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

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**FORM 10-K**

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

**For the year ended December 31, 2002**

**Commission File Number 000-30229**

**SONUS NETWORKS, INC.**

(Exact name of Registrant as specified in its charter)

<b>DELAWARE</b> (State or other jurisdiction of incorporation or organization)	<b>04-3387074</b> (I.R.S. employer identification no.)
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**5 Carlisle Road, Westford, Massachusetts 01886**  
(Address of principal executive offices, including zip code)

**(978) 692-8999**  
(Registrant's telephone number, including area code)

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

**Securities registered pursuant to Section 12(g) of the Act:**  
Common stock, \$0.001 par value

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 the Registrant's knowledge, in definitive proxy statement or information proxy 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 Exchange Act Rule 12b-2). Yes  No

As of June 28, 2002, there were 204,593,633 shares of \$0.001 par value per share, common stock, outstanding. As of that date, the aggregate market value of the voting stock held by non-affiliates of the Registrant was approximately \$368,728,616.

**DOCUMENTS INCORPORATED BY REFERENCE**

The information required in Items 11-13 is incorporated by reference to specified portions of the Registrant's definitive Proxy Statement to be issued in conjunction with the Registrant's 2003 Annual Meeting of Shareholders, which is expected to be filed not later than 120 days after the Registrant's fiscal year ended December 31, 2002.

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## ITEM 1. BUSINESS.

This Form 10-K, as well as all other reports filed with the Securities and Exchange Commission (SEC), are available free of charge through our Internet site (<http://www.sonusnet.com>) as soon as practicable after we electronically file such material with, or furnish it to, the SEC. The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 450 Fifth Street, NW, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site (<http://www.sec.gov>) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

### Overview

We are a leading provider of voice infrastructure solutions for the new public network. Our products are a new generation of carrier-class switching equipment and software that enable voice services to be delivered over packet-based networks. Our target customers include new and established communications service providers, including long distance carriers, local exchange carriers, Internet service providers, wireless operators, cable operators, international telephone companies and carriers that provide services to other carriers. Many of these carriers have been building packet-based networks to support the dramatic growth in data traffic resulting from Internet use. Packet-based networks, which transport traffic in small bundles, or "packets," offer a significantly more flexible, cost-effective and efficient means for providing communications services than existing circuit-based networks, designed years ago for telephone calls. By enabling voice traffic to be carried over these packet-based networks, our products will accelerate the convergence of voice and data into the new public network.

Our suite of voice infrastructure solutions includes the GSX9000™ Open Services Switch, the Insignus™ Softswitch and the Sonus Insight™ Management System. Our products, designed for deployment at the core of a service provider's network, can significantly reduce the cost to build and operate voice services compared to traditional alternatives. Moreover, our products offer a powerful and open platform for service providers to increase their revenues through the creation and delivery of new and innovative voice and data services. Our switching equipment and software can be rapidly and easily deployed, and readily expanded to accommodate growth in traffic volumes. Our products also interoperate with service providers' existing telephone infrastructure, allowing them to preserve the investment in their current networks. Designed for the largest telephone networks in the world, our products offer the reliability and voice quality that have been hallmarks of the public telephone network for decades.

We have been recognized by three market research firms as the worldwide market share leader in several key segments of the carrier-class packet voice infrastructure equipment market. Our announced customers include many of the world's major service providers: Alestra (Mexico), BellSouth Corporation, China Netcom, Fusion Communications (Japan), Global Crossing, Level 3 Communications, NTT Communications, Qwest Communications, Time Warner Telecom, T-Systems International (a division of Deutsche Telekom Group) and XO Communications. We sell our products principally through a direct sales force and, in some markets, through distributors and resellers. We also collaborate with our customers to identify and develop new advanced services and applications that they can offer to their customers.

As a result of the current challenging business environment in the telecommunications industry, many service providers, including some of Sonus' customers, are experiencing financial difficulties, and some are in the process of restructuring their businesses or have filed for bankruptcy. While this has resulted in reductions in spending by service providers for products such as those we offer, we believe that over time the market opportunity for packet voice solutions is substantial. Synergy Research Group projects that the market for service provider voice over Internet protocol equipment and software will grow to approximately \$4.0 billion in 2006. Our objective is to capitalize on our early technology and

market lead and build the premier franchise in voice infrastructure solutions for the new public network. The following are key elements of our strategy:

- leverage our technology leadership to achieve key service provider design wins;
- extend our technology platform from the core of the network to the access edge;
- expand and broaden our customer base by targeting specific market segments;
- expand our global sales, marketing, support and distribution capabilities;
- grow our base of software applications and development partners;
- actively contribute to the standards definition and adoption process; and
- pursue strategic acquisitions and alliances.

## Industry Background

The public telephone network is an integral part of our everyday lives. For most of its 100-year history, the telephone industry has been heavily regulated, which has slowed the evolution of its underlying circuit-switching technologies and limited innovation in service offerings and the pricing of telephone services. We expect two global forces—deregulation and the expansion of the Internet—to revolutionize the public telephone network worldwide.

Deregulation of the telephone industry accelerated with the passage of the Telecommunications Act of 1996. The barriers that once restricted service providers to a specific geography or service offering, such as local or long distance, are disappearing. The opportunity created by opening up the \$750 billion telephone services market has encouraged new participants to enter the market and incumbent service providers to expand into new markets, both domestically as well as internationally. As an example, the Regional Bell Operating Companies (RBOCs) are in the process of receiving regulatory approval that would allow them to offer long-distance telephone service to their in-region consumers and businesses. Some of these carriers may build-out their own long distance networks creating an opportunity for next generation, packet-voice solutions.

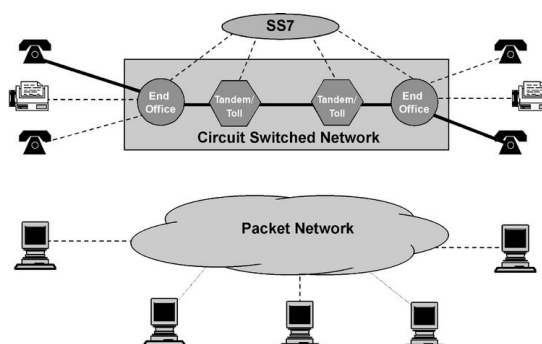
Competition between new players and incumbents is driving down service prices. With limited ability to reduce the cost structure of the public telephone network, profit margins for traditional telephone services are eroding. In response, service providers are seeking new, creative and differentiated services as a means to increase revenues and opportunities to reduce costs.

Simultaneously, the rapid adoption of the Internet is driving dramatic growth of data traffic. Today, a significant portion of this data traffic is carried over the traditional circuit-switched telephone network. However, the circuit-switched network, designed for voice traffic and built long before the advent of the Internet, is not suited to efficiently transport data traffic. In a circuit-switched network, a dedicated path, or circuit, is established for each call, reserving a fixed amount of capacity or bandwidth in each direction. The dedicated circuit is maintained for the duration of the call across all of the circuit switches spanning the path from origination to the destination of the call, even when no traffic is being sent. As a result, a circuit-switched architecture is highly inefficient for Internet applications, which tend to create large bursts of data traffic followed by long periods of silence.

In contrast, a packet network divides traffic into distinct units called packets and routes each packet independently. By combining traffic from users with differing capacity demands at different times, packet networks more efficiently fill available network bandwidth with packets of data from many users, thereby reducing the bandwidth wasted due to silence from any single user. The volume of data traffic continues to increase as use of the Internet and the number of connected users grow, driving service providers to build large-scale, more efficient packet networks.

With voice traffic carried over the vast installed base of traditional circuit-switched networks and data traffic carried over rapidly expanding packet networks, service providers are faced with the expense and complexity of building and maintaining parallel networks.

The following diagrams depict these parallel voice and data networks.



We believe significant opportunities exist in uniting these separate, parallel networks into a new integrated public network capable of transporting both voice and data traffic. Enormous potential savings can be realized by eliminating redundant or overlapping equipment purchases and reducing network operating costs. Also, combining traditional voice services with Internet or Web-based services in a single network is expected to enable new and powerful high-margin, revenue-generating service offerings such as voice virtual private networks (Voice VPNs), one-number/follow-me services, unified messaging, prepaid and calling cards, Internet call waiting, sophisticated call centers and other services.

The packet network is the platform for the new public network. The volume of data traffic has already eclipsed voice traffic and is growing much faster than voice. Packet architectures are more efficient at moving data, are more flexible and reduce equipment and operating costs. The key to realizing the full potential of a converged, packet-based network is to enable the world's voice traffic to run over those networks.

Early attempts to develop new technologies to carry voice traffic over packet networks have included voice over Internet protocol, or VoIP, systems using a personal computer platform and devices that added VoIP capability to existing data devices such as remote access servers. While demonstrating the viability of transmitting voice over packet technology, these approaches have fallen far short of the quality, reliability and scalability required by the public telephone network.

The early VoIP systems also lack the ability to interoperate with the signaling infrastructure of the circuit-switched network. Without this signaling capability, VoIP applications cannot provide the consistent "look, sound and feel" of traditional telephone calls and are not well-suited to more complex applications such as voicemail, unified messaging and other value-added services.

The public telephone network is large, highly complex and generates significant revenues, a substantial majority of which are derived from voice services. Given service providers' substantial investment in, and dependence upon, traditional circuit-switched technology, their transition to the new public network will be gradual.

## Requirements for voice infrastructure products for the new public network

Users demand high levels of quality and reliability from the public telephone network and service providers require a cost-efficient network that enables new revenue-generating services. As a result, voice infrastructure products for the new public network must satisfy the following requirements:

**Carrier-class performance.** Because they operate complex, mission-critical networks, service providers have clear infrastructure requirements. These include extremely high reliability, quality and interoperability. For example, service providers typically require equipment that complies with their 99.999% availability standard.

**Compatibility with standards and existing infrastructure.** New infrastructure equipment and software must support the full range of telephone network standards, including signaling protocols such as SS7 or ISDN and international signaling variants, and various physical interfaces such as T1 and E1. It must also support data networking protocols such as Internet protocol, or IP, and asynchronous transfer mode, or ATM, as well as newer protocols such as SIP, MGCP, Megaco (H.248) and H.323. Infrastructure solutions must also seamlessly integrate with service providers' existing operations support systems.

**Scalability and density.** Infrastructure solutions for the new public network face challenging scalability requirements. Service providers' central offices typically support tens or even hundreds of thousands of simultaneous calls. In order to be economically attractive, the new infrastructure must compare favorably with existing networks in terms of cost per port, space occupied, power consumption and cooling requirements.

**Intelligent software in an open and flexible platform.** The architecture for the new public network decouples the capabilities of traditional circuit-switching equipment into robust hardware elements and highly intelligent software platforms that provide control, signaling and service creation capabilities. This approach will transform the closed, proprietary circuit-switched public telephone network into a flexible, open environment accessible to a wide range of software developers. Service providers and third-party vendors will be able to develop and implement new applications independent of switch vendors. Moreover, the proliferation of independent software providers promises to drive the creation of innovative voice and data services that could expand service provider revenues.

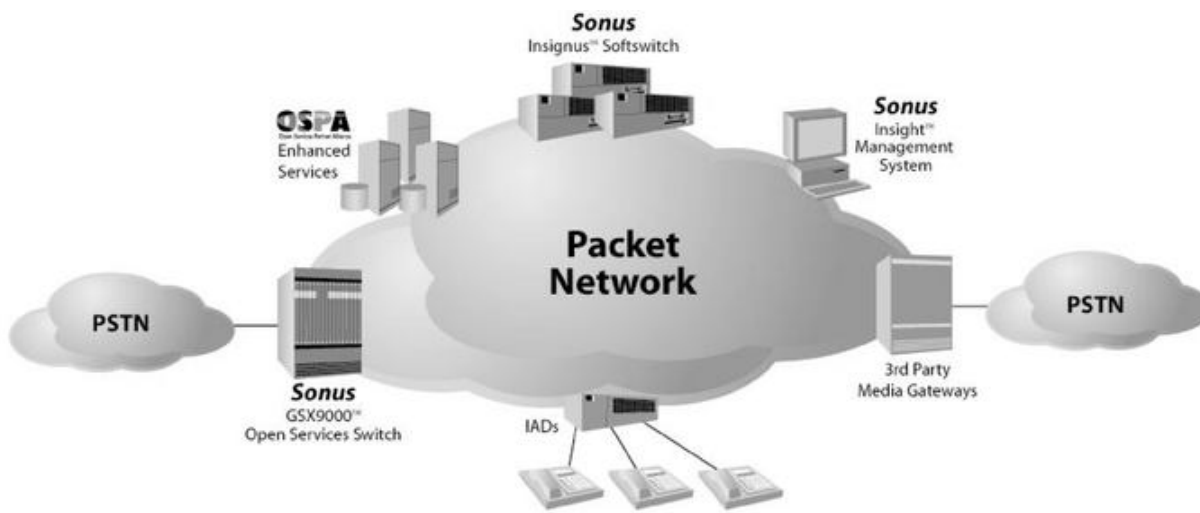
**Simple and rapid installation, deployment and support.** Infrastructure solutions must be easy to install, deploy, configure and manage. These attributes will enable rapid growth and effective management of dynamic and complex service provider networks.

## The Sonus Solution

We develop, market and sell what we believe to be the first comprehensive suite of voice infrastructure products purpose-built for the deployment and management of voice and data services over the new public network. The Sonus solution consists of the following carrier-class products:

- GSX9000™ Open Services Switch;
- Insignus™ Softswitch; and
- Sonus Insight™ Management System.

These products are designed to offer high reliability, toll-quality voice, improved economics, interoperability, rapid deployment and an open architecture enabling the design and implementation of new services and applications. Our solution has been specifically designed to meet the requirements of the new public network. As shown in the following diagram, our products unite the voice and data networks.



**Carrier-class performance.** Our products are designed to offer the highest levels of quality, reliability and interoperability, including:

- full redundancy, enabling 99.999% availability;
- voice quality equal or superior to today's circuit-switched network;
- system hardware designed for Network Equipment Building Standards, or NEBS Level 3, compliance;
- network monitoring and provisioning designed for Operations System Modifications for the Integration of Network Elements, or OSMINE, compliance;
- a complete set of service features, addressing those found in the existing voice network and extending them to offer greater flexibility; and
- sophisticated network management and configuration capabilities.

**Compatibility with industry standards and existing infrastructure.** Our products are designed to be compatible with all applicable voice and data networking standards and interfaces, including:

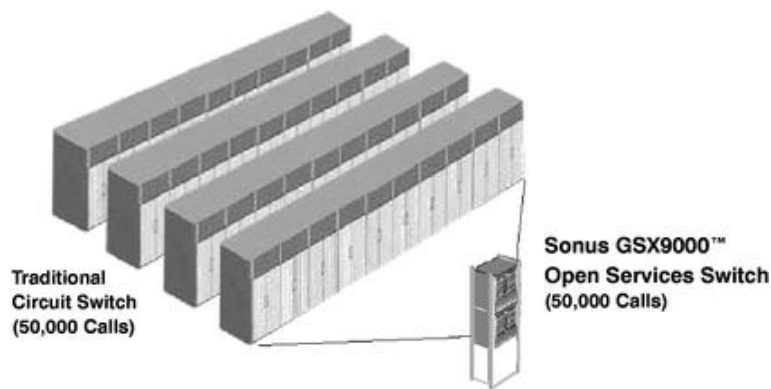
- SS7 and other telephone network signaling protocols, including international signaling variants, advanced services and simple call management and routing;
- IP, ATM, Ethernet and optical data networking standards;
- call management standards including SIP, MGCP, H.323 and others;
- voice coding standards such as G.711 and echo cancellation standard G.168; and
- all common interfaces, including T1, T3, E1 and optical interfaces.

The Sonus solution is designed to interface with legacy circuit-switching equipment, supporting the transparent flow of calls and other information between the circuit and packet networks. As a result, our products allow service providers to migrate to the new public network, while preserving their significant legacy infrastructure investments.

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**Cost effectiveness and high scalability.** The Sonus solution can be used to cost-effectively build packet-based switch configurations supporting a range from a few hundred calls to hundreds of thousands of simultaneous calls. In addition, the capital cost of our equipment is typically half that of traditional circuit-switched equipment. At the same time, our GSX9000™ Open Services Switch offers unparalleled density, requires less than one-tenth of the space needed by typical circuit-switching implementations and requires significantly less power and cooling. This makes possible a significant reduction in expensive central office facilities cost and allows service providers to deploy our equipment in locations where traditional circuit switches are not even an option given the limited space and environmental services.

The GSX9000™ Open Services Switch can create central office space savings as shown below.



**Open software architecture and flexible platform.** Our Open Services Architecture™, or OSA, is based on a software-centric design and a flexible platform, allowing rapid development of new products and services. New services may be developed by us, by service providers or by any number of third parties including software developers and systems integrators. The OSA also facilitates the creation of services that were previously not possible on the circuit-switched network. In addition, we have partnered with a number of third-party application software developers in our Open Services Partner Alliance<sup>SM</sup>, or OSPA, to stimulate the growth of new applications available for our platform.

**Ease of installation and deployment.** Our equipment and software can be installed and placed in service by our customers much more quickly than circuit-switching equipment. By offering comprehensive testing, configuration and management software, we expedite the deployment process as well as the ongoing management and operation of our products. We believe that typical installations of our solution require just weeks of time from product arrival to final testing, thereby reducing the cost of deployment and speeding the time to market for new services.

### The Sonus Strategy

Our objective is to capitalize on our early technology and market lead and build the premier franchise in voice infrastructure solutions for the new public network. The following are key elements of our strategy:

**Leverage our technology leadership to achieve key service provider design wins.** As the first company to provide voice infrastructure products for the new public network, we have achieved key design wins with market-leading service providers as they develop the architecture for their new voice networks. We expect service providers to select vendors that provide leading technology and the ability to maintain that technology leadership. Our equipment is an integral part of the network architecture and achieving design wins will enable us to expand our business as these networks are deployed. We have been awarded projects by major service providers including Alestra (Mexico), BellSouth Corporation, China Netcom, Fusion Communications (Japan), Global Crossing, Level 3 Communications, NTT Communications, Qwest Communications, Time Warner Telecom, T-Systems International (a division of

Deutsche Telekom Group) and XO Communications. Furthermore, by working closely with our customers as they deploy these networks, we gain valuable knowledge regarding their requirements, positioning us to develop product enhancements and extensions that address evolving service provider needs.

**Extend our technology platform from the core of the network to the access edge.** Our robust and sophisticated technology platform has been designed to operate at the heart of the largest networks in the world. From this fundamental position in the trunking infrastructure, we are extending our reach by moving outward to the access segments of the network. Sonus supports multiple carrier applications in a single platform. These applications include long distance/international calling, tandem switching, Internet call diversion, business PBX access, residential access/Centrex, H.323 termination, direct voice over broadband and enhanced services. This approach will allow our customers to design and execute a coordinated migration and expansion strategy as they build entirely new networks or transition from their legacy circuit-switched infrastructure.

**Expand and broaden our customer base by targeting specific market segments, such as wireless operators.** We plan to leverage our early success to penetrate new customer segments. We believe new and incumbent service providers will build the new public network at different rates. The next-generation service providers, who are relatively unencumbered by legacy equipment, have been among the initial purchasers of our equipment and software. Other newer entrants, including wireless operators, cable operators and Internet service providers, or ISPs, are also likely to be early adopters of our products. Incumbents, including interexchange carriers, or IXC, Regional Bell Operating Companies, or RBOCs, and international PTTs are also expected to adopt packet voice technologies over time.

**Expand our global sales, marketing, support and distribution capabilities.** Becoming the primary supplier of voice infrastructure for the new public network will require a strong worldwide presence. We are broadening our sales, marketing, support and distribution capabilities to address this need. We have established offices throughout the United States, in China, Japan, Singapore, Germany and France, and in the United Kingdom. In addition, we plan to augment our global direct sales effort with international distribution partners. As a carrier-class solution provider, we are making a significant investment in professional services and customer support.

**Grow our base of software applications and development partners.** We have established and promote a partner program, the OSPA, which brings together a broad range of development partners to provide our customers with a variety of advanced services, application options and interoperability testing. Our OSPA partners include companies such as BayPackets, Broadsoft, Juniper Networks, NetCentrex, Riverstone Networks and Voyant Technologies.

**Actively contribute to the standards definition and adoption process.** To advance our technology and market leadership, we will continue to actively lead and contribute to standards bodies such as the International Softswitch Consortium, the Internet Engineering Task Force and the International Telecommunications Union. The definition of standards for the new public network is in an early stage and we intend to drive these standards to meet the requirements for an open, accessible, scalable and powerful new public network infrastructure.

**Pursue strategic acquisitions and alliances.** We intend to expand our products and services through selected acquisitions and alliances. These may include acquisitions of complementary products, technologies and businesses that further enhance our technology leadership or product breadth. We also believe that

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## Sonus Products

### GSX9000™ Open Services Switch

The Sonus GSX9000™ Open Services Switch enables voice traffic to be transported over packet networks. Its carrier-class hardware, which is NEBS Level 3 compliant and designed to provide 99.999% availability with no single point of failure, offers optional full redundancy and full hot-swap capability. It is powered from -48VDC sources standard in central offices and attaches to the central office timing network. The basic building block of a GSX9000™ is a shelf. Each shelf is 28" high, mounts in a standard 19" or 23" rack and provides 16 slots for server and adapter modules. The first 2 slots are reserved for management modules, while the other 14 slots may be used for any mix of other module types. It supports the following interfaces:

- T1;
- T3;
- E1;
- OC3;
- 100BaseT;
- 1000BaseT; and
- OC12c/STM-4.



The GSX9000™ is designed to deliver voice quality equal, or superior, to that of the legacy circuit-switched public network. It is designed to support the multiple encoding schemes used in circuit switches such as G.711 and delivers a number of other voice compression algorithms. It also is designed to provide world-class echo cancellation, conforming to the latest G.168 standard, on every circuit port. It automatically disables echo cancellation when it detects a modem signal. The GSX9000™ is also designed to minimize delay, further enhancing perceived voice quality. The GSX9000™ scales to the very large configurations required by major service providers. A single GSX9000™ shelf can support up to 22,176 simultaneous calls. A single GSX9000™, consisting of multiple shelves, can support 100,000 or more simultaneous calls. The GSX9000™ is designed to operate with our Insignus™ Softswitch and with softswitches and network products offered by other vendors.

### Insignus™ Softswitch

Softswitches provide the network intelligence in next-generation networks, including call control, signaling, core network routing and a management foundation. Our Insignus™ Softswitch is based on a modular architecture that is designed for high performance and scalability, as well as interoperability with third-party gateways, devices and services. The Insignus™ Softswitch includes the following functionality:

- call control and signaling;
- service selection and routing;
- line-side endpoint control and services for both residential and enterprise markets;
- local calling features and regulatory requirements such as emergency services routing; and
- a gateway between existing SS7/C7 signaling networks and the packet network.

The Insignus™ Softswitch functions can be deployed on the same or separate platforms, and can be configured in either a centralized or distributed manner, based on a service providers' network requirements. This high level of flexibility allows service providers to precisely allocate functionality and processing performance, avoiding the cost of unused resources. Service providers can also deploy additional Insignus™ modules as their requirements change. For instance, a service provider deploying

the functions for a long distance application might require only service selection routing and SS7 connectivity. As the service provider moves into the local market, it can add line-side endpoint control to deliver access services on the same platform. The Insignus™ Softswitch can scale from the smallest single point of presence to the largest global networks.

The Insignus™ Softswitch supports industry-standard protocols such as SIP, H.323 and MGCP, using them for both interaction with third-party products and for communication among components of the Open Services Architecture. The Insignus™ Softswitch supports a large number of international SS7/C7 variants, for both call signaling and interaction with legacy intelligent network, or IN, and advanced intelligent network, or AIN, services.

The Insignus™ Softswitch is deployed on industry-standard, NEBS-compliant computing platforms. The Insignus™ Softswitch supports redundancy, providing carrier-class reliability. In fully redundant configurations, it is designed to eliminate loss of active calls during switchover for any hardware and software component.

We believe that in addition to traditional voice services, our Insignus™ Softswitch will enable service providers to offer differentiated, value-added features and services developed by us, by application software developers, system integrators or service providers themselves, including:

- one-number/follow-me services, which route a subscriber's email, phone and Web services to any location;
- unified messaging that integrates telephone services, email and Web applications, and allows subscribers to have a unified mailbox for email, voicemail and message filtering;
- conference calling across the Internet and multimedia conferencing;
- Prepaid cards and calling cards;
- Internet-enabled call centers;
- Voice VPNs; and
- Internet content delivered with voice.

