance. Under certain circumstances the Company allows its customers to return product. A provision is made for estimated product returns.

The Company also performs research and product development work under best efforts technology development agreements. Revenues under technology development agreements are recognized when applicable contractual milestones have been met, including deliverables, and in any case, do not exceed the amounts that would be recognized using the percentage-of-completion method. The costs associated with technology development revenues are closely related to the costs of ongoing research and development activities. Generally, the incremental costs of providing any deliverables under technology development arrangements are not easily distinguishable from the costs of ongoing activities, are not significant, and have been included in research and development in the statements of operations.

*Warranty:* A limited warranty is provided on the Company’s products for a period of one year and allowances for estimated warranty costs are recorded during the period of sale. The determination of such allowances requires the Company to make estimates of product return rates and expected costs to repair or replace the products under warranty. The Company periodically assesses the adequacy of the warranty liability and adjusts such amounts as necessary.

*Concentrations of Credit Risk:* Financial instruments that potentially subject the Company to significant concentration of credit risk consist principally of cash, cash equivalents, short-term investments and accounts receivable. The Company places its cash, cash-equivalents and short-term investments in several high credit-quality financial institutions. The Company is exposed to credit risk in the event of default by these institutions to



**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

the extent of the amount recorded on the balance sheet. Accounts receivable are billed in U.S. currency and are derived from revenues earned from customers primarily located in Japan and the United States. The Company performs ongoing credit evaluations of its customers' financial condition and generally does not require collateral. The Company maintains reserves for potential credit losses. Management judgment is used to estimate the required reserves. Actual results could differ from those estimates.

*Customer Concentrations:* The following customers accounted for 10% or more of total accounts receivable:

	<u>December 31,</u>	
	<u>2003</u>	<u>2002</u>
NEC .....	35%	51%
Sumitomo Electric Industries .....	16%	35%
Accton Technology Corporation .....	14%	—
Solectron Technology .....	12%	—

The Company has a limited number of customers with individually large amounts due at any given balance sheet date. Any unanticipated change in one of those customers' creditworthiness or other matters affecting the collectibility of amounts due from such customers could have a material adverse effect on the results of operations in the period in which such changes or events occur.

*Supplier Concentrations:* The Company depends on a single or limited number of outside contractors to fabricate, assemble and test its semiconductor devices. The Company generally sources its production through standard purchase orders and has wafer supply and assembly and test agreements with outside contractors. While the Company seeks to maintain a sufficient level of supply and endeavors to maintain ongoing communications with suppliers to guard against interruptions or cessation of supply, business and results of operations could be adversely affected by a stoppage or delay of supply, substitution of more expensive or less reliable products or services, receipt of defective semiconductor devices, an increase in the price of products, or inability to obtain reduced pricing from suppliers in response to competitive pressures.

*Cash Equivalents and Short-term Investments:* The Company invests its excess cash in money market accounts, obligations of the U.S. government, and debt instruments and considers all highly liquid instruments purchased with an original maturity of three months or less to be cash equivalents. Cash equivalents are recorded at cost, which approximates fair value.

The Company's investments in marketable equity securities and all debt securities are classified as available-for-sale at the time of purchase and the Company periodically reevaluates such designation. The investments are adjusted for amortization of premiums and discounts to maturity and such amortization is included in interest income, net. At December 31, 2003 and 2002, all of the Company's investments in debt securities were classified as available-for-sale, with changes in market value recorded as unrealized gains and losses in accumulated other comprehensive income until their disposition. Realized gains and losses and declines in value judged to be other than temporary on available-for-sale securities are included in interest income, net and were insignificant for all periods presented. The cost of securities sold is based on the specific-identification method.

*Inventories:* Inventories are stated at the lower of standard cost, which approximates cost, or net realizable value. Cost is based on a first-in, first-out basis. The Company performs detailed reviews of the net realizable value of inventories, both on hand as well as for inventories that it is committed to purchase with consideration given to deterioration, obsolescence, and other factors.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

*Property and Equipment:* Property and equipment are carried at cost less accumulated depreciation and amortization. Property and equipment are depreciated for financial reporting purposes using the straight-line method over the assets' estimated useful lives of three years. Leasehold improvements are amortized using the straight-line method over the shorter of the useful lives of the assets or the terms of the leases. Equipment under capital lease is stated at the lower of fair market value or the present value of the minimum lease payments at the inception of the lease.

*Impairment of Long-lived Assets:* The Company reviews long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The Company measures the recoverability of long-lived assets by comparison of the carrying amount to undiscounted future net cash flows. If the Company considers such assets to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the long-lived assets exceeds their fair value, as determined by discounted cash flows.

*Goodwill:* As of January 1, 2002, the Company adopted Statement of Financial Standards No. 142, "Goodwill and Other Intangible Assets" (SFAS 142), which addresses the financial accounting and reporting standards for goodwill and other intangible assets subsequent to their acquisition. This accounting standard requires that goodwill no longer be amortized, and instead, be tested for impairment at least annually. In addition, within six months of adopting the new accounting standard, a transitional impairment test must be completed and any impairment identified must be reported as a cumulative effect of a change in accounting principle. See Note 4.

*Software Development Costs:* Costs incurred in the research and development of the software embedded in our products are expensed as incurred until technological feasibility has been established. The Company believes its current process for developing software is essentially completed concurrently with the establishment of technological feasibility, which is evidenced by a working model that includes the semiconductor device and embedded software; accordingly, development costs incurred after the establishment of technological feasibility have not been material and, therefore, have been expensed.

*Advertising Costs:* The Company expenses advertising costs as incurred. These costs were not material and are included in sales and marketing expense.

*Shipping and Handling:* The cost of shipping products to customers is not material, and is included in cost of goods sold.

*Foreign Currency Accounting:* The United States dollar is the functional currency for all foreign operations. The effect on the consolidated statements of operations of transaction and translation gains and losses is insignificant for all years presented.

*Fair Value of Financial Instruments:* The Company has evaluated the estimated fair value of financial instruments. The amounts reported for cash and cash equivalents, accounts receivable, short-term borrowings, accounts payable, and accrued expenses approximate the fair value due to their short maturities. Investment securities are reported at their estimated fair value based on quoted market prices. Realized gains and losses from the Company's investments have been insignificant.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

*Net Loss Per Share:* Basic and diluted net loss per share have been computed using the weighted average number of shares of common stock outstanding during the period, less shares subject to repurchase. The following table presents the computation of basic and diluted net loss per share (in thousands, except per share amounts):

	Years ended December 31,		
	2003	2002	2001
Net loss .....	\$(13,359)	\$(33,301)	\$(19,693)
Basic and diluted:			
Weighted average shares of common stock			
outstanding .....	36,433	34,686	33,909
Less weighted average shares subject to repurchase ..	—	(45)	(414)
Weighted average shares used to compute basic and			
diluted net loss per share .....	36,433	34,641	33,495
Basic and diluted net loss per share .....	\$ (0.37)	\$ (0.96)	\$ (0.59)

The Company has excluded all outstanding warrants, stock options, and shares subject to repurchase by the Company from the calculation of basic and diluted net loss per share because these securities are antidilutive for all periods presented. Options and warrants to purchase 12,657,818, 13,292,190 and 5,903,370 shares of common stock have been excluded for the years ended December 31, 2003, 2002 and 2001.

