

PROSPECTUS

221,753 SHARES

SONUS NETWORKS, INC.

COMMON STOCK

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Selling stockholders identified in this prospectus may sell up to 221,753 shares of common stock of Sonus Networks, Inc. Sonus will not receive any of the proceeds from the sale of shares by the selling stockholders. Sonus' common stock is listed on the Nasdaq National Market under the symbol "SONS". On August 17, 2001 the last sale price of the common stock, as reported on the Nasdaq National Market, was \$16.33 per share. When used herein, the term "selling stockholder" includes donees, transferees, pledgees and other successors in interest.

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Investing in the common stock of Sonus involves a high degree of risk. See "Risk Factors," beginning on page 3.

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NEITHER THE SECURITIES AND EXCHANGE COMMISSION NOR ANY STATE SECURITIES COMMISSION HAS APPROVED OR DISAPPROVED OF THESE SECURITIES OR PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

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The selling stockholders may sell the shares of common stock described in this prospectus in public or private transactions, on or off the National Market System of the Nasdaq Stock Market, at prevailing market prices, or at privately negotiated prices. The selling stockholders may sell shares directly to purchasers or through brokers or dealers. Brokers or dealers may receive compensation in the form of discounts, concessions or commissions from the selling stockholders. More information is provided in the section titled "Plan of Distribution."

The date of this Prospectus is August 20, 2001.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC under the Securities Act of 1933 a registration statement on Form S-3. This prospectus does not contain all of the information contained in the registration statement since portions have been omitted under the rules of the SEC. We also file annual, quarterly and special reports, proxy statements and other information with the SEC under the Exchange Act. The Exchange Act file number for our SEC filings is 000-30229. You may read and copy the registration statement and any other document we file at the following SEC public reference rooms:

Judiciary Plaza  
450 Fifth Street, N.W.  
Rm. 1024  
Washington, D.C. 20549

500 West Madison Street  
14th Floor  
Chicago, Illinois 60661

7 World Trade Center  
Suite 1300  
New York, New York 10048

You may obtain information on the operation of the public reference room in Washington, D.C. by calling the SEC at 1-800-SEC-0330. We file information electronically with the SEC. Our SEC filings are available from the SEC's Internet site at [HTTP://WWW.SEC.GOV](http://WWW.SEC.GOV), which contains reports, proxy and information statements and other information regarding issuers that file electronically. You may read and copy our SEC filings and other information at the offices of Nasdaq Operations, 1735 K Street, N.W., Washington, D.C. 20006.

CERTAIN INFORMATION WE ARE INCORPORATING BY REFERENCE

The SEC allows us to "incorporate by reference" the documents we file with it, which means that we can disclose important information to you by referring you to those documents instead of reproducing that information in this

prospectus. The information incorporated by reference is considered to be part of this prospectus, and information in documents that we file later with the SEC will automatically update and supersede information in this prospectus. We incorporate by reference the following documents:

- Our Annual Report on Form 10-K for our fiscal year ended December 31, 2000, filed on March 28, 2001;
- Our Current Report on Form 8-K, dated February 2, 2001, filed with the SEC on February 2, 2001;
- Our Current Report on Form 8-K, dated May 11, 2001, filed with the SEC on June 21, 2001;
- Our Current Report on Form 8-K, dated July 31, 2001, filed with the SEC on August 7, 2001;
- Our Quarterly Report on Form 10-Q for our fiscal quarter ended March 31, 2001, filed with the SEC on May 15, 2001;
- Our Quarterly Report on Form 10-Q for our fiscal quarter ended June 30, 2001, filed with the SEC on August 13, 2001; and
- The description of our common stock contained in Sonus' Registration Statement filed with the SEC under Section 12(g) of the Securities Exchange Act including any amendment or report filed for the purpose of updating such description.

Upon request, Sonus will provide without charge to each person to whom a copy of this prospectus has been delivered a copy of any information that was incorporated by reference in the prospectus (other than exhibits to documents, unless the exhibits are specifically incorporated by reference into the prospectus). Sonus will also provide upon request, without charge to each person to whom a copy of this prospectus has been delivered, a copy of all documents filed from time to time by Sonus with the SEC pursuant to the Securities Exchange Act of 1934. Requests for copies should be directed to

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Investor Relations, Sonus Networks, Inc., 5 Carlisle Road, Westford, MA 01886. Telephone requests may be directed to (978) 692-8999.

