

# SONUS NETWORKS INC

## FORM 10-K (Annual Report)

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

**FORM 10-K**

- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the fiscal year ended December 31, 2016
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

Commission File Number 001-34115

**SONUS NETWORKS, INC.**

(Exact name of Registrant as specified in its charter)

**DELAWARE**

(State or other jurisdiction of  
incorporation or organization)

**04-3387074**

(I.R.S. Employer Identification No.)

**4 Technology Park Drive, Westford, Massachusetts 01886**  
(Address of principal executive offices, including zip code)

**(978) 614-8100**

(Registrant's telephone number, including area code)  
Securities registered pursuant to Section 12(b) of the Act:

**Title of each class**

**Name of each exchange on which registered**

Common Stock, par value \$0.001

The NASDAQ Global Select Market

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

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 whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer

Accelerated filer

Non-accelerated filer   
(Do not check if a smaller  
reporting company)

Smaller reporting company

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

The aggregate market value of the common stock held by non-affiliates of the Registrant was approximately \$371,600,000 based on the closing price for the Common Stock on the NASDAQ Global Select Market on June 30, 2016. As of February 20, 2017, there were 49,067,648 shares of common stock, \$0.001 par value, outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Portions of the definitive Proxy Statement to be delivered to stockholders in connection with the Registrant's 2017 Annual Meeting of Stockholders are incorporated by reference into Part III of this report.

**SONUS NETWORKS, INC.**  
**FORM 10-K**  
**YEAR ENDED DECEMBER 31, 2016**  
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### **Cautionary Note Regarding Forward-Looking Statements**

This Annual Report on Form 10-K contains "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995, which are subject to a number of risks and uncertainties. All statements other than statements of historical facts contained in this Annual Report on Form 10-K, including statements regarding our future results of operations and financial position, business strategy, plans and objectives of management for future operations and plans for future product development and manufacturing are forward-looking statements. Without limiting the foregoing, the words "anticipates", "believes", "could", "estimates", "expects", "intends", "may", "plans", "seeks" and other similar language, whether in the negative or affirmative, are intended to identify forward-looking statements, although not all forward looking statements contain these identifying words. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of various factors. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. We therefore caution you against relying on any of these forward-looking statements. Important factors that could cause actual results to differ materially from those in these forward-looking statements are discussed in Item 1A., "Risk Factors" of Part I and Items 7 and 7A., "Management's Discussion and Analysis of Financial Condition and Results of Operations" and "Quantitative and Qualitative Disclosures About Market Risk," respectively, of Part II of this Annual Report on Form 10-K. Also, any forward-looking statement made by us in this Annual Report on Form 10-K speaks only as of the date on which this Annual Report on Form 10-K was first filed. Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law.

References in this Annual Report on Form 10-K to "Sonus," "Sonus Networks," "Company," "we," "us" and "our" are to Sonus Networks, Inc. and its subsidiaries, collectively, unless the context requires otherwise.

## PART I

### Item 1. Business

#### Overview

Sonus helps the world's leading communications service providers and enterprises embrace the next generation of Session Initiation Protocol ("SIP") and 4G/LTE (Long Term Evolution)-based solutions, including Voice over Internet Protocol ("VoIP"), Voice over WiFi ("VoWiFi"), video and Unified Communications ("UC") by securing and enabling reliable and scalable Internet Protocol ("IP") networks. With customers around the globe and 20 years of experience transforming networks to IP, Sonus enables service providers and enterprises to capture and retain users and generate significant related return on investment. Sonus products include session border controllers ("SBCs"), diameter signaling controllers ("DSCs"), and VoWiFi solutions, which are supported by a global services team with experience in design, deployment and maintenance of some of the world's largest IP networks.

Our solutions enable the delivery of real-time communication applications over wireline and wireless IP infrastructure with the same performance and quality level historically delivered from legacy voice time-division multiplexing ("TDM") technologies. Our original flagship product, the GSX9000 VoIP softswitch, helped usher in the VoIP revolution by providing a carrier-class IP telephony switch that would support the transition from circuit-switched to IP-based network communications. Other products soon followed, such as the Sonus Element Management Server and the Sonus PSX Centralized Routing & Policy Server, which allowed communications service providers to replace high-cost circuit-based and space-consuming network equipment with smaller and more cost-efficient IP-based servers. We leveraged this expertise in managing and scaling large VoIP networks and introduced one of the industry's first SBCs to address the growing need for secure interconnection between private communications networks and the public Internet. Our SBC products are the fastest-growing segment of our business, addressing the needs of mid- to large-sized enterprises from core infrastructures to branch offices, as well as the full spectrum of communications service providers, both large and small.

Today Sonus provides communication solutions to service providers and enterprises that enable them to secure and unify their real-time communications infrastructures. Our solutions provide a secure way for our customers to link and leverage multivendor, multiprotocol communications systems and applications across their networks, around the world and in a rapidly changing ecosystem of IP-enabled devices such as smartphones and tablets. Our solutions help realize the intended value and benefits of UC platforms by enabling disparate communications environments, commonplace in most enterprises today, to work seamlessly together. Likewise, Sonus solutions secure the evolution to cloud-based delivery of UC solutions - both for service providers transforming to a cloud-based network and for enterprises using cloud-based UC. In 2016, we announced our comprehensive cloud portfolio, delivering a secure solution with elastic policy control and session management, automated scaling, innovative load balancing and high availability.

Our service provider customers include AT&T Inc., BICS (formerly known as Belgacom ICS), BT Group plc, CenturyLink, Inc., Colt Technology Services, Deutsche Telekom AG, KDDI Corporation, Level 3 Communications, Inc. (which announced that it will be acquired by CenturyLink, Inc.), Orange Business Services, Softbank Group Corp., TalkTalk Telecom Group PLC, Tata Communications Ltd., Verizon Communications Inc., Vonage Holdings Corp. and XO Communications, LLC (which was recently acquired by Verizon Communications Inc.). We have traditionally sold our products through a global direct sales force, with additional sales support from regional channel partners throughout the world. Our channel partner program, Sonus Partner Assure, expands our coverage of the service provider and enterprise markets.

In 2012, in concert with Sonus Partner Assure, we enhanced our SBC 5200 to be more enterprise- and channel-centric and launched the SBC 5100 to address the requirements for smaller offices as a result of their VoIP and SIP deployments. The acquisition of Network Equipment Technologies, Inc. ("NET") in 2012 also provided us with the SBC 1000 and SBC 2000, along with strong expertise in the Microsoft Skype for Business and Lync market and a presence in the U.S. federal government market. Today, Sonus has more Skype for Business and Lync-qualified SBCs than any other vendor. In 2013, we introduced the industry's first software-based SBC architected to deliver unlimited scalability and designed with advanced features, the Sonus SBC SWE (Software edition). In 2016, this product was named a "Cloud Computing Security Excellence Award" winner by *Cloud Computing* magazine and Miercom, an independent certification company, verified the performance of the SBC SWE in network function virtualization ("NFV") environments through extensive testing.

In 2014, with the acquisition of Performance Technologies, Incorporated ("PT"), we expanded and diversified our portfolio with an integrated Diameter and SS7 signaling solution and have delivered strategic value to service providers seeking to offer new multimedia services through mobile, cloud-based, real-time communications. Also in 2014, we announced our Sonus SBC

7000 ("SBC 7000"), which is designed to address scalability requirements for real-time, multimedia communications with the capability to license up to 150,000 sessions. The SBC 7000 is purpose-built to support emerging services such as high definition ("HD") voice and video, Voice over Long-Term Evolution ("VoLTE") and Rich Communications Services ("RCS").

In 2014, we announced our software-based DSC and software-based policy and routing engine ("PSX"). By the end of 2014, we had virtualized our SBC, DSC and PSX products, leading this aspect of the market as evolving network architectures transition to leveraging virtualized network functions as part of software-based, programmable networks.

In 2015, we acquired from Treq Labs, Inc. ("Treq") certain assets related to its software-defined networking ("SDN") business, which provides solutions that optimize networks for voice, video and UC for both enterprise and service provider customers.

On September 26, 2016, we acquired Taqua, LLC ("Taqua"), an early leader in next-generation IP switch technology with more than 400 installed systems and over four million subscribers worldwide. Taqua's Virtualized Mobile Core ("VMC") solution is expected to bolster our product offerings in the mobile communications space by providing an alternative to full IP-based multi-media services ("IMS")/VoLTE as well as a solution for providers that would like to offer VoWiFi. The acquisition is also expected to expand our fixed portfolio by adding a Class 5 Softswitch (T7000) for network transformation projects. The acquisition is aligned with our growth strategy and network transformation initiatives.

## **Industry Background**

The single greatest capital cost for telecommunications service providers has been and continues to be their infrastructure. In order to leverage these capital investments and deliver new services such as triple-play (voice, television and Internet) bundles, service providers must consolidate their infrastructure from the costly, legacy Public Switched Telephone Network ("PSTN") infrastructures into the more efficient and flexible IP-based network models, which we believe are driving their revenue-growth objectives. Migrating from the PSTN to IP reduces costs by enabling the consolidation of voice, video and data within a single IP-based networking infrastructure. In an effort to further leverage service providers' capital investments and deliver new IP-based services, we believe the telecommunications industry is undergoing another major transformation from hardware-centric IP-based networks toward software-centric programmable IP-based networks.

The shift from PSTN- to IP-based communications began around 1996 and was driven by the desire of communications service providers to deliver new IP data services to grow their revenue. For most telecommunications service providers, the move to IP-based network communications presumed a strategic, phased migration. This strategy often involved deploying VoIP-based network equipment to enable the inter-networking between legacy TDM infrastructures and the new IP-based infrastructures. As a result, service providers typically found themselves operating hybrid networks that featured a mix of old (TDM) and new (IP/SIP) technology. The interoperability of these technologies introduced several issues, such as security, call control and quality of service requirements, which had to be addressed over a converged IP network that now carried not just data, but voice and multimedia data streams as well. Our original solution portfolio focused almost exclusively on helping telecommunications service providers successfully transition from TDM to all-IP communications while reducing costs and increasing revenue opportunities. As IP-to-IP communications have become more common, our product focus has naturally shifted from core network switching to SBCs and securing those communications. As 4G/LTE networks displace 3G and older wireless networks, creating additional security risks and network congestion, our product focus has shifted to DSCs and mobility solutions as well.

While we anticipate that TDM-to-IP interoperability will remain a core requirement of communications networks for many years to come, communications service providers and enterprises face a new generation of potentially disruptive market trends, including cloud-based communications, UC, mobility/applications and NFV. Although hosted communications have been available for years, hosting them in the cloud represents a unique opportunity for service providers. This is a key trend currently affecting both enterprises and service providers. Local and long-distance voice, video, Interactive Voice Response ("IVR") systems and call recording are just a few examples of applications that are beginning to be delivered in this manner. Another key trend affecting enterprises and service providers is the demand by users for the unification of communication modalities such as voice, instant messaging ("IM"), short message service, video and web-sharing. A third key trend, which primarily impacts enterprises, is the move to mobility and secure applications as service providers are evolving their mobile networks to VoLTE and VoWiFi. Enterprises need to support the explosion of communications devices (e.g., tablets, smartphones, laptops) and third-party applications in their communications infrastructure. A fourth key trend, NFV, is the virtualization of certain products to enable network functionality, such as the SBC, PSX (and its derivatives) and DSC to run as software on commercial, off-the-shelf platforms to be hosted in public cloud infrastructure or within other network elements. The primary benefit of NFV for service providers is the ability to more rapidly innovate and deploy new cloud-based applications, service and infrastructure to meet their customers' evolving needs. We believe our software-based SBC, DSC, VMC and policy solutions are designed to help customers effectively address these trends as they migrate to the cloud.

## **Network Requirements and the Sonus Solutions**

The introduction of the Sonus GSX9000 Open Services Switch helped to change the perception that VoIP was an inferior alternative to the PSTN. That original commitment to quality, found in all of our solutions today, can be summed up in five solution attributes: Security, Reliability, Scalability, Interoperability and Simplicity.

**Security** . IP communications networks must be secure against both internal and external attacks. Our SBCs and other networking products provide robust network security through a variety of methods including endpoint authentication, signaling and media encryption, prevention of denial-of-service ("DoS") and distributed DoS ("DDoS") attacks, Network Address Translation firewall support and user-defined security policies such as whitelisting and blacklisting.

**Reliability** . Communications service providers and enterprises operate complex, mission-critical networks. Our products are designed to offer the highest levels of quality and reliability, including:

- Full redundancy, designed for 5-nine's (99.999%) availability;
- Quality of service equal or superior to the PSTN;
- System hardware designed to comply with Network Equipment Building System Standards Level 3;
- Interworking between numerous signaling and media formats to support multivendor, global networks; and
- Sophisticated security, network monitoring and analytics capabilities.

**Scalability** . Communications service providers and enterprises face challenging scalability requirements, with communications networks that may support tens or even hundreds of thousands of simultaneous sessions. To be economically attractive, new infrastructure investments must compare favorably with existing networks in terms of performance, cost per port, space occupation, power consumption and cooling requirements. Our software products are architected to scale simply and cost-effectively from a handful of sessions to a virtually unlimited number of simultaneous sessions in either hybrid or public cloud deployments. In addition, our hardware platforms offer unparalleled density and require significantly less space, power and cooling compared to legacy systems that do not scale. Our higher capacity platforms are designed to be more cost-efficient to operate and minimize management overhead.

**Interoperability** . New network infrastructure equipment and software must often sustain the full range of network communications standards, supporting both data networking protocols as well as telephony protocols. Infrastructure solutions must also integrate seamlessly with existing operations support systems. Our products are designed to be compatible with a wide range of voice and data networking standards and interfaces, including:

- SS7 and other telephony signaling protocols, including numerous country variants, number translations (e.g., ENUM and DNS) and intelligent services routing;
- Call signaling standards such as SS7/SIGTRAN, SIP and its variants: BICC, MGCP and H.323;
- Narrowband and Wideband media encoding/decoding formats and standards such as G.711 and G.722;
- All bearer interfaces over both packet- and circuit-based bearers such as TDM, Optical and Ethernet;
- Management and accounting interfaces such as Radius, Diameter, SNMP and AMA;
- Interoperability with enterprise systems including Private Branch eXchanges ("PBXs"), IVR applications and Microsoft Lync Server; and
- Interoperability between 2G/3G networks and 4G/LTE networks.

**Simplicity** . Our products are built on the idea of a simple, flexible architecture that allows communications service providers and enterprises to quickly deploy them individually in specific roles (e.g., as a standalone SBC) or collectively in broader solutions, such as international gateways, IP-based networks and 4G/LTE networks. This is accomplished through our unique, centralized SIP architecture as well as our commitment to third-party interoperability testing and certification, adherence to industry standards and our industry-leading global services organization.

## **Sonus Products**

At December 31, 2016, our products included the following:

### ***Sonus Session Border Controllers***

Our portfolio of SBCs addresses security and interworking requirements for small, medium and large businesses as well as regional and global communications service providers. SBCs are the fastest-growing segment of our business and we offer a

broad range of SBCs that scale from a handful of SIP sessions to hundreds of thousands of sessions and collectively represent the largest number of Skype for Business and Lync-certified SBCs than any other vendor on the market.

We currently offer the following unique SBC products:

- **Sonus SBC 1000** for small businesses and branch offices that require performance of up to 160 concurrent SIP sessions in a standalone SBC;
- **Sonus SBC 2000** for mid-size enterprises, branch offices and regional Points of Presence that require performance of up to 600 concurrent SIP sessions in a standalone SBC;
- **Sonus SBC 5110** for enterprises and service providers that require performance of up to 10,000 concurrent SIP sessions in a standalone SBC;
- **Sonus SBC 5210** for enterprises and large national/global service providers that require performance of up to 64,000 concurrent SIP sessions in a standalone SBC;
- **Sonus SBC 5400** for enterprises and large national/global service providers that require performance of up to 75,000 concurrent SIP sessions in a standalone SBC;
- **Sonus SBC 7000** for real-time, multimedia communications that require performance of up to 150,000 sessions in a standalone SBC;
- **Sonus SBC 9000** for large enterprises and service providers that require a hybrid gateway/SBC solution for a mix of TDM and IP voice traffic;
- **SBC VX** , a secure hybrid solution sold to the U.S. government and its agencies; and
- **Sonus SBC SWe (Software edition)** , a software-based SBC for virtual environments, remote deployments and instances where virtualized software-based implementations are required.

In 2016, the Sonus SBC 5110, SBC 5210 and SBC 7000 were Federal Information Processing Standard (FIPS) 140-2 validated, enabling U.S. government and other regulated customers to utilize these SBCs to secure mission-critical communications. This program is operated jointly by the United States National Institute of Standards and Technology and the Communications Security Establishment of Canada to specify the level of security needed to protect sensitive government data in computer and telecommunication systems.

#### ***Sonus GSX9000 Open Services Switch***

The Sonus GSX9000 Open Services Switch (the "GSX9000") bridges IP and TDM networks by converting any type of voice signal into IP packets and transmitting those IP packets over a data network. It then converts whatever type of signal is necessary to be deposited back onto non-IP networks and delivers such signal to its intended destination. The GSX9000 is designed to deliver voice quality that is equal or superior to that of the legacy circuit-switched public network. Further, it supports multiple voice encoding schemes used in circuit switches and delivers a number of other voice compression algorithms. The GSX9000 scales to very large configurations, such as those required by large national service providers. A single GSX9000 shelf is designed to support up to 22,000 simultaneous calls, while a single GSX9000 in a multiple-shelf configuration is architected to support 100,000 or more simultaneous calls. The GSX9000 also operates with our PSX Policy & Routing Server and with softswitches and network products offered by other vendors.

#### ***Sonus T7000 Intelligent Switching System***

The Sonus T7000 is a Class 5 end-office softswitch that provides residential and business voice services and is a next generation IP-IP Multimedia Processing Engine. Using the T7000, operators can transform their networks from older Nortel DMS, Lucent 5ESS and other switches to an IP-based Class 5 softswitch. The T7000 allows operators to meet regulatory requirements, satisfy the demand for new triple-play services, migrate to VoIP, lower operating costs, and generate new revenues with the RUS-listed, carrier-class Class 5 switching gateway.

#### ***Sonus Diameter Signaling Controllers***

The trend toward 4G/LTE networks and increasingly mobile-centric communications is expected to result in a significant rise in Diameter traffic in service provider networks. To address the anticipated growth of Diameter traffic in the network, Sonus offers its Diameter Signaling Controller, the Sonus DSC 8000. The DSC 8000 is designed to provide high performance, capacity, scalability and interoperability for 4G/LTE networks. The Sonus DSC solution is also available as a software-only product, DSC SWe, which can be run on common-off-the-shelf hardware and in virtual instances for superior price/performance. In 2016, Sonus made new SS7 security enhancements to its DSC 8000 products that are designed to discourage mobile device hacking.

#### ***Sonus Signal Transfer Points***

The Sonus Signal Transfer Point ("STP") acts as the switch/router in an SS7 signaling network, managing and controlling all signaling traffic. The STP's vast array of network interfaces provide network planners the ability to design and implement SS7

network architectures that meet both the physical and business requirements of their companies. These interfaces include TDM SS7 Links, Asynchronous Transfer Mode SS7 Links, High Speed "HSL" Annex "A" SS7 Links and the IP-based SIGTRAN Links.

### ***Sonus PSX Policy & Routing Server***

The Sonus PSX Policy & Routing Server (the "PSX") is the central routing and policy engine for our softswitch and distributed SBC solutions. The PSX plays an integral role in many of our network deployments, and provides both the call routing intelligence and policy intelligence for SIP sessions across the network. The PSX is unique in that it can act as a central control and provisioning point for hundreds of switches or SBCs, resulting in significant operational savings for our customers. The PSX is based upon a modular architecture that is designed for high performance and scalability, as well as interoperability with third-party gateways, devices and services. The PSX is an all-IP component and can perform most IP-based database lookups natively. The core PSX platform is also extensible through applications to address solutions such as Least Cost Routing, Number Portability and Breakout Gateway Control Functions (for hybrid IP Multimedia Subsystem networks). The PSX can also be deployed in virtualized environments as a software-only instance via the Sonus Virtualized PSX (SWe) product.

### ***Sonus WebRTC Services Solution***

Web Real-Time Communications ("WebRTC") is a technology that enables web browsers to participate in audio, video and data communications, without any kind of additional plug-ins or application downloads. A WebRTC-enabled browser or mobile application allows users to place a call, participate in multi-party video and audio conferencing, and engage in screen sharing collaboration. Any device that supports a WebRTC-enabled browser can be used to communicate with another WebRTC-enabled application over the Internet. WebRTC facilitates interoperability between different communication systems and helps enable UC by allowing users, servers and applications to connect the world of web communications to the world of UC. With the Sonus WebRTC Services Solution, customers can write WebRTC-enabled applications that securely interoperate with other WebRTC-enabled devices or with SIP endpoints.

The Sonus WebRTC Services Solution includes:

- **Sonus WebRTC Gateway (WRTC)**, which enables interworking from WebRTC to SIP, as well as signaling from WebRTC to WebRTC solutions; and
- **Sonus WebRTC Software Development Kit (WRTC SDK)**, which provides application program interfaces for voice, video, IM, desktop share, session management, presence and conferencing.

### ***Sonus Network Management Solutions***

We offer our customers a variety of products to help manage and integrate our networked solutions with internal provisioning and billing systems, including:

- **Sonus NetScore** network performance analysis tool, which provides a real-time assessment of the state of a service provider's or enterprise's network, including quality of service, call delay, network effectiveness, congestion and efficiency;
- **Sonus Element Management System** for centralized management and provisioning of Sonus network elements; and
- **Sonus DataStream Integrator** for integration of call data records with back-office billing and accounting systems.

### ***Virtualized Mobile Core Solution***

Sonus' VMC is a virtualized IMS services core that enables rapid deployment of next-generation voice and messaging services, including VoWiFi and VoLTE. Deployed in numerous mobile operator networks today, the VMC is a carrier-grade product that combines a number of standard IMS functions into one virtualized software solution, including:

- Telephony Application Server (TAS);
- IP Short Message Gateway (IP-SM-GW);
- Service Centralization and Continuity Application Server (SCC-AS);
- IP Multimedia Service Switching Function (IM-SSF);
- Media Resource Function (MRF); and
- Serving Call Session Control Function (S-CSCF).

### ***Sonus Global Services***

Sonus Global Services offers professional consulting and services that support our industry-leading IP communications solutions. Through a wide range of service offerings, our consultants provide the skill and expertise to help communications service providers and enterprises transform their communications networks, from network engineering and design through network integration and commissioning to network operations. We believe our service offerings accelerate our customers'

return on investment, optimize their operational capability, enhance their network's performance and health, and help them generate new revenue. In addition to end-to-end design, integration and deployment services, our Global Services team offers customized engagements, training workshops, interoperability/verification testing and around-the-clock technical support worldwide.

The Sonus Global Services team provides our customers with:

- A full-service portfolio including consulting, integration, deployment, migration, operation support, monitoring and managed services;
- Global reach through our worldwide service organization and partner presence in all major global markets;
- Program managers who use a disciplined methodology for all deployment and integration projects; and
- Consistent execution in the design, deployment and support of the world's largest and most advanced networks.

In addition to global support teams, as of December 31, 2016, Sonus Global Services maintained regional service desks located in Westford, Massachusetts (United States), Tokyo (Japan), Prague (Czech Republic), Ottawa (Canada), Mexico City (Mexico) and Kuala Lumpur (Malaysia), and both a service desk and customer test center in Richardson, Texas (United States).

### **Sonus Market Strategy**

We see opportunity for securing real-time communications in the cloud for both communication service providers and enterprises. Communication service providers are transitioning their networks from hardware to NFV. In parallel, enterprise-based UC infrastructures are moving to cloud-based delivery systems. The trend toward cloud-based communications requires infrastructure investment by the enterprises who buy cloud services as well as the communications service providers that deliver cloud services. Our SBCs (whether virtual- or hardware-based) that are installed in service provider and enterprise networks enable these customers to deliver and secure real time communication services across and between multiple infrastructures and heterogeneous IP-PBX corporate environments. Additionally, when installed at the edge of service providers' and enterprises' networks, our SBCs allow service providers to securely and seamlessly deliver consolidated voice and data services to enterprises through SIP trunking services.

We expect that communications service providers will continue to modernize their TDM peering and access networks to SIP, and to monetize their existing SIP trunking services by offering new cloud services, including hosted and managed UC infrastructure and applications that drive the need for more SBC sessions. We also anticipate that service providers will expand their cloud-based real time communication services, further driving a need for SIP and Diameter-based infrastructure equipment. To that end, we are partnered with companies such as BroadSoft, Inc., whose products allow service providers to increase their cloud application offerings, while using our SBCs and policy solutions to facilitate the integration of their networks and offerings.

We currently sell our SBCs to enterprise customers for use at both the core and the edge of their networks, which allows them to set up a secure IP network with their service providers, consolidate dial plans and routing services and evolve from their legacy PBX infrastructures. In adopting cloud-based services, we expect that enterprises will continue to leverage their premise-based assets (e.g., PBXs) and, as such, will continue to need strong interworking and policy management to enable these cloud- and premise-based components to work together seamlessly. We believe that enterprises want UC solutions in their networks, and expect Microsoft's UC platform to play a key role in their communications productivity. We currently offer the broadest portfolio of Microsoft Skype for Business and Lync-qualified SBCs to enable enterprises to integrate Skype for Business with existing PBXs or facilitate their migration from a PBX to Skype for Business. Additionally, we have strong certified channel partners that continue to support customers' migrations to Skype for Business.