*Stock-based Compensation:* The Company has employee stock plans that are described more fully in Note 7. The Company has elected to account for its employee stock plans in accordance with the intrinsic value method under Accounting Principles Board Opinion No. 25, “Accounting For Stock Issued to Employees” (APB Opinion No. 25). The following table illustrates the effect on net loss and loss per share had compensation expense for the Company’s stock-based award plans been determined on the fair value at the grant dates for awards under the plan consistent with the method of Statement of Financial Accounting Standards No. 123, “Accounting For Stock Issued to Employees” (FAS 123). For purposes of FAS 123 pro forma disclosures, the estimated fair value of the options is amortized to expense over the options’ vesting period (in thousands):

	Years ended December 31,		
	2003	2002	2001
Net loss as reported .....	\$(13,359)	\$(33,301)	\$(19,693)
Add: Stock-based employee compensation expense			
(recovery) included in reported net loss, net of related			
tax effects .....	1,426	3,807	15,416
Less: Total stock-based employee compensation expense			
under fair value based method for all awards, net of			
related tax effects .....	(25,269)	(56,652)	(66,059)
Pro forma net loss .....	\$(37,202)	\$(86,146)	\$(70,336)
Basic and diluted net loss per share—as reported .....	\$ (0.37)	\$ (0.96)	\$ (0.59)
Basic and diluted net loss per share—pro forma .....	\$ (1.02)	\$ (2.49)	\$ (2.10)

See Note 7 for a discussion of the assumptions used in the option pricing model and estimated fair value of employee stock options.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

The Company accounts for stock issued to non-employees in accordance with the provisions of FAS 123 and Emerging Issues Task Force Issue No. 96-18, "Accounting for Equity Instruments That are Issued to Other Than Employees for Acquiring, or in Conjunction with Selling, Goods or Services." Direct grants of shares of common stock are made to certain advisors and consultants to the Company for past services with no vesting or future performance obligations. The fair value of such grants is immediately charged to expense in accordance with EITF 96-18.

*Reclassifications:* Certain amounts in the 2002 consolidated balance sheet and the 2002 and 2001 consolidated statement of cash flows have been reclassified to conform to current year presentation.

*Recent Accounting Pronouncements:* In January 2003, the FASB issued EITF No. 00-21, "Revenue Arrangements with Multiple Deliverables" (EITF 00-21). EITF 00-21 provides guidance on how to determine whether an arrangement involves multiple deliverables and contains more than one unit of accounting. EITF 00-21 was effective for arrangements entered into after June 15, 2003. The adoption of EITF 00-21 did not have a material effect on the Company's consolidated results of operations or financial position.

In January 2003, the FASB issued Interpretation No. 46, "Consolidation of Variable Interest Entities, an Interpretation of Accounting Research Bulletin No. 51, Consolidated Financial Statements" (FIN 46). FIN 46 establishes accounting guidance for consolidation of variable interest entities (VIE's) that function to support the activities of the primary beneficiary. FIN 46 applies to any business enterprise, both public and private, that has a variable interest in a VIE. The Company does not have any variable interests in a VIE and therefore the adoption did not have any impact on the Company's consolidated financial position or results of operations.

**Note 2. Balance Sheet Information**

Inventories (in thousands):

	<b>December 31,</b>	
	<b>2003</b>	<b>2002</b>
Work-in-process .....	\$ 5,475	\$2,577
Finished goods .....	6,433	1,553
	<b>\$11,908</b>	<b>\$4,130</b>

Property and equipment (in thousands):

	<b>December 31,</b>	
	<b>2003</b>	<b>2002</b>
Equipment and software .....	\$ 25,499	\$ 22,746
Furniture and fixtures .....	1,065	998
Leasehold improvements .....	1,491	1,220
Construction in progress .....	128	33
	28,183	24,997
Accumulated depreciation and amortization .....	(20,798)	(14,608)
Property and equipment, net .....	<b>\$ 7,385</b>	<b>\$ 10,389</b>

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

Accrued liabilities (in thousands):

	December 31,	
	2003	2002
Accrued royalties . . . . .	\$13,211	\$11,815
Accrued other liabilities . . . . .	2,957	2,004
	\$16,168	\$13,819

Warranty reserve (in thousands):

	Balance at Beginning of Period	Product Warranty Accruals	Warranty Costs Incurred	Balances at End of Period
Year ended December 31, 2003 . . . . .	\$608	\$343	\$(491)	\$460
Year ended December 31, 2002 . . . . .	\$766	\$561	\$(719)	\$608
Year ended December 31, 2001 . . . . .	\$312	\$963	\$(509)	\$766

**Note 3. Acquisition**

*Acquisition:* On January 5, 2001, the Company completed its acquisition of vEngines, Inc. (“vEngines”). vEngines developed high-density voice processing semiconductor products, which bridge circuit switched voice and packet-based data networks. This technology compresses voice traffic, converting it into digital packets, which can then travel on data networks. vEngines’ targeted customer base included communications equipment manufacturers that provide carrier and access voice gateways and remote access servers.

Under the terms of the purchase agreement, 813,915 shares of the Company’s common stock, with an aggregate value of approximately \$17.1 million, were exchanged for all of the issued and outstanding capital stock of vEngines. In addition, all of the outstanding options to purchase shares of vEngines’ capital stock were exchanged for options to purchase 58,628 shares of our common stock with an aggregate fair value of approximately \$1.2 million. The Company valued the common stock and outstanding options exchanged in the transaction as follows:

<u>Security Exchanged</u>	<u>Valuation Methodology</u>
Common stock—not subject to repurchase	Fair value of Company’s stock
Common stock—subject to repurchase	Black-Scholes option pricing model
Options	Black-Scholes option pricing model

Including direct acquisition costs of approximately \$523,000, the aggregate purchase price of vEngines was approximately \$18.8 million. The acquisition was accounted for using the purchase method of accounting and accordingly, the accompanying financial statements include the results of operations of vEngines subsequent to the acquisition date.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

The Company allocated the purchase price of vEngines as follows (in thousands):

In-process research and development .....	\$ 7,422
Acquisition related deferred compensation .....	4,517
Fair value of assets acquired and liabilities assumed .....	730
Assembled workforce .....	354
Goodwill .....	5,816
Total .....	<u>\$18,839</u>

The portion of the purchase price allocated to purchased in-process research and development was \$7.4 million and was valued based on net cash flows over four years, discounted at a cost of capital of 25% to reflect the uncertainty of the products' future use. The entire amount of \$7.4 million was expensed on acquisition because the technological feasibility of the product under development had not been established and no future alternative uses existed. The specific product under development using vEngines technology has been discontinued, as the performance of a similar product under development internally was determined to be superior.