### **Sonus Insight™ Management System**

Sonus Insight™ is a complete, web-based management system designed to simplify the operation of carrier-class packet voice networks. Sonus Insight™ includes the Element Management System, or EMS, and the DataStream Integrator, or DSI, that together provide comprehensive configuration, provisioning, security, alarm reporting, performance data and billing mediation capabilities. Sonus Insight™ seamlessly integrates with service providers' existing back-office systems, and offers many tools that enhance and consolidate key management functions, allowing service providers to streamline many of today's labor-intensive processes. Sonus Insight™ scales to support hundreds of switches and concurrent users, and is based on industry standards and protocols to facilitate management from any location worldwide.

### **Customer Support and Professional Services**

We believe our comprehensive technical customer support and professional services capabilities are an important element of our solution for customers. These services cover the full network lifecycle: planning; design; installation; and operations. We help our customers create or revise their business plans and design their networks and also provide the following:

- turnkey network installation services;
- system integration and testing;
- 24-hour technical support; and

- educational services to customer personnel on the installation, operation and maintenance of our equipment.

We have established technical assistance centers in Westford, Massachusetts and in the United Kingdom. The technical assistance centers provide customers with around-the-clock technical support, as well as periodic updates to our software and product documentation. We offer our customers a variety of service plans.

A key differentiator of our support activities is our professional services group, many members of which hold advanced technical degrees in electrical engineering or related disciplines. We offer a broad range of professional services, including sophisticated network deployment, assistance with logistics and project management support. We also maintain a customer support laboratory in which customers can test the utility of our products for their specific applications and in which they can gain an understanding of the applications enabled by the converged network. Our approach to professional services is designed to ensure that our products are integrated into our customers' networks to meet their specific needs and that these customers realize the maximum value from their networking technology investments. As of December 31, 2002, our customer support and professional services organization consisted of 86 employees.

### **Customers**

Our target customer base includes long distance carriers, local exchange carriers, ISPs, wireless operators, cable operators, international telephone companies and carriers that provide services to other carriers. We have shipped products to customers including: Alestra (Mexico), BellSouth Corporation, China Netcom, Fusion Communications (Japan), Global Crossing, Level 3 Communications, NTT Communications, Qwest Communications, Time Warner Telecom, TouchAmerica, T-Systems International (a division of Deutsche Telekom Group) and XO Communications. As a result of the current challenging business environment in the telecommunications industry, many service providers, including some of Sonus' customers, are experiencing financial difficulties, and some are in the process of restructuring their businesses or have filed for bankruptcy. For the year ended December 31, 2002, Qwest, TouchAmerica and T-Systems International (Deutsche Telekom) contributed 19%, 12% and 11% of our revenues. For the year ended December 31, 2001, Qwest, XO Communications, Fusion Communications and Global Crossing contributed 22%, 17%, 16% and 13% of our revenues. For the year ended December 31, 2000, Global Crossing, Time Warner Telecom and Intermedia contributed 43%, 16% and 11% of our revenues.

### **Sales and Marketing**

We sell our products principally through a direct sales force and, in some markets, through distributors and resellers, including AsiaInfo Holdings, Inc. (China), Compta (Portugal), Nissho Electronics Corporation (Japan), Photonic Bridges (China), Samsung Corporation (Korea), Sumitomo Corporation (Japan) and Welltech Computer Corporation (Taiwan). In addition, we intend to establish relationships with selected original equipment manufacturers and other marketing partners in order to serve particular markets or geographies and provide our customers with opportunities to purchase our products in combination with related services and products.

Through our Open Services Partner Alliance, or OSPA, vendors achieve interoperability with our products quickly and efficiently, allowing those vendors, as well as service providers, to reduce the time to deploy new services. This partner program also allows service providers to select from a list of vendors that are



Sonus "Powered," which signifies proven interoperability with Sonus products. We believe that this flexibility offers those service providers a choice of solutions and value-added services, and enables them to achieve differentiation through an integrated suite of "best-of-breed" solutions.

As of December 31, 2002, our sales and marketing organization consisted of 65 employees, of whom 18 were located in Westford, Massachusetts and 47 were located in sales and support offices in the United States and around the world.

## Research and Development

We believe that strong product development capabilities are essential to our strategy of enhancing our core technology, developing additional applications, incorporating that technology into new products and maintaining comprehensive product and service offerings. Our research and development process is driven by the availability of new technology, market data and customer feedback. We have invested significant time and resources in creating a structured process for undertaking all product development projects.

We have assembled a team of highly skilled engineers with significant telecommunications and networking industry experience. Our engineers have experience in, and have been drawn from, leading computer data networking, telecommunications and multimedia companies. As of December 31, 2002, we had 171 employees responsible for research and development, of which 155 were software and quality assurance engineers and 16 were hardware engineers. Our engineering effort is focused on new applications and network access features, new network interfaces, improved scalability, interoperability, quality, reliability and next generation technologies. We currently maintain United States research and development offices in Massachusetts, New Jersey, Texas and Virginia and have an office in the United Kingdom. In addition, we have a joint development effort in Japan with Nissho Electronics Corp.

We have made, and intend to continue to make, a substantial investment in research and development. Research and development expenses were \$45.3 million for the year ended December 31, 2002, \$65.0 million for the year ended December 31, 2001 and \$26.4 million for the year ended December 31, 2000.

## Competition

The market for voice infrastructure products for the new public network is intensely competitive, subject to rapid technological change and significantly affected by new product introductions and other market activities of industry participants. We expect competition to persist and intensify in the future. Our primary sources of competition include vendors of networking and telecommunications equipment, such as Cisco Systems, Lucent Technologies and Nortel Networks. Some of our competitors have significantly greater financial resources than we do and are able to devote greater resources to the development, promotion, sale and support of their products. In addition, these competitors have more extensive customer bases and broader customer relationships than we do, including relationships with our potential customers. Other smaller and mostly private companies are also focusing on similar market opportunities.

In order to compete effectively, we must deliver innovative products that:

- provide extremely high network reliability and voice quality;
- scale easily and efficiently;
- interoperate with existing network designs and other vendors' equipment;
- provide effective network management;
- are accompanied by comprehensive customer support and professional services; and
- provide a cost-effective and space-efficient solution for service providers.

## Intellectual Property

Our success and ability to compete are dependent on our ability to develop and maintain our technology and operate without infringing on the proprietary rights of others. We rely on a combination of patent, trademark, trade secret and copyright law and contractual restrictions to protect the proprietary aspects of our technology. These legal protections afford only limited protection for our technology. We presently hold four U.S. patents, and have ten patent applications pending in the United States. In addition, we have sixteen patent applications pending abroad. We cannot be certain

that additional patents will be granted based on these pending applications. We seek to protect our intellectual property by:

- protecting our source code for our software, documentation and other written materials under trade secret and copyright laws;
- licensing our software pursuant to signed license agreements, which impose restrictions on others' ability to use our software; and
- seeking to limit disclosure of our intellectual property by requiring employees and consultants with access to our proprietary information to execute confidentiality agreements.

Due to rapid technological change, we believe that factors such as the technological and creative skills of our personnel, new product developments and enhancements to existing products are more important than the various legal protections of our technology to establishing and maintaining technology leadership.

We have incorporated third-party licensed technology into our current products. From time to time, we may be required to license additional technology from third parties to develop new products or product enhancements. Third-party licenses may not be available or continue to be available to us on commercially

reasonable terms. The inability to maintain or re-license any third-party licenses required in our current products, or to obtain any new third-party licenses to develop new products and product enhancements, could require us to obtain substitute technology of lower quality or performance standards or at greater cost, and delay or prevent us from making these products or enhancements, any of which could seriously harm the competitiveness of our products.

## **Manufacturing**

Currently, we outsource the manufacturing of our products. Our contract manufacturers provide comprehensive manufacturing services, including assembly of our products and procurement of materials on our behalf. We perform final test and assembly at our facility to ensure that we meet our internal and external quality standards. We believe that outsourcing our manufacturing will enable us to conserve working capital, better adjust manufacturing volumes to meet changes in demand and more quickly deliver products. At present, we purchase products from our outside contract manufacturers on a purchase order basis. We may not be able to enter into long-term contracts with outside manufacturers on terms acceptable to us, if at all. If we do enter into long-term contracts with outside manufacturers and our purchase requirements change, we may have excess inventory, which would increase our costs. As of December 31, 2002, we had 17 employees responsible for manufacturing, purchasing, final testing and assembly.

## **Employees**

As of December 31, 2002, we had a total of 361 employees, including 171 in research and development, 65 in sales and marketing, 86 in customer support and professional services, 17 in manufacturing and 22 in finance and administration. Our employees are not represented by any collective bargaining unit. We believe our relations with our employees are good.

## **ITEM 2. PROPERTIES.**

Our headquarters are located in a leased facility in Westford, Massachusetts, consisting of 90,000 square feet under leases that expire in March 2004. We have additional facilities in Westford and Littleton, Massachusetts, consisting of an aggregate of 51,000 square feet under subleases that expire through December 2008, and in Richardson, Texas, consisting of 16,000 square feet under a lease expiring in October 2005. We also lease short-term office space in Colorado, Oklahoma, New Jersey, Virginia, China, Japan, Singapore and the United Kingdom. We believe our existing facilities are adequate for our current needs and that suitable additional space will be available as needed.

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## **ITEM 3. LEGAL PROCEEDINGS.**

In November 2001, a purchaser of Sonus' common stock filed a complaint in the federal district court for the Southern District of New York against Sonus, two of its officers and the lead underwriters alleging violations of the federal securities laws in connection with our initial public offering (IPO) and seeking unspecified monetary damages. The purchaser seeks to represent a class of persons who purchased Sonus' common stock between the IPO on May 24, 2000 and December 6, 2000. An amended complaint was filed in April 2002. The amended complaint alleges that Sonus' registration statement contained false or misleading information or omitted to state material facts concerning the alleged receipt of undisclosed compensation by the underwriters and the existence of undisclosed arrangements between underwriters and certain purchasers to make additional purchases in the after market. The claims against Sonus are asserted under Sections 10(b) and 11 of the Securities Act of 1933 and against the individual defendants under Sections 11 and 15 of that Act. Other plaintiffs have filed substantially similar class action cases against approximately 300 other publicly traded companies and their IPO underwriters which, along with the actions against Sonus, have been transferred to a single federal judge for purposes of coordinated case management. On July 15, 2002, Sonus, together with the other issuers named as defendants in these coordinated proceedings, filed a collective motion to dismiss the consolidated amended complaints on various legal grounds common to all or most of the issuer defendants. The plaintiffs voluntarily dismissed the claims against the individual defendants, including those Sonus officers named in the complaint. On February 19, 2003, the court granted a portion of the motion to dismiss by dismissing the Section 10(b) claims against certain defendants including Sonus, but denied the remainder of the motion as to the defendants. Accordingly, the case will proceed against Sonus on the Section 11 claims. The outcome of the litigation remains uncertain. We intend to continue to vigorously defend this action.

Beginning in July 2002, several purchasers of Sonus' common stock filed complaints in federal district court for the District of Massachusetts against Sonus, certain officers and directors and a former officer under Sections 10(b) and 20(a) and Rule 10b(5) of the Securities Exchange Act of 1934 (Class Action Complaints). The purchasers seek to represent a class of persons who purchased common stock of Sonus between December 11, 2000 and January 16, 2002, and seek unspecified monetary damages. The Class Action Complaints are essentially identical and allege that Sonus made false and misleading statements about its products and business. On March 3, 2003, the plaintiffs filed a Consolidated Amended Complaint. We believe the claims in the Consolidated Amended Complaint are without merit and that we have substantial legal and factual defenses, which we intend to pursue vigorously.

On September 30, 2002, a purported shareholder derivative lawsuit was filed in the superior court of Middlesex County of Massachusetts against Sonus and its directors. The complaint is based on essentially the same allegations as the Class Action Complaints and alleges that Sonus' directors breached their fiduciary duties. The complaint seeks an unspecified amount of compensatory and other damages and relief on behalf of Sonus. After Sonus submitted a motion to dismiss the complaint on multiple grounds, the plaintiff agreed to dismiss the complaint without prejudice retaining the right to refile the complaint at a later date. The complaint was dismissed on February 4, 2003.

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

No matters were submitted to a vote of security holders during the fourth quarter of the fiscal year covered by this report.

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

Our common stock has been quoted on the Nasdaq National Market under the symbol "SONS" since May 25, 2000. Prior to that time, there was no public market for the common stock. All companies listed on Nasdaq are required to comply with certain continued listing standards.

On September 16, 2002, we received a letter from Nasdaq notifying Sonus that it did not comply with the minimum bid price requirement of \$1.00 per share for continued listing on the Nasdaq National Market and that its securities were subject to delisting from the Nasdaq National Market unless Sonus demonstrated compliance with such requirement before December 16, 2002. Sonus has demonstrated compliance with such criteria and, therefore, continues to have its common stock listed on the Nasdaq National Market. There can be no assurance, however, that Sonus will continue to maintain compliance with the listing requirements of the Nasdaq National Market. In the event the common stock of Sonus is delisted from the Nasdaq National Market, among other things, the market value and liquidity of the common stock of Sonus could be materially and adversely affected and it may become more difficult for Sonus to obtain additional financing.

The following table sets forth, for the time periods indicated, the high and low sales prices of the common stock of Sonus as reported on the Nasdaq National Market.

	High	Low
<b>Fiscal 2002:</b>		
First quarter	\$ 6.25	\$ 2.18
Second quarter	3.10	1.29
Third quarter	1.99	0.19
Fourth quarter	1.50	0.19
<b>Fiscal 2001:</b>		
First quarter	46.50	16.25
Second quarter	33.80	12.00
Third quarter	25.00	2.26
Fourth quarter	8.37	2.44

We have never declared or paid cash dividends and have no present intention to pay cash dividends in the foreseeable future. Further, our bank agreement prohibits us from declaring any cash dividends. At January 31, 2003, there were approximately 1,000 holders of record of our common stock.

## ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA.

The following selected consolidated financial data of Sonus should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and notes to those statements included elsewhere in this report.

	Year ended December 31,				
	2002	2001	2000	1999	1998
	(in thousands, except per share amounts)				
<b>Consolidated Statement of Operations Data:</b>					
Revenues	\$ 62,558	\$ 173,199	\$ 51,770	\$ —	\$ —
Cost of revenues (1)	40,302	75,698	27,848	1,861	—
Gross profit (loss)	22,256	97,501	23,922	(1,861)	—
Operating expenses:					
Research and development (1)	45,308	65,004	26,430	10,780	5,824
Sales and marketing (1)	27,863	42,267	21,569	5,606	426
General and administrative (1)	6,141	13,068	5,477	1,723	919
Stock-based compensation	19,495	75,500	26,729	4,404	59
Amortization of goodwill and purchased intangible assets	1,514	107,759	—	—	—
Write-off of goodwill and purchased intangible assets	1,848	374,735	—	—	—
Restructuring charges (benefit), net	(10,125)	25,807	—	—	—
In-process research and development	—	43,800	—	—	—
Total operating expenses	92,044	747,940	80,205	22,513	7,228
Loss from operations	(69,788)	(650,439)	(56,283)	(24,374)	(7,228)
Interest income (expense), net	1,318	5,007	6,245	487	314
Net loss	(68,470)	(645,432)	(50,038)	(23,887)	(6,914)
Beneficial conversion feature of Series C preferred stock	—	—	—	(2,500)	—
Net loss applicable to common stockholders	\$ (68,470)	\$ (645,432)	\$ (50,038)	\$ (26,387)	\$ (6,914)
Net loss per share (2):					
Basic and diluted	\$ (0.36)	\$ (3.74)	\$ (0.52)	\$ (1.84)	\$ (1.42)
Pro forma basic and diluted			(0.37)	(0.25)	
Shares used in computing net loss per share (2):					
Basic and diluted	189,889	172,382	95,877	14,324	4,858
Pro forma basic and diluted			135,057	96,188	

	2002	2001	2000	1999	1998
	(in thousands)				
<b>Consolidated Balance Sheet Data:</b>					
Cash, cash equivalents and marketable securities	\$111,167	\$ 125,067	\$ 142,065	\$ 23,566	\$ 16,501
Working capital	57,200	97,023	135,597	19,604	15,321
Total assets	141,533	184,884	194,835	30,782	18,416
Long-term obligations, less current portion	3,293	12,698	—	3,402	1,220
Convertible subordinated notes	10,000	10,000	—	—	—
Redeemable convertible preferred stock	—	—	—	46,109	22,951
Total stockholders' equity (deficit)	56,735	102,885	150,706	(25,199)	(7,097)

(Footnotes on following page)

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- (1) Excludes non-cash, stock-based compensation expense as follows:

	Year ended December 31,				
	2002	2001	2000	1999	1998
	(in thousands)				
Cost of revenues	\$ 275	\$ 1,328	\$ 404	\$ 92	\$ —
Research and development	10,334	43,553	11,428	1,537	29
Sales and marketing	5,702	18,300	12,051	2,104	12
General and administrative	3,184	12,319	2,846	671	18
	\$ 19,495	\$ 75,500	\$ 26,729	\$ 4,404	\$ 59

- (2) See Note 1 (o) to our consolidated financial statements for an explanation of the method of calculation. Pro forma per share calculation reflects the conversion of all outstanding shares of redeemable convertible preferred stock into shares of common stock which occurred upon the closing of our IPO in May 2000, as if the conversion occurred at the date of original issuance.

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

The following discussion should be read in conjunction with our consolidated financial statements and notes to those statements and other financial information appearing elsewhere in this report. The following discussion contains forward-looking information that involves risks and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements as a result of a number of factors, including the risks discussed in "Risk Factors" and elsewhere in this report.

### Overview

Sonus is a leading provider of voice infrastructure products for the new public network. We offer a new generation of carrier-class switching equipment and software that enables voice services to be delivered over packet-based networks.

Since our inception, we have incurred significant losses and, as of December 31, 2002, had an accumulated deficit of \$797.9 million. We have not achieved profitability on a quarterly or an annual basis, and anticipate that we will continue to incur net losses. We have a lengthy sales cycle for our products and, accordingly, we expect to incur sales and other expenses before we realize the related revenues. We expect to continue to incur significant sales and marketing, research and development and general and administrative expenses and, as a result, we will need to generate significant revenues to achieve and maintain profitability.

We sell our products primarily through a direct sales force and, in some markets, through resellers and distributors. Customers' decisions to purchase our products to deploy in commercial networks involve a significant commitment of resources and a lengthy evaluation, testing and product qualification process. We believe these long sales cycles, as well as our expectation that customers will tend to sporadically place large orders with short lead times, will cause our revenues and results of operations to vary significantly and unexpectedly from quarter to quarter. We expect to recognize revenues from a limited number of customers for the foreseeable future.

Sonus began shipping product to customers during the fourth quarter of fiscal 1999 and recorded its first revenues of \$51.8 million in fiscal 2000, and revenues of \$173.2 million in fiscal 2001 and \$62.6 million in fiscal 2002. Significant declines in capital spending by telecommunications service providers, and financial difficulties, including in some cases bankruptcies, experienced by certain emerging service providers, including some of Sonus' customers, caused the reduction in revenue in fiscal 2002 from the prior year.

In response to these unfavorable economic conditions, in the third quarter of fiscal 2001, Sonus commenced restructuring plans designed to reduce expenses and align its cost structure with its revised business outlook. Accordingly, Sonus recorded a restructuring charge in fiscal 2001 of \$25.8 million for a worldwide workforce reduction, consolidation of excess facilities and other charges, a non-cash impairment charge of \$374.7 million for the write-off of goodwill and certain

purchased intangible assets related to the acquisition of telecom technologies, inc. (TTI) and a \$25.4 million write-off of deferred compensation for shares and options held by terminated employees.

Further restructuring actions were implemented in fiscal 2002 resulting in aggregate net charges of \$8.1 million for worldwide workforce reductions and consolidation of excess facilities, a \$9.4 million write-off of excess inventory and purchase commitments and a \$1.5 million write-off of deferred compensation for shares and options held by terminated employees. In addition, in fiscal 2002, Sonus recorded a \$16.6 million non-cash restructuring benefit for a lease renegotiation. As a result of our restructuring actions, we believe that our operating expenses in fiscal 2003 will be reduced from the fiscal 2002 level. See Note 2 to our consolidated financial statements.

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## Critical Accounting Policies and Estimates

The preparation of financial statements and related disclosures in conformity with accounting principles generally accepted in the United States requires management to make judgments, assumptions and estimates that affect the amounts reported in the consolidated financial statements and accompanying notes. Management bases its estimates and judgments on historical experience, market trends and other factors that are believed to be reasonable under the circumstances. On an on-going basis, Sonus re-evaluates its estimates, including those related to allowance for doubtful accounts, inventory reserves, purchased intangible assets, warranty obligations, restructuring accruals and loss contingencies. Actual results could differ from these estimates. The following critical accounting policies are impacted significantly by judgments, assumptions and estimates used in the preparation of our consolidated financial statements.

**Revenue Recognition.** We recognize revenue from product sales to end users, resellers and distributors upon shipment, provided there are no uncertainties regarding acceptance, persuasive evidence of an arrangement exists, the sales price is fixed or determinable and collection of the related receivable is probable. If uncertainties exist, we recognize revenue when those uncertainties are resolved. In multiple element arrangements, in accordance with Statement of Position 97-2 and 98-9, we use the residual method when vendor-specific objective evidence does not exist for one of the delivered elements in the arrangement. Service revenue is recognized as the services are provided. Revenue from maintenance and support arrangements is recognized ratably over the term of the contract.

**Allowance for Doubtful Accounts.** The allowance for doubtful accounts is based on our assessment of the collectibility of specific customer accounts. While we believe that our allowance for doubtful accounts is adequate and that the judgment applied is appropriate, if there is a deterioration of a major customer's credit worthiness or actual defaults are higher than our historical experience, the actual results could differ from these estimates.

**Inventory Reserves.** Inventory purchases and commitments are based upon estimated future demand for our products. Sudden and significant decreases in the demand for our products or higher risks of inventory obsolescence because of rapidly changing technology and customer requirements, could require us to increase our inventory reserves and as a result our gross profit could be adversely affected.

**Warranties.** We accrue for warranty costs based on contractual rights and on the historical rate of claims and costs to provide warranty services. While we believe the accrual for warranty costs is adequate to address known warranty issues, if we experience an increase in warranty claims greater than our historical experience or our costs to provide warranty services increase, we may be required to increase our warranty accrual and our gross profit could be adversely affected.

**Loss Contingencies.** We are subject to the possibility of various loss contingencies arising in the ordinary course of business. We consider the likelihood of the loss or impairment of an asset or the incurrence of a liability as well as our ability to reasonably estimate the amount of loss in determining loss contingencies. An estimated loss contingency is accrued when it is probable that a liability has been incurred or an asset has been impaired and the amount of loss can be reasonably estimated. We regularly evaluate current information available to us to determine whether such accruals should be adjusted.

## Results of Operations

**Revenues.** Revenue is recognized from product sales to end users, resellers and distributors upon shipment, provided there are no uncertainties regarding acceptance, persuasive evidence of an arrangement exists, the sales price is fixed or determinable and collection of the related receivable is probable. If uncertainties exist, we recognize revenue when those uncertainties are resolved. In multiple element arrangements, in accordance with Statements of Position 97-2 and 98-9, we use the residual

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method to recognize revenue when vendor-specific objective evidence does not exist for one of the delivered elements in the arrangement. Service revenue is recognized as the services are provided. Revenue from maintenance and support arrangements is recognized ratably over the term of the contract. Amounts collected prior to satisfying the revenue recognition criteria are reflected as deferred revenue. We estimate and record warranty costs at the time of product revenue recognition.

**Cost of Revenues.** Our cost of revenues consists primarily of amounts paid to third-party manufacturers for purchased materials and services, manufacturing and professional services personnel and related costs and inventory obsolescence. Manufacturing engineering, documentation control, final testing and assembly are performed at our facility.

**Gross Profit.** Our gross profit as a percentage of revenues is highly variable due to many factors such as our revenue volume. Gross profit may also be affected by the following factors: demand for our products and services; new product introductions and enhancements both by us and by our competitors; product service and support costs associated with initial deployment of our products in customers' networks; changes in our pricing policies and those of our competitors; write off of any excess or obsolete inventory; unfavorable warranty experience; the mix of product configurations sold; geographic mix; the mix of sales channels through which our products and services are sold; the volume of manufacturing; and costs of manufacturing and components.

**Research and Development Expenses.** Research and development expenses consist primarily of salaries and related personnel costs, recruiting expenses and prototype costs related to the design, development, testing and enhancement of our products. We expense our research and development costs as incurred. Some aspects of our research and development efforts require significant short-term expenditures, the timing of which can cause significant quarterly variability in our expenses. We believe that our recent restructuring actions will reduce research and development expenses in fiscal 2003 from the fiscal 2002 level.

However, rapid technological innovation is critical to our long-term success and we intend to continue to make substantial investments to enhance our products and technologies to meet the requirements of our customers and market.