In addition to the documents listed above, we also incorporate by reference any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, including any filings after the date of initial filing and prior to the effectiveness of the registration statement of which this prospectus is a part, until we have sold all of the offered securities to which this prospectus relates or the offering is otherwise terminated.

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#### RISK FACTORS

ANY INVESTMENT IN OUR SHARES OF 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 OCCUR, THE TRADING PRICE OF OUR COMMON STOCK COULD DECLINE AND YOU MAY LOSE ALL OR PART OF YOUR INVESTMENT.

#### RISKS RELATING TO OUR BUSINESS AND FINANCIAL PERFORMANCE

WE EXPECT THAT A MAJORITY OF OUR REVENUES WILL BE GENERATED FROM A LIMITED NUMBER OF CUSTOMERS AND OUR REVENUES WILL NOT GROW IF WE DO NOT SUCCESSFULLY SELL PRODUCTS TO THESE CUSTOMERS.

To date, we have shipped our products to a limited number of customers and only during the first quarter of fiscal 2000 did we begin to recognize revenues. We expect that in the foreseeable future, substantially all of our revenues will depend on sales of our products to a limited number of customers. For example, three customers each contributed more than 10% of our revenues for the three and six months ended June 30, 2001. Some of the customers to whom we have shipped products have deployed our products in their commercial networks, while others are using our products in laboratory testing or internal trials. Our customers may not, or may not continue to, deploy our products in their commercial networks on a timely basis, or at all, and any delay or failure by our customers to introduce commercial services based on our products, or a downturn in their business, would seriously harm our ability to sell products and generate revenues.

WE WILL NOT BE SUCCESSFUL IF WE DO NOT GROW OUR CUSTOMER BASE.

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;
- any delays or difficulties that we may incur in completing the development and introduction of our planned products or product enhancements;
- our customers' inability to raise capital to finance their business plans;
- 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.

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 rapidly 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 volumes, or at all.

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

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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.

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

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to make timely delivery of orders, we may lose revenues and suffer damage to our customer relationships.

WE HAVE BEEN IN BUSINESS FOR A SHORT PERIOD OF TIME AND YOUR BASIS FOR EVALUATING US IS LIMITED.

We were founded in August 1997, and only during the first quarter of fiscal 2000 did we begin to recognize any revenues. We have a limited meaningful operating history upon which you may evaluate us and our prospects. Moreover, we cannot be sure that we have accurately identified all of the risks to our business. Also, our assessment of the prospects for our success may prove inaccurate.

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 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 and other factors.

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 based on anticipated organizational growth and revenue trends. 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.

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WE MAY NOT BECOME PROFITABLE.

We have incurred significant losses since inception and expect to continue to incur losses in the future. As of June 30, 2001, we had an accumulated deficit of \$217.8 million and had only recognized cumulative revenues since inception of \$145.9 million through June 30, 2001. We have not achieved profitability on a quarterly or annual basis. As a result of our acquisition of telecom technologies, inc., or TTI, we expect to incur significant additional expenses for stock-based compensation and amortization of goodwill and purchased intangibles, which will make achieving profitability more difficult in the near to mid-term.

Our revenues may not grow and we may never generate sufficient revenues to achieve or sustain profitability. We expect to continue to incur significant and increasing sales and marketing, product development, administrative and other expenses. As a result, we will need to generate significant revenues to achieve and maintain profitability.

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.

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, that have entered our market by acquiring companies that design competing products. In addition, a number of smaller and mostly private companies, including Convergent Networks, Unisphere Networks and others, have announced plans for new products that address similar market opportunities that 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, including the ability to offer vendor-sponsored financing programs. If we are unable or unwilling to offer vendor-sponsored financing, prospective customers

may decide to purchase products from one of our competitors who offers this type of financing. Furthermore, some of our competitors are currently selling significant amounts of other

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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.

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 margins.

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 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, our 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 FAILURE TO MANAGE OUR EXPANSION EFFECTIVELY IN A RAPIDLY CHANGING MARKET COULD INCREASE OUR COSTS, HARM OUR ABILITY TO SELL FUTURE PRODUCTS AND IMPAIR OUR FUTURE GROWTH.