The Company recorded acquisition-related deferred compensation of \$4.5 million as unearned stock-based compensation. This amount represents the portion of the purchase consideration related to shares issued contingent on continued employment of certain employee stockholders and the intrinsic value of stock options assumed that become exercisable as future services are provided by employees. The compensation is being recognized over the related employment period, using the graded vesting method, which results in acceleration of amortization expense for the overall award. A total of \$536,000, \$1.1 million and \$2.7 million of expense was recognized for the years ended December 31, 2003, 2002 and 2001, respectively, and has been included in amortization of deferred compensation.

Goodwill and the assembled workforce were amortized through December 31, 2001, on a straight-line basis over their expected useful lives of four and two years, respectively. Beginning January 1, 2002, upon adoption of FAS 142, the Company no longer amortizes goodwill; rather, goodwill is evaluated for impairment at least on an annual basis. See Note 4 for further details. Pro-forma results of operations have not been presented because the pro-forma impact of the acquisition was not material to the Company's results of operations and financial position for the year ended December 31, 2001.

**Note 4. Goodwill and Other Intangible Assets**

With the adoption of SFAS 142, the Company ceased amortizing goodwill effective January 1, 2002. In addition, the Company reclassified assembled workforce, which is no longer defined as an acquired intangible under SFAS 141, to goodwill as required by SFAS 142. The Company completed its transitional impairment test during the quarter ended June 30, 2002 and no impairment was recognized. The Company completed its annual impairment test in the fourth quarter of 2002. The goodwill impairment test was based on a two-step approach. The fair value of the Company was compared to its carrying value. Since the carrying value of the Company exceeded its fair value, the implied value of goodwill was calculated by deducting the fair value of all tangible and intangible assets from the fair value of the Company. As the implied fair value of goodwill was zero, the Company recognized an impairment charge of \$5.8 million to fully write down the goodwill. Fair value of the Company was determined using a discounted future cash flows analysis and a market approach. The cash flow period used in the analysis was nine years, with a discount rate of 18% and estimated terminal values based on a terminal growth rate of 5%. The discount rate was based on the Company's weighted average cost of capital. The assumptions supporting the estimated future cash flows, including the discount rate and estimated terminal values, reflect management's best estimates.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

Changes in the carrying amount of goodwill for the year ended December 31, 2002 are as follows (in thousands):

Balance as of December 31, 2001 .....	\$ 5,190
Workforce reclassified as goodwill .....	645
Goodwill impairment .....	(5,835)
Balance as of December 31, 2002 .....	<u>\$ —</u>

The following table presents a reconciliation of previously reported net loss and net loss per share to the amounts adjusted to exclude goodwill and acquired workforce amortization for the year ended December 31, 2001 (in thousands, except for per share data). No such expenses were incurred in 2003 or 2002 related to the amortization of goodwill or acquired workforce.

Net loss:	
As reported .....	\$(19,693)
Goodwill amortization .....	2,006
Workforce amortization .....	<u>1,112</u>
As adjusted .....	<u>\$(16,575)</u>
Basic and diluted net loss per share:	
As reported .....	\$ (0.59)
Goodwill amortization .....	0.06
Workforce amortization .....	<u>0.03</u>
As adjusted .....	<u>\$ (0.50)</u>

Amortization expense for other intangible assets was \$83,000 for the year ended December 31, 2003 and \$167,000 in each of the years ended December 31, 2002 and 2001. Other purchased intangibles were amortized over three years and were fully amortized as of December 31, 2003.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

**Note 5. Cash Equivalents and Short-term Investments**

The estimated fair market values of cash equivalents and short-term investments are based on quoted market prices. Cash equivalents and short-term investments as of December 31, 2003 and 2002 were as follows (in thousands):

	<u>Amortized Cost</u>	<u>Gross Unrealized Gain/ (Loss)</u>	<u>Estimated Fair Market Value</u>
<b>December 31, 2003</b>			
Cash equivalents:			
Money market funds .....	\$19,176	\$—	\$19,176
	<u>19,176</u>	<u>—</u>	<u>19,176</u>
Short-term investments:			
Corporate debt securities .....	1,032	2	1,034
Obligations of the U.S. government and affiliated agencies .....	30,722	34	30,756
Auction rate securities .....	32,635	—	32,635
Certificate of deposit .....	467	—	467
	<u>64,856</u>	<u>36</u>	<u>64,892</u>
Total cash equivalents and short-term investments .....	<u>\$84,032</u>	<u>\$36</u>	<u>\$84,068</u>
<b>December 31, 2002</b>			
Cash equivalents:			
Money market funds .....	\$87,557	\$—	\$87,557
Obligations of the U.S. government and affiliated agencies .....	495	—	495
	<u>88,052</u>	<u>—</u>	<u>88,052</u>
Short-term investments:			
Corporate debt securities .....	1,001	(1)	1,000
Obligations of the U.S. government and affiliated agencies .....	7,013	9	7,022
Certificate of deposit .....	467	—	467
	<u>8,481</u>	<u>8</u>	<u>8,489</u>
Total cash equivalents and short-term investments .....	<u>\$96,533</u>	<u>\$ 8</u>	<u>\$96,541</u>

The fair value of short-term investments at December 31, 2003, by contractual maturity, was as follows (in thousands):

Due in one year or less .....	\$19,622
Due after one year .....	<u>45,270</u>
Total .....	<u>\$64,892</u>

**Note 6. Commitments and Contingencies**

The Company leases its facilities under operating leases expiring through 2011. Rental expense was approximately \$2.4 million, \$2.5 million and \$2.2 million for the years ended December 31, 2003, 2002, and 2001, respectively. Additionally, the Company leases certain software under operating leases expiring through December 2005.



**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

During 2002, the Company exchanged certain software licenses which were set to expire in 2003 for new software licenses. In connection with this arrangement, the Company entered into a noncancelable capital lease agreement totaling approximately \$2.1 million. The transaction was accounted for under Accounting Principles Board No. 29, "Nonmonetary Transactions", and no gain or loss was recorded on the transaction. The software and related accumulated amortization that was included in property and equipment was approximately \$3.4 million and \$1.2 million at December 31, 2003. Amortization expense related to assets under capital lease is included with depreciation expense. In addition, the related software licenses secure the capital lease.