**Sales and Marketing Expenses.** Sales and marketing expenses consist primarily of salaries and related personnel costs, commissions, travel and entertainment expenses, promotions, customer evaluations and other marketing expenses. We believe that our recent restructuring actions will reduce sales and marketing expenses in fiscal 2003 from the fiscal 2002 level.

**General and Administrative Expenses.** General and administrative expenses consist primarily of salaries and related personnel costs for executive and administrative personnel, recruiting expenses, allowance for doubtful accounts and professional fees. We believe that our recent restructuring actions will reduce general and administrative expenses in fiscal 2003 from the fiscal 2002 level.

**Stock-Based Compensation Expenses.** Stock-based compensation expenses include the amortization of stock compensation charges resulting from the granting of stock options, including those TTI stock options assumed by Sonus, stock awards to TTI employees under the 2000 Retention Plan and sales of restricted common stock. See Note 15(h) to our consolidated financial statements. Deferred compensation related to the granting of stock options and sales of restricted common stock to employees, including those TTI stock options assumed by Sonus, are being amortized over the vesting periods of four to five years. The deferred compensation charges associated with the 2000 Retention Plan awarded to TTI employees have been fully expensed as of December 31, 2002. The compensation expense associated with non-employees is recorded at the time services are provided. As of December 31, 2002, we expect to record approximately \$2.9 million and \$600,000 in employee stock-based compensation expense for fiscal 2003 and 2004.

On October 16, 2002, Sonus commenced an offer to exchange outstanding employee stock options (Exchange Offer) for new stock options to be granted on a date that is at least six months and one day from the expiration date of the Exchange Offer. See Note 15(d) to our consolidated financial

statements. The Exchange Offer expired on November 22, 2002 and outstanding options to purchase approximately 8,800,000 shares of common stock were accepted for exchange and cancelled. Employees will receive an option to purchase one share of common stock for each option exchanged. The new options will be granted with an exercise price equal to the fair market value of our common stock on the date of grant.

**Years Ended December 31, 2002 and 2001**

**Revenues.** Revenues for the years ended December 31, 2002 and 2001 were as follows, in thousands:

	2002	2001
<b>Revenues:</b>		
Product	\$ 41,395	\$ 152,648
Service	21,163	20,551
Total revenues	\$ 62,558	\$ 173,199

Product revenues comprise sales of our voice infrastructure products, including our GSX9000™ Open Services Switch, the Insignus™ Softswitch, the Sonus Insight™ Management System and related product offerings. Product revenues for fiscal 2002 decreased 73% from fiscal 2001, as a result of significant declines in capital spending by telecommunications service providers and financial difficulties, including in some cases bankruptcies, experienced by certain emerging service providers, including some of Sonus' customers. Service revenues primarily comprise hardware and software maintenance, network design and other professional services. Service revenues for fiscal 2002 increased 3% from fiscal 2001 primarily due to a greater installed base of products under maintenance contracts and an increase in product installation revenues.

For the years ended December 31, 2002 and 2001, three and four customers each contributed more than 10% of our revenues, representing an aggregate of 42% and 67% of total revenues. International revenues, primarily to Asia and Europe, were 25% and 18% of revenues for the years ended December 31, 2002 and 2001.

**Cost of Revenues/Gross Profit.** Cost of revenues for fiscal 2002 included a charge of \$9.4 million for the write-off of excess inventory and purchase commitments. Cost of revenues and gross profit as a percentage of revenues for the years ended December 31, 2002 and 2001 were as follows (in thousands, except percentages):

	2002	2001
<b>Cost of revenues:</b>		
Write-off of inventory and purchase commitments	\$ 9,434	\$ —
Product	19,535	56,222
Service	11,333	19,476
Total cost of revenues	\$ 40,302	\$ 75,698
<b>Gross profit (% of revenues):</b>		
Product	53%	63%
Service	47	5
Total gross profit	36%(1)	56%

(1) Includes the impact for the write-off of inventory and purchase commitments.

The decrease in product gross profit as a percentage of revenues, excluding the write-offs in fiscal 2002, was primarily due to a higher proportion of fixed costs resulting from the significant decline in

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revenue. The increase in service gross profit as a percentage of revenues was primarily due to cost cutting measures attributed to our restructuring actions.

**Research and Development Expenses.** Research and development expenses were \$45.3 million for fiscal 2002, a decrease of \$19.7 million, or 30%, from \$65.0 million in fiscal 2001. The decrease primarily reflects a reduction in salaries and related expenses attributed to restructuring actions and travel and entertainment expenses and, to a lesser extent, reductions in consulting fees and prototype costs, partially offset by an increase in depreciation expense.

**Sales and Marketing Expenses.** Sales and marketing expenses were \$27.9 million for fiscal 2002, a decrease of \$14.4 million, or 34%, from \$42.3 million in fiscal 2001. The decrease primarily reflects a reduction in salaries and related expenses attributed to restructuring actions and a reduction in commissions due to the decline in revenues, partially offset by increased costs for customer trials.

**General and Administrative Expenses.** General and administrative expenses were \$6.1 million for fiscal 2002, a decrease of \$7.0 million, or 53%, from \$13.1 million in fiscal 2001. The decrease primarily reflects reductions in salaries and related expenses attributed to restructuring actions, consultants and a reduction in the provision for doubtful accounts, and, to a lesser extent, reductions in travel and entertainment and supplies.

**Stock-Based Compensation Expenses.** Stock-based compensation expenses were \$19.5 million for fiscal 2002, a decrease of \$56.0 million, or 74% from \$75.5 million in fiscal 2001. The decrease is primarily attributed to lower deferred compensation balances resulting from write-offs made in connection with employee terminations and our offer to exchange certain employee stock options.

**Goodwill, Purchased Intangible Assets and In-Process Research and Development Expenses.** In January 2001, Sonus acquired certain intellectual property, in-process research and development and intangible assets in connection with our acquisition of TTI, which resulted in the recording of \$523.7 million of goodwill and other intangibles. Results for fiscal 2001 included a \$40.0 million write off of TTI purchased in-process research and development. Amortization of TTI purchased intangible assets was \$1.2 million for fiscal 2002, a decrease of \$106.4 million from \$107.6 million for fiscal 2001. This decrease is primarily the result of a write-off of \$374.7 million of TTI goodwill and purchased intangible assets in fiscal 2001. See Notes 3 and 4 to our consolidated financial statements.

In July 2001, Sonus completed the acquisition of certain intellectual property and other assets of privately-held Linguatq Incorporated, a provider of data distribution and billing application software, which resulted in the recording of \$5.4 million of goodwill and purchased intangible assets. Results for fiscal 2001 included a non-cash charge of \$3.8 million for purchased in-process research and development. Amortization of Linguatq purchased intangible assets was \$358,000 for fiscal 2002, an increase of \$191,000 from \$167,000 for fiscal 2001. See Note 5 to our consolidated financial statements.

**Restructuring Charges (Benefit), net.** Commencing in the third quarter of fiscal 2001 through fiscal 2002, in response to unfavorable business conditions primarily caused by significant reductions in capital spending by telecommunications service providers, Sonus implemented restructuring actions designed to reduce expenses and align its cost structure with its revised business outlook. The restructuring actions included worldwide workforce reductions, consolidation of excess facilities and the write-off of inventory and purchase commitments. Additionally, in fiscal 2002, Sonus recorded a restructuring benefit for a lease renegotiation. See Note 2 to our consolidated financial statements.

**Workforce reduction.** Restructuring actions in fiscal 2001 resulted in the reduction of Sonus' work force by approximately 150 employees, or 21%. Restructuring actions in fiscal 2002 reduced the work force by an additional 230 employees, or 39%. The affected employees were entitled to severance and other benefits for which Sonus recorded charges of \$4.9 million in fiscal 2002 and \$4.5 million in fiscal 2001.

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**Consolidation of excess facilities and other charges.** Sonus recorded net restructuring charges of \$1.5 million in fiscal 2002 and \$21.3 million in fiscal 2001 for the consolidation of excess facilities and other miscellaneous charges, which are included on the balance sheet as accrued restructuring expenses and long-term obligations. Offsetting the fiscal 2002 charge, Sonus recorded a restructuring benefit of \$16.6 million in fiscal 2002 as a result of the reduction by Sonus' TTI subsidiary of its lease commitment for excess space in its Texas facilities in exchange for a one-time payment of \$835,000 to a landlord and a guarantee by Sonus of TTI's future rent obligations.

**Write-off of inventory and purchase commitments.** During fiscal 2002, Sonus recorded cost of revenues of \$9.4 million, consisting of \$7.0 million for the write-off of inventory determined to be excess and obsolete and \$2.4 million for materials that are expected to be purchased from third-party contract manufacturers and suppliers under purchase commitments, but which are in excess of required quantities.

**Write-Off of Goodwill and Purchased Intangible Assets.** In response to unfavorable business conditions, Sonus re-evaluated the fair value of goodwill established in connection with the acquisitions of TTI and Linguatq and as a result recorded a non-cash impairment charge of \$1.8 million in fiscal 2002 for the write-off of goodwill.

In fiscal 2001, in light of negative industry and economic conditions, a general decline in technology valuations and our decision to discontinue the development and use of certain acquired technology, we performed an assessment of the carrying value of the goodwill and purchased intangible assets recorded in connection with our acquisition of TTI. In accordance with Statement of Financial Accounting Standards (SFAS) No. 121, Sonus recorded a non-cash impairment charge of \$374.7 million in fiscal 2001 for the write-off of goodwill and certain purchased intangible assets because the estimated undiscounted future cash flows of these assets was less than the carrying value.

**Interest Income (Expense), net.** Interest income consists of interest earned on our cash balances and marketable securities. Interest expense consists of interest incurred on convertible subordinated notes, equipment financing and capital lease arrangements. Interest income, net of interest expense, was \$1.3 million for fiscal 2002, a decrease of \$3.7 million from \$5.0 million in fiscal 2001. The decrease primarily reflects a reduction in interest rates and invested balances.

**Net Operating Loss Carryforwards.** As of December 31, 2002, we had approximately \$157.7 million of federal net operating loss carryforwards for tax purposes available to offset future taxable income. These net operating loss carryforwards expire at various dates through 2022, to the extent that they are not used. We have not recognized any benefit from the future use of net operating loss carryforwards for fiscal 2002 and 2001, or for any other periods since inception. Use of the net operating loss carryforwards may be limited in future years if there is a significant change in our ownership. Management has recorded a full valuation allowance for the related net deferred tax asset due to the uncertainty of realizing the benefit of this asset.

**Income Taxes.** No provision for income taxes has been recorded for fiscal 2002 and 2001, due to accumulated net losses.

**Years Ended December 31, 2001 and 2000**

**Revenues.** Revenues for the years ended December 31, 2001 and 2000 were as follows, in thousands:

	2001	2000
<b>Revenues:</b>		
Product	\$ 152,648	\$ 49,859
Service	20,551	1,911
Total revenues	\$ 173,199	\$ 51,770

Product revenues for fiscal 2001 increased 206% from fiscal 2000. The increase in product revenues was the result of a significant increase in the sale of voice infrastructure products. The increase in service revenues was primarily due to a greater installed base of products under maintenance contracts and an increase in product installations.

For the years ended December 31, 2001 and December 31, 2000, four and three customers each contributed more than 10% of our revenues and represented an aggregate of 67% and 70% of total revenues. International revenues, primarily to Asia and Europe, were 18% and 11% of revenues for the years ended December 31, 2001 and 2000.

**Cost of Revenues/Gross Profit.** Cost of revenues and gross profit as a percentage of revenues for the years ended December 31, 2001 and 2000 were as follows (in thousands, except percentages):

	2001	2000
<b>Cost of revenues:</b>		
Product	\$ 56,222	\$ 25,427
Service	19,476	2,421
Total cost of revenues	\$ 75,698	\$ 27,848
<b>Gross profit (loss) (% of revenues):</b>		
Product	63%	49%
Service	5	(27)
Total gross profit	56%	46%

The increase in product gross profit as a percentage of revenues was primarily the result of improved manufacturing efficiencies due to increased volume, a favorable product mix and a reduction in material costs. The increase in service gross profit as a percentage of revenues was primarily due to improved service efficiencies due to increased volume.

**Research and Development Expenses.** Research and development expenses were \$65.0 million for fiscal 2001, an increase of \$38.6 million, or 146%, from \$26.4 million in fiscal 2000. The increase reflects costs primarily associated with a significant increase in personnel and personnel-related expenses including those in connection with our acquisition of TTI, and, to a lesser extent, prototype and software expenses for the development of our products.

**Sales and Marketing Expenses.** Sales and marketing expenses were \$42.3 million for fiscal 2001, an increase of \$20.7 million, or 96%, from \$21.6 million in fiscal 2000. The increase reflects costs primarily associated with the hiring of additional U.S. and international sales and marketing personnel including those in connection with our acquisition of TTI, commissions, the opening of international sales offices and, to a lesser extent, travel-related expenses, marketing program costs and trade shows.

**General and Administrative Expenses.** General and administrative expenses were \$13.1 million for fiscal 2001, an increase of \$7.6 million, or 139%, from \$5.5 million in fiscal 2000. The increase reflects

the hiring of additional personnel including those in connection with our acquisition of TTI, and, to a lesser extent, an increase in professional fees, allowance for doubtful accounts and costs associated with being a public company.



**Stock-Based Compensation Expenses.** Stock-based compensation expenses were \$75.5 million for fiscal 2001, an increase of \$48.8 million, or 182% from \$26.7 million in fiscal 2000. The increase is primarily due to the amortization of deferred stock-based compensation resulting from the unvested TTI stock options assumed by Sonus, retention stock awards issued to TTI employees and the write-off of \$25.4 million of deferred compensation of shares and options held by terminated employees impacted by the restructuring plan.

**Goodwill, Purchased Intangible Assets and In-Process Research and Development Expenses.** In January 2001, Sonus acquired certain intellectual property, in-process research and development and intangible assets in connection with our acquisition of TTI. Results of operations for fiscal 2001 include \$107.6 million in amortization of TTI goodwill and purchased intangible assets, a \$40.0 million write-off of TTI purchased in-process research and development and the write-off of \$374.7 million in TTI goodwill and certain purchased intangible assets. See Notes 3 and 4 to our consolidated financial statements.

In July 2001, Sonus completed the acquisition of certain intellectual property and other assets of privately-held Linguatq Incorporated. Results of operations for fiscal 2001 include the amortization of purchased intangible assets of \$167,000 and a non-cash charge of \$3.8 million for purchased in-process research and development. See Note 5 to our consolidated financial statements.

**Restructuring Charges.** On September 26, 2001, in response to unfavorable business conditions largely caused by a rapid decrease in capital spending by telecommunications service providers, Sonus announced a restructuring plan designed to reduce expenses and align its cost structure with its revised business outlook. Accordingly, during the third quarter of fiscal 2001, Sonus recorded a restructuring charge of \$25.8 million for a worldwide workforce reduction, consolidation of excess facilities and other charges.

*Workforce reduction.* Restructuring actions in September 2001 resulted in the reduction of Sonus' workforce by approximately 150 employees, or 21%. The affected employees were entitled to severance and other benefits for which Sonus recorded a charge of \$4.5 million in fiscal 2001.

*Consolidation of excess facilities and other charges.* Sonus recorded a restructuring charge in fiscal 2001 of \$21.3 million for the consolidation of excess facilities and other miscellaneous charges, which are included on the balance sheet as accrued restructuring expenses and long-term obligations.

**Write-Off of Goodwill and Purchased Intangible Assets.** In light of negative industry and economic conditions, a general decline in technology valuations and our decision to discontinue the development and use of certain acquired technology, we performed an assessment of the carrying value of the goodwill and purchased intangible assets recorded in connection with our acquisition of TTI. In accordance with SFAS No. 121, Sonus recorded a non-cash impairment charge of \$374.7 million in fiscal 2001 for the write-off of goodwill and certain purchased intangible assets because the estimated undiscounted future cash flows of these assets was less than the carrying value.

**Interest Income (Expense), net.** Interest expense consists of interest incurred on convertible subordinated notes, equipment financing and capital lease arrangements. Interest income, net of interest expense, was \$5.0 million for fiscal 2001, a decrease of \$1.2 million from \$6.2 million in fiscal 2000. The decrease reflects a reduction in interest rates and invested balances and increasing interest expense incurred on capital lease arrangements assumed in the TTI acquisition and convertible subordinated notes.

**Income Taxes.** No provision for income taxes has been recorded for fiscal 2001 and 2000, due to accumulated net losses.

## Liquidity and Capital Resources

At December 31, 2002, Sonus' principal source of liquidity was its cash, cash equivalents and marketable securities that totaled \$111.2 million. Sonus' operating activities used net cash of \$15.9 million in fiscal 2002, as compared to \$1.2 million in fiscal 2001. The greater cash use primarily reflects an increase in the net loss excluding non-cash charges and a reduction in accrued expenses, partially offset by an increase in deferred revenue.

Net cash provided by investing activities was \$12.0 million for fiscal 2002, as compared to net cash used in investing activities of \$50.4 million for fiscal 2001. Net cash provided by investing activities for fiscal 2002 primarily reflects net maturities of marketable securities of \$15.1 million, offset by purchases of property and equipment of \$3.0 million. Net cash used in investing activities for fiscal 2001 primarily reflects net purchases of marketable securities of \$21.0 million, purchases of property and equipment of \$23.1 million and cash expenditures associated with our acquisitions of \$6.1 million. Sonus has no current material commitments for capital expenditures but does expect approximately \$5.0 million in purchases during fiscal 2003.

In January 2002, we established a \$10.0 million equipment line of credit and a \$20.0 million working capital line of credit with a bank available through March 24, 2003. On March 14, 2003, we extended these existing lines of credit through March 23, 2004. The lines of credit are collateralized by all of our assets, except intellectual property and bear interest at the banks prime rate. We are required to comply with various financial and restrictive covenants. As of December 31, 2002, Sonus had \$6.7 million available under the equipment line of credit, \$2.8 million in current outstanding borrowings and was in compliance with all bank covenants. See Notes 11 and 19 to our consolidated financial statements.

Net cash provided by financing activities was \$5.1 million for fiscal 2002, as compared to \$13.6 million for fiscal 2001. The net cash provided by financing activities for fiscal 2002 primarily resulted from the sale of common stock in connection with our employee stock purchase plan (ESPP) and net borrowings on our bank equipment line of credit. The net cash provided by financing activities for fiscal 2001 primarily resulted from the issuance of convertible subordinated notes, the sale of common stock under the ESPP and the exercise of stock options, partially offset by the repayment of \$8.0 million in a bank note assumed as part of the TTI acquisition.

The following summarizes our future contractual cash obligations as of December 31, 2002, in thousands:

	2003	2004	2005	2006	2007	2008	Total
Capital lease obligations	\$ 548	\$ 193	\$ 30	\$ —	\$ —	\$ —	\$ 771
Equipment line of credit	1,201	1,153	651	—	—	—	3,005
Operating leases	3,049	1,183	388	195	204	213	5,232
Convertible subordinated notes	475	475	475	10,238	—	—	11,663
<b>Total contractual cash obligations</b>	<b>\$ 5,273</b>	<b>\$ 3,004</b>	<b>\$ 1,544</b>	<b>\$ 10,433</b>	<b>\$ 204</b>	<b>\$ 213</b>	<b>\$ 20,671</b>

Based on our past performance and current expectations, we believe our current cash, cash equivalents, marketable securities and available bank financing will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least 12 months. Although it is difficult to predict future liquidity requirements with certainty, 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, the timing and rate of expansion of our business and the resources we devote to developing our products. We anticipate devoting substantial capital resources to continue our research and development efforts, to maintain our sales, support and marketing, and for other general

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corporate activities. We may periodically review strategic and operational alternatives to improve our operating results and financial position. In this regard, we may consider, among other things, changes in our capital structure, adjustments to our capital expenditures and overall spending and the restructuring of our operations. We cannot assure you that we will be successful in implementing any new strategic or operational initiatives or, if implemented, that they will have the effect of improving our operating results and financial position. If our existing resources and cash generated from operations are insufficient to satisfy our liquidity requirements, we may seek to sell additional equity or debt securities. The sale of additional 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 June 2002, the Financial Accounting Standards Board (FASB) issued SFAS No. 146, *Accounting for Costs Associated with Exit or Disposal Activities*. SFAS No. 146 addresses the recognition, measurement and reporting of costs associated with exit and disposal activities, including restructuring activities that are currently accounted for in accordance with Emerging Issues Task Force Issue No. 94-3, *Liability Recognition for Certain Employee Termination Benefits and other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*. The scope of SFAS No. 146 includes costs related to terminating a contract that is not a capital lease, costs to consolidate facilities or relocate employees, and certain termination benefits provided to employees who are involuntarily terminated. SFAS No. 146 is effective for exit or disposal activities initiated after December 31, 2002. Sonus does not expect the implementation of this statement will have a material impact on its consolidated financial position or results of operations.

In November 2002, the FASB issued Interpretation No. 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others* (FIN No. 45). FIN No. 45 elaborates on the disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. It also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The initial recognition and initial measurement provisions of the interpretation are applicable on a prospective basis to guarantees issued or modified after December 31, 2002 and the disclosure requirements in this interpretation are effective for financial statements of interim or annual periods ending after December 15, 2002. The FIN No. 45 disclosure requirements are included in Note 8(c). The adoption of FIN No. 45 is not expected to have a material impact on Sonus' financial position or results of operations.

In December 2002, the FASB issued SFAS No. 148, *Accounting for Stock-Based Compensation—Transition and Disclosure*, an amendment of SFAS Statement No. 123. SFAS No. 148 provides alternative methods of transition for a voluntary change to the fair value-based method of accounting for employee stock-based compensation. These alternative methods will only impact Sonus if we voluntarily change to the fair value-based method of accounting for employee stock-based compensation which we currently do not plan to do. SFAS No. 148 also requires companies who account for employee stock-based compensation under the intrinsic value-based method to disclose additional footnote information in annual financial statements effective for fiscal years ending after December 15, 2002 and in financial statements for interim periods beginning after December 15, 2002. The requisite disclosure appears in Note 1(j) to our consolidated financial statements.

In January 2003, the FASB issued Interpretation No. 46, *Consolidation of Variable Interest Entities* (FIN No. 46) to clarify the conditions under which assets, liabilities and activities of another entity should be consolidated into the financial statements of a company. FIN No. 46 requires the consolidation of a variable interest entity by a company that bears the majority of the risk of loss from the variable interest entity's activities, is entitled to receive a majority of the variable interest entity's

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residual returns or both. The provisions of FIN No. 46 are required to be adopted by Sonus in fiscal 2003. The adoption of FIN No. 46 is not expected to have a material impact on Sonus' financial position or results of operations.

### **Explanation of Use of Non-GAAP Financial Results**

In addition to its audited financial results in accordance with United States generally accepted accounting principles (GAAP), we may on occasion provide certain non-GAAP financial results to be used for informational purposes only. The non-GAAP financial results typically may exclude non-cash or one-time charges or benefits.

Sonus' management uses the non-GAAP financial results as an alternative means for assessing our quarterly operations. By excluding non-cash charges such as stock-based compensation, amortization of goodwill and purchased intangible assets, write-off of goodwill and purchased intangible assets and in-process research and development expenses, Sonus' management can evaluate our operations excluding these non-cash charges and can compare its results on a more consistent basis to the results of other companies in our industry. By excluding one-time charges such as restructuring charges (benefits) and inventory write-offs, Sonus' management can compare our ongoing operations to prior quarters where such items may be materially different and to ongoing operations of other companies in our industry who may have materially different one-time charges. Even though Sonus' management recognizes that non-GAAP financial results are not a substitute for GAAP results, non-GAAP measures are helpful in assisting Sonus' management understand and manage its business.

Sonus' management believes that the non-GAAP financial results may also provide useful information to investors. Non-GAAP financial results provide an alternative means for assessing and understanding our operations. Non-GAAP results may also allow investors and analysts to more readily compare our operations to prior financial results and to the financial results of other companies in the industry who similarly provide non-GAAP results to investors and analysts. Investors may seek to evaluate our business performance and the performance of our competitors as they relate to cash. Excluding one-time and non-cash charges may assist investors in this evaluation and comparisons.

We intend to continue to assess the potential value of reporting non-GAAP results consistent with applicable rules and regulations.

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## RISK FACTORS

*Investing in our common stock involves a high degree of risk. You should carefully consider the risks described below before buying our common stock. If any of the following risks actually occurs, the trading price of our common stock could decline and you may lose all or part of your investment.*

***Our business has been adversely affected by recent developments in the telecommunications industry and these developments will continue to impact our revenues and operating results.***

From our inception through the year 2000, the telecommunications market experienced rapid growth spurred by a number of factors including deregulation in the industry, entry of a large number of new emerging service providers, growth in data traffic and the availability of significant capital from the financial markets. In 2001 and 2002, the telecommunications industry experienced a reversal of some of these trends, marked by dramatic reductions in capital expenditures by service providers, financial difficulties and, in some cases, bankruptcies experienced by service providers and a sharp contraction in the availability of capital. These conditions caused a substantial reduction in demand for telecommunications equipment, including our products.