We have expanded our operations rapidly and have hired a significant number

of employees during 2001. Our growth has placed, and our anticipated growth will continue to place, a significant strain on our management systems and resources. Our ability to successfully offer our products and implement our business plan in a rapidly evolving market requires effective planning and management processes. We expect that we will need to continue to improve our financial, managerial and manufacturing controls and reporting systems, and will need to continue to expand, train and manage our work force worldwide. If we fail to implement adequate control systems in an efficient and timely manner, our costs may be increased and our growth could be impaired and we may not be able to accurately anticipate and fulfill market demand, the result of which will be a loss of revenues and customers.

IF WE FAIL TO HIRE AND RETAIN NEEDED PERSONNEL, THE IMPLEMENTATION OF OUR BUSINESS PLAN COULD SLOW OR OUR FUTURE GROWTH COULD HALT.

Competition for highly skilled engineering, sales, marketing and support personnel is intense because there are a limited number of people available with the necessary technical skills and understanding of our market. Any failure to attract, assimilate or retain qualified personnel to fulfill our current or future needs could impair our growth. The support of our products requires highly trained customer support and professional services personnel. Once we hire them, they may require extensive training in our voice infrastructure products. If we are unable to hire, train and retain our customer support and professional services personnel, we may not be able to increase sales of our products. 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. Most of our officers or key employees are not bound by an employment agreement for any specific term. 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.

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 LITIGATION, 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 may also become involved in litigation as a result of allegations that we infringe the intellectual property rights of others. Any parties asserting that our products infringe upon their proprietary rights would force us to defend ourselves and possibly our customers or contract manufacturers against the alleged infringement. These claims and any resulting lawsuit, if successful, could subject us to significant 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 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.

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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, and in connection with our recent acquisition of TTI, we did:

- issue stock that would dilute our current stockholders' percentage ownership;

- incur debt or assume liabilities;
- incur significant amortization expenses related to goodwill and other 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, including those associated with our acquisition of TTI, 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.

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

WE MAY FACE RISKS ASSOCIATED WITH OUR INTERNATIONAL EXPANSION THAT COULD IMPAIR OUR ABILITY TO GROW OUR REVENUES ABROAD.

Our expansion into international markets 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 and distributing 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;

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- reduced protection for intellectual property rights in some countries; and
- potentially adverse tax consequences.

IF WE ARE SUBJECT TO UNFAIR HIRING CLAIMS, WE COULD INCUR SUBSTANTIAL COSTS IN DEFENDING OURSELVES.

Companies in our industry whose employees accept positions with competitors frequently claim that their competitors have engaged in unfair hiring practices. We may be subject to claims of this kind in the future as we seek to hire qualified personnel. Those 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 to have engaged in unfair hiring practices, or our employees are found to have violated agreements with previous employers, we may suffer a significant disruption in our operations.

WE MAY NEED ADDITIONAL CAPITAL IN THE FUTURE, WHICH MAY NOT BE AVAILABLE TO US, AND IF IT IS AVAILABLE, MAY DILUTE OWNERS 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;
- 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 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.

#### RISKS RELATING TO THIS OFFERING

##### OUR STOCK PRICE MAY 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:

- loss of any of our major customers;
- changes in the financial condition of any of our major customers;
- the addition or departure of key personnel;
- variations in our quarterly operating results;
- announcements by us or our competitors of significant contracts, new products or product enhancements, acquisitions, distribution partnerships, joint ventures or capital commitments;
- changes in financial estimates by securities analysts;
- sales of common stock or other securities by us or by our stockholders in the future;
- release and sale of shares of common stock currently held in escrow;
- any acquisitions, distribution partnerships, joint ventures or capital commitments;

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- the impact of recessions in economies outside the United States; and
- unexpected changes in regulatory requirements and currency exchange rates.

##### 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 initial public offering or in connection with our acquisition of TTI may 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 outstanding convertible subordinated notes. Sales of a substantial number of shares of our common stock within a short period of time in the future could cause our stock price to fall. In addition, the sale of these shares could impair our ability to raise capital through the sale of additional debt or stock.

##### INSIDERS HAVE SUBSTANTIAL CONTROL OVER US AND COULD LIMIT YOUR ABILITY TO INFLUENCE THE OUTCOME OF KEY TRANSACTIONS, INCLUDING A CHANGE OF CONTROL.

As of April 30, 2001, our executive officers, directors and entities affiliated with them beneficially owned, in the aggregate, approximately 19.5% of our outstanding common stock. These stockholders, if acting together, would be able to influence significantly all 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, 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.