As mobile networks continue to adopt LTE and deployments of the Internet of Things ("IoT") accelerate, our DSCs, along with our SBCs, provide the critical edge interconnection for deployment in these networks. Providing both security for and interoperability between carriers and service providers, we believe our single vendor solution for data, voice, media and authentication are well positioned for this high-growth area. In addition to the Diameter Edge function, our scalable DSC also can be used in the core of the network, providing Diameter Routing and load balancing to handle congestion management and reduce network complexity as traffic generated by mobile devices and the IoT increases.

In addition to the adoption of LTE, we also anticipate a parallel adoption of VoWiFi. With a more congested radio access network ("RAN") comes a need to expand coverage using WiFi. We believe our VoWiFi solution is well positioned to assist carriers in alternate coverage paradigms for their mobile subscribers.

We also plan to continue developing new solutions internally and through partnerships that allow our customers to stay ahead of the rapid technology shifts in the communications industry. Following are some key principles driving our product evolution:

**Expand our solutions to secure IP-based communications markets.** The transformation from legacy TDM networks to all-IP networks has created new requirements for security, UC and media manipulation as well as an opportunity for creating IP-to-IP services at the network edge. The requirements for security go far beyond the legacy functionality of SBCs and include the operator's requirements for a border gateway to other IP networks as well as a wide variety of requirements associated with the need for enterprises to secure their own IP networks. The UC or multimedia nature of emerging services provides an opportunity for us to create innovative compliance and security solutions, both individually and with the help of partners.

**Expand and broaden our customer base by targeting specific market segments, such as enterprises and wireless operators .** We plan to penetrate additional customer segments and believe that new and incumbent service providers will build out their VoIP infrastructures at different rates. The next-generation communications service providers, who are relatively unencumbered by legacy equipment, have been initial purchasers of our equipment and software. Other newer entrants, including wireless operators, cable operators and Internet service providers ("ISPs"), have also been early adopters of our products. Moreover, incumbents, including interexchange carriers, regional Bell operating companies and international operators, are adopting packet-voice technologies. Large enterprises are often operating voice networks that can be as complex as a small to mid-sized service provider, and we believe that our products are a good match for their needs for secure, reliable and scalable communications. We also continue to expand our SBC portfolio with the needs of the small and medium business customers in mind.

**Expand our global sales, marketing, support and distribution capabilities .** As a primary supplier of network infrastructure solutions to Tier 1 service providers (a service provider that can reach every other network on the Internet without purchasing IP transit), we require a strong worldwide presence. We have an established sales presence throughout North America, Europe, Asia/Pacific, the Middle East, Africa, and Central/South America. We augment our global direct sales force by working with international partners in key markets around the world. Our expanded channel partner program was designed as a two-tiered structure to better support our growing and diverse community of SBC channel resellers.

**Leverage our technology leadership to attract and retain key communications service providers.** As one of the first companies to offer carrier-class IP network solutions, we have worked with many of the world's leading communications service providers to help them develop their next-generation, IP-based multimedia networks. We expect service providers to select vendors that deliver leading technology and can maintain that technology leadership. We believe that our solutions are an integral part of our customers' network architectures, and we will continue to help these customers move forward as their networks grow and evolve. By working closely with leading service providers, we gain valuable knowledge about their requirements, and we will continue to use this knowledge to enhance our existing products and create new products that address the most important requirements of network operators globally.

#### **Sonus Customers**

Our solutions are deployed in many of the world's leading service provider and enterprise networks, including AT&T Inc., BICS (formerly known as Belgacom ICS), BT Group plc, CenturyLink, Inc., CITIC Telecom 1616 LTD., Deutsche Telekom AG, Inteliquent, Inc., Kellogg Company, KDDI Corporation, Level 3 Communications, Inc. (which announced that it is being acquired by CenturyLink, Inc.), NTT Communications Corp., Orange Business Services, RELX Group plc, Royal Dutch Shell plc, SoftBank Group Corp., State Street Corporation, TalkTalk Telecom Group PLC, Tata Communications Ltd., TeliaSonera AB, Telstra Corporation Limited, Verizon Communications Inc., and Vonage Holdings Corp. In recent years, we have seen a significant increase in the number of enterprise customers purchasing our SBC product portfolio as a result of our overall channel partner program.

The table below provides information regarding our customer who accounted for 10% or more of our revenue for the years ended December 31, 2016, 2015 and 2014 :

	Year ended December 31,		
	2016	2015	2014
AT&T	12%	13%	19%

#### **Sales and Marketing**

We sell our products through both direct sales and indirect channels globally, leveraging the assistance of resellers such as Verizon Communications Inc. and distributors such as ScanSource, Inc. and Westcon Group Inc. Sonus Partner Assure, our channel partner program, was designed to serve particular markets and provide our customers with opportunities to purchase our products in combination with related services and products.

## **Product 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 leverages innovative technology in response to market data and customer feedback. We have introduced differentiated products to address market and customer needs, including the Sonus SBC 5100. In addition, with the acquisition of NET in 2012, we incorporated its SBC products into our product SBC portfolio as the Sonus SBC 1000 and the Sonus SBC 2000. Both the Sonus SBC 1000 and Sonus SBC 2000 received enhancements in 2016 that offer more cloud functionality and support for third-party applications while driving the cost of ownership down, resulting in more features and more power at a lower price point.

In 2013, we introduced the first software-based SBC that was designed to feature advanced capabilities and unlimited scalability, the Sonus SBC SWe (Software edition). In 2014, we announced software-only versions of our PSX policy server and DSC products, as well as our most powerful SBC to date, the SBC 7000. In 2015, we introduced the Sonus WebRTC Services Solution and expanded our virtual product portfolio with virtual versions of Sonus NetScore and Sonus Element Management System. In 2016, we introduced enhancements to our comprehensive cloud solution with cloud-optimized versions of our PSX and EMS, a microservices architecture for our SBC SWe and innovative integrated analytics.

We have assembled a team of highly skilled engineers with significant telecommunications and networking industry experience. Our engineers have deep experience in and with leading wireline and wireless telecommunications equipment suppliers, computer data networking and multimedia companies. Our engineering effort is focused on SBC and DSC product development, new applications and network access features for enterprises, solutions to support Unified and cloud-based communications services and next-generation wireless technologies. At December 31, 2016, we maintained research and development offices in Massachusetts, California, Illinois, Texas, New York and New Jersey in the United States; Kanata, Ontario Canada; Bangalore, India and Swindon, United Kingdom. We have made, and intend to continue to make, a substantial investment in research and development.

Our research and development expenses were \$72.8 million for the year ended December 31, 2016, \$77.9 million for the year ended December 31, 2015 and \$79.4 million for the year ended December 31, 2014.

## **Competition**

The market for voice and multimedia network equipment remains competitive worldwide, but there are historical regional differences in services, regulations and business practices among sub-markets that can benefit individual vendors. Regardless of the region, the overall market is subject to rapid technological change, affected by new product introductions, changing customer demands, industry consolidation and other market activities of industry participants. To compete effectively, we must deliver innovative products that provide extremely high reliability and quality, deploy and scale easily and efficiently, interoperate with existing network infrastructures and multivendor solutions, provide effective network management, are accompanied by comprehensive customer support and professional services, provide a cost-effective and space-efficient solution for enterprises and service providers, meet price competition from low-cost equipment providers and offer solutions that are timely for the market and support where the industry is heading. We expect competition to persist and intensify in the future. Our primary sources of competition include vendors of networking and telecommunications equipment, such as ADTRAN, Inc., ALOE Systems Inc., AudioCodes Ltd., Avaya Inc., Cisco Systems, Inc., Dialogic Inc., Ericsson LM Telephone Company, F5 Networks, Inc., GENBAND Inc., Huawei Technologies Co. Ltd., Metaswitch Networks Corporation, Mitel Networks Corporation, Nokia Corporation, Oracle Corporation, Sansay, Inc., Technicolor SA, Xura, Inc. and ZTE Corporation.

Although we believe we compete favorably because our solutions are widely deployed, highly scalable and cost-effective for our customers, some of our competitors have broader product portfolios than we have and are able to devote greater resources to the development, promotion, sale and support of their products. In addition, some of our competitors have more extensive customer bases and broader customer relationships than we have, including relationships with our potential customers and established relationships with distribution partners. Other smaller private and public companies are also focusing on similar market opportunities.

Please see generally the risks that are more fully discussed in Item 1A. Risk Factors for risks related to competition in our industry.

### **Intellectual Property**

Intellectual property is fundamental to our business and our success, and we depend upon our ability to develop, maintain and protect our technology. Therefore, we seek to safeguard our investments in technology and rely on a combination of United States and foreign patent, trademark, trade secret and copyright law and contractual restrictions to protect the proprietary aspects of our technology and to defend us against claims from others. Our general policy has been to seek to patent those patentable inventions that we expect to incorporate in our products or that we expect will be valuable otherwise. We have a program to file applications for and obtain patents, copyrights and trademarks in the United States and in specific foreign countries where we believe filing for such protection is appropriate.

At December 31, 2016, we held 221 U.S. patents with expiration dates ranging from February 2017 through March 2025, and had 39 patent applications pending in the United States. While we have 9 patents that are set to expire within the next two years, the expiration of these patents is not expected to have a material effect on our financial position or future operations since these patents do not relate to our current business strategy and therefore are not of material value to us. In addition, at December 31, 2016, we held 50 foreign patents with expiration dates ranging from June 2019 through October 2027, and had 13 patent applications pending abroad. We also had 24 registered trademarks in the United States, including Sonus, the Sonus logo, NetAssure, NetEng, NetScore, Promina and Tenor, and had two pending trademark applications in the United States at December 31, 2016. In addition to the protections described above, we seek to safeguard our intellectual property by:

- Protecting the source and object code for our software, documentation and other written materials under copyright laws and trade secret;
- 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.

We have incorporated third-party licensed technology into certain of our current products. From time to time, we may be required to license additional technology from third parties to develop new products or to enhance existing products. Based on experience and standard industry practice, we believe that licenses to use third-party technology generally can be obtained on commercially reasonable terms. Nonetheless, there can be no assurance that necessary third-party licenses will be available or continue to be available to us on commercially reasonable terms. As a result, the inability to maintain, license 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 enhance existing products could require us to obtain substitute technology of lower quality or performance standards or at greater cost. This could delay or prevent us from making these products or enhancements, any of which could seriously harm our business, financial condition and operating results.

Please see generally the risks that are more fully discussed in Item 1A. Risk Factors for risks related to our intellectual property.

### **Manufacturing**

As of December 31, 2016, we outsourced the manufacturing of our products to four manufacturers, one of which is primarily relied upon. Our contract manufacturers provide comprehensive manufacturing services, including assembly and testing of our products and procurement of component materials on our behalf. We believe that outsourcing our manufacturing enables us to preserve working capital, allows for greater flexibility in meeting changes in demand and enables us to be more responsive in delivering products to our customers. At present, we purchase products from our contract manufacturers on a purchase order basis.

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.

Please see generally the risks that are more fully discussed in Item 1A. Risk Factors for risks related to our manufacturing operations.

## Backlog

We sell products and services pursuant to purchase orders issued under master agreements that provide standard terms and conditions that govern the general commercial terms and conditions of the sale. These agreements typically do not obligate customers to purchase any minimum or guaranteed quantities, nor do they generally require upfront cash deposits. At any given time, we have orders for products that have not yet been shipped and for services (including our customer support obligations) that have not yet been performed. We also have orders relating to products that have been delivered and services that have been performed but have not yet been accepted by the customer under the applicable purchase terms. We include both of these situations in our calculation of backlog. A backlogged order may not result in revenue in the quarter in which it was booked, and the actual revenue recognized in a quarter may not equal the total amount of related backlog. Therefore, we do not believe that our backlog, as of any particular date, is necessarily indicative of actual revenue for any future period. In addition, we expect to derive a greater percentage of our revenue in the future from the enterprise market and through sales channels where speed of fulfillment is essential to winning business. Consequently, we expect to derive a lower percentage of our business from large service provider orders that are delivered over multiple quarters and years and we expect our backlog to decrease as a result. Our backlog was approximately \$123 million at December 31, 2016 and approximately \$114 million at December 31, 2015 .

## Employees

At December 31, 2016 , we had a total of 1,152 employees. Except for our employees in France, our employees are not represented by any collective bargaining agreement. We believe our relations with our employees are good.

## Geographic and Segment Information

We operate in a single segment. 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 in making decisions regarding resource allocation and assessing performance. To date, our chief operating decision maker has made such decisions and assessed performance at the company level, as one segment. Our chief operating decision maker is our President and Chief Executive Officer.

Our classification of revenue by geographic area is determined by the ship-to location of our customers. The following table summarizes revenue by geographic area as a percentage of total revenue:

	Year ended December 31,		
	2016	2015	2014
United States	69%	71%	71%
Europe, Middle East and Africa	13	13	13
Japan	10	10	9
Other Asia Pacific	5	4	5
Other	3	2	2
	100%	100%	100%

Information regarding the geographic components of our property and equipment is provided in Note 8 of the Notes to Consolidated Financial Statements included in this Annual Report on Form 10-K.

## Additional Information

We were incorporated in August 1997 as a Delaware corporation. Our principal executive offices are located at 4 Technology Park Drive, Westford, MA 01886. Our telephone number at our principal executive office is 978-614-8100.

This Annual Report on Form 10-K, as well as all other reports filed with or furnished to the United States Securities and Exchange Commission (the "SEC"), are available free of charge through our Internet site ( <http://www.sonus.net> ) as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information found on our website is not part of this report or any other report we file with or furnish to the SEC. The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, NE, 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.

## Item 1A. 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, our business, financial condition, results of operations and cash flows could be materially adversely affected, the trading price of our common stock could decline materially and you could lose all or part of your investment.*

***Our quarterly revenue and operating results are unpredictable and may fluctuate significantly from quarter to quarter, which could adversely affect our business, consolidated financial statements and the trading price of our common stock.***

Our revenues and operating results may 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. The primary factors that may affect our revenues and operating results include, but are not limited to, the following:

- consolidation within the telecommunications industry, including acquisitions of or by our customers;
- general economic conditions in our markets, both domestic and international, as well as the level of discretionary IT spending;
- competitive conditions in our markets, including the effects of new entrants, consolidation, technological innovation and substantial price discounting;
- fluctuation in demand for our products and services, and the timing and size of customer orders;
- fluctuations in foreign exchange rates;
- cancellation or deferral of existing customer orders or the renegotiation of existing contractual commitments;
- mix of product configurations sold;
- length and variability of the sales cycle for our products;
- application of complex revenue recognition accounting rules to our customer arrangements;
- timing of revenue recognition;
- changes in our pricing policies, the pricing policies of our competitors and the prices of the components of our products;
- market acceptance of new products, product enhancements and services that we offer;
- the quality and level of our execution of our business strategy and operating plan, and the effectiveness of our sales and marketing programs;
- new product announcements, introductions and enhancements by us or our competitors, which could result in deferrals of customer orders;
- our ability to develop, introduce, ship and successfully deliver new products and product enhancements that meet customer requirements in a timely manner;
- our reliance on contract manufacturers for the production and shipment of our hardware products;
- our or our contract manufacturers' ability to obtain sufficient supplies of sole or limited source components or materials;
- our ability to attain and maintain production volumes and quality levels for our products;
- variability and unpredictability in the rate of growth in the markets in which we compete;
- costs related to acquisitions; and
- corporate restructurings.

Equipment purchases by communications service providers and enterprises continue to be unpredictable. As with other telecommunications product suppliers, we typically recognize a portion of our revenue in a given quarter from sales booked and shipped in the last weeks of that quarter. As a result, delays in customer orders may result in delays in shipments and recognition of revenue beyond the end of a given quarter. Additionally, it can be difficult for us to predict the timing of receipt of major customer orders, and we are unable to control timing decisions made by our customers. Consequently, our quarterly operating results are difficult to predict even in the short term and a delay in an anticipated sale past the end of a particular quarter may negatively impact our results of operations for that quarter, or in some cases, that year. Therefore, we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance. If our revenue or operating results fall below the expectations of investors or securities analysts or below any guidance we may provide to the market, the price of our common stock could decline substantially. Such a stock price decline could also occur even if we meet our publicly stated revenue and/or earnings guidance.

A significant portion of our operating expenses is fixed in the short term. If revenues for a particular quarter are below expectations, we may not be able to reduce costs and expenses proportionally for that quarter. Any such revenue shortfall would, therefore, have a significant effect on our operating results for that quarter.

***We have incurred net losses and may incur additional net losses.***

We incurred net losses in fiscal years 2016, 2015 and 2014. We may incur additional net losses in future quarters and years. Our revenues may not grow and we may never generate sufficient revenues to sustain profitability.

***We will not be successful if we do not grow our customer base, especially since our revenue has historically been generated from a limited number of customers and the per-order revenue from orders placed by the majority of our new customers is generally lower than the per-order revenue generated from our historical sales. Additionally, if we are unable to generate recurring business from our existing customers, our consolidated financial statements could be materially and adversely affected.***

Prior to our acquisition of Network Equipment Technologies, Inc. ("NET") in August 2012, we had shipped our products to a limited number of customers. Since the acquisition of NET, the number of customers to whom we have shipped our products has increased significantly. However, due to the nature of certain of our product offerings, the per-order revenue from orders placed by the majority of our new customers is generally lower than the per-order revenue generated from our historical customer orders.

Our future success will depend on our ability to attract additional customers beyond our current customer base. One customer, AT&T, contributed more than 10% of our revenue in each of the past three years, representing approximately 12% of our revenue in 2016, 13% of our revenue in 2015 and 19% of our revenue in 2014. Factors that may affect our ability to grow our customer base include but are not limited to the following:

- economic conditions that discourage potential new customers from making the capital investments required to adopt new technologies;
- deterioration in the general financial condition of service providers and enterprises, or their ability to raise capital or access lending sources;
- new product introductions by our competitors; and
- the development of our channel partner program.

If we are unable to expand our customer base, we will be forced to rely on generating recurring revenue from existing customers, which may not be successful. We expect to derive an increasing percentage of our revenue from engagements with our value-added resellers ("VAR") and global system integration partners; however, in the foreseeable future, the majority of our revenue will continue to depend on sales of our products to a limited number of existing customers or sales to customers with lower per-order revenue than those generated from our historical sales. Factors that may affect our ability to generate recurring revenues from our existing customers include but are not limited to the following:

- customer willingness to implement our products;
- pricing pressures due to the commoditization of our products;
- the timing of industry transitions to new network technologies;
- acquisitions of or by our customers;
- delays or difficulties that we may incur in completing the development and introduction of our planned products or product enhancements;
- failure of our products to perform as expected; and
- difficulties we may incur in meeting customers' delivery requirements or with software development, hardware design, manufacturing or marketing of our products and/or services.

The loss of any significant customer, or any substantial reduction in purchase orders or deferral of purchasing decisions from these customers, could materially and adversely affect our consolidated financial statements.

***We continue to enhance our sales strategy, which we expect will include more partner sales engagements to resell our products and services through authorized Sonus distributors, value added resellers, system integrators and other channel partners. Disruptions to, or our failure to effectively develop and manage, these partners and the processes and procedures that support them could adversely affect our ability to generate revenues from the sale of our products and services. If we do not have adequate personnel, experience and resources to manage the relationships with these partners and to fulfill our responsibilities under such arrangements, such shortcomings could lead to the decrease of the sales of our products and services and our operating results could suffer.***

We continue to enhance our sales strategy, which we expect will include more partner sales engagements to resell our products and services through authorized Sonus distributors, value added resellers, system integrators and other channel partners. Our

future success is dependent upon establishing and maintaining successful relationships with a variety of distributors, value added resellers, system integrators and other channel partners. We may also need to pursue strategic partnerships with vendors who have broader technology or product offerings in order to compete with end-to-end solution providers. In addition, many of the enterprise markets we are pursuing require a broad network of resale partners in order to achieve effective distribution.

Many of our distribution and channel partners sell competitive products and services and the loss of, or reduction in sales by, these partners could materially reduce our revenues. Our sales through channel partners typically involve the use of our products as components of a larger solution being implemented by the systems integrator. In these instances, the purchase and sale of our products are dependent on the channel partner, who typically controls the timing, prioritization and implementation of the project. Project delays, changes in priority or solution re-design decisions by the systems integrator can adversely affect our product sales. If we fail to maintain relationships with our distribution, VAR and systems integration partners; fail to develop new relationships with other partners in new markets; fail to manage, train or provide incentives to our existing partners effectively; or if these partners are not successful in their sales efforts, sales of our products and services may decrease and our operating results could suffer. Moreover, if we do not have adequate personnel, experience and resources to manage the relationships with our partners and to fulfill our responsibilities under such arrangements, any shortcomings could have a material adverse impact on our business and consolidated financial statements.

In addition, we recognize some of our revenue based on a drop-ship model using information provided by our partners. If those partners provide us with inaccurate or untimely information, the amount or timing of our revenues could be adversely affected. We may also be impacted by financial failure of our partners, which could result in our inability to collect accounts receivable in full.

***As the telecommunications industry and the requirements of our current and potential customers evolve, we are redirecting certain of our resources to more readily respond to the changing environment through the research and development of innovative new products and the improvement of existing products. If our strategic plan is not aligned with the direction our customers take as they invest in the evolution of their networks, customers may not buy our products or use our services.***

Success in our industry requires large investments in technology and creates exposure to rapid technological and market changes. We spend a significant amount of time, money and resources both developing new technology, products and solutions and acquiring new businesses or business assets, as applicable, such as NET in 2012, Performance Technologies, Incorporated ("PT") in 2014 and Taqua, LLC ("Taqua") in 2016. In 2015, we acquired from Treq Labs, Inc. ("Treq") certain assets related to Treq's business of designing, developing, marketing, selling, servicing and maintaining software-defined networking ("SDN") technology, SDN controller software and SDN management software (the "SDN Business"). Our strategic plan includes a significant shift in our investments from mature technologies that previously generated significant revenue for us toward certain next-generation technologies, as well as working with channel partners to sell our products. In order for us to be successful, our technologies, products and solutions must be accepted by relevant standardization bodies and by the industry as a whole. Our choices of specific technologies to pursue, and those to de-emphasize, may prove to be inconsistent with our customers' investment spending. Our success also depends upon our ability to integrate new and acquired products and services, as well as our ability to enhance our existing products and services. Moreover, if we invest in the development of technologies, products and solutions that do not function as expected, are not adopted by the industry, are not ready in time, are not accepted by our customers as quickly as anticipated, mature more quickly than we anticipated or are not successful in the marketplace, our sales and earnings may suffer and, as a result, our stock price could decline. As technology advances, we may not be able to respond quickly or effectively to developments in the market for our products, or new industry standards may emerge and could render our existing or future products and services obsolete. If our products and services become technologically obsolete or if we are unable to develop successor products and services that are accepted by our customers, we may be unable to sell our products and services in the marketplace and face declines in sales. We may also 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.

***We believe the telecommunications industry is in the early stages of a major architectural shift to the virtualization of networks. If the architectural shift does not occur, if it does not occur at the pace we predict, or if the products and services we have developed are not attractive to our customers after such shift takes place, our revenues could decline.***

We believe the telecommunications industry is in the early stages of transitioning to the virtualization of networks, and we are developing products and services that we believe will be attractive to our customers and potential customers who make that shift. While we anticipate that the industry shift to a software-centric cloud-based architecture is all but certain to happen, fundamental changes like this often take time to accelerate. In addition, our customers may adapt to such changes at varying rates. As our customers take time to determine their future network architectures, we may encounter delayed timing of orders, deferred purchasing decisions and reduced expenditures. These longer decision cycles and reduced expenditures may

negatively impact our revenues, or make it difficult for us to accurately predict our revenues, either of which could materially adversely affect our consolidated financial statements and cause our stock price to decline.

***In 2012, the macro-environment for our media gateway trunking business faced significant declining revenues that happened faster than we were anticipating. Since then, we have continued to experience significant declines in customer spending in our media gateway trunking business. Even though we continue to transform our company from a media gateway trunking business to an SBC and DSC security company, a portion of our current revenue remains dependent upon the commercial success of our voice infrastructure products, which we believe will remain true for the foreseeable future. If the market for these products continues to significantly decline and if our SBC and DSC sales do not accelerate as quickly as we forecast, our operating results could suffer.***

While we continue to transform our company from a media gateway trunking business to a Session Border Controller ("SBC") and Diameter Signaling Controller ("DSC") security business, a portion of our current revenue still depends upon the commercial success of our TDM-to-IP and our all-IP voice infrastructure products and solutions, and we believe this will remain true for the foreseeable future. If the market for these products continues to significantly decline and if our SBC and DSC sales do not accelerate as quickly as we forecast, our operating results could suffer.

***Restructuring activities could adversely affect our ability to execute our business strategy.***

We recorded net restructuring expense of \$10.5 million in the aggregate in 2016, 2015 and 2014, comprised of \$9.9 million for severance and related costs, \$0.4 million for the consolidation of certain facilities and \$0.2 million for the write-off of assets associated with the headcount reduction and facilities consolidations.