We expect the developments described above to continue to affect our business in the following manner:

- our ability to accurately forecast revenue is diminished;
- our revenues could be reduced further; and
- our losses may increase because operating expenses are largely based on anticipated revenue trends and a high percentage of our expenses are and will continue to be fixed in the short-term.

Our business, operating results and financial condition could be materially and adversely impacted by any one or a combination of the above.

***The weakened financial position of many emerging service providers has increased the unpredictability of our results.***

A substantial portion of our revenues to date has been from emerging service providers. Several of our emerging service provider customers, including XO Communications and Global Crossing, who together contributed 30% of our total 2001 revenues and 15% of our total 2002 revenues, have experienced financial difficulties and have filed for bankruptcy or are in the process of restructuring their operations. Our operating results could be materially and adversely affected if any present or future emerging service provider seeks to renegotiate existing contractual commitments, reduces its level of orders, delays or fails to pay our receivables, or fails to successfully and timely reorganize its operations including emerging from bankruptcy.

***We expect that a majority of our revenues will be generated from a limited number of customers and we will not be successful if we do not grow our customer base.***

To date, we have shipped our products to a limited number of customers. We expect that in the foreseeable future, the majority of our revenues will continue to depend on sales of our products to a limited number of customers. Three and four customers each contributed more than 10% of our revenues for the years ended December 31, 2002 and 2001, which represented an aggregate of 42% and 67% of total revenues. Our future success will depend on our ability to attract additional customers beyond our current limited number. The growth of our customer base could be adversely affected by:

- customer unwillingness to implement our new voice infrastructure products;
- potential customer concerns with selecting an emerging telecommunications equipment vendor;
- any delays or difficulties that we may incur in completing the development and introduction of our planned products or product enhancements;

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- any further deterioration in the general financial condition of service providers which could lead to additional bankruptcies or their inability to raise capital to finance business plans and capital expenditures;
  - new product introductions by our competitors;
  - any failure of our products to perform as expected; or
  - any difficulty we may incur in meeting customers' delivery requirements.

The loss of any of our significant customers or any substantial reduction in orders or contractual commitments from these customers could materially adversely affect our financial condition and results of operations. If we do not expand our customer base to include additional customers that deploy our products in operational commercial networks, our revenues will not grow significantly, or at all.

***The market for voice infrastructure products for the new public network is new and evolving and our business will suffer if it does not develop as we expect.***

The market for our products is evolving. Packet-based technology may not be widely accepted as a platform for voice and a viable market for our products may not develop or be sustainable. If this market does not develop, or develops more slowly than we expect, we may not be able to sell our products in significant volume, or at all.

***We may need additional capital in the future, which may not be available to us, and if it is available, may dilute the ownership of our common stock.***

We may need to raise additional funds through public or private debt or equity financings in order to:

- fund ongoing operations and capital requirements;
- take advantage of opportunities, including more rapid expansion or acquisition of complementary products, technologies or businesses;
- develop new products; or
- respond to competitive pressures.

Any additional capital raised through the sale of debt or equity may dilute an investor's percentage ownership of our common stock. Furthermore, additional financings may not be available on terms favorable to us, or at all. A failure to obtain additional funding could prevent us from making expenditures that may be required to grow or maintain our operations.

***We will not retain customers or attract new customers if we do not anticipate and meet specific customer requirements or if our products do not interoperate with our customers' existing networks.***

To achieve market acceptance for our products, we must effectively anticipate, and adapt in a timely manner to, customer requirements and offer products and services that meet changing customer demands. Prospective customers may require product features and capabilities that our current products do not have. The introduction of new or enhanced products also requires that we carefully manage the transition from older products in order to minimize disruption in customer ordering patterns and ensure that adequate supplies of new products can be delivered to meet anticipated customer demand. If we fail to develop products and offer services that satisfy customer requirements, or to effectively manage the transition from older products, our ability to create or increase demand for our products would be seriously harmed and we may lose current and prospective customers.

Many of our customers will require that our products be designed to interface with their existing networks, each of which may have different specifications. Issues caused by an unanticipated lack of interoperability may result in significant warranty, support and repair costs, divert the attention of our

engineering personnel from our hardware and software development efforts and cause significant customer relations problems. If our products do not interoperate with those of our customers' networks, installations could be delayed or orders for our products could be cancelled, which would seriously harm our gross margins and result in loss of revenues or customers.

***We may not become profitable.***

We have incurred significant losses since inception and expect to continue to incur losses in the future. As of December 31, 2002, we had an accumulated deficit of \$797.9 million and had only recognized cumulative revenues since inception of \$287.5 million through December 31, 2002. We have not achieved profitability on a quarterly or annual basis. Our revenues may not grow and we may never generate sufficient revenues to achieve or sustain profitability.

***The unpredictability of our quarterly results may adversely affect the trading price of our common stock.***

Our revenues and operating results will vary significantly from quarter to quarter due to a number of factors, many of which are outside of our control and any of which may cause our stock price to fluctuate. Generally, purchases by service providers of telecommunications equipment from manufacturers have been unpredictable and clustered, rather than steady, as the providers build out their networks. The primary factors that may affect our revenues and results include the following:

- fluctuation in demand for our voice infrastructure products and the timing and size of customer orders;
- the cancellation or deferral of existing customer orders or the renegotiation of existing contractual commitments;
- the failure of certain of our customers to successfully and timely reorganize their operations, including emerging from bankruptcy;
- the length and variability of the sales cycle for our products and the corresponding timing of recognizing or deferring revenues;
- new product introductions and enhancements by our competitors and us;
- changes in our pricing policies, the pricing policies of our competitors and the prices of the components of our products;
- our ability to develop, introduce and ship new products and product enhancements that meet customer requirements in a timely manner;
- the mix of product configurations sold;
- our ability to obtain sufficient supplies of sole or limited source components;

- our ability to attain and maintain production volumes and quality levels for our products;
- costs related to acquisitions of complementary products, technologies or businesses; and
- general economic conditions, as well as those specific to the telecommunications, networking and related industries.

As with other telecommunications product suppliers, we may recognize a substantial portion of our revenue in a given quarter from sales booked and shipped in the last weeks of that quarter. As a result, a delay in customer orders is likely to result in a delay in shipments and recognition of revenue beyond the end of a given quarter, which would have a significant impact on our operating results for that quarter.

Our operating expenses are largely fixed in the short-term and as a result, a delay in generating or recognizing revenues for the reasons set forth above, or for any other reason, could cause significant variations in our operating results. We believe that quarter-to-quarter comparisons of our operating

results are not a good indication of our future performance. It is likely that in some future quarters, our operating results may be below the expectations of public market analysts and investors. In this event, the price of our common stock will probably substantially decrease.

***If we fail to retain needed personnel, the implementation of our business plan could slow or our future growth could halt.***

Our business depends upon highly skilled engineering, sales, marketing and customer support personnel. Any failure to retain needed qualified personnel could impair our growth. Our future success depends upon the continued services of our executive officers who have critical industry experience and relationships that we rely on to implement our business plan. The loss of the services of any of our officers or key employees could delay the development and introduction of, and negatively impact our ability to sell, our products.

***We may face risks associated with our international expansion that could impair our ability to grow our revenues abroad.***

International revenues, primarily attributable to Asia and Europe, were 25% of our revenues for fiscal 2002, and we intend to continue to expand our sales into international markets. This expansion will require significant management attention and financial resources to successfully develop direct and indirect international sales and support channels. In addition, we may not be able to develop international market demand for our products, which could impair our ability to grow our revenues. We have limited experience marketing, distributing and supporting our products internationally and, to do so, we expect that we will need to develop versions of our products that comply with local standards. Furthermore, international operations are subject to other inherent risks, including:

- greater difficulty collecting accounts receivable and longer collection periods;
- difficulties and costs of staffing and managing international operations;
- the impact of differing technical standards outside the United States;
- the impact of recessions in economies outside the United States;
- unexpected changes in regulatory requirements and currency exchange rates;
- certification requirements;
- reduced protection for intellectual property rights in some countries;
- potentially adverse tax consequences; and
- political and economic instability.

***We are entirely dependent upon our voice infrastructure products and our future revenues depend upon their commercial success.***

Our future growth depends upon the commercial success of our voice infrastructure products. We intend to develop and introduce new products and enhancements to existing products in the future. We may not successfully complete the development or introduction of these products. If our target customers do not adopt, purchase and successfully deploy our current or planned products, our revenues will not grow.

***Because our products are sophisticated and designed to be deployed in complex environments, they may have errors or defects that we find only after full deployment, which could seriously harm our business.***

Our products are sophisticated and are designed to be deployed in large and complex networks. Because of the nature of our products, they can only be fully tested when substantially deployed in very large networks with high volumes of traffic. Some of our customers have only recently begun to

commercially deploy our products and they may discover errors or defects in the software or hardware, or the products may not operate as expected. If we are unable to fix errors or other performance problems that may be identified after full deployment of our products, we could experience:

- loss of, or delay in, revenues;

- loss of customers and market share;
- a failure to attract new customers or achieve market acceptance for our products;
- increased service, support and warranty costs and a diversion of development resources; and
- costly and time-consuming legal actions by our customers.

***If we do not respond rapidly to technological changes or to changes in industry standards, our products could become obsolete.***

The market for voice infrastructure products for the new public network is likely to be characterized by rapid technological change and frequent new product introductions. We may be unable to respond quickly or effectively to these developments. We may experience difficulties with software development, hardware design, manufacturing or marketing that could delay or prevent our development, introduction or marketing of new products and enhancements. The introduction of new products by our competitors, the market acceptance of products based on new or alternative technologies or the emergence of new industry standards could render our existing or future products obsolete. If the standards adopted are different from those that we have chosen to support, market acceptance of our products may be significantly reduced or delayed. If our products become technologically obsolete, we may be unable to sell our products in the marketplace and generate revenues.

***If we fail to compete successfully, our ability to increase our revenues or achieve profitability will be impaired.***

Competition in the telecommunications market is intense. This market has historically been dominated by large companies, such as Lucent Technologies and Nortel Networks, both of whom are our direct competitors. We also face competition from other large telecommunications and networking companies, including Cisco Systems, some of whom have entered our market by acquiring companies that design competing products. In addition, a number of smaller and mostly private companies have announced plans for new products that target market opportunities similar to those we address. Because this market is rapidly evolving, additional competitors with significant financial resources may enter these markets and further intensify competition.

Many of our current and potential competitors have significantly greater selling and marketing, technical, manufacturing, financial and other resources. Further, some of our competitors sell significant amounts of other products to our current and prospective customers. Our competitors' broad product portfolios, coupled with already existing relationships, may cause our customers to buy our competitors' products or harm our ability to attract new customers.

To compete effectively, we must deliver innovative products that:

- provide extremely high reliability and voice quality;
- scale easily and efficiently;
- interoperate with existing network designs and other vendors' equipment;
- provide effective network management;
- are accompanied by comprehensive customer support and professional services; and
- provide a cost-effective and space-efficient solution for service providers.

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If we are unable to compete successfully against our current and future competitors, we could experience price reductions, order cancellations, loss of revenues and reduced gross profit margins.

***We depend upon contract manufacturers and any disruption in these relationships may cause us to fail to meet the demands of our customers and damage our customer relationships.***

We rely on a small number of contract manufacturers to manufacture our products according to our specifications and to fill orders on a timely basis. Our contract manufacturers provide comprehensive manufacturing services, including assembly of our products and procurement of materials. Each of our contract manufacturers also builds products for other companies and may not always have sufficient quantities of inventory available to fill our orders or may not allocate their internal resources to fill these orders on a timely basis. We do not have long-term supply contracts with our manufacturers and they are not required to manufacture products for any specified period. We do not have internal manufacturing capabilities to meet our customers' demands. Qualifying a new contract manufacturer and commencing commercial-scale production is expensive and time consuming and could result in a significant interruption in the supply of our products. If a change in contract manufacturers results in delays in our fulfillment of customer orders or if a contract manufacturer fails to make timely delivery of orders, we may lose revenues and suffer damage to our customer relationships.

***We and our contract manufacturers rely on single or limited sources for supply of some components of our products and if we fail to adequately predict our manufacturing requirements or if our supply of any of these components is disrupted, we will be unable to ship our products.***

We and our contract manufacturers currently purchase several key components of our products, including commercial digital signal processors, from single or limited sources. We purchase these components on a purchase order basis. If we overestimate our component requirements, we could have excess inventory, which would increase our costs. If we underestimate our requirements, we may not have an adequate supply, which could interrupt manufacturing of our products and result in delays in shipments and revenues.

We currently do not have long-term supply contracts with our component suppliers and they are not required to supply us with products for any specified periods, in any specified quantities or at any set price, except as may be specified in a particular purchase order. In the event of a disruption or delay in supply, or inability to obtain products, we may not be able to develop an alternate source in a timely manner or at favorable prices, or at all. A failure to find acceptable alternative sources could hurt our ability to deliver high-quality products to our customers and negatively affect our operating margins. In addition, reliance on our suppliers exposes us to potential supplier production difficulties or quality variations. Our customers rely upon our ability to meet committed delivery dates,

and any disruption in the supply of key components would seriously impact our ability to meet these dates and could result in legal action by our customers, loss of customers or harm to our ability to attract new customers.

***If we are not able to obtain necessary licenses of third-party technology at acceptable prices, or at all, our products could become obsolete.***

We have incorporated third-party licensed technology into our current products. From time to time, we may be required to license additional technology from third parties to develop new products or product enhancements. Third-party licenses may not be available or continue to be available to us on commercially reasonable terms. The inability to maintain or re-license any third-party licenses required in our current products or to obtain any new third-party licenses to develop new products and product enhancements could require us to obtain substitute technology of lower quality or performance standards or at greater cost, and delay or prevent us from making these products or enhancements, any of which could seriously harm the competitiveness of our products.

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***Our ability to compete and our business could be jeopardized if we are unable to protect our intellectual property or become subject to intellectual property rights claims, which could require us to incur significant costs.***

We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. Monitoring unauthorized use of our products is difficult and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States. If competitors are able to use our technology, our ability to compete effectively could be harmed.

In addition, we have received inquiries from other patent holders and may become subject to claims that we infringe their intellectual property rights of others. Any parties asserting that our products infringe upon their proprietary rights could force us to license their patents for substantial royalty payments or to defend ourselves and possibly our customers or contract manufacturers in litigation. These claims and any resulting licensing arrangement or lawsuit, if successful, could subject us to significant royalty payments or liability for damages and invalidation of our proprietary rights. Any potential intellectual property litigation also could force us to do one or more of the following:

- stop selling, incorporating or using our products that use the challenged intellectual property;
- obtain from the owner of the allegedly infringed intellectual property right a license to sell or use the relevant technology, which license may not be available on reasonable terms, or at all; or
- redesign those products that use any allegedly infringing technology.

Any lawsuits regarding intellectual property rights, regardless of their success, would be time-consuming, expensive to resolve and would divert our management's time and attention.

***Any investments or acquisitions we make could disrupt our business and seriously harm our financial condition.***

Although we have no current agreements to do so, we intend to consider investing in, or acquiring, complementary products, technologies or businesses. In the event of future investments or acquisitions, we could:

- issue stock that would dilute our current stockholders' percentage ownership;
- incur debt or assume liabilities;
- incur significant impairment charges related to the write-off of goodwill and purchased intangible assets;
- incur significant amortization expenses related to purchased intangible assets; or
- incur large and immediate write-offs for in-process research and development and stock-based compensation.

Our integration of any acquired products, technologies or businesses will also involve numerous risks, including:

- problems and unanticipated costs associated with combining the purchased products, technologies or businesses;
- diversion of management's attention from our core business;
- adverse effects on existing business relationships with suppliers and customers;
- risks associated with entering markets in which we have limited or no prior experience; and
- potential loss of key employees, particularly those of the acquired organizations.

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We may be unable to successfully integrate any products, technologies, businesses or personnel that we might acquire in the future without significant costs or disruption to our business.

***If we are subject to employment claims, we could incur substantial costs in defending ourselves.***

We may become subject to employment claims in connection with employee terminations. In addition, companies in our industry whose employees accept positions with competitors frequently claim that their competitors have engaged in unfair hiring practices. These claims may result in material litigation. We could incur substantial costs defending ourselves or our employees against those claims, regardless of their merits. In addition, defending ourselves from those types of claims could divert our management's attention from our operations. If we are found liable in connection with any employment claim, we may incur significant costs that could adversely impact our financial condition and results of operations.

***Securities litigation could result in substantial cost and divert the attention of key personnel, which could seriously harm our business.***

We are currently a defendant in several securities class action lawsuits, which seek damages of indeterminate amounts. Litigation may be time-consuming, expensive and disruptive to normal business operations, and the outcome of litigation is difficult to predict. An unfavorable resolution of any specific lawsuit could have a material adverse effect on our business, results of operations and financial condition.

***Our stock price has been and may continue to be volatile.***

The market for technology stocks has been and will likely continue to be extremely volatile. The following factors could cause the market price of our common stock to fluctuate significantly:

- the addition or loss of any major customer;
- changes in the financial condition or anticipated capital expenditure purchases of any existing or potential major customer;
- quarterly variations in our operating results;
- changes in financial estimates by securities analysts;
- speculation in the press or investment community;
- announcements by us or our competitors of significant contracts, new products or acquisitions, distribution partnerships, joint ventures or capital commitments;
- sales of common stock or other securities by us or by our stockholders in the future;
- securities and other litigation;
- announcement of a stock split, reverse stock split, stock dividend or similar event;
- economic conditions for the telecommunications, networking and related industries; and
- worldwide economic instability.

***If we fail to comply with certain continued Nasdaq National Market listing standards, our common stock could be delisted and the market value and liquidity of our common stock may decrease significantly.***

Our common stock is presently listed on the Nasdaq National Market under the symbol SONS. All companies listed on Nasdaq are required to comply with certain continued listing standards.

On September 16, 2002, we received a letter from Nasdaq notifying Sonus that it did not comply with the minimum bid price requirement of \$1.00 per share for continued listing on the Nasdaq National Market and that its securities were subject to delisting from the Nasdaq National Market

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unless Sonus demonstrated compliance with such requirement before December 16, 2002. Sonus has demonstrated such compliance and, therefore, continues to have its common stock listed on the Nasdaq National Market. There can be no assurance, however, that Sonus will continue to maintain compliance with the listing requirements of the Nasdaq National Market. In the event the common stock of Sonus is delisted from the Nasdaq National Market, among other things, the market value and liquidity of the common stock of Sonus could be materially and adversely affected and it may become more difficult for Sonus to obtain additional financing.

***Sales of a substantial amount of our common stock in the future could cause our stock price to fall.***

Some stockholders who acquired shares prior to our IPO or in connection with our acquisition of TTI hold a substantial number of shares of our common stock that have not yet been sold in the public market. Further, additional shares may become available for sale upon the conversion or redemption of convertible subordinated notes. Sales of a substantial number of shares of our common stock within a short period of time in the future could impair our ability to raise capital through the sale of additional debt or stock and/or cause our stock price to fall.

***Ownership of stock by insiders could limit your ability to influence the outcome of key transactions, including a change of control.***

Our executive officers, directors and entities affiliated with them beneficially own, in the aggregate, approximately 12% of our outstanding common stock. These stockholders, if acting together, could be able to influence matters requiring approval by our stockholders, including the election of directors and the approval of mergers or other business combination transactions.

***Provisions of our charter documents and Delaware law may have anti-takeover effects that could prevent a change of control.***



Provisions of our amended and restated certificate of incorporation, our amended and restated by-laws and Delaware law could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our stockholders.

## SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements that involve substantial risks and uncertainties. In some cases you can identify these statements by forward-looking words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "should," "will," and "would" or similar words. You should read statements that contain these words carefully because they discuss future expectations, contain projections of future results of operations or of financial position or state other "forward-looking" information. The important factors listed above in the section captioned "Risk Factors," as well as any cautionary language in this report, provide examples of risks, uncertainties and events that may cause the actual results to differ materially from the expectations described in these forward-looking statements. You should be aware that the occurrence of the events described in the risk factors and elsewhere in this report could have a material adverse effect on the business, results of operations and financial position of Sonus.

Any forward-looking statements in this report are not guarantees of future performances, and actual results, developments and business decisions may differ from those anticipated by such forward-looking statements, possibly materially. Sonus disclaims any duty to update any forward-looking statements, all of which are expressly qualified by the statements in this section.

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## ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK.

We do not currently use derivative financial instruments. We generally place our marketable security investments in high-quality credit instruments, primarily U.S. Government obligations and corporate obligations with contractual maturities of less than one year. We do not expect any material loss from our marketable security investments and therefore believe that our potential interest rate exposure is not material. We have no current material exposure to foreign currency rate fluctuations, though we will continue to evaluate the impact of foreign currency exchange risk on our results of operations as we expand internationally.

## ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The consolidated financial statements of Sonus Networks, Inc. are filed as a part of this Annual Report on Form 10-K beginning on page F-1.

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

Sonus dismissed Arthur Andersen LLP (Andersen) as its independent accountants and appointed Ernst and Young LLP (Ernst and Young) as its new independent accountants, effective June 27, 2002. The decision to dismiss Andersen and to retain Ernst and Young was approved by Sonus' Board of Directors upon the recommendation of its Audit Committee.

During Sonus' fiscal years ended December 31, 2001 and 2000, and the subsequent interim period from January 1, 2002 through June 27, 2002, there were no disagreements between Sonus and Andersen on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements if not resolved to Andersen's satisfaction would have caused them to make reference to the subject matter of the disagreement in connection with their reports.

None of the reportable events described under Item 304(a)(1)(v) of Regulations S-K occurred within Sonus' fiscal years ended December 31, 2001 and 2000 and the subsequent interim period from January 1, 2002 through June 27, 2002.

The audit reports of Andersen on the consolidated financial statements of Sonus and its subsidiaries as of and for the fiscal years ended December 31, 2001 and 2000 did not contain any adverse opinion or disclaimer of opinion, nor were they qualified or modified as to uncertainty, audit scope, or accounting principles.

Sonus provided Andersen with a copy of the above disclosure statements. Attached as Exhibit 16.1 is a copy of Andersen's letter, dated June 27, 2002, stating its agreement with these disclosure statements.

Sonus did not consult with Ernst and Young on any accounting or auditing matters during the fiscal years ended December 31, 2001 and 2000 and the subsequent interim period from January 1, 2002 through June 27, 2002.

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

The following table sets forth our executive officers and directors, their respective ages and positions as of December 31, 2002:

Name	Age	Position
Rubin Gruber	58	Chairman of the Board of Directors
Hassan M. Ahmed	45	President, Chief Executive Officer and Director
Edward N. Harris	41	Vice President of Manufacturing
Michael G. Hluchyj	48	Chief Technology Officer, Vice President and Secretary
Paul R. Jones	53	Vice President of Engineering
Jeffrey Mayersohn	51	Vice President of Customer Support and Professional Services
Stephen J. Nill	51	Chief Financial Officer, Vice President of Finance and Administration and Treasurer

John Michael O'Hara	36	Vice President of Marketing
Gary A. Rogers	47	Vice President of Worldwide Sales
Edward T. Anderson (1)	53	Director
Paul J. Ferri (1)(2)	64	Director
Paul J. Severino (1)(2)	56	Director

- (1) Member of audit committee.
- (2) Member of compensation committee.

**Rubin Gruber** is one of our founders and has been a Director since November 1997 and Chairman of our Board of Directors since November 1998. From November 1997 until November 1998, Mr. Gruber was our President. Before founding Sonus, Mr. Gruber was a founder of VideoServer, Inc., now Ezenia!, Inc., a manufacturer of videoconference network equipment, and from February 1992 until September 1996 served as Vice President of Business Development. Previously, Mr. Gruber was a founder and served as President of both Cambridge Telecommunications, Inc., a manufacturer of networking equipment, and Davox Corporation, a developer of terminals supporting voice and data applications, and served as a Senior Vice President of Bolt, Beranek and Newman Communications Corporation, a subsidiary of Bolt, Beranek and Newman, Inc., a manufacturer of data communications equipment. Mr. Gruber also serves on the Board of Directors of the International Softswitch Consortium. Mr. Gruber holds a B.Sc. in mathematics from McGill University and an M.A. in mathematics from Wayne State University.