Future minimum lease payments under the Company's capital and operating leases at December 31, 2003 are as follows (in thousands):

	<u>Operating Leases</u>	<u>Capital Leases</u>
2004 .....	\$ 3,623	\$529
2005 .....	2,734	—
2006 .....	987	—
2007 .....	958	—
2008 .....	1,002	—
Thereafter .....	<u>2,196</u>	<u>—</u>
Total payments .....	11,500	529
Less: Interest portion .....	<u>—</u>	<u>(2)</u>
Total minimum payments .....	<u>\$11,500</u>	<u>\$527</u>

The Company does not own or operate a fabrication facility and foundries located in Asia currently supply substantially all of its wafer requirements. The Company's purchase obligations to these foundries are based on wafer supply agreements or noncancelable purchase orders. As of December 31, 2003, the Company's non-cancelable purchase obligations for wafers, all expected to be delivered within the next six months, is \$3.1 million. Included in this amount is approximately \$733,000 of excess wafers that have been expensed in the 2003 operating results.

The semiconductor and telecommunications industries are characterized by substantial litigation regarding patent and other intellectual property rights. From time to time, the Company receives various inquiries or claims in connection with these rights and may become party to associated claims. In certain cases, management has accrued estimates of the amounts it expects to pay upon resolution of such matters and such amounts are included in accrued liabilities. Should the company not be able to secure the terms it expects, these estimates may change and will be recognized in the period in which they are identified. Although the ultimate outcome of such inquiries is not presently determinable, management believes that the resolution of these matters will not have a material adverse effect on the Company's financial position or results of operations.

**Note 7. Stockholders' Equity**

*Preferred Stock:* The Board of Directors has the authority, without any further vote or action by the stockholders, to provide for the issuance of 9,500,000 shares of preferred stock from time to time in one or more series with such designation, rights, preferences and limitations as the Board of Directors may determine, including the consideration received therefore, the number of shares comprising each series, dividend rates, redemption provisions, liquidation preferences, redemption fund provisions, conversion rights, and voting rights, all without the approval of the holders of common stock.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

*Stockholder Rights Plan:* In December 2002, the Company's Board of Directors approved the adoption of a stockholder rights plan and reserved 500,000 shares of preferred stock for issuance under the plan. The plan is designed to assure that Centillium stockholders receive fair value in the event of a future unsolicited business combination or similar transaction involving Centillium in a manner or on terms not approved by the Centillium Board of Directors.

Under the plan, Centillium issued a dividend of one right for each outstanding share of common stock of the Company held by stockholders of record as of the close of business on January 9, 2003. Each right will initially entitle stockholders to purchase a fractional share of the Company's preferred stock for \$25.00. However, the rights will become exercisable only after the occurrence of certain specified events, including the acquisition of 15% or more of Centillium's outstanding common stock by an unsolicited third party acquiror. Upon the occurrence of any such event, under the terms specified in the plan, each right entitles the holder, other than the unsolicited third party acquiror, to purchase a certain number of shares of common stock of the Company, at a fifty percent discount to the then-current market price. The rights expire on January 9, 2013, under the terms of the plan. Centillium's Board of Directors may redeem outstanding rights at a price of \$0.001 per right, with certain exceptions. The terms of the rights and the rights plan may be amended by Centillium's Board of Directors at any time without the approval of the rights holders as set forth in the rights plan.

*Warrant:* In 1998, the Company issued a warrant to a financial institution in connection with an equipment financing arrangement. The warrant is exercisable for 9,450 shares of common stock at an exercise price of \$4.00 per share. The warrant is immediately exercisable and expires in May 2005. The fair value of the warrant is not material for reporting purposes.

*Common Stock Reserved:* Common stock reserved is as follows:

	<b>December 31,</b>	
	<b>2003</b>	<b>2002</b>
Common stock options .....	16,708,966	16,723,618
Employee stock purchase plan .....	394,767	499,181
Common stock warrants .....	9,450	9,450
	<u>17,113,183</u>	<u>17,232,249</u>

*Deferred Stock-based Compensation:* During 2003, 2002 and 2001, the Company recorded adjustments to deferred compensation of \$615,000, \$2.6 million and \$2.0 million related to the cancellation of certain option grants. Deferred compensation represents the difference between the grant price and the fair value for financial statement reporting purposes of the Company's common stock options granted during these periods. Deferred compensation expense is being amortized using the graded vesting method, in accordance with FAS 123 and FAS Interpretation No. 28, over the vesting period of each respective option, generally four years. Under the graded vesting method, each option grant is separated into portions based on their vesting terms, which results in acceleration of amortization expense for the overall award. The accelerated amortization pattern results in expensing approximately 59% of the total award in year one, 25% in year two, 12% in year three and 4% in year four. As required by APB 25, we record an adjustment to amortization of deferred compensation when employees forfeit options for which compensation expense is recognized using the graded vesting method, but which are unvested on the date their employment terminates.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

Stock based compensation expense, net of adjustments, is included in the associated expense categories as follows (in thousands):

	Years ended December 31,		
	2003	2002	2001
Cost of revenues .....	\$ 39	\$ 256	\$ 797
Research and development .....	907	2,469	7,992
Sales and marketing .....	44	(434)	2,361
General and administration .....	436	1,506	4,196
	\$1,426	\$3,797	\$15,346

*Proceeds from Stockholder:* During the quarter ended June 30, 2003, a stockholder sold shares of Centillium stock in a transaction deemed to be a short-swing sale. Under Section 16(b) of the Securities Exchange Act of 1934, the shareholder was required to disgorge to the Company the profit realized from the stock sale in the amount of approximately \$857,000. The Company accounted for the transaction as a contribution from a stockholder and reflected the proceeds as an increase to additional paid in capital in its financial statements. Proceeds from this sale did not effect the Company’s consolidated statement of operations.

*Stock Options:* In March 1997, the Board of Directors approved a stock option plan that authorized the grant of options to purchase shares of the Company’s common stock. The plan is administered by the Board of Directors and provides for incentive stock options or nonqualified stock options to be issued to employees, directors, and consultants of the Company. Prices for incentive stock options may not be less than the fair value of the common stock at the date of grant. Prices for nonqualified stock options may not be less than 85% of the fair value of the common stock at the date of grant. Options granted prior to May 23, 2000 are immediately exercisable and generally vest over a period of four years from the date of grant. Options granted on or after May 23, 2000 are exercisable when vested and generally vest over a four-year period. Any unvested stock issued is subject to repurchase by the Company at the original issuance price upon termination of the option holder’s employment. Unexercised options expire ten years after the date of grant. The plan also provides for automatic annual increases on the first day of each of the Company’s fiscal years equal to 6% of the Company’s outstanding common stock on the date of the annual increase.