Our current restructuring and any future restructuring, should it become necessary for us to continue to restructure our business due to worldwide market conditions or other factors that reduce the demand for our products and services, could adversely affect our ability to execute our business strategy in a number of ways, including through:

- loss of key employees;
- diversion of management's attention from normal daily operations of the business;
- diminished ability to respond to customer requirements related to both products and services;
- decrease in cash and profits related to severance payments and facility termination costs;
- disruption of our engineering and manufacturing processes, which could adversely affect our ability to introduce new products and to deliver products both on a timely basis and in accordance with the highest quality standards; and/or
- reduced ability to execute effectively internal administrative processes, including the implementation of key information technology programs.

***If we fail to realize the anticipated benefits from our recent acquisitions on a timely basis, or at all, our business and financial condition may be adversely affected.***

We may fail to realize the anticipated benefits from our recent acquisitions on a timely basis, or at all, for a variety of reasons, including but not limited to the following:

- problems or delays in assimilating or transitioning to us the acquired assets, operations, systems, processes, controls, technologies, products or personnel;
- loss of acquired customer accounts;
- unanticipated costs associated with the acquisitions;
- failure to identify in the due diligence process or assess the magnitude of certain liabilities we assumed in the acquisitions, which could result in unexpected litigation or regulatory exposure, unfavorable accounting treatment, unexpected increases in taxes due, significant issues with product quality or development or other adverse effects on our business or consolidated financial statements;
- multiple or overlapping product lines as a result of the acquisitions that are offered, priced and supported differently, which could cause customer confusion and delays;
- higher than anticipated costs in continuing support and development of acquired products;
- diversion of management's attention from our core business and the challenges of managing larger and more widespread operations from the acquisitions;
- adverse effects on existing business relationships of Sonus, the SDN Business and/or Taqua with respective suppliers, licensors, contract manufacturers, customers, distributors, resellers and industry experts;
- significant impairment, exit and/or restructuring charges if the products or technologies acquired in the acquisitions do not meet our sales expectations or are unsuccessful;

- insufficient revenue to offset increased expenses associated with the acquisitions;
- risks associated with entering markets in which we have no or limited prior experience;
- potential loss of the employees we acquired in the acquisitions or our own employees; and/or
- failure to properly integrate internal controls and financial systems of the combined companies.

If we are not able to successfully manage these issues, the anticipated benefits and efficiencies of our recent acquisitions may not be realized fully or at all, or may take longer to realize than expected, and our ability to compete, our revenue and gross margins and our results of operations may be adversely affected.

***The acquisition of Taqua may result in additional expenses that could adversely affect the financial results of the combined company.***

The financial results of Sonus and Taqua as a combined company may be adversely affected by cash expenses and non-cash accounting charges incurred in connection with the combination. In addition to the amortization of intangible assets acquired in connection with this acquisition and other related expenses, we recorded \$1.2 million of acquisition-related cash expense in 2016 in connection with this acquisition and may incur additional acquisition-related cash expense in the future. The price of our common stock could decline to the extent the combined company's financial results are materially affected by these charges.

***Any future investments, mergers or acquisitions we make or enter into, as applicable, could be difficult to integrate, disrupt our business, dilute shareholder value and seriously harm our financial condition.***

We are not currently a party to any material pending merger or acquisition agreements. However, we may merge with or acquire additional businesses, products or technologies in the future. No assurance can be given that any future merger or acquisition will be successful or will not materially and adversely affect our business, operating results or financial condition. We continue to review opportunities to merge with or acquire other businesses or technologies that would add to our existing product line, complement and enhance our current products, expand the breadth of our markets, enhance our technical capabilities or otherwise offer growth opportunities. If we enter into a merger or make acquisitions in the future, we could, among other things:

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

Mergers and acquisitions are inherently risky and subject to many factors outside of our control. Therefore, we cannot be certain that we would be successful in overcoming problems in connection with our past or future acquisitions. Our inability to do so could significantly harm our business, revenues, and results of operations.

***If in the future we do not have a sufficient number of shares available to issue to our employees, the limited number of shares we could issue may impact our ability to attract, retain and motivate key personnel.***

We historically have used stock options, restricted stock and other equity awards as a significant component of our employee compensation program in order to align our employees' interests with the interests of our stockholders, encourage employee retention and provide competitive compensation packages. In 2007, our stockholders approved our 2007 Stock Incentive Plan (the "2007 Plan"), which included a limited amount of shares to be granted under such 2007 Plan. Our stockholders approved amendments to the 2007 Plan in June 2010, June 2013, December 2014 and June 2015. At our 2016 annual meeting of stockholders, our stockholders approved an amendment and restatement of the 2007 Plan (as amended and restated, the "Stock Plan") that, among other things, increased the aggregate number of shares of our common stock authorized for issuance under the Stock Plan by 800,000 new shares, from 15,676,713 shares to 16,476,713 shares. However, our stockholders did not approve a proposed stock option exchange program that, if implemented, would have returned shares of our common stock to the Stock Plan that would then be available for future issuance under the Stock Plan.

Since only one of these proposals was approved at our 2016 annual meeting of stockholders, we may not have sufficient shares for our needs in the near future. If our stockholders do not approve any other future amendments that we determine are needed to the Stock Plan, the limited number of shares available for use as equity incentives to employees may make it more difficult for us to attract, retain and motivate key personnel.

***Worldwide efforts to contain capital spending and global economic conditions and uncertainties in the geopolitical environment could have a material adverse effect on us.***

One factor that significantly affects our operating results is the impact of economic conditions on the willingness of our current and potential customers to make capital investments. Given the general uncertainty regarding global economic conditions and uncertainties in the geopolitical environment, we believe that customers have tried to maintain or improve profitability through cost control and constrained capital spending, which places additional pressure on IT departments to demonstrate acceptable return on investment. Some of our current or prospective customers may cancel or delay spending on the development or roll-out of capital and technology projects with us due to economic uncertainty and, consequently, our results of operations may be adversely affected. In addition, current uncertain worldwide economic and political environments make it increasingly difficult for us, our customers and our suppliers to accurately forecast future product demand, which could result in an inability to satisfy demand for our products and a loss of market share. Our revenues are likely to decline in such circumstances and our profit margins could erode, or we could incur significant losses.

Moreover, economic conditions worldwide may contribute to slowdowns in the communications and networking industries, as well as to specific segments and markets in which we operate, resulting in, among other things:

- reduced demand for our products and services as a result of our customers choosing to refrain from building capital intensive networks;
- increased price competition for our products, not only from our competitors, but also as a consequence of customers disposing of unutilized products;
- risk of excess and obsolete inventories;
- excess facilities and manufacturing capacity; and/or
- higher overhead costs as a percentage of revenue and higher interest expense.

Continuing turmoil in the geopolitical environment in many parts of the world, including terrorist activities and military actions, as well as political and economic issues in many regions, including the uncertainty arising from the recent referendum vote in the UK in favor of exiting the European Union as well as from changes to be implemented by the new U.S. presidential administration, continue to put pressure on global economic conditions. Our operating results and our ability to expand into other international markets may also be affected by changing economic conditions particularly germane to that sector or to particular customer markets within that sector.

***If we fail to compete successfully against telecommunications equipment and networking companies, our ability to increase our revenues and achieve profitability will be impaired.***

Competition in the telecommunications market is intense. This market has historically been dominated by large incumbent telecommunications equipment companies, such as Ericsson LM Telephone Company and Huawei Technologies Co. Ltd., both of which are our direct competitors. We also face competition from other telecommunications and networking companies, including ADTRAN, Inc., ALOE Systems Inc., AudioCodes Ltd., Avaya Inc., Cisco Systems, Inc., Dialogic Inc., F5 Networks, Inc., GENBAND Inc., Metaswitch Networks Corporation, Mitel Networks Corporation, Nokia Corporation, Oracle Corporation, Sansay, Inc., Technicolor SA, Xura, Inc. and ZTE Corporation, all of which design competing products. These or other competitors may also merge, intensifying competition. Additional competitors with significant financial resources may enter our markets and further intensify competition.

Many of our current and potential competitors have significantly greater selling and marketing, technical, manufacturing, financial and other resources than we have. Further, some of our competitors sell significant amounts of other products to our current and prospective customers and have the ability to offer lower prices to win business. 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 quality;
- deploy and scale easily and efficiently;
- interoperate with existing network infrastructures and multivendor solutions;
- provide effective network management;
- are accompanied by comprehensive customer support and professional services;
- provide a cost-effective and space-efficient solution for enterprises and service providers;

- meet price competition from low cost equipment providers; and
- offer solutions that are timely for the market and support where the industry is heading.

If we are unable to compete successfully against our current and future competitors, we could experience price reductions, order cancellations and loss of customers and revenues, and our operating results could be adversely affected.

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

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 if we fail to effectively manage the transition from older products, our ability to create or increase demand for our products and services could 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 canceled, which would seriously harm our gross margins and result in loss of revenues or customers. Additionally, our customers may decide to devote a significant portion of their budgets to evolving technology as they consider national or worldwide build-outs. Therefore, if the demand for our products is not strong and if our target customers do not adopt, purchase and successfully deploy our current or planned products, our revenues will not grow.

***Our large customers have substantial negotiating leverage, and they may require that we agree to terms and conditions that may have an adverse effect on our business.***

Large communications service providers have substantial purchasing power and leverage in negotiating contractual arrangements with us. These customers may, among other things, require us to develop additional features, require penalties for failure to deliver such features, require us to partner with a certain reseller before purchasing our products and/or seek discounted product and/or service pricing. As we sell more products to this class of customer, we may be required to agree to terms and conditions that are less beneficial to us, which may affect the timing of revenue recognition, amount of deferred revenues or product and service margins and may adversely affect our financial position and cash flows in certain reporting periods.

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

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

- addition or loss of any major customer;
- continued significant declines in customer spending in the media gateway trunking business;
- decreased spending by customers in the SBC and/or DSC businesses;
- consolidation of our customers and among our competitors in the telecommunications industry;
- changes in the financial condition or anticipated capital expenditure purchases of any existing or potential major customer;
- economic conditions for the telecommunications, networking and related industries;
- quarterly variations in our bookings, revenues and 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, mergers or capital commitments;
- activism by any single large stockholder or combination of stockholders;
- sales of common stock or other securities by us or by our stockholders in the future;
- securities and other litigation;

- repurchases under our stock buyback program;
- announcement of a stock split, reverse stock split, stock dividend or similar event; and/or
- emergence or adoption of new technologies or industry standards.

Furthermore, brokerage firms often do not permit stocks trading below \$5.00 per share to be sold short, but often permit short-selling of shares which are traded at higher prices. As a result, to the extent our per-share trading price is consistently above \$5.00, investors may short our stock. This may increase the volatility of our stock price.

***Our Amended Credit Agreement contains financial and operating restrictions that may limit our access to credit. If we fail to comply with covenants in the Amended Credit Agreement, we may be required to repay any potential indebtedness thereunder, which may have an adverse effect on our liquidity. In addition, if we are unable to extend, renew or replace the Credit Agreement by the maturity date of June 30, 2017, on favorable terms, or at all, our business, operations and financial condition may be materially adversely affected.***

The Amended Credit Agreement provides us with a revolving credit facility of up to \$20 million. Provisions in the Amended Credit Agreement impose limitations on our ability to, among other things:

- incur additional indebtedness;
- create liens;
- enter into transactions with affiliates;
- dispose of assets;
- make certain investments; and
- merge or consolidate.

In addition, we are required to meet certain financial covenants customary for financings of this type. Our failure to comply with these covenants may result in the declaration of an event of default, which could cause us to be unable to borrow under the Amended Credit Agreement or result in the acceleration of the maturity of indebtedness outstanding under the Amended Credit Agreement at such time. If the maturity of our indebtedness is accelerated, we may not have sufficient funds available for repayment or we may not have the ability to borrow or obtain sufficient funds to replace the accelerated indebtedness on terms acceptable to us, or at all. We are also subject to a commitment fee at an annualized rate of 0.1125% on any unused commitments available for borrowing.

Furthermore, while we had no amounts outstanding under the Amended Credit Agreement as of December 31, 2016, we may wish to draw on this facility in the future. We may be prevented from borrowing, however, if we are unable to extend, renew or replace the Credit Agreement by the maturity date of June 30, 2017, on favorable terms, or at all, which could have a material adverse effect on our liquidity and cause our business, operations and financial condition to suffer.

***Our business could be jeopardized if we are unable to protect our intellectual property; additionally, in some jurisdictions, our rights may not be as strong as we currently enjoy in the United States.***

We rely on a combination of security countermeasures within our deployed products, as well as 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. The legal systems of many foreign countries do not protect or honor intellectual property rights to the same extent as the legal system of the United States. It may be very difficult, time-consuming and costly for us to attempt to enforce our intellectual property rights, especially in these foreign jurisdictions. If competitors are able to use our technology, our ability to compete effectively could be harmed.

***Claims that our current or future products infringe or misappropriate the proprietary rights of others could adversely affect our ability to sell those products and cause us to incur additional costs.***

Substantial litigation over intellectual property rights exists in the telecommunications industry. We expect that we could be increasingly subject to third-party infringement claims as our revenue increases, the number of competitors grows and/or the functionality of products and technology in different industry segments overlaps. Third parties may currently have, or may eventually be issued, patents on which our current or future products or technologies may allegedly infringe. For example, there has been a n increase in the industry of third-party infringement claims brought by Non-Practicing Entities, also known as patent trolls.

In addition, we and our customers have received inquiries from intellectual property owners and may become subject to claims that we or our customers allegedly infringe the intellectual property rights of third parties. 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 infringed intellectual property right a license to sell or use the relevant technology, which license may not be available at acceptable prices, on acceptable terms, or at all; or
- redesign those products that use any allegedly infringing technology.

Patent litigation, regardless of its outcome, will likely result in the expenditure of significant financial resources and the diversion of management's time and resources. In addition, patent litigation may cause negative publicity, adversely impact prospective customers, cause product shipment delays, prohibit us from manufacturing, marketing or selling our current or future products, require us to develop non-infringing technology, make substantial payments to third parties or enter into royalty or license agreements, which may not be available on acceptable terms or at all. If a third party's claim of infringement against us in a particular patent litigation is successful, and we could not develop non-infringing technology or license the infringed or similar technology on a timely and cost-effective basis, our revenue may decrease substantially and we could be exposed to significant liability. A court could enter orders that temporarily, preliminarily or permanently enjoin us or our customers from making, using, selling, offering to sell or importing our current or future products, or could enter an order mandating that we undertake certain remedial activities. Although historically our costs to defend lawsuits relating to indemnification provisions in our product agreements have been insignificant, the costs may be significant in future periods.

***We may face risks related to litigation that could result in significant legal expenses and settlement or damage awards.***

From time to time, we are subject to claims and litigation regarding intellectual property rights or other claims, which could seriously harm our business and require us to incur significant costs. We are currently subject to a purported class action litigation alleging violations of the federal securities laws in federal district court against us and two of our officers, Raymond P. Dolan, our President and Chief Executive Officer, and Mark T. Greenquist, our former Chief Financial Officer (collectively, the "Defendants"). The plaintiff in the case claims to represent purchasers of our common stock during the period from October 23, 2014 and March 24, 2015, and seeks unspecified damages. The principal allegation contained in the complaint is that the Defendants made misleading forward-looking statements concerning our first quarter of 2015 financial performance. We are also fully cooperating with an SEC inquiry regarding the development and issuance of our first quarter 2015 revenue and earnings guidance. At this time, it is not possible to predict the outcome of the SEC's inquiry, including whether or not any proceedings will be initiated or, if so, when or how the matter will be resolved.

In the past, we have also been named as a defendant in other securities class action and derivative lawsuits. We are generally obliged, to the extent permitted by law, to indemnify our current and former directors and officers who are named as defendants in these lawsuits. Defending against litigation may require significant attention and resources of management. Regardless of the outcome, such litigation could result in significant legal expenses.

We may also be subject to employment claims in connection with employee terminations. In addition, companies in our industry whose employees accept positions with us may claim that we 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. Further, defending ourselves from those types of claims could divert our management's attention from our operations. The cost of employment claims may also rise as a result of our increasing international expansion.

If we are a party to material litigation and if the defenses we claim are ultimately unsuccessful, or if we are unable to achieve a favorable settlement, we could be liable for large damage awards that could have a material adverse effect on our business and consolidated financial statements.

***Actions that may be taken by significant stockholders may divert the time and attention of our Board of Directors and management from our business operations.***

Campaigns by significant investors to effect changes at publicly-traded companies continue to be prevalent. There can be no assurance that one or more current or future stockholders will not pursue actions to effect changes in our management and strategic direction, including through the solicitation of proxies from our stockholders. If a proxy contest were to be pursued

by any stockholder, it could result in substantial expense to us, consume significant attention of our management and Board of Directors, and disrupt our business.

***Delaware law and our charter documents contain provisions that could discourage or prevent a potential takeover, even if such a transaction would be beneficial to our stockholders.***

Some provisions in our amended and restated certificate of incorporation, our amended and restated by-laws, as well as provisions of Delaware law, may discourage, delay or prevent a merger or acquisition that may be deemed undesirable by our Board of Directors but that a stockholder may consider favorable. These include provisions:

- authorizing the Board of Directors to issue shares of preferred stock;
- limiting the persons who may call special meetings of stockholders;
- prohibiting stockholder actions by written consent;
- permitting the Board of Directors to increase the size of the Board and to fill vacancies;
- providing indemnification to our directors and officers;
- controlling the procedures for conduct and scheduling of Board and stockholder meetings;
- requiring a super-majority vote of our stockholders to amend our amended and restated by-laws and certain provisions of our amended and restated certificate of incorporation; and
- establishing advance notice requirements for nominations for election to the Board of Directors or for proposing matters that can be acted on by stockholders at stockholder meetings.

These provisions, alone or together, could delay hostile takeovers or changes in control of us or our management.

As a Delaware corporation, we are also subject to provisions of Delaware law, including Section 203 of the Delaware General Corporation law, which prevents some stockholders holding more than 15% of our outstanding common stock from engaging in certain business combinations without approval of the holders of substantially all of our outstanding common stock.

Any provision of our amended and restated certificate of incorporation, our amended and restated by-laws or Delaware law that has the effect of delaying or deterring a change in control could limit the opportunity for our stockholders to receive a premium for their shares of our common stock, and could also affect the price that some investors are willing to pay for our common stock. Although we believe that our amended and restated certificate of incorporation, our amended and restated bylaws and provisions of Delaware law provide an opportunity for the Board of Directors to assure that our stockholders realize full value for their investment, they could have the effect of delaying or preventing a change of control that some stockholders may consider beneficial.

***We are exposed to fluctuations in currency exchange rates that could negatively impact our financial results and cash flows.***

Because a portion of our business is conducted outside the United States, we face exposure to adverse movements in foreign currency exchange rates. These exposures may change over time as business practices evolve, and they could have a material adverse impact on our financial results and cash flows. An increase in the value of the dollar could increase the real cost to our customers of our products in those markets outside the United States where we often sell in dollars, and a weakened dollar could increase the cost of local operating expenses and procurement of raw materials from sources outside the United States.

***We may face risks associated with our international expansion that could impair our ability to grow our international revenues. If we fail to manage the operational and financial risks associated with our international operations, it could have a material adverse effect on our business and consolidated financial statements.***

We have expanded, and expect to continue to expand, our operations in international and emerging markets. International operations are a significant part of our business, and such operations will continue to require significant management attention and financial resources to successfully develop direct and indirect international sales and support channels. In addition, our international operations are subject to other inherent risks, including:

- reliance on channel partners;
- greater difficulty collecting accounts receivable and longer collection cycles;
- difficulties and costs of staffing and managing international operations;
- impacts of differing technical standards outside the United States;
- compliance with international trade, customs and export control regulations;
- reduced protection for intellectual property rights in some countries;

- foreign government regulations limiting or prohibiting potential sales or increasing the cost of doing business in such markets, including reversals or delays in the opening of foreign markets to new competitors or the introduction of new technologies;
- challenging pricing environments in highly competitive new markets;
- foreign currency exchange controls, restrictions on repatriation of cash and changes in currency exchange rates;
- potentially adverse tax consequences; and
- political, social and economic instability, including as a result of the fragility of global financial markets, health pandemics or epidemics and/or acts of war or terrorism.

Our international revenue, both as a percentage of total revenue and absolute dollars, may vary from one period to the next, and accordingly, current data may not be indicative of future periods. If we are unable to support our business operations in international and emerging markets, or their further expansion, while balancing the higher operational and financial risks associated with these markets, our business and consolidated financial statements could be harmed.

In addition, we may not be able to develop international market demand for our products, which could impair our ability to grow our revenues. In many international markets, long-standing relationships between potential customers and their local suppliers and protective regulations, including local content requirements and approvals, create barriers to entry. We have limited experience marketing, distributing and supporting our products in certain international locations and, to do so, we expect that we will need to develop versions of our products that comply with local standards. Moreover, difficulties in foreign financial markets and economies and of foreign financial institutions, particularly in emerging markets, could adversely affect demand from customers in the affected countries.

***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. Additionally, in the event we elect to consolidate and/or change any of our manufacturers, qualifying a new contract manufacturer to commence commercial scale production or consolidating to a reduced number of contract manufacturers are expensive and time-consuming activities and could affect our business.***

While we currently work with four contract manufacturers, we primarily rely upon one large global manufacturer to assemble our products according to our specifications and to fulfill orders on a timely basis. Reliance on a third-party manufacturer involves a number of risks, including a lack of control over the manufacturing process, inventory management and the potential absence or unavailability of adequate capacity. We do not have the internal manufacturing capabilities to meet our customers' demands. Any difficulties or failures to perform by our contract manufacturers could cause delays in customer product shipments or otherwise negatively affect our results of operations.

With the acquisition of Taqua in September 2016, we increased the number of contract manufacturers we work with from three to four. Any future changes to or consolidations of our current contract manufacturers could lead to material shortages or delays in the supply of our products. In the event we elect to continue to consolidate and/or change any of our manufacturers, qualifying a new contract manufacturer to commence commercial scale production or consolidating to a reduced number of contract manufacturers are expensive and time-consuming activities 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. Single-source and limited source manufacturing arrangements are of a nature that ordinarily accompanies the type of business we conduct. Nevertheless, depending upon the component, there may or may not be alternative sources of substitutes. We purchase these components on a purchase order basis. If we overestimate our component and finished goods 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. Additionally, if any of our contract manufacturers underestimates our requirements, they may not have an adequate supply, which could interrupt manufacturing of our products and result in delays in shipments and revenues. If any of our sole or limited source suppliers experiences capacity constraints, work stoppages or other reductions or disruptions in output, they may not be able to meet, or may choose not to meet, our delivery schedules. Moreover, we have agreed to compensate our contract manufacturers in the event of termination or cancellation of orders, discontinuance of product or excess material.

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. While we regularly monitor our inventory of supplies, 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.

Reliance on our suppliers exposes us to potential supplier production difficulties, quality variations and unforeseen price increases. Our customers rely upon our ability to meet committed delivery dates, and any disruption in the supply of key components would seriously adversely affect our ability to meet these dates and could result in loss of customers, harm to our ability to attract new customers, or legal action by our customers. Defense-expedite rated orders from the U.S. federal government, which by law receive priority, can also interrupt scheduled shipments to our other customers. Additionally, any unforeseen price increases could reduce our profitability or force us to increase our prices, which could result in a loss of customers or harm our ability to attract new customers and could have a material adverse effect on our consolidated financial statements.

Our customer contracts also generally allow customers to reschedule delivery dates or cancel orders within certain time frames before shipment without penalty and outside those times frames with a penalty. Because of these and other factors, there are risks of excess or inadequate inventory that could negatively affect our expenses, revenue and earnings.

***The market for some of our products depends on the availability and demand for other vendors' products.***

Some of our products, particularly those addressing the Unified Communications market, are designed to function with other vendors' products. In these cases, demand for our products is dependent upon the availability, demand for, and sales of the other vendors' products, as well as the degree to which our products successfully interoperate with the other vendors' products and add value to the solution being provided to the customer. If the other vendors change the design of their products, delay the issuance of new releases, fail to adequately market their products, or are otherwise unsuccessful in building a market for their products, the demand for our products will be adversely affected.

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

Our business depends upon highly skilled technical, managerial, engineering, sales, marketing and customer support personnel. Competition for these personnel is intense, especially during times of economic recovery or growth. Any failure to hire, assimilate in a timely manner and retain needed qualified personnel, particularly engineering and sales personnel, could impair our growth and make it difficult to meet key objectives, such as timely and effective product introductions.

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. With the exception of certain key employees based in the European Union, none of our officers or key employees is 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 and achieve our business objectives.

We had two executive departures in the 2016: our Executive Vice President, Services, Product Management and Corporate Development and our Chief Financial Officer. We are currently searching for a permanent replacement for the Chief Financial Officer role. We had five executive departures in 2015: our Vice President, Finance, Controller and Principal Accounting Officer; our Vice President and General Manager, Products; our Vice President and General Manager, Global Services; our Chief Information Officer; and our Vice President, Global Marketing. We had one executive departure in 2014: the departure of our Executive Vice President of Strategy and Go-to-Market. While we have since hired replacements and/or promoted certain individuals on an interim or permanent basis, there is always a risk of uncertainty and instability relating to our ability to find highly qualified successors for certain executive positions and to transition the duties and responsibilities of any departing key executive in an orderly manner.