**Hassan M. Ahmed** has been our President and Chief Executive Officer and a member of our Board of Directors since November 1998. From July 1998 to November 1998, Mr. Ahmed was Executive Vice President and General Manager of the Core Switching Division of Ascend Communications, Inc., a provider of wide area network switches and access data networking equipment, and from July 1997 until July 1998 was a Vice President and General Manager of the Core Switching Division. From June 1995 to July 1997, Mr. Ahmed was Chief Technology Officer and Vice President of Engineering for Cascade Communications Corp., a provider of wide area network switches. From 1993 until June 1995, Mr. Ahmed was a founder and President of WaveAccess, Inc., a supplier of wireless communications. Prior to that, he was an Associate Professor at Boston University, Engineering Manager at Analog Devices, a chip manufacturer, and director of VSLI Systems at Motorola Codex, a supplier of communications equipment. Mr. Ahmed holds a B.S. and M.S. in engineering from Carleton University and a Ph.D. in engineering from Stanford University.

**Edward N. Harris** has been our Vice President of Manufacturing since October 2002. From September 2000 to October 2002, Mr. Harris was our Director of Materials and Planning. From July 1999 to September 2000, Mr. Harris was Senior Supply Chain Manager for Lucent Technologies,

Integrated Network Solutions, a provider of core switching products. He was previously employed by Ascend Communications prior to its acquisition by Lucent, as Supply Chain Manager from January 1998 to June 1999 and as Senior Buyer/Planner from June 1997 to December 1997, and with Cascade Communications prior to its acquisition by Ascend, as Senior Buyer/Planner from 1994 to June 1997. Prior to that, he worked in materials management at American Science & Engineering, a manufacturer of x-ray inspection equipment and at Analog Devices. Mr. Harris holds a B.S. from the University of New Hampshire.

**Michael G. Hluchyj** is one of our founders and has been our Chief Technology Officer and Vice President since November 1997. He also has been our Secretary since our inception, and was our President from August 1997 to November 1997, our Treasurer from inception until March 2000 and a Director from our inception until November 1998. From July 1994 until July 1997, he was Vice President and Chief Technology Officer at Summa Four, Inc., a supplier of switches for carrier networks. Previously, he was Director of Networking Research at Motorola Codex and on the technical staff at AT&T Bell Laboratories. Mr. Hluchyj holds a B.S. in engineering from the University of Massachusetts and an M.S. and a Ph.D. in engineering from the Massachusetts Institute of Technology.

**Paul R. Jones** has been our Vice President of Engineering since June 2000. From February 1997 until May 2000, he was Vice President of Engineering for Indus River Networks, Inc., a developer of virtual private network solutions. From December 1994 until February 1996, he was Chief Operating Officer at Isis Distribution Systems, a wholly owned subsidiary of Stratus Computers. From March 1990 until November 1994, he was Vice President of Engineering at Stratus Computers, Inc., a provider of fault tolerant computer systems and services. Previously, Mr. Jones held senior engineering management positions at Stellar Computers, Inc. and Prime Computer, Inc. Mr. Jones holds an A.B. from Brown University and an M.S. in engineering from the University of Massachusetts.

**Jeffrey Mayersohn** has been our Vice President of Customer Support and Professional Services since July 1999. From March 1998 until July 1999, he was our Vice President of Carrier Relations. From June 1997 to March 1998, Mr. Mayersohn was a Senior Vice President at GTE Internetworking, an Internet service provider. From January 1995 to June 1997, he was with BBN Corporation, formerly Bolt, Beranek and Newman, Inc., and was a Vice President at the BBN Planet division, an Internet service provider. From 1978 to January 1995, he held a number of positions at Bolt, Beranek and Newman Communications Corporation, including Senior Vice President of Engineering, Senior Vice President responsible for U.S. Government Networks and Vice President of Professional Services. Mr. Mayersohn holds an A.B. in physics from Harvard College and an M.Phil. in physics from Yale University.

**Stephen J. Nill** has been our Chief Financial Officer and Vice President of Finance and Administration since September 1999 and our Treasurer since March 2000. From June 1994 until August 1999, he was Vice President of Finance and Chief Financial Officer of VideoServer, Inc., now Ezenia!, Inc. Previously, he served as Corporate Controller and Chief Accounting Officer at Lotus Development Corporation, a software supplier. Prior to that, Mr. Nill held various financial positions with Computervision, Inc., a supplier of workstation-based software, International Business Machines Corporation and Arthur Andersen LLP. Mr. Nill has a B.A. in accounting from New Mexico State University and an M.B.A. from Harvard University.

**John Michael O'Hara** has been our Vice President of Marketing since July 2002. From 1987 to March 2002, Mr. O'Hara held a number of positions at Nortel Networks Corporation, a communications technology provider. From March 2001 to March 2002, he served as Vice President of Marketing in Europe, the Middle East and Africa, from April 1999 to March 2001 was Vice President of Business Operations, from April 1997 to March 1999 was Executive Assistant to the President of Nortel Europe and, from January 1996 to March 1997 was Senior Manager of Order Management. Prior to that, he held a number of management positions including sales, operations and customer service with Nortel in the European region. He holds a B. Eng. degree in engineering from the Queens University of Belfast.

**Gary A. Rogers** has been our Vice President of Worldwide Sales since March 1999. From March 1999 to December 2000, Mr. Rogers was also our Vice President of Marketing. From February 1997 to March 1999, Mr. Rogers was Senior Vice President of Worldwide Sales and Operations at Security Dynamics, Inc., now RSA Security, Inc., a supplier of network security products. Previously, he served at Bay Networks, Inc., as Vice President of International Sales from July 1996 to February 1997 and as Vice President of Europe, Middle East and Africa from 1994 until July 1996. Prior to that, he held sales and marketing positions with International Business Machines Corporation. Mr. Rogers holds a B.A. in mathematics from Dartmouth College and an M.B.A. from the University of Chicago.

**Edward T. Anderson** has been a Director since November 1997. Mr. Anderson has been managing general partner of North Bridge Venture Partners, a venture capital firm, since 1994. Previously, he was a general partner of ABS Ventures, the venture capital affiliate of Alex Brown & Sons. He has an M.F.A. from the University of Denver and an M.A. from Columbia University Graduate School of Business.

**Paul J. Ferri** has been a Director since November 1997. Mr. Ferri has been a general partner of Matrix Partners, a venture capital firm, since 1982. He also serves on the Board of Directors of Sycamore Networks, Inc. Mr. Ferri has a B.S. in engineering from Cornell University, an M.S. in engineering from Polytechnic Institute of New York and an M.B.A. from Columbia University.

**Paul J. Severino** has been a Director since March 1999. Mr. Severino is a private investor. From 1994 to October 1996, he was Chairman of Bay Networks, Inc. after its formation from the merger of Wellfleet Communications, Inc. and Synoptics Communications, Inc. Prior to that, he was a founder, President and Chief Executive Officer of Wellfleet Communications, Inc. He also serves on the Board of Directors of MCK Communications, Inc. and Media 100, Inc. Mr. Severino has a B.S. in engineering from Rensselaer Polytechnic Institute.

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

The information required by this Item 11 is incorporated by reference to our definitive Proxy Statement with respect to our 2003 Annual Meeting of Shareholders to be filed with the SEC not later than 120 days after the end of the fiscal year.

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

The information required by this Item 12 is incorporated by reference to our definitive Proxy Statement with respect to our 2003 Annual Meeting of Shareholders to be filed with the SEC not later than 120 days after the end of the fiscal year.

The information related to Securities Authorized for Issuance under Equity Compensation Plans is incorporated by reference to our definitive Proxy Statement with respect to our 2003 Annual Meeting of Shareholders to be filed with the SEC not later than 120 days after the end of the fiscal year.

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

The information required by this Item 13 is incorporated by reference to our definitive Proxy Statement with respect to our 2003 Annual Meeting of Shareholders to be filed with the SEC not later than 120 days after the end of the fiscal year.

#### **ITEM 14. CONTROLS AND PROCEDURES.**

- (a) *Evaluation of disclosure controls and procedures.* Sonus' chief executive officer and chief financial officer have reviewed and evaluated the effectiveness of Sonus' disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) as of a date within ninety days before the filing of this annual report. Based on that evaluation, the chief executive officer and chief financial

officer have concluded that Sonus' current disclosure controls and procedures are effective to ensure that information required to be disclosed by Sonus in reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in SEC rules and forms.

- (b) *Changes in internal controls.* There have not been any significant changes in Sonus' internal controls or in other factors that could significantly affect these disclosure controls subsequent to the date of their evaluation. There were no significant deficiencies or material weakness in the internal controls, and therefore no corrective actions were taken.

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

##### **(a) Documents filed as part of Form 10-K:**

##### **1) Financial Statements.**

The following consolidated financial statements and notes thereto are included in Part II, Item 8 filed as part of this report:

- Reports of Independent Auditors and Independent Public Accountants
- Consolidated Balance Sheets
- Consolidated Statements of Operations
- Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)

- Consolidated Statements of Cash Flows
- Notes to Consolidated Financial Statements

## 2) Financial Statement Schedules.

None. All schedules are omitted because they are inapplicable, not required under the instructions or because the information is reflected in the consolidated financial statements or notes thereto.

## 3) List of Exhibits.

The following is a list of exhibits filed as a part of this Form 10-K:

Exhibit Number	Description
2.1(d)	Agreement and Plan of Merger and Reorganization, dated as of November 2, 2000, by and among the Registrant, Storm Merger Sub, Inc. and telecom technologies, inc.
3.1(c)	Certificate of Amendment to Fourth Amended and Restated Certificate of Incorporation of Sonus Networks, Inc.
3.2(b)	Fourth Amended and Restated Certificate of Incorporation of Sonus Networks, Inc.
3.3(b)	Amended and Restated By-Laws of Sonus Networks, Inc.
4.1(b)	Form of Stock Certificate representing shares of Sonus Networks, Inc. Common Stock.
9.1(d)	Voting Agreement, dated as of November 2, 2000, among the Registrant, the Stockholder parties thereto and telecom technologies, inc.
10.1(a)	Registration Rights Agreement, dated as of November 2, 2000, by and among Sonus Networks, Inc. and the Stockholder parties thereto.
10.2(a)	Sonus 2000 Retention Plan.
10.3(a)	Telecom technologies, inc. 1998 Amended Equity Incentive Plan.
10.4(b)	Amended and Restated 1997 Stock Incentive Plan of the Registrant.
10.5(b)	2000 Employee Stock Purchase Plan of the Registrant.

10.6(b)	Lease, dated January 21, 1999, as amended, between the Registrant and Glenborough Fund V, Limited Partnership with respect to property located at 5 Carlisle Road, Westford, Massachusetts.
10.7(a)	Sub-lease, dated October 20, 2000, between the Registrant and Unisphere Networks, Inc. with respect to property located at 5 Carlisle Road, Massachusetts.
10.8(a)	Sub-Lease, dated October 20, 2000, between the Registrant and Unisphere Networks, Inc. with respect to property located at 235 Littleton Road, Westford, Massachusetts.
10.9(a)	Lease, dated September 30, 2000, between the Registrant and BCIA New England Holdings LLC with respect to property located at 25 Porter Road, Littleton, Massachusetts.
10.10(b)	Agreement of Sublease, dated April 14, 2000, between the Registrant and Unisphere Solutions, Inc. with respect to property located at 25 Porter Road, Littleton, Massachusetts.
10.11(a)	Office Lease Agreement, dated as of November 14, 2000, between telecom technologies, inc. and TR Lookout Partners, Ltd. with respect to property located at 1301 East Lookout Drive, Suite 3000, Richardson, Texas.
10.12(a)	First Amendment to Office Lease Agreement, dated as of January 8, 2001, between telecom technologies, inc. and TR Lookout Partners, Ltd. with respect to property located at 1300 East Lookout Drive, Suite 3000, Richardson, Texas.
10.13(e)	Office Lease Agreement dated April 4, 1997, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.14(e)	First Amendment to Office Lease Agreement, dated November 1, 1997, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.15(e)	Second Amendment to Office Lease Agreement, dated July 1, 1998, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.16(e)	Third Amendment to Office Lease Agreement, dated July 1, 1998, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.17(e)	Fourth Amendment to Office Lease Agreement, dated February 1, 1999, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.18(e)	Global Agreement, dated March 5, 2002, by and between TR Lookout Partners, Ltd., Collins Campbell Joint Venture, telecom technologies, inc. and Registrant related to property lease agreements.
10.19	Fifth Amendment to Office Lease Agreement, dated February 28, 2002, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.20	Sixth Amendment to Office Lease Agreement, dated February 1, 2003, between telecom technologies, inc. and Collins Campbell Joint Venture with respect to property located at 1701 North Collins Blvd., Suite 3000, Richardson, Texas.
10.21(b)	Series A Preferred Stock Purchase Agreement, dated as of November 18, 1997, by and among the Registrant and the "Purchaser" parties thereto.
10.22(b)	Series B Preferred Stock Purchase Agreement, dated as of September 23, 1998, by and among the Registrant and the "Purchaser" parties thereto.
10.23(b)	Series C Preferred Stock Purchase Agreement, dated as of September 10, 1999, by and among the Registrant

- and the "Purchaser" parties thereto.
- 10.24(b) Series D Preferred Stock Purchase Agreement, dated as of March 9, 2000, by and among the Registrant and the "Purchaser" parties thereto.

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- 10.25(b) Third Amended and Restated Investor Rights Agreement, dated as of March 9, 2000, by and among the Registrant and the "Purchaser" parties thereto.
- 10.26(b) Third Amended and Restated Right of First Refusal and Co-Sale Agreement, dated as of March 9, 2000, among the Registrant and the persons and entities listed on the signature pages thereto.
- 10.27(e) Loan and Security Agreement, dated as of January 16, 2002, by and between the Registrant and Silicon Valley Bank.
- 10.28(g) Offer to Exchange Outstanding Stock Options dated October 16, 2002, as amended.
- 16.1(f) Copy of Andersen's letter, dated June 27, 2002, stating its agreement with certain disclosure statements.
- 21.1 Subsidiaries of the Registrant.
- 23.1 Consent of Ernst & Young LLP.
- 23.2 Consent of Arthur Andersen LLP.
- 99.1 Certificate of Sonus Networks, Inc. Chief Executive Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
- 99.2 Certificate of Sonus Networks, Inc. Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

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- (a) Incorporated by reference to the Registrant's Registration Statement on Form S-4 (file No. 333-52682).
- (b) Incorporated by reference to the Registrant's Registration Statement on Form S-1 (file No. 333-32206).
- (c) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed June 21, 2001 with the SEC.
- (d) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed November 17, 2000 with the SEC.
- (e) Incorporated by reference from the Registrant's Form 10-K, filed March 28, 2002 with the SEC.
- (f) Incorporated by reference to the Registrant's Current Report on Form 8-K, filed June 27, 2002 with the SEC.
- (g) Attached as Exhibit (a)(1) to Tender Offer Statement on Schedule TO, filed October 16, 2002 with the SEC, and subsequently amended by Amendment No. 1, filed on October 17, 2002, Amendment No. 2, filed on November 12, 2002, and Amendment No. 3, filed on November 26, 2002.

**(b) Reports on Form 8-K filed during the fourth quarter of fiscal 2002.**

Sonus filed on October 10, 2002 a Current Report on Form 8-K dated October 9, 2002 with the SEC in connection with its financial results for the third quarter of fiscal 2002.

Sonus filed on December 6, 2002 a Current Report on Form 8-K dated December 6, 2002 with the SEC in connection with its receipt from Nasdaq of a notification that Sonus had regained compliance with the minimum bid requirement for continued listing on the Nasdaq National Market.

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**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Westford, Commonwealth of Massachusetts, on this 19th day of March, 2003.

SONUS NETWORKS, INC.

By: /s/ HASSAN M. AHMED

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Hassan M. Ahmed  
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated:

Signature	Title	Date
<u>/s/ HASSAN M. AHMED</u> Hassan M. Ahmed	President, Chief Executive Officer and Director (Principal Executive Officer)	March 19, 2003
<u>/s/ STEPHEN J. NILL</u>	Chief Financial Officer, Vice President of Finance and Administration and	March 19, 2003

Stephen J. Nill

Treasurer (Principal Financial and  
Accounting Officer)

/s/ RUBIN GRUBER

Chairman of the Board of Directors and  
Director

March 19, 2003

Rubin Gruber

/s/ EDWARD T. ANDERSON

Director

March 19, 2003

Edward T. Anderson

/s/ PAUL J. FERRI

Director

March 19, 2003

Paul J. Ferri

/s/ PAUL J. SEVERINO

Director

March 19, 2003

Paul J. Severino

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### CERTIFICATION

I, Hassan M. Ahmed, President and Chief Executive Officer of Sonus Networks, Inc., certify that:

1. I have reviewed this annual report on Form 10-K for the year ended December 31, 2002 ("Annual Report") of Sonus Networks, Inc. (the "Registrant");
2. Based on my knowledge, this Annual Report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Annual Report;
3. Based on my knowledge, the financial statements, and other financial information included in this Annual Report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this Annual Report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the Registrant and have:
  - (a) Designed such disclosure controls and procedures to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this Annual Report is being prepared;
  - (b) Evaluated the effectiveness of the Registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this Annual Report (the "Evaluation Date"); and
  - (c) Presented in this Annual Report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the Registrant's auditors and the audit committee of Registrant's board of directors:
  - (a) All significant deficiencies in the design or operation of internal controls which could adversely affect the Registrant's ability to record, process, summarize and report financial data and have identified for the Registrant's auditors any material weaknesses in internal controls; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal controls; and
6. The Registrant's other certifying officer and I have indicated in this Annual Report whether there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 19, 2003

/s/ HASSAN M. AHMED

Hassan M. Ahmed  
President and Chief Executive Officer

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### CERTIFICATION

I, Stephen J. Nill, Chief Financial Officer, Vice President of Finance and Administration and Treasurer of Sonus Networks, Inc., certify that:

1. I have reviewed this annual report on Form 10-K for the year ended December 31, 2002 ("Annual Report") of Sonus Networks, Inc. (the "Registrant");
2. Based on my knowledge, this Annual Report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this Annual Report;
3. Based on my knowledge, the financial statements, and other financial information included in this Annual Report, fairly present in all material respects the financial condition, results of operations and cash flows of the Registrant as of, and for, the periods presented in this Annual Report;
4. The Registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-14 and 15d-14) for the Registrant and we have:
  - (a) Designed such disclosure controls and procedures to ensure that material information relating to the Registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this Annual Report is being prepared;
  - (b) Evaluated the effectiveness of the Registrant's disclosure controls and procedures as of a date within 90 days prior to the filing date of this Annual Report (the "Evaluation Date"); and
  - (c) Presented in this Annual Report our conclusions about the effectiveness of the disclosure controls and procedures based on our evaluation as of the Evaluation Date;
5. The Registrant's other certifying officer and I have disclosed, based on our most recent evaluation, to the Registrant's auditors and the audit committee of Registrant's board of directors:
  - (a) All significant deficiencies in the design or operation of internal controls which could adversely affect the Registrant's ability to record, process, summarize and report financial data and have identified for the Registrant's auditors any material weaknesses in internal controls; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Registrant's internal controls; and
6. The Registrant's other certifying officer and I have indicated in this Annual Report whether there were significant changes in internal controls or in other factors that could significantly affect internal controls subsequent to the date of our most recent evaluation, including any corrective actions with regard to significant deficiencies and material weaknesses.

Date: March 19, 2003

/s/ STEPHEN J. NILL

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Stephen J. Nill  
*Chief Financial Officer, Vice President of Finance and Administration and Treasurer*

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**SONUS NETWORKS, INC.**

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**Report of Independent Auditors**

To the Board of Directors and Stockholders of  
Sonus Networks, Inc.:

We have audited the accompanying consolidated balance sheet of Sonus Networks, Inc. as of December 31, 2002 and the related consolidated statements of operations, stockholders' equity and cash flows for the year ended December 31, 2002. These consolidated financial statements are the responsibility of the Sonus Networks, Inc. management. Our responsibility is to express an opinion on these consolidated financial statements based on our audit. The consolidated financial

statements of Sonus Networks, Inc. as of December 31, 2001 and for the years ended December 31, 2001 and 2000 were audited by other auditors who have ceased operations and whose report dated January 14, 2002 expressed an unqualified opinion on those statements.

We conducted our audit 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 audit provides a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Sonus Networks, Inc. as of December 31, 2002, and the results of its operations and its cash flows for the year ended December 31, 2002 in conformity with accounting principles generally accepted in the United States.

Ernst & Young LLP

Boston, Massachusetts  
January 21, 2003 (except with respect  
to the matter discussed in Note 19,  
as to which the date is March 14, 2003)

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This is a copy of the audit report previously issued by Arthur Andersen LLP in connection with the consolidated financial statements of Sonus Networks, Inc. included in the Annual Report on Form 10-K for the fiscal year ended December 31, 2001. This audit report has not been reissued by Arthur Andersen LLP in connection with the filing of this Annual Report on Form 10-K for the fiscal year ended December 31, 2002. The consolidated balance sheet as of December 31, 2000 and the related consolidated statements of operations, redeemable convertible preferred stock and stockholders' equity (deficit) and cash flows for the year ended December 31, 1999 related to this audit report have not been included in the audited consolidated financial statements in this Annual Report on Form 10-K for the fiscal year ended December 31, 2002. See Exhibit 23.2 included in this Annual Report on Form 10-K for further discussion.

### Report of Independent Public Accountants

To the Board of Directors and Stockholders of  
Sonus Networks, Inc.:

We have audited the accompanying consolidated balance sheets of Sonus Networks, Inc. (a Delaware corporation) as of December 31, 2001 and 2000 and the related consolidated statements of operations, redeemable convertible preferred stock and stockholders' equity (deficit) and cash flows for the years ended December 31, 2001, 2000 and 1999. These consolidated financial statements are the responsibility of the Sonus Networks, Inc. management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Sonus Networks, Inc. as of December 31, 2001 and 2000, and the results of its operations and its cash flows for the years ended December 31, 2001, 2000 and 1999 in conformity with accounting principles generally accepted in the United States.

Arthur Andersen LLP

Boston, Massachusetts  
January 14, 2002 (except with respect  
to the matters discussed in Note 17,  
as to which the date is March 5, 2002)

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## SONUS NETWORKS, INC.

### Consolidated Balance Sheets

(In thousands, except share data)

	December 31,	
	2002	2001
<b>Assets</b>		
<b>Current assets:</b>		
Cash and cash equivalents	\$ 50,307	\$ 49,123
Marketable securities	60,860	75,944
Accounts receivable, net of allowances	2,956	9,440



Inventories	10,776	18,865
Other current assets	3,806	2,952
Total current assets	128,705	156,324
<b>Property and equipment</b> , net of accumulated depreciation and amortization	11,174	23,335
<b>Goodwill and purchased intangible assets</b> , net of accumulated amortization	1,174	4,536
<b>Other assets</b> , net of accumulated amortization	480	689
	\$ 141,533	\$ 184,884

#### Liabilities and Stockholders' Equity

**Current liabilities:**

Accounts payable	\$ 4,142	\$ 8,630
Accrued expenses	33,379	27,671
Accrued restructuring expenses	3,143	8,596
Deferred revenue	29,235	13,349
Current portion of long-term obligations	1,606	1,055

Total current liabilities 71,505 59,301

**Long-term obligations**, less current portion 3,293 12,698

**Convertible subordinated notes** 10,000 10,000

**Commitments and contingencies** (Note 13)

**Stockholders' equity:**

Preferred stock, \$0.01 par value; 5,000,000 shares authorized, none issued and outstanding	—	—
Common stock, \$0.001 par value; 600,000,000 shares authorized, 206,860,358 and 205,181,085 shares issued and 204,593,548 and 204,167,335 shares outstanding at December 31, 2002 and 2001	207	205
Capital in excess of par value	858,126	860,883
Accumulated deficit	(797,868)	(729,398)
Deferred compensation	(3,469)	(28,721)
Treasury stock, at cost; 2,266,810 and 1,013,750 common shares at December 31, 2002 and 2001	(261)	(84)

Total stockholders' equity 56,735 102,885

\$ 141,533 \$ 184,884

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

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### SONUS NETWORKS, INC.