In February 2001, the Company adopted a nonstatutory stock option plan that authorized the grant of nonstatutory stock options (“options”) to purchase shares of the Company’s common stock. Such shares may be authorized, but unissued, or reacquired common stock. The plan is administered by the Board of Directors or any of its Committees and provides for options to be issued to employees and consultants of the Company only and not to officers and directors, except in connection with an officer’s initial service to the Company. Options generally vest over a period of four years from the date of grant and prices for such options shall be determined by the plan administrator, with the prices generally being not less than the fair value of the common stock at the date of grant. Upon termination of the option holder’s employment, any unvested stock issued shall revert back to the plan.

In December 2001, the Company offered a voluntary stock option exchange program to its employees and officers. Under the program, participants were able to tender for cancellation stock options that had an exercise price equal to or greater than \$10 per share for replacement options to be granted on a date which was at least six months plus one day from the date of cancellation of the tendered options. On December 3, 2001, 5.2 million stock options were tendered for cancellation. On June 4, 2002, the Company issued options for 5.1 million shares of common stock at an exercise price of \$6.62 per share, which was equal to 100 percent of the market price of Centillium’s common stock on the grant date. The terms and conditions of the replacement options, including the vesting schedules, were substantially the same as the terms and conditions of the options cancelled.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

The following is a summary of additional information with respect to the stock option plan:

	<b>Options Outstanding</b>		
	<b>Available for Grant</b>	<b>Number of Shares</b>	<b>Weighted Average Exercise Price</b>
Balance at December 31, 2000 .....	574,716	7,799,926	\$ 19.22
Options authorized .....	7,040,434	—	—
Options granted .....	(5,059,462)	5,059,462	\$ 18.81
Options exercised .....	—	(612,695)	\$ 4.04
Options available due to repurchase of unvested shares .....	55,283	—	—
Options canceled .....	<u>6,352,773</u>	<u>(6,352,773)</u>	<u>\$ 27.03</u>
Balance at December 31, 2001 .....	8,963,744	5,893,920	\$ 12.02
Options authorized .....	2,074,564	—	—
Options granted .....	(9,617,872)	9,617,872	\$ 5.47
Options exercised .....	—	(293,144)	\$ 2.38
Options available due to repurchase of unvested shares .....	84,534	—	—
Options canceled .....	<u>1,935,908</u>	<u>(1,935,908)</u>	<u>\$ 10.53</u>
Balance at December 31, 2002 .....	3,440,878	13,282,740	\$ 7.71
Options authorized .....	2,114,710	—	\$ —
Options granted .....	(3,044,911)	3,044,911	\$ 6.30
Options exercised .....	—	(2,137,258)	\$ 5.50
Options available due to repurchase of unvested shares .....	7,896	—	—
Options canceled .....	<u>1,542,025</u>	<u>(1,542,025)</u>	<u>\$ 8.86</u>
Balance at December 31, 2003 .....	<u>4,060,598</u>	<u>12,648,368</u>	<u>\$ 7.60</u>

In addition, the following table summarizes information about stock options that were outstanding and exercisable at December 31, 2003:

<b>Range of Exercise Prices</b>	<b>Options Outstanding</b>			<b>Options Exercisable</b>		
	<b>Number of Shares</b>	<b>Weighted Average Exercise Price</b>	<b>Weighted Average Remaining Contractual Life (years)</b>	<b>Number of Shares</b>	<b>Weighted Average Exercise Price</b>	<b>Weighted Average Remaining Contractual Life (years)</b>
\$ 0.40–\$ 2.56 .....	1,991,297	\$ 1.58	8.6	530,683	\$ 1.50	0.82
\$ 2.59–\$ 5.15 .....	1,548,481	\$ 4.47	7.7	806,666	\$ 4.81	1.03
\$ 5.34–\$ 5.87 .....	1,849,301	\$ 5.86	9.8	12,765	\$ 5.61	0.02
\$ 6.06–\$ 6.62 .....	3,731,249	\$ 6.59	8.4	1,932,731	\$ 6.59	3.11
\$ 6.68–\$ 9.80 .....	1,324,992	\$ 8.38	8.0	647,759	\$ 8.08	0.95
\$ 9.90–\$ 19.00 .....	1,764,585	\$ 14.19	7.4	983,340	\$ 15.02	1.24
\$ 20.00–\$ 37.15 .....	376,463	\$ 28.13	7.2	246,814	\$ 27.40	0.34
\$ 50.91–\$ 75.13 .....	62,000	\$ 63.41	6.5	52,915	\$ 63.11	0.07
\$ 0.40–\$ 75.13 .....	<u>12,648,368</u>	<u>\$ 7.60</u>	<u>8.3</u>	<u>5,213,673</u>	<u>\$ 8.76</u>	<u>7.58</u>

At December 31, 2002 and 2001, options for 4,605,713 and 2,567,049 shares, respectively, were exercisable at a weighted average price of \$8.99 and \$8.21 per share, respectively.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

*Employee Stock Purchase Plan:* To provide employees with an opportunity to purchase common stock of the Company through payroll deductions, the Company established the 2000 Employee Stock Purchase Plan and initially reserved 500,000 shares of common stock for issuance to participants. In addition, the plan provides for automatic annual increases on the first day of each of the Company's fiscal years equal to the lesser of 400,000 shares or 1% of the Company's outstanding common stock on the date of the annual increase, or a lesser number of shares determined by the Board of Directors. Under the plan, the Company's employees, subject to certain restrictions, may purchase shares of common stock at the lesser of 85 percent of the fair market value at either the beginning or end of each six-month offering period. Under the plan, the Company sold 456,865, 460,064 and 164,621 shares of common stock during fiscal years 2003, 2002 and 2001, respectively.

*SFAS 123 Assumptions and Fair Value:* The Company has elected to follow APB Opinion No. 25 and related interpretations in accounting for its employee stock options because, as discussed below, the alternative fair value accounting provided for under FAS 123 requires use of option valuation models that were not developed for use in valuing employee stock options. Under APB Opinion No. 25, when the exercise price of the Company's employee stock options equals the market price of the underlying stock on the date of grant, no compensation expense is recognized. The fair value of options granted in 2003, 2002 and 2001 reported in Note 1 was estimated at the date of grant.