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#### SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements contained in this prospectus constitute forward-looking statements that involve substantial risks and uncertainties. In some cases, you can identify these statements by forward-looking words such as "may", "will", "should", "expect", "plan", "anticipate", "believe", "estimate" or "continue" and variations of these words or comparable words. In addition, any statements which refer to expectations, projections or other characterizations of future events or circumstances are forward-looking statements. These forward-looking statements involve known and unknown risks, uncertainties and situations that may cause our or our industry's actual results, level of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these statements. The risk factors contained in this prospectus, as well as any other cautionary language in this prospectus, provide examples of risks, uncertainties and events that may cause our actual results to differ from the expectations described or implied in our forward-looking statements.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance or achievements. You should not place undue reliance on these forward-looking statements, which apply only as of the date of this prospectus. Except as required by law, we do not undertake to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

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#### ABOUT SONUS NETWORKS

We are a leading provider of voice infrastructure products 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, cable operators, international telephone companies and carriers that provide services to other carriers. These service providers are rapidly 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 products includes the GSX9000 Open Services Switch, PSX6000 SoftSwitch, INtelligentIP softswitch, SGX2000 SS7 Signaling Gateway and System 9200 Internet offload solution. Our products, designed for deployment at the core of a service provider's network, 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.

A recognized leader in carrier-class packet voice infrastructure products, Sonus' announced customers include some of the world's leading service providers: BellSouth, Global Crossing, Intermedia Communications, Qwest Communications, Time Warner Telecom, Williams Communications 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.

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;

- 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;
- Leverage our technology platform from the core of the network out to the access edge;
- Actively contribute to the standards definition and adoption process; and
- Expand through investments in and acquisitions of complementary products, technologies and businesses.

USE OF PROCEEDS

Sonus will not receive any proceeds from the sale of the shares of common stock offered pursuant to this registration statement by the selling stockholders.

SELLING STOCKHOLDERS

In a transaction exempt from the registration provisions of the Securities Act of 1933, the selling stockholders covered by this prospectus have received shares of Sonus common stock in connection with the purchase by Sonus of certain intellectual property and other assets of Linguateq Incorporated, a provider of data distribution and billing application software for both next generation and legacy networks. Pursuant to a Proceeds Agreement, dated as of July 31, 2001, Sonus agreed to issue to the selling stockholders that number of shares of Sonus common stock set forth below next to the name of each such selling stockholder. The registration statement of which this prospectus is a part was filed in connection with Sonus' obligations under a Registration Rights Agreement, dated as of July 31, 2001, between Sonus and the selling stockholders.

The table set forth below includes certain information regarding the beneficial ownership of our common stock by each of the selling stockholders as of August 1, 2001. The information provided in the table below assumes that each selling stockholder will sell all of such stockholder's Sonus common stock. Our registration of the shares of common stock covered by this prospectus does not necessarily mean that the selling stockholders will sell all or any of the shares. None of the selling stockholders has, or within the past three years has had, any position or other material relationship with Sonus or any of its predecessors or affiliates. Because the selling stockholders may sell all or some portion of the shares of common stock beneficially owned by them, only an estimate (assuming each selling stockholder sells all of their shares offered hereby) can be given as to the number of shares of common stock that will be beneficially owned by the selling stockholders after this offering. In addition, the selling stockholders may have sold, transferred or otherwise disposed of, or may sell, transfer or otherwise dispose of, at any time or from time to time since the date on which they last provided to Sonus any information regarding the shares of common stock beneficially owned by them, all or a portion of the shares of common stock beneficially owned by them in transactions exempt from the registration requirements of the Securities Act of 1933.

NUMBER OF SHARES BENEFICIALLY OWNED NAME OF BENEFICIAL OWNER PRIOR TO OFFERING	NUMBER OF SHARES BENEFICIALLY OWNED AFTER OFFERING	PERCENT OF SHARES OFFERED
Bank.....	79,077	79,077 0 * Linguateq Incorporated.....
Incorporated.....	69,415	69,415 0 * Imperial Creditcorp.....
Creditcorp.....	42,445	42,445 0 * Comdisco, Inc.....
Inc.....	30,816	30,816 0 *

\* Less than 1% of the 203,738,049 shares of Sonus common stock outstanding on

#### PLAN OF DISTRIBUTION

The shares of common stock may be sold from time to time by the selling stockholders or their donees, pledgees, transferees and other successors in interest in one or more transactions at fixed prices, at market prices at the time of sale, at varying prices determined at the time of sale or at negotiated prices. When used herein, the term "selling stockholders" refers to all of their donees, pledgees, transferees and other successors in interest. The shares of common stock may be sold in one or more of the following transactions:

- on any national securities exchange or quotation service on which the common stock may be listed or quoted at the time of sale, including the Nasdaq National Stock Market;
- in the over-the-counter market;
- in private transactions, block sales, short sales or other similar types of transactions;
- through options; or
- a combination of any of the above transactions.