***If we are not able to obtain necessary licenses or on-going maintenance and support of third-party technology at acceptable prices, on acceptable terms, or at all, it could harm our operating results or business.***

We have incorporated third-party licensed technology, including open source software, 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 and on-going maintenance and support may not be available or continue to be available to us on commercially reasonable terms or may be available to us but only at significantly escalated pricing. Additionally, we may not be able to replace the functionality provided by third-party software currently offered with our products if that software becomes obsolete, defective or incompatible with future versions of our products or is not adequately maintained or updated. 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. Any significant interruption in the availability of these third-party software products or defects in these products could harm our sales unless and until we can secure an alternative source. Although we believe there are adequate alternate sources for the technology licensed to us, such alternate sources may not provide us with the same functionality as that currently provided to us.

***We test our products before they are deployed. However, because our larger scale products are sophisticated and designed to be deployed in complex networks, they may have errors or defects that we find only after full deployment, which could seriously harm our business.***

Our larger scale products are sophisticated and are designed to be deployed in large and complex networks. We test our products before they are deployed. However, 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 may discover errors or defects in the software or hardware, or the products may not operate as expected after full deployment. As we continue to expand our distribution channel through distributors and resellers, we will need to rely on and support their service and support organizations. 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 or increased expense;
- loss of customers and market share;
- 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/or
- costly and time-consuming legal actions by our customers.

***Because our larger scale products are deployed in large, complex networks around the world, failure to establish a support infrastructure and maintain required support levels could seriously harm our business.***

Our larger scale products are deployed in large and complex networks around the world. Our customers expect us to establish a support infrastructure and maintain demanding support standards to ensure that their networks maintain high levels of availability and performance. To continue to support our customers with these larger scale products, our support organization will need to provide service and support at a high level throughout the world. If we are unable to provide the expected level of support and service to our customers, we could experience:

- loss of customers and market share;
- failure to attract new customers in new markets and geographies;
- increased service, support and warranty costs and a diversion of development resources; and/or
- network performance penalties.

***A portion of our revenue is generated from sales to U.S. federal government agencies. Disruptions to, or our failure to effectively develop, manage and maintain our government customer relationships could adversely affect our ability to generate revenue from the sales of certain of our products. Further, such government sales are subject to potential delays and cutbacks, require specific testing efforts, and impose significant compliance obligations.***

A portion of our total revenue from product sales comes from contracts with U.S. federal government agencies. None of our current government contracts include long-term purchase commitments. Disruptions to, or our failure to effectively develop, manage and maintain our government customer relationships, could adversely affect our ability to generate revenue from the sales of our products.

A majority of our government sales involve products that have or will soon reach the end of their life cycles, and such government sales for these older products have declined substantially in recent periods. While governmental agencies have purchased and are evaluating some of our new products for broader deployment, this new line of business may not develop quickly, if at all, or be sufficient to offset future declines in sales of these legacy products. Spending by government customers fluctuates based on budget allocations and the timely passage of the annual federal budget.

Among the factors that could impact federal government spending and which would reduce our federal government contracting and subcontracting business are a significant decline in, or reapportioning of, spending by the federal government; changes as a result of the new presidential administration; changes, delays or cancellations of federal government programs or requirements; the adoption of new laws or regulations that affect companies that provide services to the federal government; federal government shutdowns or other delays in the government appropriations process; changes in the political climate, including with regard to the funding of products we provide; and general economic conditions. The loss or significant curtailment of any government contract or subcontracts, whether due to our performance or due to interruptions of or changes in governmental funding for such contracts or subcontracts, could have a material adverse effect on our business, results of operations and financial condition.

The Department of Defense ("DOD") has issued specific requirements for IP networking products for features and interoperability. In order for a vendor's product to be used to connect to the DOD network, that product must pass a series of significant tests and be certified by the Joint Interoperability Test Command ("JITC"). Certain of our products are already certified by JITC, including the Sonus SBC 5110 and the Sonus SBC 5210 session border controllers, as well as the VX900 VoIP Secure Voice Gateway. However, if we are unable to obtain JITC certification as needed, our DOD sales, and hence our revenue and results of operations, may suffer.

***Consolidation in the telecommunications industry could harm our business.***

The telecommunications industry, including many of our customers, has experienced consolidation, such as the acquisition of XO Communications, LLC by Verizon Communications in February 2017, Polycom, Inc. by Siris Capital Group LLC, a private equity investment firm, in September 2016, the acquisition of Aruba Networks, Inc. by HP Inc. in May 2015, the acquisition of Mavenir Systems, Inc. by Mitel Networks Corporation in April 2015, the acquisition of Riverbed Technology, Inc. by Thoma Bravo, a private equity investment firm, in April 2015, the acquisition of Dialogic Inc. by Novacap TMT IV, L.P. in 2014, the acquisitions of Acme Packet, Inc. and Tekelec by Oracle Corporation in 2013 and the pending acquisition of Level 3 Communications Inc. by CenturyLink Inc., and we expect this trend to continue. Consolidation among our customers may cause delays or reductions in capital expenditure plans and/or increased competitive pricing pressures as the number of available customers declines and the relative purchasing power of customers increases in relation to suppliers. Any of these factors could adversely affect our business.

***We are exposed to the credit risk of some of our customers and to credit exposures in fragile financial markets, which could result in material losses.***

Due to our reliance on significant customers, we are dependent on the continued financial strength of our customers. If one or more of our significant customers experience financial difficulties, it could result in uncollectable accounts receivable and our loss of significant customers and anticipated revenue.

Most of our sales are on an open credit basis, with typical payment terms of 30 to 60 days. We monitor individual customer payment capability in granting such open credit arrangements, seeking to limit such open credit to amounts we believe our customers can pay and maintain reserves we believe are adequate to cover exposure for doubtful accounts. However, there can be no assurance that our open credit customers will pay the amounts they owe to us or that the reserves we maintain will be adequate to cover such credit exposure. Our customers' failure to pay and/or our failure to maintain sufficient reserves could have a material adverse effect on our consolidated financial statements. Additionally, in the event that turmoil in the credit markets makes it more difficult for some customers to obtain financing, those customers' ability to pay could be adversely impacted, which in turn could have a material adverse impact on our business and consolidated financial statements.

A portion of our sales is derived through our distributors. As distributors tend to have more limited financial resources than other resellers and end-user customers, they generally represent sources of increased credit risk.

***The hardware products that we purchase from our third-party vendors have life cycles, and some of those products have reached the end of their life cycles. If we are unable to correctly estimate future requirements for these products, it could harm our operating results or business.***

Some of the hardware products that we purchase from our third-party vendors have reached the end of their life cycles. It may be difficult for us to maintain appropriate levels of the discontinued hardware to adequately ensure that we do not have a shortage or surplus of inventory of these products. If we do not correctly forecast the demand for such hardware, we could have excess inventory and may need to write off the costs related to such purchases. The write-off of surplus inventory could materially and adversely affect our operating results. However, if we underestimate our forecast and our customers place

orders to purchase more products than are available, we may not have sufficient inventory to support their needs. If we are unable to provide our customers with enough of these products, it could make it difficult to retain certain customers, which could have a material and adverse effect on our business.

***Man-made problems, such as computer viruses, hacking or terrorism, and natural disasters may disrupt our operations and harm our operating results.***

Despite our implementation of network security measures, our servers are vulnerable to computer viruses, break-ins and similar disruptions from unauthorized tampering with our computer systems. Any attack on our servers could have a material adverse effect on our business and consolidated financial statements. Additionally, the information systems of our customers could be compromised due to computer viruses, break-ins and hacking, which could lead to unauthorized tampering with our products and may result in, among other things, the disruption of our customers' business, errors or defects occurring in the software due to such unauthorized tampering, and our products not operating as expected after such unauthorized tampering. Such consequences could affect our reputation and have a material adverse effect on our business and consolidated financial statements. Efforts to limit the ability of malicious third parties to disrupt the operations of the Internet or undermine our own security efforts may be met with resistance. In addition, the continued threat of terrorism and heightened security and military action in response to this threat, or any future acts of terrorism, may cause further disruptions to the economies of the United States and other countries and create further uncertainties or otherwise materially harm our business and consolidated financial statements. Likewise, events such as work stoppages or widespread blackouts could have similar negative impacts. Such disruptions or uncertainties could result in delays or cancellations of customer orders or the manufacture or shipment of our products and have a material adverse effect on our business and consolidated financial statements.

Natural catastrophic events, such as earthquakes, fire, floods, or tornadoes, may also affect our or our customers' operations and could have a material adverse effect on our business. Moreover, one of our offices is located in the Silicon Valley area of Northern California, a region known for seismic activity. These facilities are located near the San Francisco Bay where the water table is quite close to the surface and where tenants in nearby facilities have experienced water intrusion problems. A significant natural disaster, such as an earthquake or flood, could have a material adverse effect on our business in this location.

***A breach of the security of our information systems or those of our third-party providers could adversely affect our operating results.***

We rely upon the security of our information systems and, in certain circumstances, those of our third-party providers, such as vendors, consultants and contract manufacturers, to protect our sensitive or proprietary information and information of our customers. Despite our security procedures and those of our third-party providers, our information systems and those of our third-party providers are vulnerable to threats such as computer hacking, cyber-terrorism or other unauthorized attempts by third parties to access, modify or delete our or our customers' sensitive or proprietary information. Such cyberattacks and other cyber incidents are occurring more frequently, are constantly evolving, are becoming more sophisticated and can take many forms. Information technology system failures, including a breach of our or our third-party providers' data security measures through a cyberattack, other cyber incident or otherwise, or the theft or loss of laptops, other mobile devices or electronic records used to back up our systems or our third-party providers' systems, could result in a disclosure of customer, employee, or our information or otherwise disrupt our ability to function in the normal course of business by potentially causing, among other things, delays in the fulfillment or cancellation of customer orders or disruptions in the manufacture or shipment of products or delivery of services, any of which could have a material adverse effect on our operating results. These types of security breaches could also create exposure to lawsuits, regulatory investigations, increased legal liability and/or reputational damage. Such consequences could be exacerbated if we or our third-party providers are unable to adequately recover critical systems following a systems failure. Due to the constantly evolving nature of these security threats, the form and impact of any future incident cannot be predicted.

***Failure or circumvention of our controls and procedures could impair our ability to report accurate financial results and could seriously harm our business.***

Even an effective internal control system, no matter how well designed, has inherent limitations - including the possibility of the circumvention or overriding of controls - and therefore, can provide only reasonable assurance with respect to financial statement preparation. The failure or circumvention of our controls, policies and procedures could impair our ability to report accurate financial results and could have a material adverse effect on our business and consolidated financial statements.

***Any changes to existing accounting pronouncements or taxation rules or practices may cause adverse fluctuations in our reported results of operations or affect how we conduct our business.***

A change in accounting pronouncements or taxation rules or practices can have a significant effect on our reported results and may affect our reporting of transactions completed before the change is effective. New accounting pronouncements, taxation rules and varying interpretations of accounting pronouncements or taxation rules have occurred in the past and may occur in the future. The change to existing rules, future changes, if any, or the need for us to modify a current tax position may adversely affect our reported financial results or the way we conduct our business. For example, a new revenue recognition standard was issued in 2014 that will be effective for companies in 2018, and we expect that the adoption of this new standard could have a material impact on our consolidated financial statements.

***Changes in our business strategy related to product and maintenance offerings and pricing could affect revenue recognition.***

Our business strategy and competition within the industry could exert pricing pressure on our product and maintenance offerings. Changes in our product or maintenance offerings or packages and related pricing could affect the amount of revenue recognized in a reporting period.

***If our goodwill or intangible assets become impaired, we may be required to record a significant charge to earnings.***

Under generally accepted accounting principles, we review our intangible assets for impairment when events or changes in circumstances indicate the carrying value may not be recoverable. Our intangible assets increased by approximately \$12 million in 2016 as a result of our acquisition of Taqua, \$11 million in 2015 as a result of our acquisition of the SDN Business and \$17 million in 2014 as a result of our acquisition of PT. Goodwill, which increased by approximately \$9 million in 2016 as a result of our acquisition of Taqua, \$1 million in 2015 as a result of our acquisition of the SDN Business and \$7 million in 2014 as a result of our acquisition of PT (net of the reduction of goodwill related to the sale of PT's Multi-Protocol Server business), is tested for impairment at least annually. Factors that may be considered a change in circumstances indicating that the carrying value of our goodwill or intangible assets may not be recoverable include significant underperformance relative to plan or long-term projections, strategic changes in business strategy, significant negative industry or economic trends, significant change in circumstances relative to a large customer, significant decline in our stock price for a sustained period and decline in our market capitalization to below net book value.

***Failure by our strategic partners or by us in integrating products provided by our strategic partners could harm our business.***

Our solutions include the integration of products supplied by strategic partners, who offer complementary products and services. We rely on these strategic partners in the timely and successful deployment of our solutions to our customers. If the products provided by these partners have defects or do not operate as expected, if the services provided by these partners are not completed in a timely manner, if our partners have organizational or supply issues, or if we do not effectively integrate and support products supplied by these strategic partners, then we may have difficulty with the deployment of our solutions that may result in:

- loss of, or delay in, revenues;
- increased service, support and warranty costs and a diversion of development resources; and
- network performance penalties.

In addition to cooperating with our strategic partners on specific customer projects, we also may compete in some areas with these same partners. If these strategic partners fail to perform or choose not to cooperate with us on certain projects, in addition to the effects described above, we could experience:

- loss of customers and market share; and
- failure to attract new customers or achieve market acceptance for our products.

***Our use and reliance upon research and development resources in India may expose us to unanticipated costs and/or liabilities.***

We have a material office in Bangalore, India. The employees at this facility consist principally of research and development personnel. There is no assurance that our reliance upon development resources in India will enable us to achieve meaningful cost reductions or greater resource efficiency. Further, our development efforts and other operations in India involve significant risks, including:

- difficulty hiring and retaining appropriate engineering and management resources due to intense competition for such resources and resulting wage inflation;
- knowledge transfer related to our technology and resulting exposure to misappropriation of intellectual property or information that is proprietary to us, our customers and other third parties;
- heightened exposure to changes in economic, security and political conditions in India; and
- fluctuations in currency exchange rates and tax compliance in India.

Difficulties resulting from the factors noted above and other risks related to our operations in India could increase our expenses, impair our development efforts, harm our competitive position and damage our reputation.

***Failure to comply with the Foreign Corrupt Practices Act or the UK Bribery Act could subject us to significant civil or criminal penalties.***

We earn a significant portion of our total revenues from international sales generated through our foreign direct and indirect operations. As a result, we are subject to the Foreign Corrupt Practices Act of 1977, as amended (the "FCPA"), and the UK Bribery Act of 2010 (the "UKBA"), which are laws that prohibit bribery in the conduct of business. The FCPA generally prohibits U.S. companies and their intermediaries from making corrupt payments to foreign officials for the purpose of obtaining or keeping business or otherwise obtaining favorable treatment, and requires companies to maintain adequate record-keeping and internal accounting practices to accurately reflect the transactions of the company. The FCPA applies to companies, individual directors, officers, employees and agents. The UKBA is much broader and prohibits all bribery, in both the public and private sectors. Although the UKBA does not contain a separate financial records provision, such a requirement is captured under other UK legislation. Under the FCPA and the UKBA, U.S. companies, their subsidiaries, employees, senior officers and/or directors may be held liable for actions taken by strategic or local partners or representatives. In addition, the U.S. government or the UK government, as applicable, may seek to hold us liable for successor liability violations committed by companies in which we acquire. If we or our intermediaries fail to comply with the requirements of the FCPA and the UKBA, governmental authorities in the United States and the United Kingdom, as applicable, could seek to impose civil and/or criminal penalties, which could have a material adverse effect on our reputation and consolidated financial statements.

***Compliance with regulations regarding the use of conflict minerals may disrupt our operations and harm our operating results.***

In 2012, under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010, the Securities and Exchange Commission adopted new requirements for companies that use certain minerals and derivative metals (referred to as "conflict minerals" regardless of their actual country of origin) in their products. These metals, which include tantalum, tin, gold and tungsten, are central to the technology industry and are present in our products as component parts. As a result, we are required to investigate and disclose whether or not the conflict minerals that are used in our products originated from the Democratic Republic of the Congo or adjoining countries. There are various costs associated with these investigation and disclosure requirements, in addition to the potential costs of changes to products, processes or sources of supply as a consequence of such activities. In addition, the implementation of these rules could adversely affect the sourcing, supply and pricing of materials used in our products. Also, we may face reputational challenges if we are unable to sufficiently verify the origins for all conflict minerals used in our products through the procedures we may implement or if we are unable to replace any conflict minerals used in our products that are sourced from the Democratic Republic of the Congo or adjoining countries, as there may not be any acceptable alternative sources of the conflict minerals in question or alternative materials that have the properties we need for our products. We may also encounter challenges to satisfy those customers who require that all of the components of our products be certified as conflict-free. If we are not able to meet customer requirements, customers may choose to disqualify us as a supplier and we may have to write off inventory in the event that it cannot be sold. These changes could also have an adverse impact in our ability to manufacture and market our products.

***We are subject to governmental export and import controls that could subject us to liability, require a license from the U.S. government or impair our ability to compete in international markets.***

Our products are subject to U.S. export controls and may be exported outside the United States only with the required level of export license or through an export license exception because we incorporate encryption technology into our products. Under these laws and regulations, we are responsible for obtaining all necessary licenses or other approvals, if required, for exports of hardware, software and technology, as well as the provision of service. Obtaining export licenses can be difficult and time-consuming, and in some cases a license may not be available on a timely basis or at all.

In addition, various countries regulate the import of certain encryption technology and have enacted laws that could limit our ability to distribute our products or our customers' ability to implement our products in those countries. Changes in our

products or changes in export and import regulations may create delays in the introduction of our products in international markets, prevent our customers with international operations from deploying our products throughout their global systems or, in some cases, prevent the export or import of our products to certain countries altogether. Any change in export or import regulations or related legislation, shift in approach to the enforcement or scope of existing regulations or change in the countries, persons or technologies targeted by such regulations, could result in decreased use of our products by, or in our decreased ability to export or sell our products to, existing or potential customers with international operations. Any decreased use of our products or limitation on our ability to export or sell our products would likely have a material adverse effect on our business and consolidated financial statements.

***Regulation of the telecommunications industry could harm our operating results and future prospects.***

The telecommunications industry is highly regulated and our business and financial condition could be adversely affected by changes in the regulations relating to the telecommunications industry. Currently, there are few laws or regulations that apply directly to access to or delivery of voice services on IP networks. We could be adversely affected by regulation of IP networks and commerce in any country where we operate, including the United States. Such regulations could include matters such as voice over the Internet or using Internet protocol, encryption technology, and access charges for service providers. The adoption of such regulations could decrease demand for our products, and at the same time increase the cost of selling our products, which could have a material adverse effect on our business and consolidated financial statements.

**Item 1B. Unresolved Staff Comments**

None.

**Item 2. Properties**

Our corporate headquarters is located in a leased facility in Westford, Massachusetts, consisting of 97,500 square feet under a lease that expires in August 2018. In addition to our corporate headquarters, we maintained, as of December 31, 2016, the following facilities:

<b>Location</b>	<b>Principal use</b>	<b>Square footage (approximate)</b>	<b>Lease expiration</b>
Bangalore, India	Engineering/development	60,000	October 2019
Richardson, Texas	Customer testing	26,500	January 2020
Freehold, New Jersey (a)	Engineering/development	16,500	January 2018
Fremont, California	Engineering/development and general and administrative	16,000	June 2020
Kanata, Canada	Engineering/development and general and administrative	16,000	October 2018
Richardson, Texas	Engineering/development, sales and general and administrative	15,600	September 2021
Prague, Czech Republic	Customer support	11,500	May 2019
Swindon, United Kingdom	Engineering/development and customer support	5,800	December 2018
San Jose, California (b)	Engineering/development	5,500	November 2018
Rochester, New York	Engineering/development and general and administrative	5,400	October 2019
Tokyo, Japan	Sales and customer support	5,000	May 2020
Schaumburg, Illinois	Engineering/development	4,700	October 2019
Richardson, Texas	Warehouse/manufacturing	2,800	March 2017
Hyannis, Massachusetts	Engineering/development	2,200	December 2019

(a) In January 2017, we reduced the square footage of this facility to approximately 13,500 square feet and extended the lease through January 2024.

(b) Facility was not in use at December 31, 2016 as part of a restructuring initiative and is currently being actively marketed for sublease.

As of December 31, 2016, we also leased short-term office space in Australia, China, France, Germany, Malaysia, Mexico, Singapore, South Korea, Taiwan and the United Arab Emirates. We believe our existing facilities are adequate for our current needs and that suitable additional space will be available as needed.

### **Item 3. Legal Proceedings**

On April 6, 2015, Ming Huang, a purported shareholder of ours, filed a Class Action Complaint (Civil Action No. 3:15-02407), alleging violations of the federal securities laws (the "Complaint") in the United States District Court for the District of New Jersey (the "District of New Jersey"), against us and two of our officers, Raymond P. Dolan, our President and Chief Executive Officer, and Mark T. Greenquist, our former Chief Financial Officer (collectively, the "Defendants"). On September 21, 2015, in response to motions subsequently filed with the District of New Jersey by four other purported shareholders of ours seeking status as lead plaintiff, the District of New Jersey appointed Richard Sousa as lead plaintiff (the "Plaintiff"). The Plaintiff claims to represent purchasers of our common stock during the period from October 23, 2014 to March 24, 2015, and seeks unspecified damages. The principal allegation contained in the Complaint is that the Defendants made misleading forward-looking statements concerning our fiscal first quarter of 2015 financial performance. On September 22, 2015, we filed a Motion to Transfer (the "Motion to Transfer") this case to the United States District Court for the District of Massachusetts. The Plaintiff filed his opposition to the Motion to Transfer on October 5, 2015, and we filed a reply to the Motion to Transfer on October 13, 2015. On March 21, 2016, the District of New Jersey granted our Motion to Transfer. Thus, this case will now be litigated in the United States District Court for the District of Massachusetts (Civil Action No. 1:16-cv-10657-GAO). On May 4, 2016, the Plaintiff filed an amended complaint (the "Amended Complaint"), which is now the operative complaint in this litigation. On June 20, 2016, the Company and the other Defendants filed a Motion to Dismiss the Amended Complaint (the "Motion to Dismiss") and on July 25, 2016, the Plaintiff filed an opposition to the Motion to Dismiss. We filed our reply to the Plaintiff's opposition to the Motion to Dismiss on August 15, 2016. A hearing on the Motion to Dismiss is scheduled for February 28, 2017. We believe that the Defendants have meritorious defenses to the allegations made in the Amended Complaint and do not expect the results of this suit to have a material adverse effect on our business or consolidated financial statements.

We are often a party to disputes and legal proceedings that we consider routine and incidental to our business. Management does not expect the results of any of these actions to have a material effect on our business or consolidated financial statements.

### **Item 4. Mine Safety Disclosures**

Not applicable.

## PART II

### Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

#### Market Information

Our common stock is quoted on the NASDAQ Global Select Market under the symbol "SONS".

The following table sets forth, for the time periods indicated, the high and low sale prices of our common stock as reported on the NASDAQ Global Select Market:

	High	Low
<b>Fiscal 2016</b>		
First quarter	\$ 8.10	\$ 5.15
Second quarter	\$ 9.26	\$ 7.05
Third quarter	\$ 10.00	\$ 7.52
Fourth quarter	\$ 7.84	\$ 5.51
<b>Fiscal 2015</b>		
First quarter	\$ 20.75	\$ 7.86
Second quarter	\$ 8.55	\$ 7.50
Third quarter	\$ 8.20	\$ 5.82
Fourth quarter	\$ 7.55	\$ 5.55

#### Holdings

At February 22, 2017, there were approximately 158 holders of record of our common stock.

#### Dividend Policy

We have never declared or paid cash dividends and have no present intention to pay cash dividends in the foreseeable future.

#### Recent Sales of Unregistered Securities

None.

**Purchases of Equity Securities by the Issuer and Affiliated Purchasers**

The following table summarizes repurchases of our common stock during the fourth quarter of 2016:

<b>Period</b>	<b>Total Number of Shares Purchased (1)</b>	<b>Average Price Paid per Share</b>	<b>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs (2)</b>	<b>Approximate Dollar Value of Shares that May Yet be Purchased Under the Plans or Programs (3)</b>
October 1, 2016 to October 31, 2016	119,559	\$ 6.35	85,000	\$ 7,331,121
November 1, 2016 to November 30, 2016	245,405	\$ 5.98	245,000	\$ 5,865,165
December 1, 2016 to December 31, 2016	70,162	\$ 6.22	70,000	\$ 5,429,481
Total	<u>435,126</u>	\$ 6.12	<u>400,000</u>	\$ 5,429,481

(1) Upon vesting of restricted stock awards, our employees are permitted to return to us a portion of the newly vested shares to satisfy the tax withholding obligations that arise in connection with such vesting. During the fourth quarter of 2016, 35,126 shares of restricted stock were returned to us by employees to satisfy tax withholding obligations arising in connection with vesting of restricted stock, which shares are included in this column.