The option valuation models used to estimate the fair value of options under FAS 123 were developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected life of the option. Because the Company's employee stock options have characteristics significantly different from those of traded options and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options. Pro forma information regarding net loss is required by FAS 123, which requires that the information be determined as if the Company has accounted for its employee stock-based awards under the fair value method of FAS 123. The fair value of the options granted in all periods were estimated using the Black-Scholes method, with the following weighted average assumptions:

	Stock Option Plan			Employee Stock Purchase Plan		
	2003	2002	2001	2003	2002	2001
Expected life from vest date . . . . .	3.3 years	2.7 years	2.9 years	6.0 months	6.0 months	6.0 months
Volatility . . . . .	118%	121%	147%	94%	121%	147%
Risk-free interest rate . . . . .	2.97%	2.90%	3.90%	1.08%	1.65%	1.93%
Dividend rate . . . . .	—	—	—	—	—	—

The options' weighted average grant date fair value, which is the value assigned to the options under FAS 123, was approximately \$5.02, \$4.33, and \$7.86 for the years ended December 31, 2003, 2002 and 2001, respectively. The weighted-average fair value of purchase rights granted under the Employee Stock Purchase Plan in 2003, 2002 and 2001 were \$2.14, \$3.74, and \$7.93 per share, respectively.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

**Note 8. Income Taxes**

The provision (benefit) for income taxes for the years ended December 31, 2003, 2002 and 2001 consists of the following (in thousands):

	Years ended December 31,		
	2003	2002	2001
Current:			
Federal .....	\$ —	\$(182)	\$278
State .....	5	8	65
Foreign .....	128	79	57
	\$133	\$ (95)	\$400

The difference between the provision (benefit) for income taxes and the amount computed by applying the federal statutory income tax rate of 34% to loss before taxes is explained as follows (in thousands):

	Years ended December 31,		
	2003	2002	2001
Tax provision (benefit) at federal statutory rate .....	\$(4,497)	\$(11,355)	\$(6,560)
Loss for which no tax benefit is currently recognizable .....	3,957	8,690	—
Deferred compensation .....	485	576	5,252
Purchased in-process research and development and amortization of goodwill .....	—	1,983	3,583
Utilization of net operating losses .....	—	—	(2,237)
Other .....	188	11	362
Total tax provision (benefit) .....	\$ 133	\$ (95)	\$ 400

As of December 31, 2003, the Company has \$75 million and \$33 million of net operating loss carryforwards for federal and state purposes, respectively. The Company also has federal and state research and development tax credit carryforwards of approximately \$3.8 million and \$3.7 million, respectively. The federal net operating losses and federal tax credit carryforwards will expire at various dates beginning in 2018, if not utilized. The California net operating losses are not available to offset income until 2008 due to the recent state law change. The California research tax credits can be carried forward indefinitely.

Utilization of the net operating loss and credits carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by the Internal Revenue Code of 1986, as amended, and similar state provisions. The annual limitation may result in the expiration of net operating losses and tax credit carryforwards before full utilization.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

Deferred taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company’s deferred taxes consist of the following (in thousands):

	Years ended December 31,	
	2003	2002
Deferred tax assets:		
Net operating loss carryforwards . . . . .	\$ 27,479	\$ 20,440
Research and development credit carryforwards . . . . .	6,277	4,733
Reserves and accruals not currently deductible . . . . .	9,509	9,426
Capitalized research and development expenses . . . . .	801	222
Total deferred tax assets . . . . .	44,066	34,821
Valuation allowance . . . . .	(44,066)	(34,821)
Net deferred tax assets . . . . .	\$ —	\$ —

Financial Accounting Standards Board Statement No. 109, “Accounting for Income Taxes” provides for the recognition of deferred tax assets if realization of such assets is more likely than not. Based upon the weight of available evidence, which includes the Company’s historical operating performance and the reported cumulative net losses to date, the Company has provided a full valuation allowance against its deferred tax assets.

The valuation allowance increased by approximately \$9.2 million for the year ended December 31, 2003, increased by approximately \$14.6 million for the year ended December 31, 2002 and decreased by approximately \$733,000 for the year ended December 31, 2001. The valuation allowance at December 31, 2003 and 2002 includes approximately \$8.7 million and \$4.6 million, respectively, related to stock option deductions, the benefit of which will be recorded in paid-in capital when realized.

**Note 9. Business Segment Information**

The Company’s operations involve the design, development, marketing and technical support of semiconductor products that enable broadband communications. Through December 31, 2003, the Company’s revenues have been primarily derived from one business segment, the sale of broadband communication products for the DSL and VoP markets. The Company sells primarily to original equipment manufacturers and companies in the communications industries.

The Chief Executive Officer has been identified as the Chief Operating Decision Maker (CODM) because he has final authority over resource allocation decisions and performance assessment. The CODM does not receive discrete financial information about any individual components.

**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

The Company's foreign operations consist primarily of research and development facilities in France and India. Sales and marketing activities are conducted through other subsidiaries throughout the world. Geographic sales information for the last three fiscal years is based on the location of the end customer. The following is a summary of net revenues by major geographic area (in thousands):

	Years ended December 31,		
	2003	2002	2001
Japan .....	\$ 99,137	\$ 90,260	\$138,948
North America .....	14,470	11,431	16,710
Asia—Excluding Japan .....	9,806	2,660	3,108
All other .....	1,563	621	741
Total .....	\$124,976	\$104,972	\$159,507

The following customers account for 10% or more of net total revenues:

	December 31,		
	2003	2002	2001
NEC .....	49%	45%	38%
Sumitomo Electric Industries .....	31%	41%	48%

**Note 10. 401(k) Profit Sharing Plan And Trust**

The Company has adopted a 401(k) Profit Sharing Plan and Trust that allows eligible employees to make contributions subject to certain limitations. The Company may make discretionary contributions based on profitability as determined by the Board of Directors. There was no amount contributed by the Company to the plan for the years ended December 31, 2003, 2002 and 2001.

**Note 11. Related Party Transactions**

During 2003, the Company purchased \$486,000 of foundry services and products from Semiconductor Manufacturing International Corporation (SMIC). As of December 31, 2003, the Company had recorded a liability of \$213,000 for accounts payable due to SMIC. One of the Company's directors is also a director of SMIC.

In the second quarter of 2000, the Company invested \$990,000 in equity securities of Broadxent, Inc., a wholly owned subsidiary of Creative Technology Ltd. In the second quarter of 2001, in connection with an ongoing evaluation of this long-term equity investment, the Company wrote down the basis of this investment to zero as a result of impairment in the value of this asset. In the first quarter of 2002, the Company sold this long-term investment for \$440,000 and reported this amount as a non operating gain.

The Company sold \$2.5 million and \$2.1 million of products to Broadxent, Inc. in the years ended December 31, 2002 and 2001, respectively. As of December 31, 2002 and December 31, 2001, the Company had \$4,600 and \$486,000, respectively, in accounts receivable from Broadxent, Inc. One of the Company's directors is also a director of Creative Technology Ltd.