#### Consolidated Statements of Operations

(In thousands, except per share data)

	Year ended December 31,		
	2002	2001	2000
<b>Revenues:</b>			
Product	\$ 41,395	\$ 152,648	\$ 49,859
Service	21,163	20,551	1,911
Total revenues	62,558	173,199	51,770
<b>Cost of revenues (1):</b>			
Write-off of inventory and purchase commitments	9,434	—	—
Product	19,535	56,222	25,427
Service	11,333	19,476	2,421
Total cost of revenues	40,302	75,698	27,848
<b>Gross profit</b>	22,256	97,501	23,922
<b>Operating expenses:</b>			
Research and development (1)	45,308	65,004	26,430
Sales and marketing (1)	27,863	42,267	21,569
General and administrative (1)	6,141	13,068	5,477

Stock-based compensation	19,495	75,500	26,729
Amortization of goodwill and purchased intangible assets	1,514	107,759	—
Write-off of goodwill and purchased intangible assets	1,848	374,735	—
Restructuring charges (benefit), net	(10,125)	25,807	—
In-process research and development	—	43,800	—
Total operating expenses	92,044	747,940	80,205
<b>Loss from operations</b>	(69,788)	(650,439)	(56,283)
Interest expense	(676)	(567)	(209)
Interest income	1,994	5,574	6,454
<b>Net loss</b>	\$ (68,470)	\$ (645,432)	\$ (50,038)
<b>Net loss per share:</b>			
Basic and diluted	\$ (0.36)	\$ (3.74)	\$ (0.52)
Pro forma basic and diluted			\$ (0.37)

**Shares used in computing net loss per share (Note 1 (o)):**

Basic and diluted	189,889	172,382	95,877
Pro forma basic and diluted			135,057

(1) Excludes non-cash, stock-based compensation expense as follows:

Cost of revenues	\$ 275	\$ 1,328	\$ 404
Research and development	10,334	43,553	11,428
Sales and marketing	5,702	18,300	12,051
General and administrative	3,184	12,319	2,846
	\$ 19,495	\$ 75,500	\$ 26,729

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

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**SONUS NETWORKS, INC.**  
**Consolidated Statements of Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit)**  
(In thousands, except share data)

	Redeemable Convertible Preferred Stock		Common Stock				Capital in Excess of Par Value	Accumulated Deficit	Stock Subscriptions Receivable	Deferred Compensation	Treasury Stock		Total Stockholders' Equity (Deficit)
	Shares	Redemption Value	Shares	Par Value	Shares	Cost							
<b>Balance, December 31, 1999</b>	12,323,968	\$ 46,109	65,510,921	\$ 66	\$ 25,567	\$ (33,882)	\$ (346)	\$ (16,604)	—	\$ —	\$ (25,199)		
Issuance of Series D preferred stock and issuance costs of \$46	1,509,154	24,750	—	—	—	(46)	—	—	—	—	(46)		
Issuance of common stock to public, net of issuance costs of \$10,545	—	—	17,250,000	17	121,688	—	—	—	—	—	121,705		
Conversion of preferred stock to common stock	(13,833,122)	(70,859)	96,957,222	97	70,762	—	—	—	—	—	70,859		
Payments on subscriptions receivable	—	—	—	—	—	—	108	—	—	—	108		
Issuance of common stock to employees	—	—	3,870,676	4	6,421	—	—	—	—	—	6,425		
Exercise of stock options	—	—	655,655	—	228	—	—	—	—	—	228		
Repurchase of common stock	—	—	—	—	—	—	—	—	772,500	(65)	(65)		
Compensation associated with the grant of stock options and sale of restricted stock to non-employees	—	—	—	—	2,389	—	—	—	—	—	2,389		
Deferred compensation related to stock option grants and sale of restricted common stock	—	—	—	—	39,433	—	—	(39,433)	—	—	—		
Amortization of deferred compensation	—	—	—	—	—	—	—	24,340	—	—	24,340		
Net loss	—	—	—	—	—	(50,038)	—	—	—	—	(50,038)		
<b>Balance, December 31, 2000</b>	—	—	184,244,474	184	266,488	(83,966)	(238)	(31,697)	772,500	(65)	150,706		
Issuance of common stock in connection with employee stock purchase plan	—	—	1,021,333	1	7,865	—	—	—	—	—	7,866		
Issuance of common stock in connection with acquisition of telecom technologies, inc. (TTI) (Note 4)	—	—	15,000,000	15	504,998	—	—	—	—	—	505,013		
Issuance of common stock in connection with acquisition of certain assets of Linguatq, Inc. (Note 5)	—	—	221,753	—	4,995	—	—	—	—	—	4,995		

Issuance of restricted stock awards in connection with acquisition of TTI (Note 4)	—	—	3,000,000	3	55,193	—	—	(55,196)	—	—	—				
Deferred compensation related to unvested stock options assumed in connection with acquisition of TTI (Note 4)	—	—	—	—	22,600	—	—	(22,600)	—	—	—				
Exercise of stock options	—	—	1,693,525	2	4,016	—	—	—	—	—	4,018				
Amortization of deferred compensation	—	—	—	—	—	—	—	50,071	—	—	50,071				
Deferred compensation for terminated employees (Note 2)	—	—	—	—	(5,272)	—	—	30,701	—	—	25,429				
Payment on subscriptions receivable	—	—	—	—	—	—	238	—	—	—	238				
Repurchase of common stock	—	—	—	—	—	—	—	—	241,250	(19)	(19)				
Net loss	—	—	—	—	—	(645,432)	—	—	—	—	(645,432)				
<b>Balance, December 31, 2001</b>	—	—	205,181,085	205	860,883	(729,398)	—	(28,721)	1,013,750	(84)	102,885				
Issuance of common stock in connection with employee stock purchase plan	—	—	1,199,247	2	2,841	—	—	—	—	—	2,843				
Exercise of stock options	—	—	480,026	—	159	—	—	—	—	—	159				
Amortization of deferred compensation	—	—	—	—	—	—	—	18,029	—	—	18,029				
Deferred compensation for terminated employees (Note 2)	—	—	—	—	(5,757)	—	—	7,223	—	—	1,466				
Repurchase of common stock	—	—	—	—	—	—	—	—	1,253,060	(177)	(177)				
Net loss	—	—	—	—	—	(68,470)	—	—	—	—	(68,470)				
<b>Balance, December 31, 2002</b>	—	\$	206,860,358	\$	207	\$ 858,126	\$	(797,868)	\$	(3,469)	2,266,810	\$	(261)	\$	56,735

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

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## SONUS NETWORKS, INC.

### Consolidated Statements of Cash Flows

(In thousands)

	Year ended December 31,		
	2002	2001	2000
<b>Cash flows from operating activities:</b>			
Net loss	\$ (68,470)	\$ (645,432)	\$ (50,038)
Adjustments to reconcile net loss to net cash used in operating activities:			
Depreciation and amortization	15,474	15,189	5,112
Write-off of inventory	7,026	—	—
Stock-based compensation	19,495	75,500	26,729
Amortization of goodwill and purchased intangible assets	1,514	107,759	—
Write-off of goodwill and purchased intangible assets	1,848	374,735	—
Non-cash restructuring benefit	(16,557)	—	—
In-process research and development	—	43,800	—
Changes in current assets and liabilities:			
Accounts receivable	6,484	8,666	(14,100)
Inventories	1,063	2,284	(18,458)
Other current assets	(854)	1,081	(2,595)
Accounts payable	(4,488)	(5,665)	12,027
Accrued expenses	5,708	27,659	13,548
Deferred revenue	15,886	(6,781)	13,420
Net cash used in operating activities	(15,871)	(1,205)	(14,355)
<b>Cash flows from investing activities:</b>			
Purchases of property and equipment	(3,008)	(23,050)	(14,832)
Maturities of marketable securities	58,524	42,416	32,262
Purchases of marketable securities	(43,440)	(63,403)	(72,538)
Other assets	(96)	(194)	(681)
Acquisitions, net of cash acquired	—	(6,125)	—
Net cash provided by (used in) investing activities	11,980	(50,356)	(55,789)
<b>Cash flows from financing activities:</b>			
Net proceeds from sale of common stock	2,843	7,866	128,130
Proceeds from exercise of stock options	159	4,018	228
Net proceeds from issuance of redeemable convertible preferred stock	—	—	24,704

Payment of stock subscriptions receivable	—	238	108
Additions to long-term obligations	3,300	—	405
Payments of long-term obligations	(1,050)	(527)	(5,143)
Payment of note payable to bank	—	(8,000)	—
Proceeds from issuance of convertible subordinated notes	—	10,000	—
Repurchase of common stock	(177)	(19)	(65)
Net cash provided by financing activities	5,075	13,576	148,367
<b>Net increase (decrease) in cash and cash equivalents</b>	<b>1,184</b>	<b>(37,985)</b>	<b>78,223</b>
<b>Cash and cash equivalents, beginning of year</b>	<b>49,123</b>	<b>87,108</b>	<b>8,885</b>
<b>Cash and cash equivalents, end of year</b>	<b>\$ 50,307</b>	<b>\$ 49,123</b>	<b>\$ 87,108</b>

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

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## SONUS NETWORKS, INC.

### Notes to Consolidated Financial Statements

#### (1) Operations and Significant Accounting Policies

Sonus Networks, Inc. (Sonus) was incorporated on August 7, 1997 and is a leading provider of voice infrastructure products for the new public network. Sonus offers a new generation of carrier-class switching equipment and software that enable voice services to be delivered over packet-based networks.

Sonus is subject to risks common to technology-based companies including, but not limited to, the development of new technology, development of markets and distribution channels, dependence on key personnel and the ability to obtain additional capital as needed to meet its business plan. Sonus has a limited operating history and has incurred significant operating losses since inception.

The accompanying consolidated financial statements reflect the application of certain significant accounting policies as described in this note and elsewhere in the accompanying consolidated financial statements and notes.

##### (a) Principles of Consolidation

The accompanying consolidated financial statements include the accounts of Sonus and its wholly owned subsidiaries. All material intercompany transactions and balances have been eliminated.

##### (b) Cash Equivalents and Marketable Securities

Cash equivalents are stated at cost plus accrued interest, which approximates market value, and have maturities of three months or less at the date of purchase.

Marketable securities are classified as held-to-maturity, as Sonus has the intent and ability to hold to maturity. Marketable securities are reported at amortized cost. Cash equivalents and marketable securities are invested in high quality credit instruments, primarily U.S. Government obligations and corporate obligations with contractual maturities of less than one year. There have been no gains or losses to date.

##### (c) Concentrations of Credit and Off-Balance Sheet Risk, Significant Customers and Limited Suppliers

The financial instruments that potentially subject Sonus to concentrations of credit risk are cash, cash equivalents, marketable securities and receivables. Sonus has no off-balance-sheet concentrations such as foreign exchange contracts, options contracts or other foreign hedging arrangements. Sonus' cash and cash equivalent holdings are diversified between four financial institutions.

For the years ended December 31, 2002, 2001 and 2000, three, four and three customers, each of whom contributed more than 10% of revenues, accounted for an aggregate of 42%, 67% and 70% of revenues. As of December 31, 2002 and 2001, three and four customers each accounted for an aggregate of 91% and 69% of Sonus' accounts receivable balance. International revenues, primarily to Asia and Europe, were 25%, 18% and 11% of revenues for the years ended December 31, 2002, 2001 and 2000. Certain components and software licenses from third-parties used in Sonus' products are procured from a single source. The failure of a supplier, including a subcontractor, to deliver on schedule could delay or interrupt Sonus' delivery of products and thereby materially adversely affect Sonus' revenues and operating results.

##### (d) Inventories

Inventories are stated at the lower of cost (first-in, first-out basis) or market. Sonus provides inventory allowances based on excess and obsolete inventories.

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##### (e) Property and Equipment

Property and equipment are stated at cost, net of accumulated depreciation and amortization. Expenditures for maintenance and repairs are charged to expense as incurred, whereas major betterments are capitalized as additions to property and equipment. Sonus provides for depreciation and amortization using the straight-line method and charges to operations amounts estimated to allocate the cost of the assets over their estimated useful lives.

**(f) Goodwill and Purchased Intangible Assets**

In June 2001, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 142, *Goodwill and Other Intangible Assets*. SFAS No. 142 eliminated the amortization of goodwill and certain other intangibles with indefinite lives and instead subjects these assets to periodic impairment assessments. SFAS No. 142 was effective for all goodwill and certain other intangibles acquired after June 30, 2001 and commenced on January 1, 2002 for all goodwill and certain other intangibles existing on June 30, 2001.

Purchased intangible assets of \$1,174,000 as of December 31, 2002 are carried at cost less accumulated amortization. Amortization is computed over the estimated useful lives of the respective assets, two and three years. Sonus expects that the remaining amount of purchased intangible assets will be fully amortized by February 2004.

**(g) Other Assets**

Other assets include licenses for certain technology embedded in Sonus' products. These licenses are amortized over the lesser of their useful lives or the term of the license.

**(h) Revenue Recognition**

Sonus recognizes revenue from product sales to end users, resellers and distributors upon shipment, provided there are no uncertainties regarding acceptance, persuasive evidence of an arrangement exists, the sales price is fixed or determinable and collection of the related receivable is probable. If uncertainties exist, Sonus recognizes revenue when those uncertainties are resolved. In multiple element arrangements, in accordance with Statement of Position 97-2 and 98-9, Sonus uses the residual method when vendor-specific objective evidence does not exist for one of the delivered elements in the arrangement. Service revenue is recognized as the services are provided. Revenue from maintenance and support arrangements is recognized ratably over the term of the contract. Amounts collected prior to satisfying the revenue recognition criteria are reflected as deferred revenue. Warranty costs are estimated and recorded by Sonus at the time of product revenue recognition.

**(i) Software Development Costs**

Sonus accounts for its software development costs in accordance with SFAS No. 86, *Accounting for the Costs of Computer Software to Be Sold, Leased or Otherwise Marketed*. Accordingly, the costs for the development of new software and substantial enhancements to existing software are expensed as incurred until technological feasibility has been established, at which time any additional costs would be capitalized. Sonus has determined that technological feasibility is established at the time a working model of the software is completed. Because Sonus believes its current process for developing software is essentially completed concurrently with the establishment of technological feasibility, no costs have been capitalized to date.

**(j) Stock-Based Compensation**

In October 1995, the FASB issued SFAS No. 123, *Accounting for Stock-Based Compensation*. SFAS No. 123 provides that companies may account for stock-based compensation either under the fair value based method of accounting under SFAS No. 123 or use the intrinsic value-based method provided by Accounting Principles Board (APB) No. 25, *Accounting for Stock Issued to Employees*. SFAS No. 123, as amended by SFAS No. 148 (Note 1(p)), requires companies adopting APB No. 25 to make pro forma disclosure in the notes to the financial statements using the measurement provisions of SFAS No. 123. Sonus uses the intrinsic value-based method of APB No. 25 to account for all of its employee stock-based compensation plans and uses the fair value method of SFAS No. 123 to account for all non-employee stock-based compensation. See Note 15(h).

Sonus has computed the pro forma disclosures required under SFAS No. 123 for stock options granted to employees and shares purchased under the 2000 Employee Stock Purchase Plan (ESPP) using the Black-Scholes option pricing model with an assumed risk-free interest rate of 3% in 2002, 4.5% in 2001, and 5% in 2000, volatility of 150% for both 2002 and 2001 and 80% for 2000 and an expected life ranging from 2 to 5 years for stock options and 6 months for the ESPP, with the assumption that no dividends will be paid. Had compensation expense for Sonus' stock option plan and ESPP been determined consistent with SFAS No. 123, the pro forma net loss and pro forma net loss per share would have been as follows:

	Year ended December 31,		
	2002	2001	2000
	(in thousands, except per share data)		
<b>Net loss—</b>			
As reported	\$ (68,470)	\$ (645,432)	\$ (50,038)
Less employee stock-based compensation under fair value method	(31,337)	(53,736)	(5,942)
Pro forma	\$ (99,807)	\$ (699,168)	\$ (55,980)
<b>Basic and diluted net loss per share—</b>			
As reported	\$ (0.36)	\$ (3.74)	\$ (0.52)
Pro forma	(0.53)	(4.06)	(0.58)

The Black-Scholes option pricing model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option pricing models require the input of highly subjective assumptions including the expected stock price volatility. Because Sonus' employee stock options and ESPP shares 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 Sonus' options and ESPP shares.

**(k) Comprehensive Loss**

Sonus applies SFAS No. 130, *Reporting Comprehensive Income*. The comprehensive loss for the years ended December 31, 2002, 2001 and 2000 does not differ from the reported loss.

**(l) Fair Value of Financial Instruments**

The carrying amounts of Sonus' financial instruments, which include cash equivalents, marketable securities, accounts payable, long-term obligations and the convertible subordinated note, approximate their fair value.

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**(m) Use of Estimates**

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management 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 financial statements and the reported amounts of expenses during the reporting period. Actual results could materially differ from those estimates.

**(n) Disclosures about Segments of an Enterprise**

SFAS No. 131, *Disclosures about Segments of an Enterprise and Related Information*, established standards for reporting information regarding operating segments and established standards for related disclosures about products and services and geographic areas. Operating segments are identified as components of an enterprise about which separate discrete financial information is available for evaluation by the chief operating decision maker, or decision making group, in making decisions regarding resource allocation and assessing performance. To date, Sonus has viewed its operations and manages its business as one operating segment.

**(o) Net Loss Per Share**

Basic net loss per share is computed by dividing the net loss for the year by the weighted average number of shares of unrestricted common stock outstanding during the year. Diluted net loss per share is computed by dividing the net loss for the year by the weighted average number of shares of unrestricted common stock and potential common stock outstanding during the year, if dilutive. Potential common stock consists of restricted shares of common stock, shares of common stock issuable upon the exercise of stock options, conversion of convertible subordinated notes and shares of common stock issued in connection with our acquisition of telecom technologies, inc. (TTI) which were subject to the achievement of milestones and employee retention (Notes 4 and 15(f)). For both basic and diluted net loss per share, shares of common stock issuable upon the conversion of Sonus' redeemable convertible preferred stock have been excluded from the date of issuance until conversion into common stock. There were no dilutive shares of potential common stock for the years ended December 31, 2002, 2001 and 2000 as Sonus incurred a net loss in each year.

Pro forma basic and diluted net loss per share for the year ended December 31, 2000 is computed using the weighted average number of unrestricted common shares outstanding, including the pro forma effects of the automatic conversion of Sonus' Series A, B, C and D redeemable convertible preferred stock into shares of Sonus' common stock which occurred upon the closing of Sonus' initial public offering (IPO), as if such conversion occurred at the date of original issuance.

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The following table sets forth the computation of shares used in calculating the historical and pro forma basic and diluted net loss per share, in thousands:

	Year ended December 31,		
	2002	2001	2000
<b>Historical—</b>			
Weighted average common shares outstanding	204,675	198,068	135,364
Less weighted average restricted common shares outstanding	(14,786)	(25,686)	(39,487)
Shares used in computing basic and diluted net loss per share	189,889	172,382	95,877
<b>Pro forma—</b>			
Shares used in computing historical basic and diluted net loss per share			95,877
Weighted average number of common shares assumed to be issued upon conversion of redeemable convertible preferred stock			39,180
Shares used in computing pro forma basic and diluted net loss per share			135,057

Excluded from the computation of diluted net loss per share in the above table are options to purchase shares of common stock and shares of common stock issuable upon conversion of convertible subordinated notes representing an aggregate of 13,307,042, 20,615,955 and 17,725,526 as of December 31, 2002, 2001 and 2000, as their effects would have been anti-dilutive.

**(p) Recent Accounting Pronouncements**

In June 2002, the FASB issued SFAS No. 146, *Accounting for Costs Associated with Exit or Disposal Activities*. SFAS No. 146 addresses the recognition, measurement and reporting of costs associated with exit and disposal activities, including restructuring activities that are currently accounted for in accordance with Emerging Issues Task Force Issue No. 94-3, *Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)*. The scope of SFAS No. 146 includes costs related to terminating a contract that is not a capital lease, costs to consolidate facilities or relocate employees, and certain termination benefits provided to employees who are involuntarily terminated. SFAS No. 146 is effective for exit or disposal activities initiated after December 31, 2002. Sonus does not expect the implementation of this statement will have a material impact on its consolidated financial position or results of operations.

In November 2002, the FASB issued Interpretation No. 45, *Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others* (FIN No. 45). FIN No. 45 elaborates on the disclosures to be made by a guarantor in its interim and annual financial statements about its obligations under certain guarantees that it has issued. It also clarifies that a guarantor is required to recognize, at the inception of a guarantee, a liability for the fair value of the obligation undertaken in issuing the guarantee. The initial recognition and initial measurement provisions of the interpretation are applicable on a prospective basis to guarantees issued or modified after December 31, 2002 and the disclosure requirements in this interpretation are effective for financial statements of interim or annual periods ending after December 15, 2002. The FIN No. 45 disclosure requirements are included in Note 8(c). The adoption of FIN No. 45 is not expected to have a material impact on Sonus' financial position or results of operations.

In December 2002, the FASB issued SFAS No. 148, *Accounting for Stock-Based Compensation—Transition and Disclosure*, an amendment of SFAS No. 123. SFAS No. 148 provides alternative methods

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of transition for a voluntary change to the fair value-based method of accounting for employee stock-based compensation. These alternative methods will only impact Sonus if we voluntarily change to the fair value-based method of accounting for employee stock-based compensation which we currently do not plan to do. SFAS No. 148 also requires companies who account for employee stock-based compensation under the intrinsic value-based method to disclose additional footnote information in annual financial statements effective for fiscal years ending after December 15, 2002 and in financial statements for interim periods beginning after December 15, 2002. The requisite disclosure appears in Note 1(j) to our consolidated financial statements.

In January 2003, the FASB issued Interpretation No. 46, *Consolidation of Variable Interest Entities* (FIN No. 46) to clarify the conditions under which assets, liabilities and activities of another entity should be consolidated into the financial statements of a company. FIN No. 46 requires the consolidation of a variable interest entity by a company that bears the majority of the risk of loss from the variable interest entity's activities, is entitled to receive a majority of the variable interest entity's residual returns or both. The provisions of FIN No. 46 are required to be adopted by Sonus in fiscal 2003. The adoption of FIN No. 46 is not expected to have a material impact on Sonus' overall financial position or results of operations.

**(2) Restructuring Charges**

Commencing in the third quarter of fiscal 2001 through fiscal 2002, in response to unfavorable business conditions primarily caused by significant declines in capital spending by telecommunications service providers, Sonus implemented restructuring plans designed to reduce expenses and align its cost structure with its revised business outlook. The restructuring plans included worldwide workforce reductions, consolidation of excess facilities and the write-off of excess inventory and purchase commitments.

**2002 Restructuring Activity**

Sonus' restructuring related activities for fiscal 2002 are summarized as follows, in thousands:

	2002 Restructuring Charges	Cash Payments	Adjustments	Dec. 31, 2002 Accrual Balance	Current Portion	Long-term Portion
Workforce reduction	\$ 4,947	\$ (4,413)	\$ —	\$ 534	\$ 534	\$ —
Consolidation of facilities	3,416	(887)	(243)	2,286	928	1,358
Sub-total	8,363	(5,300)	(243)	2,820	1,462	1,358
Write-off of purchase commitments	2,408	(1,333)	—	1,075	1,075	—
Total	\$ 10,771	\$ (6,633)	\$ (243)	\$ 3,895	\$ 2,537	\$ 1,358

Remaining cash expenditures relating to the workforce reductions are expected to be substantially paid in the first quarter of fiscal 2003. The remaining cash expenditures relating to the consolidation of excess facilities are expected to be paid through 2008. The purchase commitment obligations are expected to be substantially paid by the end of March 2003.

**(a) Workforce reduction**

The restructuring actions in 2002 resulted in the reduction of Sonus' workforce by approximately 230 employees, or 39%. The affected employees were entitled to severance and other benefits for which Sonus recorded a charge of \$4,947,000 in fiscal 2002. In addition in fiscal 2002, Sonus recorded

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non-cash stock-based compensation expense of \$1,466,000 related to the write-off of deferred compensation associated with shares and options held by terminated employees.

### **(b) Consolidation of excess facilities**

Sonus recorded a net restructuring charge in fiscal 2002 of \$3,173,000 for the consolidation of excess facilities, which is included on the balance sheet in accrued restructuring expenses and long-term obligations. The accrual for the consolidation of excess facilities was determined assuming no sub-lease income.

### **(c) Write-off of inventory and purchase commitments**

During fiscal 2002, Sonus recorded cost of revenues of \$9,434,000, consisting of \$7,026,000 for the write-off of inventory determined to be excess and obsolete and \$2,408,000 for materials that were committed to be purchased from third-party contract manufacturers and suppliers under purchase commitments, but which are in excess of required quantities. The charge for purchase commitments was recorded on the balance sheet as accrued restructuring expenses.

## **2001 Restructuring Activity**

Sonus' restructuring related activities for fiscal 2001 are summarized as follows, in thousands:

	Initial Restructuring Charges	Cash Payments	Dec. 31, 2001 Accrual Balance	2002 Activity			Dec. 31, 2002 Accrual Balance	Current Portion	Long- Term Portion
				Non-Cash Benefit	Cash Payments	Adjustments			
Workforce reduction	\$ 4,506	\$ (3,635)	\$ 871	\$ —	\$ (871)	\$ —	\$ —	\$ —	
Consolidation of facilities and other charges (benefit)	21,301	(1,116)	20,185	(16,557)	(1,366)	(1,688)	574	399	175
<b>Total</b>	<b>\$ 25,807</b>	<b>\$ (4,751)</b>	<b>\$ 21,056</b>	<b>\$ (16,557)</b>	<b>\$ (2,237)</b>	<b>\$ (1,688)</b>	<b>\$ 574</b>	<b>\$ 399</b>	<b>\$ 175</b>

Remaining cash expenditures relating to the consolidation of excess facilities and other miscellaneous charges are expected to be paid through 2004.