(2) Consists of purchases pursuant to a stock buyback program announced on July 29, 2013, under which our Board of Directors has authorized the repurchase of up to \$100 million of our common stock from time to time on the open market or in privately negotiated transactions (the "2013 Buyback Program"). At December 31, 2016, we had \$5.4 million remaining under the 2013 Buyback Program for future repurchases. The timing and amount of any shares repurchased will be determined by our management based on its evaluation of market conditions and other factors. We may elect to implement a 10b5-1 repurchase program, which would permit shares to be repurchased when we might otherwise be precluded from doing so under insider trading laws. The 2013 Buyback Program does not have a fixed expiration date but may be suspended or discontinued at any time. The 2013 Buyback Program is being funded using our working capital.

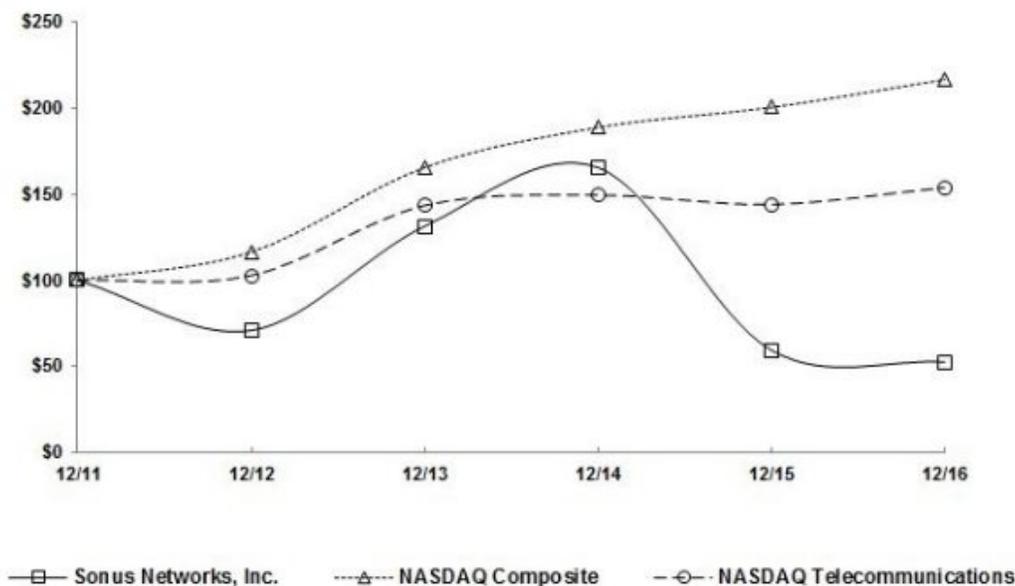
(3) Consists of remaining amounts available for repurchases under the 2013 Buyback Program.

**Performance Graph**

The following performance graph compares the cumulative total return to stockholders for our common stock for the period from December 31, 2011 through December 31, 2016 with the cumulative total return over the same period on the NASDAQ Composite Index and the NASDAQ Telecommunications Index. The comparison assumes an investment of \$100 on December 31, 2011 in our common stock and in each of the indices and, in each case, assumes reinvestment of all dividends, if any. The performance shown is not necessarily indicative of future performance.

This graph is not deemed to be "filed" with the SEC or subject to the liabilities of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and should not be deemed to be incorporated by reference into any of our prior or subsequent filings under the Securities Act of 1933, as amended, or the Exchange Act.

**COMPARISON OF 5 YEAR CUMULATIVE TOTAL RETURN\***  
Among Sonus Networks, Inc., the NASDAQ Composite Index  
and the NASDAQ Telecommunications Index



\*\$100 invested on 12/31/11 in stock or index, including reinvestment of dividends.  
Fiscal year ending December 31.

	December 31,					
	2011	2012	2013	2014	2015	2016
Sonus Networks, Inc.	\$ 100.00	\$ 70.83	\$ 131.25	\$ 165.42	\$ 59.42	\$ 52.50
NASDAQ Composite	\$ 100.00	\$ 116.41	\$ 165.47	\$ 188.69	\$ 200.32	\$ 216.54
NASDAQ Telecommunications	\$ 100.00	\$ 102.78	\$ 143.40	\$ 149.42	\$ 144.02	\$ 153.88

**Item 6. Selected Financial Data**

The following selected consolidated financial data 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 thereto included elsewhere in this Annual Report on Form 10-K.

<b>Consolidated Statement of Operations Data</b> <b>(In thousands, except per share amounts)</b>	<b>Year ended December 31,</b>				
	<b>2016 (1)</b>	<b>2015 (2)</b>	<b>2014 (3)</b>	<b>2013</b>	<b>2012 (4)</b>
<b>Revenue:</b>					
Product	\$ 146,381	\$ 141,913	\$ 182,455	\$ 167,272	\$ 153,326
Service	106,210	107,121	113,871	109,461	100,808
Total revenue	252,591	249,034	296,326	276,733	254,134
<b>Cost of revenue:</b>					
Product	47,367	50,460	60,284	59,235	58,109
Service	37,613	36,917	42,637	45,038	53,431
Total cost of revenue	84,980	87,377	102,921	104,273	111,540
Gross profit	167,611	161,657	193,405	172,460	142,594
<b>Operating expenses:</b>					
Research and development	72,841	77,908	79,396	69,559	67,341
Sales and marketing	68,539	72,841	80,141	78,365	76,341
General and administrative	35,948	39,846	43,937	40,107	34,283
Acquisition-related expense	1,152	131	1,558	93	5,496
Restructuring expense	2,740	2,148	5,625	5,411	7,675
Total operating expenses	181,220	192,874	210,657	193,535	191,136
Loss from operations	(13,609)	(31,217)	(17,252)	(21,075)	(48,542)
Interest and other income, net	2,193	1,329	2,611	408	814
Loss from continuing operations before income taxes	(11,416)	(29,888)	(14,641)	(20,667)	(47,728)
Income tax provision	(2,516)	(2,007)	(2,214)	(1,452)	(2,441)
Net loss	\$ (13,932)	\$ (31,895)	\$ (16,855)	\$ (22,119)	\$ (50,169)
<b>Loss per share</b>					
Basic	\$ (0.28)	\$ (0.64)	\$ (0.34)	\$ (0.40)	\$ (0.90)
Diluted	\$ (0.28)	\$ (0.64)	\$ (0.34)	\$ (0.40)	\$ (0.90)
<b>Shares used to compute loss per share</b>					
Basic	49,385	49,560	50,245	55,686	56,018
Diluted	49,385	49,560	50,245	55,686	56,018

(1) Includes \$1.9 million of revenue and \$4.7 million of net loss attributable to Taqua, LLC for the period subsequent to its acquisition by the Company on September 26, 2016.

(2) Includes the results of operations of the SDN Business of Treq Labs, Inc. for the period subsequent to its acquisition by the Company on January 2, 2015. The Company has not disclosed the revenue and earnings of the SDN Business for the periods since January 2, 2015, as these amounts are not significant to the Company's consolidated financial statements.

(3) Includes \$14.8 million of revenue attributable to Performance Technologies Incorporated for the period subsequent to its acquisition by the Company on February 19, 2014. The impact on earnings is not significant.

(4) Includes \$17.3 million of revenue and \$9.5 million of net loss attributable to NET for the period subsequent to its acquisition by the Company on August 24, 2012.

**Consolidated Balance Sheet Data**

<b>(In thousands)</b>	<b>December 31,</b>				
	<b>2016</b>	<b>2015</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>
Cash and cash equivalents	\$ 31,923	\$ 50,111	\$ 41,157	\$ 72,423	\$ 88,004
Marketable securities	\$ 61,836	\$ 58,533	\$ 64,443	\$ 138,882	\$ 161,905
Investments	\$ 32,371	\$ 33,605	\$ 42,407	\$ 34,364	\$ 29,698
Working capital	\$ 100,845	\$ 117,692	\$ 129,480	\$ 223,879	\$ 286,745
<b>Total assets</b>	<b>\$ 308,059</b>	<b>\$ 312,891</b>	<b>\$ 332,635</b>	<b>\$ 417,484</b>	<b>\$ 470,740</b>
Convertible subordinated note	\$ —	\$ —	\$ —	\$ 2,380	\$ 2,380
Long-term deferred revenue	\$ 7,188	\$ 7,374	\$ 8,009	\$ 10,528	\$ 11,647
Other long-term liabilities	\$ 1,633	\$ 2,760	\$ 5,246	\$ 4,371	\$ 5,706
<b>Total stockholders' equity</b>	<b>\$ 219,122</b>	<b>\$ 223,026</b>	<b>\$ 240,350</b>	<b>\$ 312,252</b>	<b>\$ 376,046</b>

## Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

### Overview

We are a leading provider of networked solutions for communications service providers (e.g., telecommunications, wireless and cable service providers) and enterprises to help them secure and unify their real-time communications infrastructures. We help the world's leading communications service providers and enterprises embrace the next generation of Session Initiation Protocol ("SIP") and 4G/LTE (Long Term Evolution)-based solutions, including Voice over Internet Protocol ("VoIP"), Voice over WiFi ("VoWiFi"), video and Unified Communications ("UC") by securing and enabling reliable and scalable Internet Protocol ("IP") networks. Our products include session border controllers ("SBCs"), diameter signaling controllers ("DSCs") and VoWiFi solutions, which are supported by a global services team with experience in design, deployment and maintenance of some of the world's largest IP networks.

Our solutions provide a secure way for our customers to link and leverage multivendor, multiprotocol communications systems and applications across their networks, around the world and in a rapidly changing ecosystem of IP-enabled devices such as smartphones and tablets. Our solutions help realize the intended value and benefits of UC platforms by enabling disparate communications environments, commonplace in most enterprises today, to work seamlessly together. Likewise, our solutions secure the evolution to cloud-based delivery of UC solutions - both for service providers transforming to a cloud-based network and for enterprises using cloud-based UC.

We utilize both direct and indirect sales channels to reach our target customers. Customers and prospective customers in the service provider space are traditional and emerging 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. Enterprise customers and target enterprise customers include financial institutions, retailers, state and local governments, and other multinational corporations. We collaborate with our customers to identify and develop new, advanced services and applications that can help to reduce costs, improve productivity and generate new revenue.

We have traditionally sold our products through a global direct sales force, with additional sales support from regional channel partners throughout the world. Our channel partner program, Sonus Partner Assure, expands our coverage of the service provider and enterprise markets.

Our fiscal year ends on December 31. For fiscal years 2015 and 2014, we reported our first, second and third quarters on a 4-4-5 basis, with the quarter ending on the Friday closest to the last day of each third month. In 2015, our first quarter ended on March 27, 2015, our second quarter ended on June 26, 2015 and our third quarter ended on September 25, 2015. In 2014, our first quarter ended on March 28, 2014, our second quarter ended on June 27, 2014 and our third quarter ended on September 26, 2014. Effective January 1, 2016, we reported our first, second and third quarters on a month-end basis, such that our first quarter ended on March 31, 2016, our second quarter ended on June 30, 2016 and our third quarter ended on September 30, 2016.

### *Business Acquisitions*

On September 26, 2016 (the "Taqua Acquisition Date"), we acquired Taqua, LLC ("Taqua"), a leading supplier of IP communications systems, applications and services to mobile and fixed operators. Taqua enables the transformation of software-based service provider networks to deliver next-generation voice, video and messaging services, including VoIP, VoWiFi and VoLTE. We believe that the acquisition of Taqua will, among other things, accelerate our mobile strategy by adding a Virtualized Mobile Core ("VMC") Softswitch (the T7000) for Network Transformation projects and a Multimedia Controller used in IP Peering applications (the T7100), both of which are complementary to our current product offerings. In consideration, we paid \$19.9 million in cash to the sellers on the Taqua Acquisition Date, net of cash acquired. We also entered into an Earn-Out Agreement, dated as of September 26, 2016, with Taqua Holdings, LLC and Jeffrey L. Brawner, the seller representative in the transaction, under which there is the potential for additional cash payments of up to \$65 million in the aggregate to the sellers if certain annual revenue thresholds are exceeded as measured annually through 2020. Based on historical and forecasted sales, no incremental contingent consideration was recorded as of December 31, 2016. The financial results of Taqua are included in our consolidated financial statements starting on the Taqua Acquisition Date.

On January 2, 2015 (the "Treq Asset Acquisition Date"), we acquired from Treq Labs, Inc. ("Treq") certain assets related to its business of designing, developing, marketing, selling, servicing and maintaining software-defined networking ("SDN") technology, SDN controller software and SDN management software (the "SDN Business") for \$10.1 million in cash on the

Treq Asset Acquisition Date, with an additional consideration payment of \$750,000 paid on each of July 2, 2015 and January 4, 2016. We also entered into an Earn-Out Agreement under which we agreed to issue to the sellers up to an aggregate of 1.3 million shares of common stock over a three-year period subsequent to the Treq Asset Acquisition Date if aggregate revenue thresholds of at least \$60 million are achieved by the SDN Business during that period, and up to an aggregate of an additional 2.2 million shares (3.5 million shares in total) if aggregate revenue thresholds of at least \$150 million are achieved by the SDN Business during that period. If the initial revenue thresholds are not met, no shares will be issued. Based on historical and forecasted sales, no incremental contingent consideration was recorded initially as of the Treq Asset Acquisition Date or through December 31, 2016. The SDN Business provides solutions that optimize networks for voice, video and UC for both enterprise and service provider customers. We believe that the acquisition of the SDN Business has helped to accelerate our delivery of our SDN strategy. The financial results of the SDN Business are included in our consolidated financial statements starting on the Treq Asset Acquisition Date.

On February 19, 2014 (the "PT Acquisition Date"), we completed the acquisition of Performance Technologies, Incorporated ("PT") for \$3.75 per share, or approximately \$35 million in cash, net of PT's cash and excluding acquisition-related costs. This acquisition has enabled us to expand and diversify our portfolio with an integrated, virtualized Diameter and SIP-based solution and deliver strategic value to service providers seeking to offer new multimedia services through mobile, cloud-based real-time communications. The financial results of PT are included in our consolidated financial statements for the period subsequent to the PT Acquisition Date. On June 20, 2014, we sold the PT Multi-Protocol Server ("MPS") business for \$2.0 million. We had acquired the MPS business in connection with the acquisition of PT. The results of operations of the MPS business are excluded from our consolidated results for the period subsequent to June 20, 2014.

### ***Corporate Strategy***

Our strategy is designed to capitalize on our technology and market lead, and build a premier franchise in multimedia infrastructure solutions. We are currently focusing our major efforts on the following aspects of our business which enable next generation communications including SIP- and 4G/LTE-based networks.

- expanding our communications network solutions to address emerging UC-, IP- and cloud-based enterprise and service providers;
- embracing the principles outlined by 3GPP, 4GPP2 and LTE architectures and delivering the industry's most advanced IMS (IP Multimedia Subsystem)-ready SBC and DSC product suites;
- leveraging our TDM (time division multiplexing)-to-IP gateway technology leadership with service providers to accelerate adoption of SIP-enabled Unified Communication services;
- expanding and broadening our customer base by targeting the enterprise market for SIP trunking and access solutions;
- providing an environment for our customers to enable real-time communication to embed into their presence on the worldwide web;
- expanding our global sales distribution, marketing and support capabilities;
- actively contributing to the SIP standards definition and adoption process;
- pursuing strategic transactions and alliances;
- successfully implementing our cost reduction initiatives; and
- delivering sustainable profitability by continuing to improve our overall performance.

### ***Financial Overview***

#### *Restructuring and Cost Reduction Initiatives*

We have been committed to streamlining our operations and reducing our operating costs.

In August 2012, we committed to a restructuring initiative to close and consolidate certain facilities and reduce our worldwide workforce (the "2012 Restructuring Initiative"). We regularly review our restructuring accruals against expected cash expenditures to determine if adjustments are required. As a result of such reviews, we recorded a net credit to restructuring expense aggregating \$1.7 million in 2015. We recorded \$5.6 million of expense in connection with the 2012 Restructuring Initiative in 2014. As of December 31, 2015, the payments related to this initiative had been completed.

To better align our cost structure to our then-current revenue expectations, in April 2015, we announced a cost reduction review. As part of this review, on April 16, 2015, we initiated a restructuring plan to reduce our workforce by approximately 150 positions, or 12.5% of our worldwide workforce (the "2015 Restructuring Initiative"). We recorded restructuring expense of \$67,000 in 2016 and \$3.8 million in 2015 in connection with the 2015 Restructuring Initiative.

On July 25, 2016, we announced a program to further accelerate our investment in new technologies as the communications industry migrates to a cloud-based architecture (the "2016 Restructuring Initiative"). We expect to record expense aggregating between \$3 million and \$4 million in connection with this action, resulting in expected annual savings of approximately \$6 million to \$8 million. We recorded \$1.5 million of expense in 2016 and expect to record the remaining expense by the end of the second quarter of 2017. We intend to utilize the majority of the savings to shift headcount toward new strategic initiatives, such as new products and an expanded go-to-market footprint in selected geographies and discrete vertical markets.

In connection with the acquisition of Taqua, our management approved a restructuring plan in the third quarter of 2016 to eliminate certain redundant positions within the combined companies. On October 24, 2016, the Audit Committee of our Board of Directors approved a broader Taqua restructuring plan related to headcount and redundant facilities (collectively, the "Taqua Restructuring Initiative"). In connection with this initiative, we recorded \$1.2 million of restructuring expense in 2016. We anticipate we will record additional future expense in connection with this initiative for headcount and redundant facilities aggregating approximately \$1 million.

#### *Financial Results*

We reported losses from operations of \$13.6 million for 2016, \$31.2 million for 2015 and \$17.3 million for 2014. We reported net losses of \$13.9 million for 2016, \$31.9 million for 2015 and \$16.9 million for 2014.

Our revenue was \$252.6 million in 2016, \$249.0 million in 2015 and \$296.3 million in 2014. Our gross profit was \$167.6 million in 2016, \$161.7 million in 2015 and \$193.4 million in 2014. Our gross profit as a percentage of revenue ("total gross margin") was 66.4% in 2016, 64.9% in 2015 and 65.3% in 2014.

Our operating expenses were \$181.2 million in 2016, compared to \$192.9 million in 2015 and \$210.7 million in 2014. Our 2016 operating expenses included \$1.2 million of incremental acquisition-related costs for professional and services fees related to our September 2016 acquisition of Taqua and \$2.7 million of restructuring expense, comprised of \$1.5 million related to our 2016 Restructuring Initiative, \$1.2 million related to our Taqua Restructuring Initiative and \$67,000 related to our 2015 Restructuring Initiative. Our 2015 operating expenses included \$0.1 million of incremental acquisition-related costs for professional and services fees related to the January 2015 acquisition of the SDN Business and \$2.1 million of restructuring expense, comprised of \$3.8 million of expense related to our 2015 Restructuring Initiative, net of \$1.7 million of reversals of restructuring expense previously recorded in connection with our 2012 Restructuring Initiative. Our 2014 operating expenses included \$1.6 million of incremental acquisition-related expense, comprised of \$1.3 million related to the acquisition of PT and \$0.3 million related to the acquisition of the SDN Business. Our 2014 operating expenses also included \$5.6 million of restructuring expense related to our 2012 Restructuring Initiative.

We recorded stock-based compensation expense of \$19.8 million in 2016, \$21.7 million in 2015 and \$23.9 million in 2014.

We sold a domain name and a block of IPv4 addresses in July 2016 and December 2016, respectively, both of which we had acquired in connection with previous acquisitions, and recorded income aggregating \$1.3 million in connection with these transactions. In October 2015, we sold a domain name we had acquired in connection with our acquisition of PT. We recorded \$0.9 million of income in connection with this transaction. These amounts are included in Other income, net, in our consolidated statement of operations.

In March 2014, we reached a settlement agreement for \$2.25 million to recover a portion of our losses related to the impairment of certain prepaid royalties that we had written off in 2012. This amount is included in Other income, net, in our consolidated statement of operations for 2014.

See "Results of Operations" in this Management's Discussion and Analysis of Financial Condition and Results of Operations for a discussion of these changes in our revenue and expenses.

#### **Critical Accounting Policies and Estimates**

Management's discussion and analysis of the financial condition and results of operations is based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. The preparation of these financial statements requires us to make estimates and judgments that affect the

reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. We base our estimates and judgments on historical experience, knowledge of current conditions and beliefs of what could occur in the future given available information. We consider the following accounting policies to be both those most important to the portrayal of our financial condition and those that require the most subjective judgment. If actual results differ significantly from management's estimates and projections, there could be a material effect on our consolidated financial statements. The significant accounting policies that we believe are the most critical include the following:

- Revenue recognition;
- Valuation of inventory;
- Loss contingencies and reserves;
- Stock-based compensation;
- Business combinations;
- Goodwill and intangible assets; and
- Accounting for income taxes.

**Revenue Recognition.** We recognize revenue from sales when persuasive evidence of an arrangement exists, delivery has occurred, the sale price is fixed or determinable, and collectability of the related receivable is probable. When we have future obligations, including a requirement to deliver additional elements that are essential to the functionality of the delivered elements or when customer acceptance is required, we defer revenue recognition and related costs until those obligations are satisfied. Likewise, when fees for products or services are not fixed and determinable, we defer the recording of receivables, deferred revenue and revenue until such time as the fees become due or are collected. We limit the amount of revenue recognition for delivered elements to the amount that is not contingent on the future delivery of products or services, future performance obligations, or subject to customer-specific return, exchange or refund provisions.

Revenue from maintenance and support services is generally recognized ratably over the service period. Maintenance revenue is deferred until the associated product is accepted by the customer and all other revenue recognition criteria have been met. Maintenance and support services include telephone support, return and repair support and unspecified rights to product upgrades and enhancements. Revenue from other professional services is typically recognized as the services are delivered if all other revenue recognition criteria have been met.

Our products typically have both software and non-software components that function together to deliver the products' essential functionality. Many of our sales involve multiple-element arrangements that include both software and hardware-related products, maintenance and various professional services. We recognize revenue in accordance with the provisions of Accounting Standards Codification ("ASC") 605-25, *Revenue Recognition - Multiple-Element Arrangements* ("ASC 605-25") for transactions that include both hardware and software components. We recognize revenue from stand-alone software sales under the software revenue recognition guidance in ASC 985-605, *Software - Revenue Recognition* ("ASC 985-605").

For multiple-element arrangements that include both software-only products and non-software products, we allocate the total arrangement consideration to the software-only deliverables as a group and to the individual non-software deliverables based on their relative selling prices. If an undelivered element (such as maintenance and support services) relates to both the software-only and non-software deliverables, we bifurcate the consideration allocated to the undelivered element (such as maintenance and support services) into a non-software component and the software-only component using the relative selling price method. The consideration allocated to the non-software and software-only deliverables is recognized in accordance with the applicable guidance as discussed within this critical accounting policy.

For transactions that include multiple elements, arrangement consideration is allocated to each element based on the relative selling prices of all of the elements in the arrangement using the fair value hierarchy as required by ASC 605-25.

Consistent with the methodology under the previous accounting guidance, we establish vendor-specific objective evidence of selling price ("VSOE") based upon the price charged when the same element is sold separately or established by management having the relevant pricing authority. We have VSOE for our maintenance and support services and certain professional services. When VSOE exists it is used to determine the selling price of a deliverable. We have not been able to establish VSOE on any of our products and for certain of our services because we have not sold such products or services on a stand-alone basis, not priced such products or services within a narrow range, or had limited sales history.

When VSOE is not established, we attempt to establish the selling price of each element based on third-party evidence ("TPE"). Our solution typically differs from that of our peers as there are no similar or interchangeable competitor products or services. Our various product, service and maintenance offerings contain a significant level of unique features and functionality

and therefore, comparable pricing of competitors' products and services with similar functionality cannot be obtained. Accordingly, we are not able to determine TPE for our products or services.

When we are unable to establish selling price using VSOE or TPE, we use estimated selling price ("ESP") in our allocation of arrangement consideration for the relevant deliverables. The objective of ESP is to determine the price at which we would transact a sale if a product or service was sold on a stand-alone basis. We determine ESP for our products and certain services by considering multiple factors including, but not limited to, overall market conditions, such as geographic or regional-specific market factors, profit objectives and pricing practices for such deliverables. The determination of ESP is a formal process within the Company that includes review and approval by our management.

We sell the majority of our products directly to our end customers. For products sold to resellers and distributors, we recognize revenue on a sell-through basis.

**Valuation of Inventory.** We review inventory for both potential obsolescence and potential loss of value periodically. In this review, we make assumptions about the future demand for and market value of the inventory and, based on these assumptions, estimate the amount of any excess, obsolete or slow-moving inventory.

We write down our inventories if they are considered to be obsolete or at levels in excess of forecasted demand. In these cases, inventory is written down to estimated realizable value based on historical usage and expected demand. Inherent in our estimates of market value in determining inventory valuation are estimates related to economic trends, future demand for our products and technical obsolescence of our products. If future demand or market conditions are less favorable than our projections, additional inventory write-downs could be required and would be reflected in the cost of revenue in the period the revision is made. To date, we have not been required to revise any of our assumptions or estimates used in determining our inventory valuations.

We write down our evaluation equipment at the time of shipment to our customers, as it is not probable that the inventory value will be realizable.