**CENTILLIUM COMMUNICATIONS, INC.**

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS—(Continued)**

**Note 12. Supplementary Data: Quarterly Results of Operations (unaudited)**

Summarized quarterly financial information is as follows (in thousands, except per share data):

	Year 2003 Three Months Ended			
	Mar 31	Jun 30	Sep 30	Dec 31
Net revenues . . . . .	\$ 27,829	\$33,928	\$37,498	\$ 25,721
Cost of revenues . . . . .	\$ 14,276	\$17,870	\$20,706	\$ 18,301
Gross profit . . . . .	\$ 13,553	\$16,058	\$16,792	\$ 7,420
Operating income (loss) . . . . .	\$ (3,243)	\$ (733)	\$ 126	\$(10,448)
Net income (loss) . . . . .	\$ (2,960)	\$ (511)	\$ 382	\$(10,270)
Basic and diluted net income (loss) per share . . . . .	\$ (0.08)	\$ (0.01)	\$ 0.01	\$ (0.27)
Shares used to compute basic net income (loss) per share . . . . .	35,235	35,819	36,972	37,704
Shares used to compute diluted net income (loss) per share . . . . .	35,235	35,819	41,099	37,704

	Year 2002 Three Months Ended			
	Mar 31	Jun 30	Sep 30	Dec 31
Net revenues . . . . .	\$ 22,606	\$34,413	\$23,264	\$ 24,689
Cost of revenues . . . . .	\$ 12,066	\$21,283	\$12,549	\$ 13,602
Gross profit . . . . .	\$ 10,540	\$13,130	\$10,715	\$ 11,087
Operating loss . . . . .	\$(11,052)	\$(7,879)	\$(5,815)	\$(10,884)
Net loss . . . . .	\$(10,126)	\$(7,404)	\$(5,378)	\$(10,393)
Basic and diluted net loss per share . . . . .	\$ (0.30)	\$ (0.21)	\$ (0.15)	\$ (0.30)
Shares used to compute basic and diluted net loss per share . . . . .	34,294	34,538	34,765	34,967

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

None.

**ITEM 9A. CONTROLS AND PROCEDURES**

*(a) Evaluation of disclosure controls and procedures.*

Based on an evaluation under the supervision and with the participation of the Company's management, the Company's principal executive officer and principal financial officer have concluded that the Company's disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (Exchange Act)) were effective as of December 31, 2003 to ensure that information required to be disclosed by the Company in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in Securities and Exchange Commission's rules and forms.

*(b) Changes in internal controls.*

There were no changes in the Company's internal controls over financial reporting identified in management's evaluation during the fourth quarter of fiscal 2003 that have materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting.

## **PART III**

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

The information required by this item is incorporated by reference from the information under the captions “Information Concerning Solicitation and Voting,” “Election for Directors” and “Section 16(a) Beneficial Ownership Reporting Compliance” contained in our definitive proxy statement to be filed no later than April 30, 2004 in connection with solicitation of proxies for our annual meeting of stockholders to be held June 11, 2004 (the “Proxy Statement”).

The Company’s board of directors has determined that the Company has at least one audit committee financial expert serving on its audit committee. Irwin Federman, who has been determined to be such audit committee financial expert, is independent, as that term is used in Item 7(d) (3) (iv) of schedule 14A under the Exchange Act.

### **ITEM 11. EXECUTIVE COMPENSATION**

The information required by this item is incorporated by reference from the information under the captions “Executive Compensation” and “Compensation of Directors” contained in the Proxy Statement.

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

The information required by this item is incorporated by reference from the information under the caption “Security Ownership of Certain Beneficial Owners and Management” and “Securities Authorized for Issuance Under Equity Compensation Plans” contained in the Proxy Statement.

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

The information required by this item is incorporated by reference from the information under the captions “Certain Transactions” contained in the Proxy Statement.

### **ITEM 14. PRINCIPLE ACCOUNTANT FEES AND SERVICES**

The information required by this item is incorporated by reference from the information under the caption “Audit and Related Fees” contained in the Proxy Statement.

## PART IV

### ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES, AND REPORTS ON FORM 8-K

(a) (1) *Financial Statements*

The Financial Statements required by this item are listed on the Index to Consolidated Financial Statements in Part II, Item 8 of this report.

(a) (2) *Financial Statements Schedules*

The following financial statement schedule of Centillium Communications, Inc. for the years ended December 31, 2003, 2002, and 2001 should be read in conjunction with the Consolidated Financial Statements of Centillium Communications, Inc.

#### Schedule II—Consolidated Valuation and Qualifying Accounts

Allowance for Doubtful Accounts:

	Balance at Beginning of Period	Charged to Costs and Expense	Deduction Write-Offs	Balances at End of Period
Year ended December 31, 2001 .....	\$ 932	\$ 102	\$ (8)	\$1,026
Year ended December 31, 2002 .....	\$1,026	\$(709)	\$(157)	\$ 160
Year ended December 31, 2003 .....	\$ 160	\$ —	\$ (51)	\$ 109

All other schedules have been omitted because they are not applicable or are not required or the information required to be set forth therein is included in the Consolidated Financial Statements or Notes thereto.

(a) (3) *Exhibits*

Exhibit Number	Description
3.1*	Certificate of Incorporation of the Registrant
3.2*****	Certificate of Designations of Rights, Preferences and Privileges of Series A Participating Preferred Stock of the Registrant
4.1*	Specimen certificate of common stock
4.2*	Bylaws of the Registrant
4.3*****	Preferred Stock Rights Agreement, dated as of December 30, 2002, between the Registrant and Mellon Investor Services LLC
10.1*	Form of Indemnification Agreement between the Registrant and each of its directors and officers
10.2**	1997 Stock Plan
10.3**	2000 Employee Stock Purchase Plan
10.5*	Lease, dated August 16, 1999, between the Registrant and Renco Investment Company
10.21*	Foundry Agreement, dated March 7, 2000, between Registrant and United Microelectronics Corporation