### **(a) Workforce reduction**

The restructuring actions in fiscal 2001 resulted in the reduction of Sonus' workforce by approximately 150 employees, or 21%. The affected employees were entitled to severance and other benefits for which Sonus recorded a charge of \$4,506,000 in fiscal 2001. In addition in fiscal 2001, Sonus recorded non-cash stock-based compensation expense of \$25,429,000 related to the write-off of deferred compensation associated with shares and options held by terminated employees.

### **(b) Consolidation of excess facilities and other charges (benefit)**

Sonus recorded a restructuring charge in fiscal 2001 of \$21,301,000 for the consolidation of excess facilities and other miscellaneous charges, which is included on the balance sheet in accrued restructuring expenses and long-term obligations. The accrual for the consolidation of excess facilities was determined assuming no sub-lease income.

In fiscal 2002, Sonus' TTI subsidiary reduced its lease commitments for excess space in its Texas facilities in exchange for a one-time payment of \$835,000 to a landlord and a guarantee by Sonus of

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TTI's rents owed through April 2003, the remainder of the revised lease term. As a result of this transaction, Sonus recorded a restructuring benefit of \$16,557,000 in fiscal 2002.

## **(3) Write-off of Goodwill and Purchased Intangible Assets**

In accordance with SFAS No. 142, in response to unfavorable business conditions, Sonus re-evaluated the fair value of goodwill established in connection with the acquisitions of TTI and Linguatex (Notes 4 and 5) and as a result recorded an aggregate non-cash impairment charge of \$1,848,000 in fiscal 2002 for the write-off of goodwill.

In fiscal 2001, in light of negative industry and economic conditions, a general decline in technology valuations and our decision to discontinue the development and use of certain acquired technology, we performed an assessment of the carrying value of the goodwill and purchased intangible assets recorded in connection with our acquisition of TTI. In accordance with SFAS No. 121, *Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to be Disposed of*, Sonus recorded a non-cash impairment charge of \$374,735,000 in fiscal 2001 for the write-off of goodwill and certain purchased intangible assets because the estimated undiscounted future cash flows of these assets was less than the carrying value.

## **(4) Acquisition of telecom technologies, inc.**

In January 2001, Sonus acquired privately-held TTI. Upon the closing of this acquisition, an aggregate of 10,800,000 shares of Sonus common stock (Merger Shares) were exchanged for all outstanding shares of TTI common stock. Of the 10,800,000 shares issued to the TTI stockholders, 1,200,000 shares were placed into escrow as security for indemnity obligations that were released to TTI stockholders on January 18, 2002. In addition to the Merger Shares, the TTI stockholders received in fiscal 2001, 4,200,000 additional shares of Sonus common stock upon the achievement of certain specified business expansion and product development milestones. Sonus also issued contingent awards of 3,000,000 shares of common stock under the 2000 Retention Plan to certain former TTI employees who became employees of Sonus (Note 15 (f)).



The acquisition of TTI was accounted for using the purchase method of accounting in accordance with APB Opinion No. 16, *Business Combinations*. Accordingly, the total purchase price was allocated to the assets acquired and liabilities assumed based upon their estimated fair values. The purchase price was determined by using the average market value of Sonus common stock for the period from two days before to two days after the announcement of the TTI acquisition (\$41.61 per share) to value the Merger Shares at the closing date and adding the fair value of liabilities assumed and expenses of the acquisition. Additionally, since the closing date, the purchase price was increased as the 4,200,000 shares of common stock that were subject to milestone conditions were earned. The final purchase price was computed as follows, in thousands:

Fair market value of shares issued	\$ 527,613
Liabilities assumed	21,184
Acquisition expenses	5,833
	<u>554,630</u>

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In accordance with APB Opinion No. 16 and with the assistance of valuation experts, the final purchase price was allocated to the tangible and intangible assets acquired based upon their fair values as follows, in thousands:

Tangible assets	\$ 8,296
Intangible assets:	
Workforce, developed technology and customer list	32,300
In-process research and development	40,000
Deferred compensation related to unvested stock options	22,600
Goodwill	451,434
	<u>554,630</u>

Sonus engaged third-party appraisers to conduct a valuation of the tangible and intangible assets and to assist in the determination of the useful lives for such assets. Based on the results of the appraisal, \$40,000,000 was allocated to in-process research and development, which was expensed in fiscal 2001. The amounts allocated to developed technology, customer list, assembled workforce and goodwill were planned to be amortized over their estimated useful lives of three years. During the years ended December 31, 2002 and 2001, amortization of goodwill and purchased intangible assets for the TTI acquisition was \$1,156,000 and \$107,592,000. In fiscal 2002 and 2001, Sonus recorded non-cash impairment charges of \$796,000 and \$374,735,000 for the write-off of TTI goodwill and certain purchased intangible assets (Note 3). Deferred compensation was computed based on the intrinsic value of the unvested TTI stock options assumed by Sonus and is being expensed over the remaining vesting period of up to four years.

The valuation of in-process research and development was determined using the income method. Revenue and expense projections for the in-process development project were prepared by the management of Sonus through 2008 and the present value was computed using a discount rate of 22.5%. There was no alternative future use for the in-process technology. The assumptions used for the valuation of in-process research and development are the responsibility of management.

#### Pro Forma Information

The following unaudited pro forma information presents a summary of the consolidated results of operations of Sonus and TTI as if the acquisition had occurred on January 1, 2001 and 2000. The pro forma adjustments exclude the one-time write-off of TTI in-process research and development.

	Year ended December 31,	
	2001	2000
	(In thousands, except per share data)	
Revenues	\$ 173,533	\$ 80,401
Net loss	(607,011)	(255,420)
Basic and diluted net loss per share	\$ (3.51)	\$ (2.34)
Pro forma basic and diluted net loss per share		(1.72)

The pro forma results are not necessarily indicative of what would have occurred if the acquisition had been in effect for the years presented. In addition, they are not intended to be a projection of future results and do not reflect any synergies from combining operations.

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#### (5) Acquisition of Certain Assets of Linguatq, Inc.

In July 2001, Sonus completed the acquisition of certain intellectual property and other assets of privately-held Linguatq Incorporated. Linguatq was a provider of data distribution and billing application software for both next generation and legacy networks. The acquisition of certain intellectual property and other assets was accounted for using the purchase method of accounting in accordance with SFAS No. 141, *Business Combinations*. The purchase price was determined by using the average market value of Sonus common stock for the period from two days before to two days after the terms were agreed upon for the acquisition (\$22.53 per share) to value the 221,753 Sonus common shares issued to the Linguatq stockholders at the closing date and adding payments to employees and vendors and expenses of the acquisition. The final purchase price was computed as follows, in thousands:

Fair market value of shares issued	\$ 4,995
Payments to employees and vendors	241
Acquisition expenses	141
	<u>5,377</u>
	<u>\$ 5,377</u>

In accordance with SFAS No. 142, and with the assistance of valuation experts, the purchase price was allocated to the intangible assets acquired based upon their fair values as follows, in thousands:

Intangible assets:	
Developed technology and customer list	\$ 700
In-process research and development	3,800
Goodwill	877
	<u>5,377</u>
	<u>\$ 5,377</u>

Sonus engaged third-party appraisers to conduct a valuation of the intangible assets and to assist in the determination of useful lives for such assets. Based on the results of the appraisal, \$3,800,000 was allocated to in-process research and development, which was expensed in fiscal 2001. During the years ended December 31, 2002 and 2001, amortization of purchased intangible assets for Linguateq was \$358,000 and \$167,000. In fiscal 2002, Sonus recorded a non-cash impairment charge of \$1,052,000 for the write-off of Linguateq goodwill (Note 3).

The valuation of in-process research and development was determined using the income method. Revenue and expense projections for the in-process development project were prepared by the management of Sonus through 2007 and the present value was computed using a discount rate of 25.0%. In the event that the project was not completed and technological feasibility was not achieved, there was no alternative future use for the in-process technology. The assumptions used for the valuation of in-process research and development are the responsibility of management.

Pro forma information related to the consolidated results of operations of Sonus and Linguateq were not material for 2001 and 2000.

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## (6) Inventories

Inventories consist of the following, in thousands:

	December 31,	
	2002	2001
Raw materials	\$ 691	\$ 4,899
Work in progress	177	525
Finished goods	9,908	13,441
	<u>10,776</u>	<u>18,865</u>
	<u>\$ 10,776</u>	<u>\$ 18,865</u>

## (7) Property and Equipment

Property and equipment consist of the following, in thousands:

	Estimated Useful Life	December 31,	
		2002	2001
Equipment and software	2-3 years	\$ 44,671	\$ 41,723
Furniture and fixtures	3-5 years	579	579
Leasehold improvements	Life of lease	2,574	2,514
		<u>47,824</u>	<u>44,816</u>
Less accumulated depreciation and amortization		(36,650)	(21,481)
		<u>\$ 11,174</u>	<u>\$ 23,335</u>

## (8) Other Balance Sheet Data

### (a) Accrued Expenses

Accrued expenses consist of the following, in thousands:

December 31,	
2002	2001

Employee compensation and related costs	\$ 4,250	\$ 5,830
Employee stock purchase plan	515	3,351
Professional fees	3,346	2,094
Royalties	3,472	3,582
Warranty	4,685	4,478
Post shipment obligations to customers	2,527	2,800
Customer deposits	7,240	—
Other	7,344	5,536
	<u>\$ 33,379</u>	<u>\$ 27,671</u>

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**(b) Allowance for Doubtful Accounts**

The following table sets forth activity in Sonus' allowance for doubtful accounts, in thousands:

Year ended December 31:	Balance at beginning of year	Charges (benefits) to costs and expenses	Balance at end of year
2002	\$ 2,622	\$ (2,283)	\$ 339
2001	1,000	1,622	2,622
2000	—	1,000	1,000

**(c) Warranty**

The following table sets forth activity in Sonus' warranty accrual, in thousands:

Year ended December 31:	Balance at beginning of year	Charges to costs and expenses	Deductions	Balance at end of year
2002	\$ 4,478	\$ 6,767	\$ (6,560)	\$ 4,685
2001	1,543	9,024	(6,089)	4,478
2000	—	1,732	(189)	1,543

**(9) Income Taxes**

Sonus provides for income taxes in accordance with SFAS No. 109, *Accounting for Income Taxes*. Deferred tax assets and liabilities are determined based on differences between the financial statement and tax bases of assets and liabilities using enacted tax rates.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts for income tax purposes. A valuation allowance has been recorded for the net deferred tax asset due to the uncertainty of realizing the benefit of this asset.

The following is a summary of the significant components of Sonus' deferred tax assets and liabilities, in thousands:

	December 31,	
	2002	2001
Net operating loss carryforwards	\$ 59,866	\$ 37,077
Tax credit carryforwards	9,019	5,867
Other temporary differences	28,312	23,179
Valuation allowance	(97,197)	(66,123)
	<u>\$ —</u>	<u>\$ —</u>

As of December 31, 2002, Sonus has net operating loss carryforwards for federal income tax purposes of approximately \$157,700,000 that expire through 2022. Sonus also has available research and development credit carryforwards of approximately \$9,019,000 that expire through 2022. The Internal Revenue Code contains provisions that limit the net operating loss and tax credit carryforwards available to be used in any given year in the event of certain circumstances, including significant changes in ownership interests. Sonus has completed several financings since inception and has incurred ownership changes. Sonus does not believe that these changes have had a material impact on its ability to use its net operating loss and tax credit carryforwards.

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**(10) Long-term Obligations**

Long-term obligations consist of capital leases, equipment borrowings from a bank (Note 11) and restructuring expenses (Note 2). Sonus assumed certain capital leases as part of the acquisition of TTI. The capital leases are due in monthly installments expiring at various dates through March 2005 and accrue

interest at annual rates ranging from 3.6% to 14.4%. The future minimum annual payments under capital leases and amounts due for long-term obligations, as of December 31, 2002, are as follows, in thousands:

<b>Capital Leases:</b>	
2003	\$ 548
2004	193
2005	30
	<hr/>
Total minimum lease payments	771
Less amount representing interest	(40)
	<hr/>
Present value of minimum payments	731
<b>Equipment borrowings from bank</b>	2,842
<b>Long-term portion of restructuring expenses</b>	1,326
	<hr/>
Total long-term obligations	4,899
Less current portion	(1,606)
	<hr/>
	\$ 3,293
	<hr/>

The future principal payments on long-term obligations, excluding the capital leases, as of December 31, 2002 are: \$1,104,000 in 2003; \$1,624,000 in 2004; \$828,000 in 2005; \$195,000 in 2006; \$204,000 in 2007; and \$213,000 in 2008.

### (11) Bank Agreement

In January 2002, Sonus established a \$10,000,000 equipment line of credit and a \$20,000,000 working capital line of credit with a bank, at the bank's prime rate (4.25% at December 31, 2002), available through March 24, 2003. Amounts borrowed under the equipment line shall be repaid over a 36-month period. For both lines of credit, Sonus must comply with certain restrictive covenants including maintaining certain minimum investment balances with the bank, a minimum tangible stockholders' equity of \$50,000,000 and a quick ratio of 1.5 to 1.0, as defined in the credit agreement. Currently, the amounts available for borrowing under the working capital line will be based on a percentage of eligible accounts receivable balances. Under the agreement, all of Sonus' assets, except intellectual property, have been pledged as collateral. As of December 31, 2002, Sonus had \$6,700,000 available under the equipment line of credit, \$2,842,000 in current outstanding borrowings (Note 10) and was in compliance with all bank covenants. On March 14, 2003, Sonus extended these existing lines of credit through March 23, 2004 (Note 19).

### (12) Convertible Subordinated Notes

In May 2001, Sonus completed a private placement of an aggregate principal amount of \$10,000,000 of 4.75% convertible subordinated notes, due May 1, 2006, with a customer. Interest payments are due semi-annually on May 1 and November 1 of each year through May 2006. The notes may be converted by the holder into shares of Sonus' common stock at any time before their maturity or prior to their redemption or repurchase by Sonus. The conversion rate is 33.314 shares per each \$1,000 principal amount of notes, subject to adjustment in certain circumstances. After May 1, 2004,

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Sonus has the option to redeem all or a portion of the notes at 100% of the principal amount. Also, at any time if the market price of Sonus' common stock exceeds \$60.04 per share for twenty trading days in any thirty trading-day period, Sonus may redeem these notes through the issuance of shares of common stock or for cash. In the event of a change of control in Sonus, the holder at its option may require Sonus to redeem the notes through the issuance of common stock or cash. Interest expense related to our convertible subordinated notes was \$475,000 and \$317,000 for the years ended December 31, 2002 and 2001.

### (13) Commitments and Contingencies

#### (a) Leases

Sonus leases its facilities under operating leases, which expire through December 2008. Rent expense was approximately \$3,267,000, \$4,146,000 and \$1,310,000 for the years ended December 31, 2002, 2001 and 2000. Sonus is responsible for certain real estate taxes, utilities and maintenance costs under these leases. The future minimum payments under operating lease arrangements as of December 31, 2002 are as follows: \$3,049,000 in 2003; \$1,183,000 in 2004; \$388,000 in 2005; \$195,000 in 2006; \$204,000 in 2007; and \$213,000 in 2008.

#### (b) Pending Litigation

In November 2001, a purchaser of Sonus' common stock filed a complaint in the federal district court for the Southern District of New York against Sonus, two of its officers and the lead underwriters alleging violations of the federal securities laws in connection with our initial public offering (IPO) and seeking unspecified monetary damages. The purchaser seeks to represent a class of persons who purchased Sonus' common stock between the IPO on May 24, 2000 and December 6, 2000. An amended complaint was filed in April 2002. The amended complaint alleges that Sonus' registration statement contained false or misleading information or omitted to state material facts concerning the alleged receipt of undisclosed compensation by the underwriters and the existence of undisclosed arrangements between underwriters and certain purchasers to make additional purchases in the after market. The claims against Sonus are asserted under Sections 10(b) and 11 of the Securities Act of 1933 and against the individual defendants under Sections 11 and 15 of that Act. Other plaintiffs have filed substantially similar class action cases against approximately 300 other publicly traded companies and their IPO underwriters which, along with the actions against Sonus, have been transferred to a single federal judge for purposes of coordinated case management. On July 15, 2002, Sonus, together with the other issuers named as defendants in these coordinated proceedings, filed a collective motion to dismiss the consolidated amended complaints on various legal grounds common to all or most of the issuer defendants. The plaintiffs voluntarily dismissed the claims against the individual defendants, including those Sonus officers named in the complaint. On February 19, 2003, the court granted a portion of the motion to dismiss by dismissing the Section 10(b) claims against certain

defendants including Sonus, but denied the remainder of the motion as to the defendants. Accordingly, the case will proceed against Sonus on the Section 11 claims. The outcome of the litigation remains uncertain. Sonus intends to continue to vigorously defend this action.

Beginning in July 2002, several purchasers of Sonus' common stock filed complaints in federal district court for the District of Massachusetts against Sonus, certain officers and directors and a former officer under Sections 10(b) and 20(a) and Rule 10b(5) of the Securities Exchange Act of 1934 (Class Action Complaints). The purchasers seek to represent a class of persons who purchased common stock of Sonus between December 11, 2000 and January 16, 2002, and seek unspecified monetary damages. The Class Action Complaints are essentially identical and allege that Sonus made false and misleading statements about its products and business. On March 3, 2003, the plaintiffs filed a

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Consolidated Amended Complaint. Sonus believes the claims in the Consolidated Amended Complaint are without merit and that it has substantial legal and factual defenses, which it intends to pursue vigorously.

On September 30, 2002, a purported shareholder derivative lawsuit was filed in the superior court of Middlesex County of Massachusetts against Sonus and its directors. The complaint is based on essentially the same allegations as the Class Action Complaints and alleges that Sonus' directors breached their fiduciary duties. The complaint seeks an unspecified amount of compensatory and other damages and relief on behalf of Sonus. After Sonus submitted a motion to dismiss the complaint on multiple grounds, the plaintiff agreed to dismiss the complaint without prejudice retaining the right to refile the complaint at a later date. The complaint was dismissed on February 4, 2003.

#### (14) Redeemable Convertible Preferred Stock

In connection with our IPO in May 2000, all redeemable convertible preferred stock was converted into an aggregate of 96,957,222 shares of common stock. A summary of the redeemable convertible preferred stock issuances from inception and the redemption value as of the closing of Sonus' IPO in May 2000 are as follows:

Description	Purchase Date	Number of shares		Price per Share	Redemption Value
		Authorized	Outstanding		
					(in thousands)
Series A	November 1997 and July 1998	7,220,000	7,180,000	\$ 1.00	\$ 7,180
Series B	September and December 1998, May 1999	3,247,857	3,204,287	5.00	16,021
Series C	September, November and December 1999	2,153,072	1,939,681	11.81	22,908
Series D	March 2000	1,585,366	1,509,154	16.40	24,750
		14,206,295	13,833,122		\$ 70,859

The rights, preferences and privileges of the Series A, B, C and D redeemable convertible preferred stock are as follows:

#### Conversion

Each share of Series A, B and C preferred stock was convertible into 7.5 shares of common stock and each share of Series D preferred stock was convertible into three shares of common stock, each adjustable for certain dilutive events. Conversion was at the option of the holder, but became automatic upon the closing of an IPO for the Series A, B and C preferred stock in which at least \$10,000,000 of net proceeds shall be received by Sonus at a price of at least \$2.67 per share and for the Series D preferred stock with at least \$25,000,000 of net proceeds at a price of at least \$6.56 per share.

#### Redemption

If requested prior to specified redemption dates, by the holders of 66<sup>2</sup>/<sub>3</sub>% of the then outstanding Series A, B, C and D preferred stock, Sonus was required to redeem such stock at \$1.00, \$5.00, \$11.81 and \$16.40 per share, as adjusted in the event of future dilution, plus declared but unpaid dividends.

#### Dividends

Series A, B, C and D preferred stockholders were entitled to receive any cash dividend declared on common stock equal to the amount they would be entitled to if such preferred stock had been converted into common stock.

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#### Liquidation Preference

In the event of liquidation of Sonus and before any distribution to common stockholders, the Series A, B, C and D preferred stockholders were entitled to share pro rata, \$1.00, \$5.00, \$11.81 and \$16.40 per share, plus all declared but unpaid dividends.

#### Voting Rights

Series A, B, C and D preferred stockholders were entitled to one vote per common share equivalent on all matters voted on by holders of common stock.

#### (15) Stockholders' Equity (Deficit)

### (a) Stock Split

On October 6, 2000, Sonus effected a three-for-one stock split in the form of a stock dividend. All common shares, common stock options and per share amounts in the accompanying financial statements and footnotes have been retroactively adjusted to reflect the stock split.

### (b) Initial Public Offering

On May 31, 2000, Sonus completed its IPO of 17,250,000 shares of common stock, which included the exercise of the underwriters' over allotment option of 2,250,000 shares, at \$7.67 per share. The proceeds from the IPO were \$121,705,000, after deducting the underwriting discount and commissions and offering expenses of \$10,545,000.

### (c) Restricted Common Stock

Sonus issued 24,615,693 and 262,500 shares of restricted common stock outside of the 1997 Stock Incentive Plan (the Plan) in the period ended December 31, 1997 and in the year ended December 31, 1999. The repurchase restrictions have expired as of December 31, 2002. All of these shares of common stock that were subject to repurchase restrictions contained the same rights and privileges as unrestricted shares of common stock and have been presented as outstanding as of the date of issuance.

### (d) 1997 Stock Incentive Plan

The Plan, which is administered by the Board of Directors, permits Sonus to sell or award restricted common stock or to grant incentive and non-qualified stock options for the purchase of common stock to employees, directors and consultants. On January 1 of each year, the aggregate number of shares of common stock available for purchase under the Plan shall increase by the lesser of (i) 5% of the outstanding shares on December 31 of the preceding year or (ii) an amount determined by the Board of Directors. At December 31, 2002, 100,381,965 shares were authorized and 42,153,202 shares were available under the Plan for future issuance.

Sonus issued shares of restricted common stock to employees and consultants which are subject to repurchase agreements and generally vest over a four or five-year period. If the employee leaves or if the services are not performed, Sonus may repurchase any restricted shares of common stock held by these individuals at their original purchase price ranging from \$0.01 to \$4.67 per share. All shares of common stock subject to repurchase restrictions contain the same rights and privileges as unrestricted shares of common stock and are presented as outstanding as of the date of issuance. As of December 31, 2002, 6,880,551 shares of the outstanding common stock issued under the Plan were restricted and subject to Sonus' right to repurchase.

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On October 16, 2002, Sonus commenced an offer to exchange (Exchange Offer) outstanding employee stock options granted under the Plan having an exercise price of \$0.67 or more per share for new stock options to be granted by Sonus. Outstanding options granted under the TTI 1998 Equity Incentive Plan were not eligible for exchange. Sonus' directors, Sonus' executive officers and non-employees were also not eligible to participate in the exchange. On November 22, 2002, the Exchange Offer expired. Outstanding options to purchase 8,802,245 shares of common stock were accepted for exchange and cancelled. Employees will receive an option to purchase one share of common stock (subject to adjustment for any stock splits, reverse stock splits, stock dividends or similar events) for each option to purchase one share of common stock that was tendered and accepted by Sonus. Sonus expects to issue new options in exchange for such tendered options on or after May 23, 2003. The new options will be granted with an exercise price equal to the fair market value of Sonus' common stock on the date of grant.

A summary of activity under the Plan for the years ended December 31, 2000, 2001 and 2002, is as follows:

#### Restricted Common Stock Issuances

	Number of Shares	Purchase Price	Weighted Average Purchase Price
Outstanding, December 31, 1999	39,922,482	\$ 0.01-0.22	\$ 0.05
Issued	3,870,672	0.22-4.67	1.88
Repurchased	(772,500)	0.07-0.22	0.08
Outstanding, December 31, 2000	43,020,654	0.01-4.67	0.21
Repurchased	(241,250)	0.07-0.22	0.08
Outstanding, December 31, 2001	42,779,404	0.01-4.67	0.20
Repurchased	(1,063,999)	0.01-4.00	0.17
Outstanding, December 31, 2002	41,715,405	\$ 0.01-4.67	\$ 0.20
Unrestricted common stock, December 31, 2002	34,834,854	\$ 0.01-4.67	\$ 0.35

As of December 31, 2001 and 2000, 26,504,307 and 17,319,885 shares of unrestricted common stock were outstanding with a weighted average purchase price of \$0.05 and \$0.04 per share.