**Loss Contingencies and Reserves.** We are subject to ongoing business risks arising in the ordinary course of business that affect the estimation process of the carrying value of assets, the recording of liabilities and the possibility of various 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 determine whether such amounts should be adjusted and record changes in estimates in the period they become known. We are subject to various legal claims. We reserve for legal contingencies and legal fees when the amounts are probable and reasonably estimable.

**Stock-Based Compensation.** Our stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which is generally the vesting period.

We use the Black-Scholes valuation model for estimating the fair value on the date of grant of employee stock options. Determining the fair value of stock option awards at the grant date requires judgment regarding certain valuation assumptions, including the volatility of our stock price, expected term of the option, risk-free interest rate and expected dividends. Changes in such assumptions and estimates could result in different fair values and could therefore impact our earnings. Such changes, however, would not impact our cash flows. The fair value of RSAs, RSUs and PSAs is based upon our stock price on the grant date.

In 2015, we began to grant PSUs that include a market condition to certain of our executives. We use a Monte Carlo simulation approach to model future stock price movements based upon the risk-free rate of return, the volatility of each entity, and the pair-wise covariance between each entity. These results are then used to calculate the grant date fair values of the PSUs.

The amount of stock-based compensation expense recorded in any period for unvested awards requires estimates of the amount of stock-based awards that are expected to be forfeited prior to vesting, as well as assumptions regarding the probability that PSAs will be earned.

**Business Combinations.** We allocate the purchase price of acquired companies to identifiable assets acquired and liabilities assumed at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed and represents the expected future economic benefits arising from other assets acquired in the business combination that are not

individually identified and separately recognized. Significant management judgments and assumptions are required in determining the fair value of assets acquired and liabilities assumed, particularly acquired intangible assets which are principally based upon estimates of the future performance and cash flows expected from the acquired business and applied discount rates. While we use our best estimates and assumptions as part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at a business combination date, our estimates and assumptions are inherently uncertain and subject to refinement. If different assumptions are used, it could materially impact the purchase price allocation and our financial position and results of operations. Any adjustments to assets acquired or liabilities assumed subsequent to the purchase price allocation period are included in operating results in the period in which the adjustments are determined. Intangible assets typically are comprised of developed technology, trademarks and trade names, customer contracts/relationships, order backlog, internal use software and covenants not to compete.

**Goodwill and Intangible Assets.** Goodwill is not amortized, but instead is tested for impairment at least annually or if indicators of potential impairment exist. Intangible assets with estimated lives and other long-lived assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of intangible assets with estimated lives and other long-lived assets is measured by comparing the carrying amount of the asset to future net undiscounted pretax cash flows expected to be generated by the asset. If these comparisons indicate that an asset is not recoverable, we will recognize an impairment loss for the amount by which the carrying value of the asset exceeds the related estimated fair value.

Estimated fair value is based on either discounted future pretax operating cash flows or appraised values. Considerable judgment is required to estimate discounted future operating cash flows. Judgment is also required in determining whether an event has occurred that may impair the value of goodwill or identifiable intangible or other long-lived assets. Factors that could indicate an impairment may exist include significant underperformance relative to plan or long-term projections, strategic changes in business strategy, significant negative industry or economic trends, a significant change in circumstances relative to a large customer, a significant decline in our stock price for a sustained period and a decline in our market capitalization to below net book value. We must make assumptions about future cash flows, future operating plans, discount rates and other factors in the models and valuation reports. To the extent these future projections and estimates change, the estimated amounts of impairment could differ from current estimates.

Our annual testing for impairment of goodwill is completed as of November 30. We operate as a single operating segment with one reporting unit and consequently evaluate goodwill for impairment based on an evaluation of the fair value of our company as a whole. We performed our step one assessments for 2016, 2015 and 2014 as proscribed by *Intangibles - Goodwill and Other (ASC Topic 350)* and concluded for all three years that it was not more likely than not that the fair value of our reporting unit was less than its carrying value.

**Accounting for Income Taxes.** Our provision for income taxes is comprised of a current and a deferred portion. The current income tax provision is calculated as the estimated taxes payable or refundable on tax returns for the current year. We provide for deferred income taxes resulting from temporary differences between financial and taxable income. Such differences arise primarily from tax net operating loss and credit carryforwards, depreciation, deferred revenue, stock-based compensation expense, accruals and reserves.

We assess the recoverability of any tax assets recorded on the balance sheet and provide any necessary valuation allowances as required. In evaluating our ability to recover our deferred tax assets, we consider all available positive and negative evidence including our past operating results, the existence of cumulative income in the most recent years, changes in the business in which we operate and our forecast of future taxable income. In determining future taxable income, we are responsible for assumptions utilized, including the amount of state, federal and international pre-tax operating income, the reversal of temporary differences and the implementation of feasible and prudent tax planning strategies. These assumptions require significant judgment about the forecasts of future taxable income and are consistent with the plans and estimates we are using to manage our underlying businesses. Such assessment is completed on a jurisdiction by jurisdiction basis.

At December 31, 2016, we had valuation allowances of approximately \$142 million to offset net domestic deferred tax assets of approximately \$142 million. In the event we determine it is more likely than not that we will be able to use a deferred tax asset in the future in excess of its net carrying value, the valuation allowance would be reduced, thereby increasing net earnings and increasing equity in the period such determination is made. We have recorded net deferred tax assets in some of our international subsidiaries. These amounts could change in future periods based upon our operating results and changes in tax law.

We provide for income taxes during interim periods based on the estimated effective tax rate for the full year. We record a cumulative adjustment to the tax provision in an interim period in which a change in the estimated annual effective tax rate is determined.

We have not provided for U.S. income taxes on the undistributed earnings of non-U.S. subsidiaries, as we currently plan to indefinitely reinvest these amounts and have the intent and ability to do so. Cumulative undistributed foreign earnings were approximately \$28 million at each of December 31, 2016 and December 31, 2015. Generally, the undistributed foreign earnings become subject to U.S. taxation upon the remittance of dividends and under certain other circumstances. We have been taxed on certain earnings of our non-U.S. subsidiaries. Previously taxed earnings were approximately \$16 million at each of December 31, 2016 and December 31, 2015. Thus, \$12 million of the undistributed earnings at each of December 31, 2016 and December 31, 2015 are subject to U.S. income taxes on undistributed earnings. We do not believe it is practicable to estimate with reasonable accuracy the hypothetical amount of the unrecognized deferred tax liability on our undistributed foreign earnings given the large number of tax jurisdictions involved and the many factors and assumptions required to estimate the amount of the U.S. federal income tax on the undistributed earnings after reduction for the available foreign tax credits.

We assess all material positions taken in any income tax return, including all significant uncertain positions, in all tax years that are still subject to assessment or challenge by relevant taxing authorities. Assessing an uncertain tax position begins with the initial determination of the position's sustainability and is measured at the largest amount of benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. As of each balance sheet date, unresolved uncertain tax positions must be reassessed, and we will determine whether (i) the factors underlying the sustainability assertion have changed and (ii) the amount of recognized tax benefit is still appropriate. The recognition and measurement of tax benefits require significant judgment. Judgments concerning the recognition and measurement of a tax benefit might change as new information becomes available.

## Results of Operations

### Years Ended December 31, 2016 and 2015

**Revenue.** Revenue for the years ended December 31, 2016 and 2015 was as follows (in thousands, except percentages):

	Year ended December 31,		Increase (decrease) from prior year	
	2016	2015	\$	%
Product	\$ 146,381	\$ 141,913	\$ 4,468	3.1 %
Service	106,210	107,121	(911)	(0.9)%
Total revenue	\$ 252,591	\$ 249,034	\$ 3,557	1.4 %

Product revenue is comprised of sales of our communication infrastructure products. The increase in product revenue in 2016 compared to 2015 was primarily the result of an increase in sales of our SBC 5000 series products and our SBC 7000, which contributed approximately \$5 million of higher product revenue in 2016 compared to 2015, and the inclusion of \$0.7 million of product revenue from Taqua in our current year results. These increases were partially offset by net decreases in sales of our other products, particularly our GSX-related products.

In 2016, approximately 26% of our product revenue recognized was from indirect sales through our channel partner program, compared to approximately 24% in 2015.

In both 2016 and 2015, our product revenue from sales to enterprise customers was approximately 19% of our total product revenue. These sales were made both through our direct sales team and indirect sales channel partners.

The timing of the completion of customer projects, revenue recognition criteria satisfaction and customer payments included in multiple element arrangements may cause our product revenue to fluctuate from one period to the next. These complex arrangements are generally completed through our direct sales force.

Service revenue is primarily comprised of hardware and software maintenance and support ("maintenance revenue") and network design, installation and other professional services ("professional services revenue").

Service revenue for the years ended December 31, 2016 and 2015 was comprised of the following (in thousands, except percentages):

	Year ended December 31,		Increase (decrease) from prior year	
	2016	2015	\$	%
Maintenance	\$ 86,995	\$ 89,280	\$ (2,285)	(2.6)%
Professional services	19,215	17,841	1,374	7.7 %
Total service revenue	\$ 106,210	\$ 107,121	\$ (911)	(0.9)%

Our maintenance revenue decreased in 2016 compared to 2015, primarily due to customer mix, including merger activity among certain of our customers, and the timing of product shipments in 2016. This decrease was partially offset by the growth of our installed customer base, the timing of maintenance renewals and the acquisition of Taqua.

The increase in our professional services revenue in 2016 compared to 2015 was primarily due to an increase in volume of projects completed in the current year compared to the prior year. The timing of the completion of projects for revenue recognition, customer payments and maintenance contracts may cause our services revenue to fluctuate from one period to the next.

The following customer contributed 10% or more of our revenue in the years ended December 31, 2016 and 2015:

	Year ended December 31,	
	2016	2015
AT&T	12%	13%

International revenue was approximately 31% of revenue in 2016 and approximately 29% of revenue in 2015. Due to the timing of project completions, we expect that the domestic and international components as a percentage of our revenue may fluctuate from quarter to quarter and year to year.

Our deferred product revenue was \$6.9 million at December 31, 2016 and \$12.5 million at December 31, 2015. Our deferred service revenue was \$43.8 million at December 31, 2016 and \$33.6 million at December 31, 2015. Our deferred revenue balance may fluctuate as a result of the timing of revenue recognition, customer payments, maintenance contract renewals, contractual billing rights and maintenance revenue deferrals included in multiple element arrangements.

We expect that our product revenue in 2017 will be relatively flat compared to 2016 levels, primarily due to continued consolidation among our customers and their suppliers. We will continue to focus on expanding our product offerings to address the emerging UC and IP-based markets, such as SBC, in both the enterprise and service provider markets, which we believe are aligned with the technology strategies of our customers.

We expect that our service revenue in 2017 will increase from 2016 levels as a result of the continued growth of our installed customer base, partially offset by lower revenue resulting from the aforementioned customer merger activities.

Overall, we expect that total revenue in 2017 will be flat to slightly higher, or low single digit growth, compared to 2016 total revenue.

**Cost of Revenue/Gross Margin.** Our cost of revenue consists primarily of amounts paid to third-party manufacturers for purchased materials and services, royalties, manufacturing and professional services personnel and related costs, and provision for inventory obsolescence. Our cost of revenue and gross margins for the years ended December 31, 2016 and 2015 were as follows (in thousands, except percentages):

	Year ended December 31,		Increase (decrease) from prior year	
	2016	2015	\$	%
<b>Cost of revenue</b>				
Product	\$ 47,367	\$ 50,460	\$ (3,093)	(6.1)%
Service	37,613	36,917	696	1.9%
Total cost of revenue	\$ 84,980	\$ 87,377	\$ (2,397)	(2.7)%
<b>Gross margin</b>				
Product	67.6%	64.4%		
Service	64.6%	65.5%		
Total gross margin	66.4%	64.9%		

The increase in product gross margin in 2016 compared to 2015 was primarily due to higher product revenue against certain fixed manufacturing costs, coupled with \$4.7 million of lower variable costs in connection with our inventory valuation, which increased our product gross margin in the aggregate by approximately three percentage points. Our product and customer mix, particularly sales of our SBC 7000 and SBC 5000 products, contributed slightly to the increase in our product gross margin in 2016.

The decrease in service gross margin in 2016 compared to 2015 was primarily attributable to slightly higher fixed service costs, including the inclusion of Taqua expenses since the Taqua Acquisition Date, and third party costs, both against slightly lower revenue, each of which decreased our service gross margin by approximately one-half of one percentage point.

Our service cost of revenue is relatively fixed in advance of any particular quarter and therefore, changes in service revenue will typically have a significant impact on service gross margins.

We believe that our total gross margin will continue to be comparable to historical levels on an annualized basis in the foreseeable future.

**Research and Development Expenses.** Research and development expenses consist primarily of salaries and related personnel expenses and prototype costs for the design, development, testing and enhancement of our products. Research and development expenses for the years ended December 31, 2016 and 2015 were as follows (in thousands, except percentages):

	Year ended December 31,		Decrease from prior year	
	2016	2015	\$	%
	\$ 72,841	\$ 77,908	\$ (5,067)	(6.5)%

The decrease in research and development expenses in 2016 compared to 2015 was attributable to \$2.5 million of lower depreciation expense, \$1.1 million of lower expense for product development (i.e., third-party development, prototype and test equipment costs), \$1.0 million of lower facilities-related expenses and \$0.5 million of lower employee-related expenses. The decrease in employee-related expenses was attributable to \$0.4 million of lower expense in connection with our company-wide cash bonus program, and \$0.4 million of lower stock-based compensation expense, partially offset by a \$0.3 million increase in salary and related expenses.

Some aspects of our research and development efforts require significant short-term expenditures, the timing of which may cause significant variability in our expenses. We believe that rapid technological innovation is critical to our long-term success, and we are tailoring our investments to meet the requirements of our customers and market. We believe that our research and development expenses in 2017 will increase from 2016 levels due to the full year impact in 2017 of Taqua research and development costs and our increased investment in our security strategy, partially offset by cost reductions resulting from our 2016 Restructuring Initiative and Taqua Restructuring Initiative.

**Sales and Marketing Expenses.** Sales and marketing expenses consist primarily of salaries and related personnel costs, commissions, travel and entertainment expenses, promotions, customer trial and evaluations inventory and other marketing and sales support expenses. Sales and marketing expenses for the years ended December 31, 2016 and 2015 were as follows

(in thousands, except percentages):

Year ended December 31,		Decrease from prior year	
2016	2015	\$	%
\$ 68,539	\$ 72,841	\$ (4,302)	(5.9)%

The decrease in sales and marketing expenses in 2016 compared to 2015 was attributable to \$5.0 million of lower employee-related expenses, \$1.0 million of lower consulting fees, \$0.4 million of lower facilities-related expenses and \$0.3 million of lower amortization of acquired intangible assets. These decreases were partially offset by \$0.6 million of higher marketing and trade show expenses and \$1.8 million of net increases in other sales and marketing expenses. The decrease in employee-related expenses was attributable to \$2.3 million of lower salary and commissions and related expenses, \$1.8 million of lower employee travel, training and related expenses, \$0.8 million of lower stock-based compensation expense and \$0.1 million of lower expense in connection with our company-wide cash bonus program.

We believe that our sales and marketing expenses will increase in 2017 from 2016 levels due to the full year impact of the inclusion of Taqua in 2017, partially offset by reductions resulting from the 2016 Restructuring Initiative and the Taqua Restructuring Initiative.

**General and Administrative Expenses.** General and administrative expenses consist primarily of salaries and related personnel costs for executive and administrative personnel, recruiting expenses and audit, legal and other professional fees. General and administrative expenses for the years ended December 31, 2016 and 2015 were as follows (in thousands, except percentages):

Year ended December 31,		Decrease from prior year	
2016	2015	\$	%
\$ 35,948	\$ 39,846	\$ (3,898)	(9.8)%

The decrease in general and administrative expenses in 2016 compared to 2015 was primarily attributable to \$3.3 million of lower employee-related expenses, \$0.6 million of lower depreciation expense and \$0.5 million of lower professional fees (i.e., legal, audit and outside services), partially offset by \$0.5 million of higher expense related to patent litigation settlement costs. The decrease in employee-related expenses was attributable to \$2.1 million of lower stock-based compensation expense, \$0.8 million of lower salary and related expenses and \$0.4 million of lower expense in connection with our Company-wide cash bonus program.

We believe that our general and administrative expenses will be relatively flat in 2017 compared to 2016.

**Acquisition-Related Expenses.** Acquisition-related expenses include those expenses related to business acquisitions that would not otherwise have been incurred by us. These expenses include professional and services fees, such as legal, audit, consulting, paying agent and other fees. We recorded \$1.2 million of acquisition-related expenses in 2016 in connection with the acquisition of Taqua and \$0.1 million of acquisition-related expenses in 2015 in connection with the acquisition of the SDN Business.

**Restructuring Expense.** We have been committed to streamlining operations and reducing operating costs by closing and consolidating certain facilities and reducing our worldwide workforce. Please see the additional discussion of our restructuring initiatives in the "Restructuring and Cost Reduction Initiatives" section of the Overview of this Management's Discussion and Analysis of Financial Condition and Results of Operations.

We recorded restructuring expense aggregating \$2.7 million in 2016, comprised of \$1.5 million for severance and related costs under our 2016 Restructuring Initiative, \$1.2 million related to our Taqua Restructuring Initiative and \$67,000 for a change in estimate related to severance costs under our 2015 Restructuring Initiative. The expense recorded in connection with our Taqua Restructuring Initiative was comprised of \$1.0 million for severance and related costs and \$0.2 million for the elimination of excess facilities.

We recorded \$2.1 million of restructuring expense in 2015, comprised of \$3.8 million of expense for severance and related costs in connection with our 2015 Restructuring Initiative and \$0.1 million of incremental expense in connection with our previous restructuring initiative related to vacating our Rochester, New York facility. These amounts were partially offset by reversals of \$1.4 million in connection with our Fremont, California facility and \$0.3 million in connection with our Dulles, Virginia facility, representing settlements with the respective landlords to vacate the facilities for amounts that were

lower than had previously been accrued, and \$0.1 million in connection with changes in the amounts of severance ultimately paid to certain individuals.

Although we have eliminated positions as part of our restructuring initiatives, we continue to hire in certain areas that we believe are important to our future growth. Restructuring expense is reported separately in the consolidated statements of operations.

**Interest Income, net.** Interest income and interest expense for the years ended December 31, 2016 and 2015 were as follows (in thousands, except percentages):

	Year ended December 31,		Increase (decrease) from prior year	
	2016	2015	\$	%
Interest income	\$ 866	\$ 406	\$ 460	113.3 %
Interest expense	(97)	(199)	(102)	(51.3)%
Interest income, net	\$ 769	\$ 207	\$ 562	271.5 %

Interest income consisted of interest earned on our cash equivalents, marketable securities and investments. Interest expense was related to interest on capital lease obligations and expense related to the amortization of debt issuance costs in connection with our revolving credit facility.

**Other Income, Net.** In July 2016, we sold the NET domain name to a third party and recognized a gain, net of commission and fees, of \$0.8 million, and in December 2016, we sold a block of IP addresses which we had acquired in connection with our acquisition of PT and recognized a gain, net of commission and fees, of \$0.5 million. We recorded \$0.9 million of income in 2015 related to the sale of a domain name we had acquired in connection with our acquisition of PT.

**Income Taxes.** We recorded provisions for income taxes of \$2.5 million in 2016 and \$2.0 million in 2015, primarily related to foreign operations. The increase in 2016 was primarily the result of settling a foreign tax audit, which accounted for \$0.6 million of incremental income tax expense in 2016 compared to 2015. The income tax benefits from the deferred tax assets recorded in connection with our current year domestic losses have been offset by an increase in the valuation allowance. During 2016 and 2015, we performed an analysis to determine if, based on all available evidence, we considered it more likely than not that some portion or all of the recorded deferred tax assets will not be realized in a future period. As a result of our evaluations, we concluded that there was insufficient positive evidence to overcome the more objective negative evidence related to our cumulative losses and other factors. Accordingly, we maintained a valuation against our domestic deferred tax asset.

#### Years Ended December 31, 2015 and 2014

**Revenue.** Revenue for the years ended December 31, 2015 and 2014 was as follows (in thousands, except percentages):

	Year ended December 31,		Decrease from prior year	
	2015	2014	\$	%
Product	\$ 141,913	\$ 182,455	\$ (40,542)	(22.2)%
Service	107,121	113,871	(6,750)	(5.9)%
Total revenue	\$ 249,034	\$ 296,326	\$ (47,292)	(16.0)%

The decrease in product revenue in 2015 compared to 2014 was primarily the result of lower revenue recognized from sales to one of our historically largest customers and approximately \$16 million of lower sales of certain older product offerings to other customers who continue to migrate to an all-IP network. The sale of the MPS business in June 2014 resulted in approximately \$3 million of lower revenue in 2015 compared to the prior year. These decreases were partially offset by an increase of approximately \$3 million of sales of our next generation products (our SBC 5100, SBC 5200, SBC 7000 and our virtualized software-based SWe suite of products).

In 2015, approximately 24% of our product revenue recognized was from indirect sales through our channel partner program, compared to approximately 27% of our product revenue recognized from indirect sales in 2014.

In both 2015 and 2014, our product revenue from sales to enterprise customers was approximately 19% of our total product revenue. These sales were made both through our direct sales team and indirect sales channel partners.

Service revenue for the years ended December 31, 2015 and 2014 was comprised of the following (in thousands, except percentages):

	Year ended December 31,		Decrease from prior year	
	2015	2014	\$	%
Maintenance	\$ 89,280	\$ 90,003	\$ (723)	(0.8)%
Professional services	17,841	23,868	(6,027)	(25.3)%
Total service revenue	\$ 107,121	\$ 113,871	\$ (6,750)	(5.9)%

Our maintenance revenue decreased slightly in 2015 compared to 2014, primarily due to customer mix, including merger activity among certain of our customers, and the timing of product shipments in 2015. This decrease was partially offset by the growth of our installed customer base and the timing of maintenance renewals.

The following customer contributed 10% or more of our revenue in each of the years ended December 31, 2015 and 2014:

	Year ended December 31,	
	2015	2014
AT&T	13%	19%

International revenue was approximately 29% of total revenue in both 2015 and 2014.

Our deferred product revenue was \$12.5 million at December 31, 2015 and \$9.1 million at December 31, 2014. Our deferred service revenue was \$33.6 million at December 31, 2015 and \$35.9 million at December 31, 2014.

**Cost of Revenue/Gross Margin.** Cost of revenue and gross margins for the years ended December 31, 2015 and 2014 were as follows (in thousands, except percentages):

	Year ended December 31,		Decrease from prior year	
	2015	2014	\$	%
Cost of revenue				
Product	\$ 50,460	\$ 60,284	\$ (9,824)	(16.3)%
Service	36,917	42,637	(5,720)	(13.4)%
Total cost of revenue	\$ 87,377	\$ 102,921	\$ (15,544)	(15.1)%
Gross margin				
Product	64.4%	67.0%		
Service	65.5%	62.6%		
Total gross margin	64.9%	65.3%		

The decrease in product gross margin in 2015 compared to 2014 was primarily due to lower product revenue against certain fixed costs, coupled with the impact of \$6.4 million of expenses related to reserves for both inventory and inventory-related purchase commitments for certain end-of-life products, which decreased our product gross margin in the aggregate by approximately six percentage points. This decrease was partially offset by changes in customer and product mix, which increased our product gross margin by approximately three percentage points, and lower manufacturing-related costs resulting from our 2015 Restructuring Initiative, which increased our product gross margin by approximately one-half of one percent.

The increase in service gross margin in 2015 compared to 2014 was primarily attributable to lower fixed service costs and lower third-party service costs, each of which increased our service gross margin by approximately one and one-half percentage points. The reduction in our fixed service costs was primarily the result of our 2015 Restructuring Initiative.

**Research and Development Expenses.** Research and development expenses for the years ended December 31, 2015 and 2014 were as follows (in thousands, except percentages):

	Year ended December 31,		Decrease from prior year	
	2015	2014	\$	%
	\$ 77,908	\$ 79,396	\$ (1,488)	(1.9)%

The decrease in research and development expenses in 2015 compared to 2014 was attributable to \$2.9 million of lower employee-related costs, partially offset by \$1.2 million of higher expense for product development and \$0.2 million of net increases in other research and development expenses. The decrease in employee-related expenses in 2015 was attributable to \$3.0 million of lower salary and related expenses, \$0.3 million of lower stock-based compensation expense and \$0.1 million of lower employee travel and related expenses. These decreases were partially offset by \$0.5 million of higher expense related to our Company-wide cash bonus program. Our lower employee-related expenses were primarily due to reduced headcount in connection with our 2015 Restructuring Initiative.

**Sales and Marketing Expenses.** Sales and marketing expenses for the years ended December 31, 2015 and 2014 were as follows (in thousands, except percentages):

Year ended December 31,		Decrease from prior year	
2015	2014	\$	%
\$ 72,841	\$ 80,141	\$ (7,300)	(9.1)%

The decrease in sales and marketing expenses in 2015 compared to 2014 was attributable to \$6.0 million of lower employee-related expenses, \$0.9 million of lower marketing and trade show expenses, \$0.4 million of lower expense related to evaluation equipment at customer sites, \$0.4 million of lower facilities-related expense, \$0.2 million of lower amortization expense related to acquired intangible assets and \$0.3 million of net decreases in other sales and marketing expenses. These decreases were partially offset by \$0.9 million of higher consulting expense. The decrease in employee-related expenses was attributable to \$4.8 million of lower salary and commissions and related expenses and \$1.9 million of lower employee travel and related expenses, partially offset by \$0.7 million of higher expense related to our Company-wide cash bonus program. The lower employee-related expenses were primarily due to reduced headcount and related expenses in connection with our 2015 Restructuring Initiative.