<u>Exhibit Number</u>	<u>Description</u>
10.22*	Assembly and Test Services Agreement, dated February 28, 2000, between Registrant and ST Assembly and Test Services, Ltd.
10.23**	2001 Nonstatutory Stock Option Plan
10.24***	Lease, dated August 28, 2000, between the Registrant and Bedford Property Industries, Inc.
10.25***	Change of Control Severance Agreement between the Registrant and Surendra Mandava dated December 14, 2000
10.26***	Change of Control Severance Agreement between the Registrant and Faraj Aalaei dated December 14, 2000
10.27***	Change of Control Severance Agreement between the Registrant and Shahin Hedayat dated December 14, 2000
10.28***	Change of Control Severance Agreement between the Registrant and Kamran Elahian dated December 14, 2000
10.29****	Employment Terms Sheet between the Registrant and Darrel Slack dated December 12, 2001
10.30****	Offer letter between the Registrant and Todd DeBonis dated December 13, 2001
10.31*****	Amendment No. 1 to Change of Control Severance Agreement between the Registrant and Faraj Aalaei dated November 19, 2002
10.32*****	Change of Control Severance Agreement between the Registrant and Darrel Slack dated January 14, 2003
10.33*****	Change of Control Severance Agreement between the Registrant and William Mackenzie dated January 14, 2003
10.34*****	Change of Control Severance Agreement between the Registrant and Todd DeBonis dated January 15, 2003
10.35*****	Offer letter between the Registrant and Tony Shakib dated March 24, 2003
10.36*****	Change of Control Severance Agreement between the Registrant and Tony Shakib dated March 31, 2003
10.37	Lease, dated December 23, 2003, between the Registrant and Bedford Property Investors, Inc.
14.1	Ethics Policy
21.1***	Subsidiaries of the Registrant
23.1	Consent of Ernst & Young LLP, Independent Auditors
31.1	Certification of Chief Executive Officer Pursuant to Exchange Act Rules 13a-14 and 15d-14
31.2	Certification of Chief Financial Officer Pursuant to Exchange Act Rules 13a-14 and 15d-14
32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

\* Incorporated by reference to the Exhibits filed with the Registration Statement of Form S-1 (No. 333-30772), declared effective by the Commission on May 23, 2000.

\*\* Incorporated by reference to the Exhibits filed with the Registration Statement of Form S-8 (No. 333-56610), filed with the Commission on March 6, 2001.

\*\*\* Incorporated by reference to the Exhibits filed with the Registrant's Annual Report on Form 10-K for the year ended December 31, 2000 filed with the Commission on March 19, 2001.

- \*\*\*\* Incorporated by reference to the Exhibits filed with the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001 filed with the Commission on March 27, 2002.
- \*\*\*\*\* Incorporated by reference to the Exhibits filed with the Registration Statement on Form 8-K filed with the Commission on December 31, 2002.
- \*\*\*\*\* Incorporated by reference to the Exhibits filed with the Registrant's Annual Report on Form 10-K for the year ended December 31, 2002 filed with the Commission on February 18, 2003.
- \*\*\*\*\* Incorporated by reference to the Exhibits filed with the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003 filed with the Commission on May 7, 2003.

*(b) Reports on Form 8-K*

We filed the following current reports on Form 8-K during the quarter ended December 31, 2003:

Form 8-K filed on October 23, 2003 reporting third quarter earnings.

*(c) Exhibits*

The Company hereby files as part of this Form 10-K the Exhibits listed in Item 15 (a)(3) above.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this Annual Report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Fremont, State of California, on March 5, 2004.

CENTILLIUM COMMUNICATIONS, INC.

By:                     /s/ FARAJ AALAEI                      
**Faraj Aalaei**  
**Chief Executive Officer**

Pursuant to the requirements of the Securities Exchange Act of 1934, this Annual Report on Form 10-K has been signed below by the following persons on behalf of the Registrant in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>          /s/ KAMRAN ELAHIAN          </u> <b>Kamran Elahian</b>	Chairman of the Board	March 5, 2004
<u>          /s/ FARAJ AALAEI          </u> <b>Faraj Aalaei</b>	Chief Executive Officer and Director (Principal Executive Officer)	March 5, 2004
<u>          /s/ DARREL SLACK          </u> <b>Darrel Slack</b>	Vice President and Chief Financial Officer (Principal Financial and Accounting Officer)	March 5, 2004
<u>          /s/ SHAHIN HEDAYAT          </u> <b>Shahin Hedayat</b>	Director	March 5, 2004
<u>          /s/ JERE DRUMMOND          </u> <b>Jere Drummond</b>	Director	March 5, 2004
<u>          /s/ IRWIN FEDERMAN          </u> <b>Irwin Federman</b>	Director	March 5, 2004
<u>          /s/ ROBERT C. HAWK          </u> <b>Robert C. Hawk</b>	Director	March 5, 2004
<u>          /s/ LIP-BU TAN          </u> <b>Lip-Bu Tan</b>	Director	March 5, 2004

## Corporate Information

### Board of Directors:

Kamran Elahian  
*Chairman of the Board and  
Co-founder*

Faraj Aalaei  
*CEO and Co-founder,  
Centillium Communications, Inc.*

Jere Drummond  
*Vice Chairman (retired),  
BellSouth Corp.*

Irwin Federman  
*General Partner,  
U.S. Venture Partners*

Robert Hawk  
*President and CEO (retired),  
U.S. West Multimedia  
Communications, Inc.*

Syrus Madavi  
*Director,  
Centillium Communications, Inc.*

Lip-Bu Tan  
*Chairman and Founder,  
Walden International*

### Senior Management:

Faraj Aalaei  
*CEO and Co-Founder*

Todd DeBonis  
*VP, Worldwide Sales*

William Mackenzie  
*VP, Operations*

Hassan Parsa  
*VP, Business  
Development*

Armando Pereira  
*GM, Optical Business Unit*

Tony Shakib  
*GM, Access & Network  
Business Units*

Darrel Slack  
*VP and CFO*

### Annual Meeting:

The Annual Meeting of Stockholders will be held at the Company's headquarters in Fremont at 2:00 p.m., Friday, June 11, 2004.

### Listing:

Nasdaq: CTLM

### Auditors:

Ernst & Young LLP  
San Jose, CA

### Corporate Counsel:

Wilson Sonsini Goodrich & Rosati  
Palo Alto, CA



### Transfer Agent:

Mellon Investor Services LLC  
85 Challenger Road  
Ridgefield Park, NJ 07660  
Tel: 800-356-2017  
[www.melloninvestor.com](http://www.melloninvestor.com)

### Annual Report on Form 10-K:

A copy of the Company's Form 10-K, as filed with the Securities and Exchange Commission, is available free of charge upon request.

### Corporate Headquarters:

Centillium Communications, Inc.  
215 Fourier Avenue  
Fremont, CA 94539  
510-771-3700  
[www.centillium.com](http://www.centillium.com)  
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Communications, Inc.

Safe Harbor Statement Under the Private Securities Litigation Reform Act of 1995

Except for statements of historical fact, this Annual Report includes statements that are forward-looking statements within the meaning of U.S. Federal securities laws. Actual results may differ materially from those indicated by such forward-looking statements based on a variety of risks and uncertainties, including without limitation the risks and uncertainties relating to rate and breadth of deployment of broadband access in general and Centillium's technology solutions in particular; Centillium's ability to continue and expand on its relationships with communications equipment manufacturers; and the successful development and market acceptance of Centillium's new products and technology. Centillium undertakes no obligation to update forward-looking statements for any reason. Information about potential factors that could affect Centillium's financial results is included in Centillium's Annual Report on Form 10-K and in other documents on file with the Securities and Exchange Commission.



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