The shares of common stock described in this prospectus may be sold from time to time directly by the selling stockholders. Alternatively, the selling stockholders may from time to time offer shares of common stock to or through broker/dealers or agents. The selling stockholders and any broker/dealers or agents that participate in the distribution of the shares of common stock may be deemed to be "underwriters" within the meaning of the Securities Act of 1933. Any profits on the resale of shares of common stock and any compensation received by any broker/dealer or agent may be deemed to be underwriting discounts and commissions under the Securities Act of 1933.

Any shares covered by this prospectus which qualify for sale pursuant to Rule 144 under the Securities Act of 1933 may be sold under Rule 144 rather than pursuant to this prospectus. The selling stockholders may decide not to sell all of their shares. The selling stockholders may transfer, devise or gift such shares by other means not described in this prospectus.

To comply with the securities laws of certain jurisdictions, if applicable, the common stock must be offered or sold only through registered or licensed brokers or dealers. In addition, in certain jurisdictions, the common stock may not be offered or sold unless registered or qualified for sale or an exemption is available and complied with.

Under applicable rules and regulations under the Securities Exchange Act of 1934, any person engaged in a distribution of the common stock offered hereby may not simultaneously engage in market-making activities with respect to our common stock for a specified period prior to the start of the distribution. In addition, each selling stockholder and any other person participating in a distribution will be subject to the Securities Exchange Act and the rules and regulations promulgated under the Exchange Act, including Regulation M, which may limit the timing of purchases and sales of common stock by the selling stockholders or any such other person. These factors may affect the marketability of the common stock and the ability of brokers or dealers to engage in market-making activities.

All expenses of this registration will be paid by Sonus. These expenses include the SEC's filing fees and fees under state securities or "blue sky" laws. The selling stockholders will pay all selling commissions, if any.

#### LEGAL MATTERS

Bingham Dana LLP, Boston, Massachusetts has given its opinion that the shares offered in this prospectus have been duly authorized, validly issued, fully paid and non-assessable. As of July 31, 2001, attorneys at Bingham Dana LLP owned, in the aggregate 78,900 shares of Sonus' common stock.

#### EXPERTS

The consolidated financial statements of Sonus Networks, Inc. as of December 31, 1999 and 2000, and for the years ended December 31, 1998, 1999 and 2000, incorporated by reference in this prospectus from Sonus' Annual Report on Form 10-K for the year ended December 31, 2000, have been audited by Arthur Andersen LLP, independent public accountants, as indicated in their report with

respect thereto, and are incorporated in reliance upon the authority of said firm as experts in giving said report.

The consolidated financial statements of telecom technologies, inc. as of December 31, 1999 and 2000, and for the years ended December 31, 1998, 1999 and 2000, incorporated by reference in this prospectus from Sonus' Current Report on Form 8-K filed on June 21, 2001, have been audited by Arthur Andersen LLP, independent public accountants, as indicated in their report with respect thereto, and are incorporated in reliance upon the authority of said firm as experts in giving said report.

WE HAVE NOT AUTHORIZED ANY DEALER, SALESPERSON OR OTHER PERSON TO GIVE ANY INFORMATION OR TO MAKE ANY REPRESENTATIONS NOT CONTAINED IN THIS PROSPECTUS OR ANY PROSPECTUS SUPPLEMENT. YOU MUST NOT RELY ON ANY UNAUTHORIZED INFORMATION. NEITHER THIS PROSPECTUS NOR ANY PROSPECTUS SUPPLEMENT IS AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY ANY OF THESE SECURITIES IN ANY JURISDICTION WHERE AN OFFER OR SOLICITATION IS NOT PERMITTED. NO SALE MADE PURSUANT TO THIS PROSPECTUS SHALL, UNDER ANY CIRCUMSTANCES, CREATE ANY IMPLICATION THAT THERE HAS NOT BEEN ANY CHANGE IN THE AFFAIRS OF SONUS SINCE THE DATE OF THIS PROSPECTUS.