**General and Administrative Expenses.** General and administrative expenses for the years ended December 31, 2015 and 2014 were as follows (in thousands, except percentages):

Year ended December 31,		Decrease from prior year	
2015	2014	\$	%
\$ 39,846	\$ 43,937	\$ (4,091)	(9.3)%

The decrease in general and administrative expenses in 2015 compared to 2014 was attributable to \$2.0 million of lower employee-related expenses, \$1.1 million of lower expense related to foreign currency translation, the absence in 2015 of \$0.4 million of divestiture costs related to the sale of the MPS business in 2014 and \$2.3 million of net reductions in other general and administrative expenses. These reductions were partially offset by \$1.7 million of higher professional and consulting fees. The decrease in employee-related expenses resulted from \$1.9 million of lower stock-based compensation expense, \$1.0 million of lower salary and related expenses and \$0.3 million of lower employee travel and related expenses. These decreases were partially offset by \$1.2 million of higher expense related to our Company-wide cash bonus program. Our lower employee-related expenses were primarily due to reduced headcount and related expenses in connection with our 2015 Restructuring Initiative.

**Acquisition-Related Expenses.** We recorded \$0.1 million of acquisition-related expenses in 2015 for professional fees, primarily legal fees, in connection with the acquisition of the SDN Business. We recorded \$1.6 million of acquisition-related expenses in 2014, comprised of \$1.3 million related to PT and \$0.3 million related to the SDN Business.

**Restructuring Expense.** Our restructuring expense of \$2.1 million in 2015 was comprised of \$3.8 million of expense for severance and related costs in connection with our 2015 Restructuring Initiative and \$0.1 million of incremental expense in connection with our previous restructuring initiative related to vacating our Rochester, New York facility. These amounts were partially offset by reversals of \$1.4 million in connection with our Fremont, California facility and \$0.3 million in connection with our Dulles, Virginia facility, representing settlements with the respective landlords to vacate the facilities for amounts that were lower than had previously been accrued, and \$0.1 million in connection with changes in the amounts of severance ultimately paid to certain individuals. We recorded \$5.6 million of restructuring expense in 2014, comprised of \$3.6 million for severance and related costs, \$1.8 million for facilities and \$0.2 million for the write-off of fixed assets related to our restructured facilities. Of this amount, \$2.3 million was recorded in connection with the PT acquisition, comprised of \$1.7 million for severance and related costs, \$0.5 million related to PT's former corporate headquarters in New York and \$0.1 million for the write-off of assets in connection with the PT facility.

**Interest Income, net.** Interest income and interest expense for the years ended December 31, 2015 and 2014 were as follows (in thousands, except percentages):

	Year ended December 31,		Increase (decrease) from prior year	
	2015	2014	\$	%
Interest income	\$ 406	\$ 326	\$ 80	24.5 %
Interest expense	(199)	(251)	(52)	(20.7)%
Interest income, net	\$ 207	\$ 75	\$ 132	176.0 %

Interest expense was related to interest on capital lease obligations and included expense related to the amortization of debt issuance costs in connection with our revolving credit facility. Interest expense in 2014 also included interest on the debt assumed in connection with the acquisition of Network Equipment Technologies, Inc. ("NET").

**Other Income, Net.** We recorded \$0.9 million of income in October 2015 related to the sale of a domain name we had acquired in connection with our acquisition of PT. We recorded \$2.25 million of income in 2014 related to the settlement of a litigation matter in March 2014 in which we recovered a portion of our losses related to the impairment of certain prepaid royalties that we had written off in 2012.

**Income Taxes.** We recorded provisions for income taxes of \$2.0 million in 2015 and \$2.2 million in 2014, primarily related to foreign operations. The income tax benefits from the deferred tax assets recorded in connection with our domestic losses were offset by an increase in the valuation allowance. During 2015 and 2014, we performed an analysis to determine if, based on all available evidence, we considered it more likely than not that some portion or all of the recorded deferred tax assets will not be realized in a future period. As a result of our evaluations, we concluded that there was insufficient positive evidence to overcome the more objective negative evidence related to our cumulative losses and other factors. Accordingly, we maintained a valuation against our domestic deferred tax asset.

#### Off-Balance Sheet Arrangements

We have no off-balance sheet arrangements that have or are reasonably likely to have a current or future material effect on our financial position, changes in financial position, revenues or expenses, results of operations, liquidity, capital expenditures or capital resources.

#### Liquidity and Capital Resources

Our consolidated statements of cash flows are summarized as follows (in thousands):

	Year ended December 31,		Change
	2016	2015	
Net loss	\$ (13,932)	\$ (31,895)	\$ 17,963
Adjustments to reconcile net loss to cash flows used in operating activities	35,061	40,735	(5,674)
Changes in operating assets and liabilities	(1,937)	11,029	(12,966)
Net cash provided by operating activities	\$ 19,192	\$ 19,869	\$ (677)
Net cash used in investing activities	\$ (27,347)	\$ (4,585)	\$ (22,762)
Net cash used in financing activities	\$ (9,870)	\$ (6,202)	\$ (3,668)

Our cash, cash equivalents and short- and long-term investments totaled \$126.1 million at December 31, 2016 and \$142.2 million at December 31, 2015. We had cash and marketable securities held by our foreign subsidiaries aggregating approximately \$5 million at December 31, 2016 and \$4 million at December 31, 2015. We do not intend to repatriate these funds, and as such, they are not available to fund our domestic operations. If we were to repatriate the funds, they would likely be treated as income for U.S. tax purposes, fully offset by our net operating losses. We do not believe this will have a material impact on our liquidity.

We entered into a credit agreement by and among the Company, as Borrower, Bank of America, N.A. ("Bank of America"), as Administrative Agent, Swing Line Lender and L/C Issuer, and the other lenders from time to time party thereto on June 27, 2014 (the "Credit Agreement"), which agreement was amended by a First Amendment to Credit Agreement on June 26, 2015 (the "First Amendment") and further amended by a Second Amendment to Credit Agreement on June 13, 2016 (the "Second Amendment" and collectively with the Credit Agreement and the First Amendment, the "Amended Credit

Agreement"). Certain terms of the Credit Agreement have been amended by the Second Amendment, including, among other things: (i) an increase of the commitments from \$15 million to \$20 million; (ii) an extension of the maturity date from June 30, 2016 to June 30, 2017; (iii) a reduction to the aggregate amount of cash and cash equivalents that the Loan Parties (as defined below) are required to hold at any time from \$85 million to \$50 million; and (iv) a reduction of the commitment fee on the unused commitments available for borrowing from 0.15% to 0.1125%. The Amended Credit Agreement provides that we may select the interest rates under the credit facility from among the following options: (i) the Eurodollar Rate (which is defined as the rate per annum equal to the London Interbank Offered Rate plus 1.5% per annum) for a Eurodollar Rate Loan; and (ii) the highest of (a) the Federal Funds Rate plus 1/2 of 1%, (b) the rate of interest in effect on the borrowing date as publicly announced from time to time by Bank of America as its prime rate, and (c) the monthly Eurodollar Rate plus 1%. Our obligations under the Amended Credit Agreement are guaranteed by Sonus International, Inc., Sonus Federal, Inc., Taqua and NET (collectively with the Company, the "Loan Parties") pursuant to a Master Continuing Guaranty and are secured by the assets of the Loan Parties pursuant to a Security and Pledge Agreement. We did not have any amounts outstanding under the Amended Credit Agreement at December 31, 2016.

The Amended Credit Agreement contains affirmative, negative and financial covenants customary for financings of this type. The negative covenants include limitations on liens, indebtedness, fundamental changes, dispositions, restricted payments, investments, transactions with affiliates, certain restrictive agreements and compliance with sanctions laws and regulations. The total revenues of the Loan Parties cannot be less than an aggregate of \$50 million as of the last day of the Loan Parties' fiscal quarter, computed on a fiscal quarterly basis. The credit facility will become due on June 30, 2017, subject to acceleration upon certain specified events of default, including, without limitation, payment defaults, defaults in the performance of affirmative and negative covenants, the inaccuracy of representations or warranties, bankruptcy and insolvency-related defaults, defaults relating to judgments, an ERISA Event (as defined in the Credit Agreement), the failure to pay specified indebtedness and a change of control default. We did not have any amounts outstanding under the Credit Agreement at December 31, 2016.

On July 29, 2013, we announced that our Board of Directors had authorized a stock buyback program to repurchase up to \$100 million of our common stock from time to time on the open market or in privately negotiated transactions. The stock buyback program is being funded using our working capital. During the year ended December 31, 2016, we repurchased and retired 1.3 million shares under our stock buyback program for \$9.5 million in the aggregate, including transaction fees. During the year ended December 31, 2015, we repurchased and retired 0.6 million shares for \$7.9 million, including transaction fees.

On March 20, 2014, we announced the commencement of an underwritten public offering of 7.5 million shares of our common stock on behalf of Galahad Securities Limited and its affiliated entities (collectively, the "Legatum Group"). The underwriter of the offering was granted a 30-day option to purchase up to 1.125 million additional shares from the Legatum Group. The Legatum Group received all the proceeds from the underwritten offering; no shares in the underwritten offering were sold by us or any of our officers or directors. In addition, we purchased 4.3 million shares from the underwriter for \$75.3 million in the aggregate, including \$0.3 million of transaction fees. We funded the share repurchase with cash on hand. The repurchased shares were retired upon completion of the transaction.

Our operating activities provided \$19.2 million of cash in 2016 and \$19.9 million of cash in 2015 .

Cash provided by operating activities in 2016 was primarily the result of decreases in inventory and other operating assets and higher deferred revenue, partially offset by lower accrued expenses and accounts payable, higher accounts receivable and our net loss. The decrease in accrued expenses primarily relates to lower accruals in connection with our Company-wide cash bonus program, for which we changed the timing of bonus payments in 2016 such that a portion of the bonus was paid in August 2016 based on our results against certain internal goals for the first half of the year. The remaining portion of the bonus amounts, if earned, is expected to be paid in March 2017 based on our results for the second half of 2016. Accordingly, the reduction in the bonus accrual represents the payments made to employees in August 2016. The increase in accounts receivable primarily relates to higher revenue in 2016 compared to 2015, partially offset by the results of our continued focus on our collections efforts. Deferred revenue balances will fluctuate as a result of timing of invoicing and revenue recognition. Our net loss, adjusted for non-cash items such as depreciation, amortization, stock-based compensation, losses on the disposal of equipment, gains on the sale of a domain name and a block of IPv4 addresses, and deferred income taxes, provided \$21.1 million of cash.

Cash provided by operating activities in 2015 was primarily the result of decreases in accounts receivable and other operating assets and higher deferred revenue, partially offset by lower accrued expenses and accounts payable, higher inventories and our net loss. The decrease in accounts receivable primarily reflects our focused collections efforts, coupled with the impact of lower revenue in 2015 compared to 2014. The decrease in other operating assets was primarily the result of

lower prepaid expenses. The decrease in accrued expenses was primarily attributable to our reduced restructuring accruals, reflecting both payments and reversals of previously recorded amounts, partially offset by higher amounts accrued for employee compensation and related costs, including accrued bonus, commissions and employee stock purchase plan amounts withheld. Our net loss, adjusted for non-cash items such as depreciation, amortization, stock-based compensation, losses on the disposal of equipment, the gain on the sale of a domain name and deferred income taxes, provided \$8.8 million of cash.

Our investing activities used \$27.3 million of cash in 2016 and \$4.6 million of cash in 2015. In 2016, we used \$20.7 million of cash, net of cash acquired, for business acquisitions, \$4.7 million of cash used for the purchase of property and equipment and \$3.3 million of net investments in marketable securities. These amounts were partially offset by \$1.3 million of cash proceeds from the sale of a domain name and a block of IP addresses that we had previously acquired. The amount used for business acquisitions was comprised of \$19.9 million, net of cash acquired, for the acquisition of Taqua and \$0.8 million paid as the final consideration installment for the SDN Business. The 2015 amount was comprised of \$10.9 million of cash paid, net of cash acquired, for the acquisition of the SDN Business and \$7.8 million of cash used for the purchase of property and equipment. These amounts were partially offset by \$13.2 million of net maturities of marketable securities and \$0.9 million of cash received from the sale of a domain name acquired in connection with the PT acquisition.

Our financing activities used \$9.9 million of cash in 2016 and \$6.2 million of cash in 2015. The 2016 amount was comprised of \$9.5 million used for the repurchase of common stock under our stock buyback program, \$1.8 million used to pay withholding obligations related to the net share settlement of restricted and performance-based stock grants upon vesting and approximately \$43,000 for payments on our capital leases for office equipment. These amounts were partially offset by \$1.4 million of proceeds from the sale of our common stock in connection with our Amended and Restated 2000 Employee Stock Purchase Plan, as amended ("ESPP"), and \$0.2 million of proceeds from the exercise of stock options. The 2015 amount was comprised of \$7.9 million used for the repurchase of common stock under our stock buyback program, \$2.3 million used to pay withholding obligations related to the net share settlement of restricted and performance-based stock grants upon vesting and \$0.1 million for payments on our capital leases for office equipment. These amounts were partially offset by \$2.4 million of proceeds from the sale of our common stock in connection with our ESPP and \$1.8 million of proceeds from the exercise of stock options.

### Contractual Obligations

Our contractual obligations (both principal and interest) at December 31, 2016 consisted of the following (in thousands):

	Payments due by period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Capital lease obligations	\$ 134	\$ 46	\$ 83	\$ 5	\$ —
Operating lease obligations *	11,193	4,600	5,687	906	—
Purchase obligations	780	422	358	—	—
Restructuring severance obligations	1,049	1,049	—	—	—
Uncertain tax positions **	8,969	8,969	—	—	—
	<u>\$ 22,125</u>	<u>\$ 15,086</u>	<u>\$ 6,128</u>	<u>\$ 911</u>	<u>\$ —</u>

\* Includes restructuring payments aggregating \$218,000, comprised of \$156,000 due in less than one year and \$62,000 due in one to three years.

\*\* This liability is not subject to fixed payment terms and the amount and timing of payments, if any, that we will make related to this liability are not known. See Note 17 to our consolidated financial statements appearing in this Annual Report on Form 10-K for additional information.

Based on our current expectations, we believe our current cash, cash equivalents, marketable debt securities and long-term investments will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least twelve months, including any future stock repurchases under the aforementioned stock buyback program. 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, including changes in working capital, which will, in turn, be directly affected by the levels of demand for our products, the timing and rate of expansion of our business, the resources we devote to developing our products and any litigation settlements. We anticipate devoting substantial capital resources to continue our research and development efforts, to maintain our sales, support and marketing, to improve our controls environment and for other general corporate activities. See Note 21 to our consolidated financial statements for a description of our other contingencies.

## Recent Accounting Pronouncements

In January 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2017-04, which simplifies the accounting for goodwill impairments by eliminating step two from the goodwill impairment test. Instead, if the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. ASU 2017-04 also clarifies the requirements for excluding and allocating foreign currency translation adjustments to reporting units related to an entity's testing of reporting units for goodwill impairment, clarifies that an entity should consider income tax effects from any tax deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. ASU 2017-04 is effective for us beginning January 1, 2020 for both interim and annual reporting periods, with early adoption permitted. We are currently assessing the potential impact of the adoption of ASC 2017-04 on our consolidated financial statements.

In October 2016, the FASB issued ASU 2016-16, *Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory*, ("ASU 2016-16"), which removes the prohibition in Accounting Standards Codification ("ASC") 740, *Income Taxes*, against the immediate recognition of the current and deferred income tax effects of intra-entity transfers of assets other than inventory. ASU 2016-16 is intended to reduce the complexity of accounting principles generally accepted in the United States ("GAAP") and diversity in practice related to the tax consequences of certain types of intra-entity asset transfers, particularly those involving IP. ASU 2016-16 is effective for us beginning January 1, 2019 for both interim and annual reporting periods. We do not believe that the adoption of this standard will have a material impact on our consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"), which amends the guidance in ASC 230 on the classification of certain cash receipts and payments in the statement of cash flows. The primary purpose of ASU 2016-15 is to reduce the diversity in practice that has resulted from the lack of consistent principles on this topic. ASU 2016-15 adds or clarifies guidance on eight cash flow issues, including debt prepayment or debt extinguishment costs, settlement of zero-coupon debt instruments or certain other debt instruments, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, proceeds from the settlement of corporate-owned life insurance policies, distributions received from equity method investees, beneficial interests in securitization transactions and separately identifiable cash flows and application of the predominance principle. ASU 2016-15 is effective for us beginning January 1, 2018 for both interim and annual reporting periods, with early adoption permitted. Entities must apply the guidance retrospectively to all periods presented but may apply it prospectively from the earliest date practicable if retrospective application would be impracticable. We do not expect that the adoption of ASU 2016-15 will have a material impact on our consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which adds an impairment model that is based on expected losses rather than incurred losses. Under ASU 2016-13, an entity recognizes as an allowance its estimate of expected credit losses, which the FASB believes will result in more timely recognition of such losses. ASU 2016-13 is effective for us beginning January 1, 2020 for both interim and annual reporting periods, with early adoption permitted. We do not expect that the adoption of ASU 2016-13 will have a material impact on our consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"), which simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures and statutory tax withholding requirements, as well as classification in the statement of cash flows. ASU 2016-09 was effective for us beginning January 1, 2017 for both interim and annual reporting periods. Under ASU 2016-09, we will now recognize unrealized excess tax benefits. Due to the full valuation allowance on our federal and state income taxes, we do not expect that the adoption of ASU 2016-09 will impact our accounting for income taxes. Without the valuation allowance, we estimate that we would recognize a deferred tax asset approximating \$6 million upon adoption of ASU 2016-09. We have elected to continue to apply forfeiture rates to our expense attribution related to stock options, restricted stock awards and restricted stock units, as we believe that such continued application results in more accurate expense attribution over the life of these equity grants.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842) Section A - Leases: Amendments to the FASB Accounting Standards Codification* ("ASU 2016-02"), its new standard on accounting for leases. ASU 2016-02 introduces a lessee model that brings most leases onto the balance sheet. The new standard also aligns many of the underlying principles of the new lessor model with those in ASC 606, the FASB's new revenue recognition standard (i.e., those related to evaluating when profit can be recognized). Furthermore, ASU 2016-02 addresses other concerns related to the current leases model. For example, ASU 2016-02 eliminates the current GAAP requirement for an entity to use bright-line tests in determining lease

classification. ASU 2016-02 is effective for us for both interim and annual periods beginning January 1, 2019. We are currently assessing the potential impact of the adoption of ASU 2016-02 on our consolidated financial statements.

In November 2015, the FASB issued ASU 2015-17, *Balance Sheet Classification of Deferred Taxes* ("ASU 2015-17"), which requires entities to present deferred tax assets and deferred tax liabilities as noncurrent in the consolidated balance sheet. Netting of deferred tax assets and deferred tax liabilities is still required under ASU 2015-17. ASU 2015-17 is effective for us for our annual report for the year ending December 31, 2018 and for interim period reporting beginning January 1, 2019, with early adoption permitted. We elected to early-adopt ASU 2015-17 prospectively and accordingly, reclassified our net current deferred tax asset totaling \$1.0 million to our noncurrent net deferred tax asset as of December 31, 2015. No prior periods were retrospectively adjusted. The early adoption of ASU 2015-17 did not have a material impact on our consolidated financial statements.

In September 2015, the FASB issued ASU 2015-16, *Simplifying the Accounting for Measurement-Period Adjustments* ("ASU 2015-16"), which eliminates the requirement to restate prior periods to reflect adjustments made to provisional amounts recognized in a business combination. Under ASU 2015-16, an acquirer must recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined, rather than retrospectively, as had previously been required. ASU 2015-16 also requires acquirers to present separately on the face of the income statement, or disclose in the notes, the portion of the amount recorded in current period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. ASU 2015-16 was effective for us as of January 1, 2016. The adoption of ASU 2015-16 did not have a material impact on our consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11, *Simplifying the Measurement of Inventory* ("ASU 2015-11"), which simplifies the measurement of inventory by requiring entities to measure most inventory at the lower of cost and net realizable value, replacing the previous requirement to measure most inventory at the lower of cost or market. ASU 2015-11 does not apply to inventories that are measured by using either the last-in, first-out method or the retail inventory method. ASU 2015-11 is effective for us for both interim and annual reporting periods beginning January 1, 2017. The adoption of ASU 2015-11 is not expected to have a material impact on our consolidated financial statements.

In August 2014, the FASB issued ASU 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern* ("ASU 2014-15"), which provides guidelines for determining when and how to disclose going concern uncertainties in the financial statements. The new standard requires management to perform interim and annual assessments of an entity's ability to continue as a going concern within one year of the date the financial statements are issued. An entity must provide certain disclosures if conditions or events raise substantial doubt about the entity's ability to continue as a going concern. ASU 2014-15 was effective for us for annual periods beginning January 1, 2017, and interim periods thereafter, with early adoption permitted. The adoption of ASU 2014-15 is not expected to have a material impact on our consolidated financial statements.

In June 2014, the FASB issued ASU 2014-12, *Compensation - Stock Compensation (Topic 718): Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period (a consensus of the FASB Emerging Issues Task Force)* ("ASU 2014-12"). ASU 2014-12 clarifies that entities should treat performance targets that can be met after the requisite service period of a share-based payment award as performance conditions that affect vesting. Therefore, an entity would not record compensation expense (measured as of the grant date without taking into account the effect of the performance target) related to an award for which transfer to the employee is contingent on the entity's satisfaction of a performance target until it becomes probable that the performance target will be met. ASU 2014-12 does not contain any new disclosure requirements. ASU 2014-12 was effective for us as of January 1, 2016. The adoption of ASU 2014-12 did not have a material impact on our consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"), its final standard on revenue from contracts with customers. ASU 2014-09 outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. The core principle of the revenue model is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In applying the revenue model to contracts within its scope, an entity identifies the contract(s) with a customer, identifies the performance obligations in the contract, determines the transaction price, allocates the transaction price to the performance obligations in the contract and recognizes revenue when (or as) the entity satisfies a performance obligation. ASU 2014-09 applies to all contracts with customers that are within the scope of other topics in the FASB ASC. Certain of ASU 2014-09's provisions also apply to transfers of nonfinancial assets, including in-substance nonfinancial assets that are not an output of an entity's ordinary activities (i.e., property, plant and equipment; real

estate; or intangible assets). Existing accounting guidance applicable to these transfers has been amended or superseded. In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date* ("ASU 2015-14"), which defers the original effective date of interim and annual reporting periods by one year. As a result, the Company will not be required to apply the new revenue standard until annual reporting periods beginning after December 15, 2017. In March 2016, the FASB issued ASU 2016-08, *Principal Versus Agent Considerations (Reporting Revenue Gross Versus Net)* ("ASU 2016-08") to clarify certain aspects of the principal-versus-agent guidance in its new revenue recognition standard in response to feedback received from the FASB-International Accounting Standards Board joint revenue recognition transition resource group. ASU 2016-08 clarifies the implementation guidance on principal-versus-agent considerations regarding how an entity determines whether it is a principal or an agent for each specified good or service promised to the customer and how an entity determines the nature of each specified good or service. ASU 2016-08 also provides clarification regarding the application of the principal-versus-agent guidance. In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing* ("ASU 2016-10"), which amends certain aspects of the guidance in ASU 2014-09 on identifying performance obligations, including immaterial promised goods or services, shipping and handling activities and identifying when promises represent performance obligations; and licensing implementation guidance, including determining the nature of an entity's promise in granting a license, sales-based and usage-based royalties, restrictions of time, geographical location and use, and renewals of licenses that provide a right to use IP. In May 2016, the FASB issued ASU 2016-11, *Revenue Recognition (Topic 605) and Derivatives and Hedging (Topic 815)* ("ASU 2016-11"), which rescinds certain SEC guidance from the Codification in response to announcements made by the SEC staff at the Emerging Issues Task Force's March 3, 2016 meeting, and which supersedes certain SEC observer comments on the topics of revenue and expense recognition for freight services in process, accounting for shipping and handling fees and costs, accounting for consideration given by a vendor to a customer and accounting for gas-balancing arrangements upon the adoption of ASU 2014-09. In May 2016, the FASB issued ASU 2016-12, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2016-12"), which amends certain aspects of ASU 2014-09, including regarding collectability, the presentation of sales tax and other similar taxes collected from customers, non-cash consideration, contract modifications and completed contracts at transition. ASU 2016-08, ASU 2016-10, ASU 2016-11 and ASU 2016-12 are effective at the same time as ASU 2014-09 (as amended by ASU 2015-14). We continue to assess the potential impact of the adoption of these ASUs on our consolidated financial statements, and currently believe that such adoption will, in general, accelerate the recognition of revenue (i.e., more revenue will be recognized upon delivery than is currently recognized ratably or upon payment) compared to the current standards in effect, particularly, sales of software-only products and sales to customers currently accounted for on a cash basis. We currently expect to adopt these ASUs using the modified retrospective option.