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## Common Stock Option Grants

	Number of Shares	Exercise Price	Weighted Average Exercise Price
Outstanding, December 31, 1999	3,052,743	\$ 0.01-0.22	\$ 0.11
Granted	15,531,937	0.67-22.25	10.39
Canceled	(203,499)	0.01-3.33	1.75
Exercised	(655,655)	0.07-7.67	0.35
Outstanding, December 31, 2000	17,725,526	0.01-22.25	9.07
Granted	6,466,196	2.60-29.00	12.95
Canceled	(2,215,382)	0.07-22.25	15.68
Exercised	(1,693,525)	0.07-7.67	2.37
Outstanding, December 31, 2001	20,282,815	0.01-29.00	10.17
Granted	5,958,300	0.25-3.91	2.47
Canceled (1)	(12,787,187)	0.07-22.25	9.88
Exercised	(480,026)	0.07-3.33	0.33
Outstanding, December 31, 2002	12,973,902	\$ 0.01-29.00	\$ 5.51
Exercisable, December 31, 2002	6,275,731	\$ 0.01-29.00	\$ 5.57

(1) Of the 12,787,187 options canceled in 2002, 8,802,245 were in connection with the Exchange Offer. Employees will receive an option to purchase one share of common stock for each option to purchase one share of common stock that was canceled. Sonus expects to issue new options in exchange for such tendered options on or after May 27, 2003.

As of December 31, 2001 and 2000, 4,838,112 and 783,589 options were exercisable at an average exercise price of \$8.94 and \$1.35 per share. The weighted average fair value of each option granted under the Plan for 2002, 2001 and 2000 is \$1.71, \$11.15 and \$7.05 per share.

The following table summarizes information relating to currently outstanding and exercisable options as of December 31, 2002:

Exercise Price	Outstanding			Exercisable		
	Number of Shares	Weighted Average Remaining Contractual Life (Years)	Weighted Average Exercise Price	Number of Shares	Weighted Average Exercise Price	
\$ 0.01-0.67	2,554,671	7.62	\$ 0.30	949,377	\$ 0.29	
1.89-2.60	2,020,055	5.69	2.43	783,206	2.54	
3.33-4.67	5,424,193	7.50	3.70	3,179,341	3.67	
7.67-13.88	2,261,854	8.16	13.18	1,002,660	12.94	
19.00-29.00	713,129	8.04	22.23	361,147	22.24	
	12,973,902		\$ 5.51	6,275,731	\$ 5.57	

### (e) 2000 Employee Stock Purchase Plan

In March 2000, the stockholders approved the ESPP. The ESPP consists of a series of overlapping 24-month offering periods. Each offering period generally consists of four consecutive 6-month

purchase periods. Eligible employees may purchase common stock at a price equal to 85% of the lower of the fair market value of the common stock at the beginning of each offering period or end of each purchase period. Participation is limited to 20% of an employee's eligible compensation not to exceed amounts allowed by the Internal Revenue Code. On January 1 of each year, the aggregate number of shares of common stock available for purchase under the ESPP shall increase by the lesser of (i) 2% of the outstanding shares on December 31 of the preceding year or (ii) an amount determined by the Board of Directors. As of December 31, 2002, 11,352,786 shares of common stock were authorized and 2,220,580 shares have been issued under the ESPP.

### (f) 2000 Retention Plan

In January 2001 in conjunction with the acquisition of TTI, Sonus established the 2000 Retention Plan (the Retention Plan) and issued contingent awards of 3,000,000 shares of common stock to certain employees of TTI who became employees of Sonus. Pursuant to the Retention Plan, these awards were scheduled to vest in equal installments on each of October 31, 2002, November 30, 2002, January 31, 2003 and February 28, 2003, if (i) the recipients did not voluntarily terminate employment with TTI or Sonus prior to such vesting dates and (ii) the business expansion and product development escrow release conditions were satisfied in whole or in part. Generally, any awards forfeited by employees who terminated employment with TTI, other than a termination by Sonus or TTI

without cause, were reallocated to remaining TTI employees or awarded to replacement hires. All of the Retention Plan shares were made available for distribution as of December 31, 2002.

**(g) 1998 Equity Incentive Plan**

In January 2001 in connection with the completion of the TTI acquisition, Sonus assumed TTI's 1998 Equity Incentive Plan and all grants of options under this plan. Each outstanding option to purchase shares of TTI Class B common stock granted under the 1998 Equity Incentive Plan immediately prior to the effective time of the acquisition was converted into an option to purchase Sonus' common stock based on the merger consideration, with the exercise price of the options being proportionately adjusted.

In continuation of a 1997 agreement entered into by the TTI founders and other TTI shareholders, the founders agreed, in exchange for the option exercise proceeds, to transfer to Sonus a number of shares of Sonus' common stock received by them in the acquisition equal to the number of shares of Sonus' common stock issued upon exercise by former TTI employees of the stock options granted under the TTI 1998 Equity Incentive Plan. As a result of this agreement, the aggregate number of outstanding shares of Sonus' common stock will not increase upon the exercise of these stock options.

**(h) Stock-Based Compensation**

Stock-based compensation expenses include the amortization of deferred employee compensation and other equity related expenses for non-employees.

In connection with certain employee stock option grants and the issuance of employee restricted common stock during the years ended December 31, 2000 and 1999, Sonus recorded deferred stock-based compensation of \$39,433,000 and \$20,859,000. This represents the aggregate difference between the exercise price or purchase price and the fair value of the common stock on the date of grant or sale for accounting purposes. The deferred compensation is recognized as an expense over the vesting period of the underlying stock options and restricted common stock.

In connection with the TTI acquisition, Sonus recorded deferred stock-based compensation of \$22,600,000 for the year ended December 31, 2001, related to the intrinsic value of unvested TTI stock

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options assumed by Sonus. This deferred compensation is recognized as an expense over the remaining vesting period of the underlying stock options of up to four years. Additionally, Sonus recorded \$55,196,000 of deferred stock-based compensation on 3,000,000 shares awarded to TTI employees under the Retention Plan, based on the fair value of the Sonus common stock on the closing date of the acquisition. This deferred compensation has been fully expensed as of December 31, 2002 (See Note 15 (f)).

Sonus has valued the stock options and the issuances of restricted common stock to non-employees based upon the fair market value of the services rendered where Sonus believes the value of these services is more readily determinable than the value of the options or restricted stock. All other grants of options and issuances of restricted stock to non-employees are valued based upon the Black-Scholes option pricing model. As of December 31, 2002, unvested options to purchase 15,000 shares of common stock are held by non-employees. In accordance with Emerging Issues Task Force 96-18, Sonus will record the value at the time the services are provided.

Sonus recorded stock-based compensation of \$19,495,000, \$75,500,000 and \$26,729,000 for the years ended December 31, 2002, 2001, and 2000. Stock-based compensation expense for the years ended December 31, 2002 and 2001 includes \$1,466,000 and \$25,429,000 related to the write-off of deferred compensation with respect to shares held by terminated employees impacted by the restructuring plans (Note 2). Sonus expects to record up to approximately \$2,900,000 and \$600,000 in employee stock-based compensation expense in the years ending December 31, 2003 and 2004.

**(i) Common Stock Reserved**

Common stock reserved for future issuance at December 31, 2002 consist of the following:

Stock incentive plan	55,127,104
Employee stock purchase plan	9,132,206
Conversion of convertible subordinated notes	333,140
	64,592,450

**(16) Employee Benefit Plan**

In 1998, Sonus adopted a savings plan for its employees, which has been qualified under Section 401(a) of the Internal Revenue Code. Eligible employees are permitted to contribute to the 401(k) plan through payroll deductions within statutory and plan limits. Contributions from Sonus are made at the discretion of the Board of Directors. Sonus has made no contributions to the 401(k) plan to date.

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**(17) Supplemental Cash Flow Information**

Year ended December 31,		
2002	2001	2000
(in thousands)		



**Supplemental disclosure of cash flow information:**

Cash paid during the year for interest	\$ 676	\$ 503	\$ 225
<b>Acquisition of telecom technologies, inc:</b>			
Tangible assets	\$ —	\$ 8,296	\$ —
Liabilities assumed	—	(21,184)	—
Goodwill and purchased intangible assets	—	523,734	—
Issuance of common stock in connection with the acquisition	—	(505,013)	—
Cash acquired	—	(90)	—
Acquisition, net of cash acquired	—	5,743	—
<b>Acquisition of certain assets of Linguatq, Inc.:</b>			
Goodwill and purchased intangible assets	—	5,377	—
Issuance of common stock in connection with the acquisition	—	(4,995)	—
Acquisition	—	382	—
<b>Total acquisitions, net of cash acquired</b>	<b>\$ —</b>	<b>\$ 6,125</b>	<b>\$ —</b>
<b>Supplementary disclosure of non-cash transactions:</b>			
Conversion of redeemable convertible preferred stock into common stock	\$ —	\$ —	\$ 70,859

**(18) Quarterly Results of Operations (unaudited)**

The following table presents Sonus' quarterly operating results for the years ended December 31, 2002 and 2001. The information for each of these quarters is unaudited and has been prepared on the same basis as the audited consolidated financial statements. In the opinion of management, all necessary adjustments, consisting only of normal recurring adjustments, have been included to present fairly the unaudited consolidated quarterly results when read in conjunction with Sonus' audited

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consolidated financial statements and related notes. These operating results are not necessarily indicative of the results of any future period.

	Three months ended							
	Dec. 31, 2002	Sept 30, 2002	June 30, 2002	Mar. 31, 2002	Dec. 31, 2001	Sept. 30, 2001	June. 30, 2001	Mar. 31, 2001
	(in thousands, except per share data)							
	(unaudited)							
<b>Consolidated Statement of Operations Data:</b>								
<b>Revenues</b>	\$ 12,660	\$ 7,445	\$ 21,295	\$ 21,158	\$ 38,863	\$ 40,286	\$ 52,551	\$ 41,499
Cost of revenues	6,298	4,747	9,948	19,309	17,398	18,129	22,160	18,011
<b>Gross profit</b>	6,362	2,698	11,347	1,849	21,465	22,157	30,391	23,488
<b>Operating expenses:</b>								
Research and development	8,783	9,685	12,225	14,615	15,642	18,746	16,697	13,919
Sales and marketing	5,656	5,520	8,280	8,407	10,504	12,660	10,615	8,488
General and administrative	538	2,446	1,691	1,466	3,796	3,330	3,279	2,663
Stock-based compensation	3,841	3,962	5,949	5,743	7,161	39,069	13,847	15,423
Amortization of goodwill and purchased intangible assets	359	366	383	406	480	41,368	38,704	27,207
Write-off of goodwill and purchased intangible assets	175	1,673	—	—	(1,984)	376,719	—	—
Restructuring charges (benefit), net	16	987	1,013	(12,141)	—	25,807	—	—
In-process research and development	—	—	—	—	—	3,800	—	40,000
<b>Total operating expenses</b>	19,368	24,639	29,541	18,496	35,599	521,499	83,142	107,700
<b>Loss from operations</b>	(13,006)	(21,941)	(18,194)	(16,647)	(14,134)	(499,342)	(52,751)	(84,212)
Interest income (expense), net	186	303	376	453	733	1,181	1,360	1,733

<b>Net loss</b>	\$	(12,820)	\$	(21,638)	\$	(17,818)	\$	(16,194)	\$	(13,401)	\$	(498,161)	\$	(51,391)	\$	(82,479)
<b>Net loss per share:</b>																
Basic and diluted	\$	(0.07)	\$	(0.11)	\$	(0.09)	\$	(0.09)	\$	(0.07)	\$	(2.81)	\$	(0.30)	\$	(0.51)
<b>Shares used in computing net loss per share (Note 1 (o)):</b>																
Basic and diluted		195,648		191,823		189,183		186,057		181,260		177,313		171,329		162,091

**(19) Subsequent Event**

On March 14, 2003, Sonus extended its existing \$10,000,000 equipment line of credit (\$6,700,000 is available as of December 31, 2002) and \$20,000,000 working capital line of credit with a bank, at the bank's prime rate, available through March 23, 2004 (Note 11). Amounts borrowed under the equipment line are repaid over a 36-month period. Under the agreement, all of Sonus' assets, except intellectual property, have been pledged as collateral. Sonus must also maintain a certain minimum tangible stockholders' equity and quick ratio, as defined, and maintain certain minimum investment balances with the bank.

## FIFTH AMENDMENT TO OFFICE LEASE AGREEMENT

THIS FIFTH AMENDMENT TO OFFICE LEASE AGREEMENT (this "Fifth Amendment") is made and entered into effective as of February 28, 2002, by and between Collins Campbell Joint Venture ("Landlord") and telecom technologies, inc. ("Tenant").

## RECITALS

WHEREAS, Landlord and Tenant entered into that certain Office Lease Agreement, dated as of April 4, 1997, as amended by (i) that certain First Amendment to Office Lease Agreement, dated as of November 1, 1997; (ii) those certain Second and Third Amendments to Office Lease Agreement each dated as of July 1, 1998; and (iii) that certain Fourth Amendment to Office Lease Agreement, dated February 1, 1999 (collectively, the "Lease"), with respect to certain Premises defined therein and commonly known as Suite 3000 at 1701 North Collins Blvd., Richardson, Dallas County, Texas 75080, which Lease is incorporated herein by reference;

WHEREAS, Landlord and Tenant among others, have entered into the terms of a certain global agreement of even date herewith (the "GLOBAL AGREEMENT"), and Landlord and Tenant acknowledge and agree that the terms of the Global Agreement shall be binding on the parties hereto;

WHEREAS, Landlord and Tenant desire to further amend the Lease to reduce the size of the Premises.

NOW, THEREFORE, in consideration of the mutual agreements herein set forth, the mutual agreements set forth in the Lease, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant have agreed, and do hereby agree, to the above Recitals, and as follows, subject to the occurrence of all of the events set forth in Paragraph 1 of the Global Agreement:

1. All terms used herein and not specifically defined shall have the same meanings herein as is ascribed to them in the Lease.
2. The Premises are hereby reduced to approximately 20,227 square feet of rentable area by deleting approximately 17,789 square feet of rentable area on the second floor, such "Give Back Space" being described on Exhibit "A", attached hereto and incorporated herein for all purposes.
3. Basic rental is decreased from \$3,909,279.04 to \$3,475,939.00.
4. The monthly rental installment is decreased as set forth below:
  - Monthly from March 1, 2002 through October 31, 2002 - \$35,043.28
  - Monthly from November 1, 2002 through April 30, 2003 - \$35,397.25
5. Tenant's option to extend the term of the Lease set forth in Rider 101 is hereby eliminated and of no further force or effect.
6. Except as herein provided to the contrary, Tenant's lease of the Premises from Landlord shall be on the same terms and conditions as those specified in the Lease.
7. The Lease (as amended by this Fifth Amendment) remains in full force and effect and is hereby ratified and affirmed.
8. All notices required to be sent to the Tenant shall also be sent to Sonus Networks, Inc., 5 Carlisle Road, Westford, Massachusetts 01886: Attention: Chief Financial Officer.
9. The Global Agreement, and all of the terms therein, shall be incorporated herein for all purposes. To the extent that there is a conflict between the terms of this Fifth Amendment and the terms of the Global Agreement with respect to the relevant subject matter, the terms of this Fifth Amendment shall control.

IN WITNESS WHEREOF, this Fifth Amendment is hereby executed as of the day and year first set forth above.

LANDLORD:

COLLINS CAMPBELL JOINT VENTURE,  
a Texas general partnership

By: Jaytex Properties, Ltd.,  
a Texas limited partnership

By: JRS Management, Inc.

By: /s/ W.T. Field  
-----  
W.T. Field, President

TENANT:

telecom technologies, inc.,  
a Texas corporation

By: /s/ G.M. Eastep  
-----  
Name: G.M. EASTEP  
-----  
Title: COO  
-----

[GRAPHIC DEPICTING 2ND LEVEL FLOOR PLAN]

telecom technologies, inc

Give Back Space: 17,789  
rentable square feet on  
the second floor of  
1701 N. Collins Blvd.  
Richardson, Texas 75080

## SIXTH AMENDMENT TO OFFICE LEASE AGREEMENT

THIS SIXTH AMENDMENT TO OFFICE LEASE AGREEMENT (this "Sixth Amendment") is made and entered into effective as of February 1, 2003, by and between Collins Campbell Joint Venture ("Landlord") and telecom technologies, inc. ("Tenant").

## RECITALS

WHEREAS, Landlord and Tenant entered into that certain Office Lease Agreement dated as of April 4, 1997, as amended by that certain First Amendment to Office Lease Agreement dated as of November 1, 1997, and those certain Second and Third Amendments to Office Lease Agreement dated as of July 1, 1998, that certain Fourth Amendment to Office Lease Agreement dated February 1, 1999, and that certain Fifth Amendment to Office Lease Agreement dated February 28, 2002 (collectively the "Lease"), with respect to certain Premises defined therein and commonly known as Suite 3000 at 1701 North Collins Blvd., Richardson, Dallas County, Texas 75080, which Lease is incorporated herein by reference; and

WHEREAS, Landlord and Tenant desire to further amend the Lease to reduce the size of the Premises and to extend the lease term.

NOW, THEREFORE, in consideration of the mutual agreements herein set forth, the mutual agreements set forth in the Lease, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant have agreed, and do hereby agree, to the above Recitals, and as follows:

1. All terms used herein and not specifically defined shall have the same meaning herein as is ascribed to them in the Lease.
2. The Premises are hereby reduced to 16,330 square feet of rentable area by deleting 5,952 square feet of rentable area on the third floor south, such "Give Back Space" being described on Exhibit "A", attached hereto and incorporated herein for all purposes and adding 2,055 square feet of rentable area on the second floor, such "Additional Space" being also described on Exhibit "A". The Additional Space is commonly known as Suite 2400 and was previously the "Premises" under that certain Office Lease Agreement dated October 14, 1999 (as amended -- see Section 8 below).
3. Basic rental for this renewal term is: \$662,385.57.
4. The monthly rental installment is decreased effective February 1, 2003, as set forth below:  
  
Monthly from February 1, 2003 through October 31, 2005 - \$20,072.29.
5. The term of the lease is hereby extended to expire on October 31, 2005, in lieu of April 30, 2003.
6. Landlord, at Landlord's sole cost and expense agrees to install an additional 15 tons of air conditioning on the third floor for the benefit of the VO lab in addition to taking responsibility for service and maintenance of the two (2) existing 5-ton Liebert air conditioning units servicing the VO lab. Furthermore, Tenant agrees that ownership of the two (2) existing 5-ton Liebert units rests with the Landlord.
7. Tenant may use two (2) covered parking spaces under the carport at no cost for the term described herein.
8. Effective February 1, 2003, subject to the full and final execution of this Sixth Amendment by both Landlord and Tenant, Landlord and Tenant mutually agree to terminate those certain Office Lease Agreements dated October 14, 1999 (as amended) and January 25, 2002, by and between Landlord and Tenant pertaining to Suites 2400 and 339 respectively at 1701 N. Collins Blvd., Richardson, Texas 75080, and as such, Tenant's right to occupy said suites shall expire on February 1, 2003.
9. All notices required to be sent to the Tenant shall also be sent to Sonus Networks, Inc., 5 Carlisle Road, Westford, MA 01886, Attn: Chief Financial Officer.
10. Except as herein provided to the contrary, Tenant's lease of the Premises from Landlord shall be on the same terms and conditions as those specified in the Lease.

11. The Lease (as amended by this Sixth Amendment) remains in full force and effect and is hereby ratified and affirmed.

IN WITNESS WHEREOF, this Sixth Amendment is hereby executed effective as of the day and year first set forth above.

LANDLORD:

COLLINS CAMPBELL JOINT VENTURE,  
a Texas general partnership

By: Jaytex Properties, Ltd.,  
a Texas limited partnership

By: JRS Management, Inc.

By: /s/ W.T. Field

-----  
W.T. Field, President

TENANT:

telecom technologies, inc.,  
a Texas corporation

By: /s/ G.M. Eastep

-----  
Name: G.M. EASTEP

-----  
Title: Chief Operating Officer  
-----

[GRAPHIC DEPICTING 3RD LEVEL FLOOR PLAN]

EXHIBIT "A"  
SITE PLAN

telecom technologies, inc.  
1701 N. Collins Blvd.  
Richardson, Texas 75080

Premises: 14,275 square feet of rentable area, third floor  
Additional Space: 2,055 square feet of rentable area, second floor  
-----  
16, 330 square feet of rentable area

[GRAPHIC DEPICTING 2ND LEVEL FLOOR PLAN]

EXHIBIT "A"  
SITE PLAN

telecom technologies, inc.  
1701 N. Collins Blvd.  
Richardson, Texas 75080

Additional Space: 2,055 square feet of rentable area

EXHIBIT 21.1  
SUBSIDIARIES OF THE REGISTRANT

NAME  
JURISDICTION  
OF  
INCORPORATION

- - - - -  
-----  
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telecom  
technologies,  
inc. Texas  
Sonus  
International,  
Inc. Delaware  
Sonus  
Securities  
Corp.  
Massachusetts  
Sonus  
Networks  
Limited  
United  
Kingdom Sonus  
Networks Pte  
Ltd Singapore  
Nihon Sonus  
Networks K.K.  
Japan  
Westford  
Networks  
Mexico, S. de  
R.L. de C.V.  
Mexico

EXHIBIT 23.1  
CONSENT OF INDEPENDENT AUDITORS

We consent to the incorporation by reference in the Registration Statements (Nos. 333-61940, 333-54932, 333-53970 and 333-32206) of Sonus Networks, Inc. and in the related Prospectuses of our report dated January 21, 2003 (except with respect to the matter discussed in Note 19 as to which the date is March 14, 2003), with respect to the consolidated financial statements and schedule of Sonus Networks, Inc. included in this Annual Report (Form 10-K) for the year ended December 31, 2002.

/s/ Ernst & Young LLP

Boston, Massachusetts  
March 19, 2003



EXHIBIT 23.2

This Annual Report on Form 10-K is incorporated by reference into Sonus Networks, Inc.'s filings on Form S-8 Nos. 333-61940, 333-54932, 333-53970 and 333-32206 (collectively, the "Registration Statements") and, for the purposes of determining any liability under the Securities Act, is deemed to be a new registration statement for each Registration Statement into which it is incorporated by reference.

On June 26, 2002, Sonus Networks, Inc. dismissed Arthur Andersen LLP as its independent auditor and appointed Ernst & Young LLP to replace Arthur Andersen LLP. Sonus Network, Inc.'s understanding is that the staff of the Securities and Exchange Commission has taken the position that it will not accept consents from Arthur Andersen LLP if the engagement partner and the manager for the Sonus Networks, Inc. audit are no longer with Arthur Andersen LLP. Both the engagement partner and the manager for the Sonus Networks, Inc. audit are no longer with Arthur Andersen LLP. As a result, Sonus Networks, Inc. has been unable to obtain Arthur Andersen LLP's written consent to the incorporation by reference into the Registration Statements of its audit report with respect to Sonus Networks, Inc.'s financial statements as of December 31, 2001 and December 31, 2000 and for the years then ended. Under these circumstances, Rule 437a under the Securities Act permits Sonus Networks, Inc. to file this Annual Report on Form 10-K for the fiscal year ended December 31, 2002 without a written consent from Arthur Andersen LLP. However, Arthur Andersen LLP's lack of consent could effect Arthur Andersen LLP's potential liability under Section 11(a) of the Securities Act for any untrue statements of a material fact contained in the financial statements audited by Arthur Andersen LLP or any omissions of a material fact required to be stated therein. Accordingly, your ability to assert a claim against Arthur Andersen LLP under Section 11(a) of the Securities Act for any purchases of securities under the Registration Statements made on or after the date of this Annual Report on Form 10-K may be impaired. To the extent provided in Section 11(b)(3)(C) of the Securities Act, original audit reports are being made by an expert for purposes of establishing a due diligence defense under Section 11(b) of the Securities Act.

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accounts, we hereby consent to the incorporation of our report included in this Form 10-K, into the Company's previously filed Registration Statement File Nos. 333-61940, 333-54932, 333-53970 and 333-32206.

/S/ ARTHUR ANDERSEN LLP

BOSTON, MASSACHUSETTS  
MARCH 25, 2002

EXHIBIT 99.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Sonus Networks, Inc. (the "Company") for the period ended December 31, 2002 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Hassan M. Ahmed, President and Chief Executive Officer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 19, 2003

/s/ Hassan M. Ahmed

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Hassan M. Ahmed  
PRESIDENT AND CHIEF EXECUTIVE OFFICER

EXHIBIT 99.2

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Annual Report on Form 10-K of Sonus Networks, Inc. (the "Company") for the period ended December 31, 2002 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Stephen J. Nill, Chief Financial Officer, Vice President of Finance and Administration and Treasurer of the Company, hereby certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) the Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Date: March 19, 2003

/s/ Stephen J. Nill

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Stephen J. Nill  
CHIEF FINANCIAL OFFICER, VICE PRESIDENT OF  
FINANCE AND ADMINISTRATION AND TREASURER