#### **Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

We are exposed to a variety of market risks, including changes in interest rates affecting the return on our investments and foreign currency fluctuations.

At December 31, 2016, our cash, cash equivalents, marketable securities and long-term investments totaled \$126.1 million. We maintain an investment portfolio of various holdings, types and maturities which may include money market funds, commercial paper, corporate notes, certificates of deposit and government debt securities. A sharp rise in market interest rates could have a material adverse impact on the fair value of our investment portfolio. Conversely, declines in market interest rates could have a material impact on the interest earnings of our investment portfolio. We do not currently hedge these interest rate exposures. We place our investments with high quality issuers and have policies limiting, among other things, the amount of credit exposure to any one issuer. We seek to limit default risk by purchasing only investment grade securities. We manage potential losses in fair value by investing in relatively short-term investments, thereby allowing us to hold our investments to maturity. A hypothetical movement of plus or minus 50 basis points in market interest rates could affect the value of our investment portfolio by approximately \$0.4 million for the year ended December 31, 2016. However, we have the ability to hold our investments until maturity, and therefore do not expect our operating results or cash flows to be affected to any significant degree by the effect of a sudden change in market interest rates on our investment portfolio.

Based on a hypothetical 10% adverse movement in all foreign currency exchange rates, our revenue for the year ended December 31, 2016 would have been adversely affected by approximately \$1.0 million and our net loss for the year ended December 31, 2016 would have been adversely affected by approximately \$0.9 million, although the actual effects may differ materially from this hypothetical analysis.

**Item 8. Financial Statements and Supplementary Data**

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

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

We have audited the accompanying consolidated balance sheets of Sonus Networks, Inc. and subsidiaries (the "Company") as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2016. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (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, such consolidated financial statements present fairly, in all material respects, the financial position of Sonus Networks, Inc. and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2016, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company's internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control-Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 27, 2017 expressed an unqualified opinion on the Company's internal control over financial reporting.

/s/ Deloitte & Touche LLP

Boston, Massachusetts  
February 27, 2017

**SONUS NETWORKS, INC.**  
**Consolidated Balance Sheets**  
(in thousands, except share and per share data)

	December 31, 2016	December 31, 2015
<b>Assets</b>		
Current assets:		
Cash and cash equivalents	\$ 31,923	\$ 50,111
Marketable securities	61,836	58,533
Accounts receivable, net	53,862	51,533
Inventory	18,283	23,111
Other current assets	12,010	11,853
Total current assets	177,914	195,141
Property and equipment, net	11,741	13,620
Intangible assets, net	30,197	26,087
Goodwill	49,393	40,310
Investments	32,371	33,605
Deferred income taxes	1,542	1,879
Other assets	4,901	2,249
	<u>\$ 308,059</u>	<u>\$ 312,891</u>
<b>Liabilities and Stockholders' Equity</b>		
Current liabilities:		
Accounts payable	\$ 6,525	\$ 5,949
Accrued expenses	25,886	31,963
Current portion of deferred revenue	43,504	38,716
Current portion of long-term liabilities	1,154	821
Total current liabilities	77,069	77,449
Deferred revenue	7,188	7,374
Deferred income taxes	3,047	2,282
Other long-term liabilities	1,633	2,760
Total liabilities	88,937	89,865
Commitments and contingencies (Note 21)		
Stockholders' equity:		
Preferred stock, \$0.01 par value; 5,000,000 shares authorized, none issued and outstanding	—	—
Common stock, \$0.001 par value; 120,000,000 shares authorized; 49,041,881 shares issued and outstanding at December 31, 2016; 49,473,789 shares issued and outstanding at December 31, 2015	49	49
Additional paid-in capital	1,250,744	1,240,803
Accumulated deficit	(1,037,174)	(1,023,242)
Accumulated other comprehensive income	5,503	5,416
Total stockholders' equity	219,122	223,026
	<u>\$ 308,059</u>	<u>\$ 312,891</u>

See notes to the consolidated financial statements.

**SONUS NETWORKS, INC.**  
**Consolidated Statements of Operations**  
**(in thousands, except per share data)**

	Year ended December 31,		
	2016	2015	2014
Revenue:			
Product	\$ 146,381	\$ 141,913	\$ 182,455
Service	106,210	107,121	113,871
Total revenue	252,591	249,034	296,326
Cost of revenue:			
Product	47,367	50,460	60,284
Service	37,613	36,917	42,637
Total cost of revenue	84,980	87,377	102,921
Gross profit	167,611	161,657	193,405
Operating expenses:			
Research and development	72,841	77,908	79,396
Sales and marketing	68,539	72,841	80,141
General and administrative	35,948	39,846	43,937
Acquisition-related	1,152	131	1,558
Restructuring	2,740	2,148	5,625
Total operating expenses	181,220	192,874	210,657
Loss from operations	(13,609)	(31,217)	(17,252)
Interest income, net	769	207	75
Other income, net	1,424	1,122	2,536
Loss before income taxes	(11,416)	(29,888)	(14,641)
Income tax provision	(2,516)	(2,007)	(2,214)
Net loss	\$ (13,932)	\$ (31,895)	\$ (16,855)
Loss per share:			
Basic	\$ (0.28)	\$ (0.64)	\$ (0.34)
Diluted	\$ (0.28)	\$ (0.64)	\$ (0.34)
Shares used to compute loss per share:			
Basic	49,385	49,560	50,245
Diluted	49,385	49,560	50,245

See notes to the consolidated financial statements.

**SONUS NETWORKS, INC.**  
**Consolidated Statements of Comprehensive Loss**  
**(in thousands)**

	<u>Year ended December 31,</u>		
	<u>2016</u>	<u>2015</u>	<u>2014</u>
Net loss	\$ (13,932)	\$ (31,895)	\$ (16,855)
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	54	9	(426)
Unrealized loss on available-for-sale marketable securities	33	(15)	(142)
Less: Reclassification adjustment for (gains) losses included in net loss	18	—	(46)
Other comprehensive income (loss), net of tax	105	(6)	(614)
Comprehensive loss, net of tax	<u>\$ (13,827)</u>	<u>\$ (31,901)</u>	<u>\$ (17,469)</u>

See notes to the consolidated financial statements.

**SONUS NETWORKS, INC.**  
**Consolidated Statements of Stockholders' Equity**  
(in thousands, except share data)

	Common Stock		Additional Paid-in Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount				
<b>Balances, January 1, 2014</b>	<b>53,245,218</b>	<b>\$ 53</b>	<b>\$ 1,280,655</b>	<b>\$ (974,492)</b>	<b>\$ 6,036</b>	<b>\$ 312,252</b>
Issuance of common stock in connection with employee stock purchase plan	180,502		2,882			2,882
Exercise of stock options	806,385	1	10,116			10,117
Vesting of restricted stock	428,674					—
Vesting of performance-based stock awards	136,526					—
Shares of restricted stock returned to the Company under net share settlements to satisfy tax withholding obligations	(142,399)		(2,442)			(2,442)
Stock-based compensation expense			23,914			23,914
Repurchase of common stock	(5,297,873)	(5)	(93,219)			(93,224)
Assumption of equity awards in connection with acquisition of Performance Technologies, Incorporated			1,671			1,671
Other comprehensive loss					(614)	(614)
Reclassification of liability to equity for cash bonuses converted to equity awards			2,649			2,649
Net loss				(16,855)		(16,855)
<b>Balances, December 31, 2014</b>	<b>49,357,033</b>	<b>49</b>	<b>1,226,226</b>	<b>(991,347)</b>	<b>5,422</b>	<b>240,350</b>
Issuance of common stock in connection with employee stock purchase plan	233,659		2,378			2,378
Exercise of stock options	155,478		1,757			1,757
Vesting of restricted stock awards	491,739	1				1
Vesting of performance-based stock awards and units	45,901					—
Shares of restricted stock returned to the Company under net share settlements to satisfy tax withholding obligations	(167,634)		(2,344)			(2,344)
Repurchase of common stock	(642,387)	(1)	(7,916)			(7,917)
Stock-based compensation expense			21,699			21,699
Reclassification of equity to liability for equity awards converted to cash bonuses			(997)			(997)
Other comprehensive loss					(6)	(6)
Net loss				(31,895)		(31,895)
<b>Balances, December 31, 2015</b>	<b>49,473,789</b>	<b>49</b>	<b>1,240,803</b>	<b>(1,023,242)</b>	<b>5,416</b>	<b>223,026</b>
Issuance of common stock in connection with employee stock purchase plan	225,031		1,360			1,360
Exercise of stock options	23,070		153			153
Vesting of restricted stock awards and units	792,773	1	(1)			—
Vesting of performance-based stock awards and units	18,438					—
Shares of restricted stock returned to the Company under net share settlements to satisfy tax withholding obligations	(231,620)		(1,810)			(1,810)
Repurchase of common stock	(1,259,600)	(1)	(9,529)			(9,530)
Stock-based compensation expense			19,768			19,768
Other comprehensive income					87	87
Net loss				(13,932)		(13,932)
<b>Balances, December 31, 2016</b>	<b>49,041,881</b>	<b>\$ 49</b>	<b>\$ 1,250,744</b>	<b>\$ (1,037,174)</b>	<b>\$ 5,503</b>	<b>\$ 219,122</b>

See notes to the consolidated financial statements.

**SONUS NETWORKS, INC.**  
**Consolidated Statements of Cash Flows**  
(in thousands)

	Year ended December 31,		
	2016	2015	2014
<b>Cash flows from operating activities:</b>			
Net loss	\$ (13,932)	\$ (31,895)	\$ (16,855)
<b>Adjustments to reconcile net loss to cash flows provided by operating activities:</b>			
Depreciation and amortization of property and equipment	7,970	11,961	11,488
Amortization of intangible assets	7,500	7,107	4,597
Stock-based compensation	19,768	21,699	23,914
Loss on disposal of property and equipment	33	112	292
Gain on sale of domain names and IPv4 address blocks	(1,298)	(896)	—
Deferred income taxes	1,088	752	885
<b>Changes in operating assets and liabilities:</b>			
Accounts receivable	(851)	11,369	4,771
Inventory	4,858	(1,001)	5,414
Other operating assets	506	4,915	5,077
Accounts payable	(821)	(1,257)	(3,759)
Accrued expenses and other long-term liabilities	(7,778)	(4,134)	1,657
Deferred revenue	2,149	1,137	(7,439)
Net cash provided by operating activities	<u>19,192</u>	<u>19,869</u>	<u>30,042</u>
<b>Cash flows from investing activities:</b>			
Purchases of property and equipment	(4,626)	(7,792)	(9,541)
Business acquisitions, net of cash acquired	(20,669)	(10,897)	(35,022)
Divestiture of business	—	—	2,000
Purchases of marketable securities	(78,528)	(54,772)	(112,800)
Sale/maturities of marketable securities	75,178	67,980	179,365
Proceeds from the sale of fixed assets	—	—	268
Proceeds from the sale of domain name	1,298	896	—
Net cash (used in) provided by investing activities	<u>(27,347)</u>	<u>(4,585)</u>	<u>24,270</u>
<b>Cash flows from financing activities:</b>			
Proceeds from sale of common stock in connection with employee stock purchase plan	1,360	2,378	2,882
Proceeds from exercise of stock options	153	1,757	10,117
Payment of tax withholding obligations related to net share settlements of restricted stock awards	(1,810)	(2,344)	(2,442)
Repurchase of common stock	(9,530)	(7,917)	(93,224)
Principal payments of capital lease obligations	(43)	(76)	(84)
Payment of debt	—	—	(2,380)
Net cash used in financing activities	<u>(9,870)</u>	<u>(6,202)</u>	<u>(85,131)</u>
Effect of exchange rate changes on cash and cash equivalents	(163)	(128)	(447)
Net (decrease) increase in cash and cash equivalents	(18,188)	8,954	(31,266)
Cash and cash equivalents, beginning of year	50,111	41,157	72,423
Cash and cash equivalents, end of year	<u>\$ 31,923</u>	<u>\$ 50,111</u>	<u>\$ 41,157</u>
<b>Supplemental disclosure of cash flow information:</b>			
Interest paid	\$ 41	\$ 64	\$ 89
Income taxes paid	\$ 1,249	\$ 1,430	\$ 2,247
Income tax refunds received	\$ 511	\$ 357	\$ 94
<b>Supplemental disclosure of non-cash investing activities:</b>			
Capital expenditures incurred, but not yet paid	\$ 277	\$ 375	\$ 411
Property and equipment acquired under capital lease	\$ 36	\$ 137	\$ —
Business acquisition purchase consideration - assumed equity awards	\$ —	\$ —	\$ 1,671
<b>Supplemental disclosure of non-cash financing activities:</b>			
Total fair value of restricted stock awards, restricted stock units, performance-based stock awards and performance-based stock units on date vested	\$ 10,376	\$ 9,138	\$ 8,425

See notes to the consolidated financial statements.

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements**

**(1) NATURE OF THE BUSINESS**

Sonus Networks, Inc. ("Sonus" or the "Company") is a leading provider of networked solutions for communications service providers (e.g., telecommunications, wireless and cable service providers) and enterprises to help them secure and unify their real-communications infrastructures. Sonus helps many of the world's leading communications service providers and enterprises embrace the next generation of Session Initiation Protocol ("SIP") and 4G/LTE (Long Term Evolution)-based solutions, including Voice over Internet Protocol ("VoIP"), Voice over WiFi ("VoWiFi"), video and Unified Communications ("UC") through secure, reliable and scalable Internet Protocol ("IP") networks. Sonus' products include session border controllers ("SBCs"), diameter signaling controllers ("DSCs") and VoWiFi solutions, which are supported by a global services team with experience in design, deployment and maintenance of some of the world's largest IP networks.

Sonus' communications solutions provide a secure way for its customers to link and leverage multivendor, multiprotocol communications systems and applications across their networks, around the world and in a rapidly changing ecosystem of IP-enabled devices such as smartphones and tablets. Sonus' solutions help realize the intended value and benefits of UC platforms by allowing disparate communications environments, commonplace in most enterprises today, to work seamlessly together. Likewise, Sonus' solutions facilitate the evolution to cloud-based delivery of UC solutions.

Sonus utilizes both direct and indirect sales channels to reach its target customers. Customers and prospective customers in the service provider space are traditional and emerging 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. Enterprise customers and target enterprise customers include financial institutions, retailers, state and local governments, and other multinational corporations.

**(2) BASIS OF PRESENTATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**Basis of Presentation**

The consolidated financial statements have been prepared in United States dollars, in accordance with accounting principles generally accepted in the United States ("GAAP").

On September 26, 2016 (the "Taqua Acquisition Date"), the Company acquired Taqua, LLC ("Taqua"), a leading supplier of IP communications systems, applications and services to mobile and fixed operators. The financial results of Taqua are included in the Company's consolidated financial statements starting on the Taqua Acquisition Date.

On January 2, 2015 (the "Treq Asset Acquisition Date"), the Company acquired from Treq Labs, Inc. ("Treq") certain assets related to Treq's business of designing, developing, marketing, selling, servicing and maintaining software-defined networking ("SDN") technology, SDN controller software and SDN management software (the "SDN Business"). The financial results of the SDN Business are included in the Company's consolidated financial statements starting on the Treq Asset Acquisition Date.

On February 19, 2014 (the "PT Acquisition Date"), the Company completed the acquisition of Performance Technologies, Incorporated ("PT"). The financial results of PT are included in the Company's consolidated financial statements for the periods subsequent to the PT Acquisition Date.

**Significant Accounting Policies**

***Principles of Consolidation***

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

SONUS NETWORKS, INC.

Notes to Consolidated Financial Statements (Continued)

***Use of Estimates and Judgments***

The preparation of financial statements in conformity with GAAP 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 revenues and expenses during the reporting periods. Significant estimates and judgments relied upon in preparing these consolidated financial statements include accounting for business combinations, revenue recognition for multiple element arrangements, inventory valuations, assumptions used to determine the fair value of stock-based compensation, intangible assets and goodwill valuations, legal contingencies and recoverability of Sonus' net deferred tax assets and the related valuation allowances. Sonus regularly assesses these estimates and records changes in estimates in the period in which they become known. Sonus bases its estimates on historical experience and various other assumptions that it believes to be reasonable under the circumstances. Actual results could differ from those estimates.

***Business Combinations***

The Company recognizes identifiable assets acquired and liabilities assumed at their acquisition date fair values. Goodwill as of the acquisition date is measured as the excess of consideration transferred over the net of the acquisition date fair values of the assets acquired and the liabilities assumed and represents the expected future economic benefits arising from other assets acquired in the business combination that are not individually identified and separately recognized. While the Company uses its best estimates and assumptions as part of the purchase price allocation process to accurately value assets acquired and liabilities assumed at the acquisition date, its estimates are inherently uncertain and subject to refinement. As a result, during the measurement period, which may be up to one year from the acquisition date, the Company records adjustments to the assets acquired and liabilities assumed with the corresponding offset to goodwill to the extent that it identifies adjustments to the preliminary purchase price allocation. Upon the conclusion of the measurement period or final determination of the values of assets acquired or liabilities assumed, whichever comes first, any subsequent adjustments are recorded to the consolidated statements of operations.

***Revenue Recognition***

The Company recognizes revenue from sales when persuasive evidence of an arrangement exists, delivery has occurred, the sale price is fixed or determinable, and collectability of the related receivable is reasonably assured. In instances where customer acceptance is required, revenue is deferred until the acceptance has been achieved. When fees for products or services are not fixed and determinable, the Company defers the recording of receivables, deferred revenue and revenue until such time as the fees become due or are collected.

Revenue from maintenance and support services is recognized ratably over the service period. Maintenance revenue is deferred until the associated product is accepted by the customer and all other revenue recognition criteria have been met. Maintenance and support services include telephone support, return and repair support and unspecified rights to product upgrades and enhancements. Revenue from other professional services is typically recognized as the services are delivered if all other revenue recognition criteria have been met.

The Company's products typically have both software and non-software components that function together to deliver the products' essential functionality. In addition, hardware sold generally cannot be used apart from the software. Therefore, the Company considers its principal products to be both software and hardware-related. Many of the Company's sales involve multiple element arrangements that include product, maintenance and various professional services. The Company recognizes revenue in accordance with the provisions of Accounting Standards Codification ("ASC") 605-25, *Revenue Recognition - Multiple-Element Arrangements* ("ASC 605-25") for transactions that include both hardware and software components. The Company recognizes revenue from stand-alone software sales under the software revenue recognition guidance in ASC 985-605, *Software - Revenue Recognition* ("ASC 985-605"). The Company limits the amount of revenue recognized for delivered elements to the amount that is not contingent on the future delivery of products or services, future performance obligations, or subject to customer-specific return or refund privileges.

For multiple-element arrangements that include both software-only products and non-software products, the Company allocates the total arrangement consideration to the software-only deliverables as a group and to the individual non-software deliverables based on their relative selling prices. If an undelivered element (such as maintenance and support services) relates to both the software-only and non-software deliverables, the Company bifurcates the consideration allocated to the undelivered

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements (Continued)**

element (such as maintenance and support services) into a non-software component and the software-only component using the relative selling price method. The consideration allocated to the non-software and software-only deliverables is recognized in accordance with the guidance as discussed in this note.

Under ASC 985-605, revenue for any undelivered elements that are considered not essential to the functionality of the product and for which vendor-specific objective evidence of selling price (“VSOE”) has been established is deferred and recognized upon delivery utilizing the residual method. If the Company has undelivered product for which VSOE has not been established, it defers all revenue on the entire arrangement until VSOE is established or until such elements are delivered, provided that all other revenue recognition criteria are met. If the Company has undelivered services for which VSOE has not been established, the entire arrangement is recognized as revenue over the longest remaining service period from the point in time that all services have commenced and all products have been delivered, provided that all other revenue recognition criteria are met.

For transactions that include multiple elements, arrangement consideration is allocated to each element based on the relative selling prices of all of the elements in the arrangement using the fair value hierarchy as required by ASC 605-25.

The Company establishes VSOE based upon the price charged when the same element is sold separately or established by management having the relevant pricing authority. The Company has VSOE for its maintenance and support services and certain professional services. When VSOE exists it is used to determine the selling price of a deliverable. The Company has not been able to establish VSOE of any of its products and for certain of its services because the Company has not sold such products or services on a stand-alone basis, has not priced its products or services within a narrow range, or has limited sales history.

When VSOE is not established, the Company attempts to establish the selling price of each element based on third-party evidence of selling price (“TPE”). The Company's solution typically differs from that of its peers as there are no similar or interchangeable competitor products or services. The Company's various product, service and maintenance offerings contain a significant level of unique features and functionality and therefore, comparable pricing of competitors' products and services with similar functionality cannot be obtained. Accordingly, the Company is not able to determine TPE for its products or services.

When the Company is unable to establish selling price using VSOE or TPE, the Company uses estimated selling price (“ESP”) in its allocation of arrangement consideration for the relevant deliverables. The objective of ESP is to determine the price at which the Company would transact a sale if a product or service was sold on a stand-alone basis. The Company determines ESP for its products and certain services by considering multiple factors including, but not limited to, overall market conditions, including geographic or regional-specific market factors, profit objectives and historical pricing practices for such deliverables. The determination of ESP is a formal process within the Company that includes review and approval by the Company's management.

Deferred revenue typically includes customer deposits and amounts associated with partial product shipments and maintenance or service contracts. Deferred revenue expected to be recognized as revenue more than one year subsequent to the balance sheet date is reported as a component of long-term liabilities in the consolidated balance sheets. The Company defers recognition of incremental direct costs, such as cost of goods, third-party installations and commissions, until recognition of the related revenue. Such costs are classified as current assets if the deferred revenue is initially classified as current and noncurrent assets if the related deferred revenue is initially classified as long-term.

The Company excludes any taxes assessed by a governmental authority that are directly imposed on a revenue-producing transaction (i.e., sales, use and value added) from its revenue and costs. Reimbursement received for out-of-pocket expenses and shipping costs is recorded as revenue.

The Company sells the majority of its products directly to its end customers. For products sold to resellers and distributors, the Company recognizes revenue on a sell-through basis.

***Financial Instruments***

The carrying amounts of Sonus' financial instruments, which include cash equivalents, investments, accounts receivable

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements (Continued)**

and accounts payable, approximate their fair values.

All investments in marketable securities are classified as available-for-sale and are reported at fair value, with unrealized gains and losses excluded from earnings and reported, net of tax, in Accumulated other comprehensive loss, which is a component of stockholders' equity. Unrealized losses that are determined to be other-than-temporary, based on current and expected market conditions, are recognized in earnings. Declines in fair value determined to be credit-related are charged to earnings. The cost of marketable securities sold is determined by the specific identification method.

Financial instruments with remaining maturities or that are due within one year from the balance sheet date are classified as current. Financial instruments with remaining maturities or that are payable more than one year from the balance sheet date are classified as noncurrent.

***Cash and Cash Equivalents***

Cash equivalents are stated at fair value. Cash equivalents are liquid securities that have remaining maturities of three months or less at the date of purchase.

***Restricted Cash***

The Company classifies as restricted cash all cash pledged as collateral to secure long-term obligations and all cash whose use is otherwise limited by contractual provisions. Restricted cash is recorded within other assets on the consolidated balance sheet.

***Foreign Currency Translation***

For foreign subsidiaries where the functional currency is the local currency, assets and liabilities are translated into U.S. dollars at the current exchange rate on the balance sheet date. Revenue and expenses are translated at average rates of exchange prevailing during each period. Translation adjustments for these subsidiaries are included in Accumulated other comprehensive loss. The primary component of Accumulated other comprehensive loss at both December 31, 2016 and 2015 was cumulative translation adjustments.

For foreign subsidiaries where the functional currency is the U.S. dollar, monetary assets and liabilities are translated into U.S. dollars at the current exchange rate on the balance sheet date. Nonmonetary assets and liabilities are remeasured into U.S. dollars at historical exchange rates. Revenue and expense items are translated at average rates of exchange prevailing during each period.

Realized and unrealized foreign currency gains and losses arising from transactions denominated in currencies other than the subsidiary's functional currency are reflected in earnings with the exception of intercompany transactions considered to be of a long-term investment nature.

The components of foreign currency transaction gains (losses) are reported as a component of General and administrative expenses in the consolidated statements of operations. The Company recognized net transaction losses of \$0.3 million for the year ended December 31, 2016 and \$0.4 million for the year ended December 31, 2015. The Company recognized a net transaction gain of \$1.6 million for the year ended December 31, 2014.

***Inventory***

Inventory is recorded at the lower of cost or market value using the first-in, first-out convention. The Company reduces the carrying value of inventory for those items that are potentially excess, obsolete or slow-moving based on changes in customer demand, technology developments or other economic factors.

Sonus writes down evaluation equipment at the time of shipment to its customers, as it is probable that the inventory value will not be realized.

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements (Continued)**

Deferred product costs represent deferred cost of revenue for product shipments to customers prior to satisfaction of Sonus' revenue recognition criteria. The Company classifies inventory that is not expected to be consumed within one year from the balance sheet date as noncurrent and includes such inventory as a component of Other assets.

***Property and Equipment***

Property and equipment are stated at cost, net of accumulated depreciation. Expenditures for maintenance and repairs are charged to expense as incurred. Depreciation is computed using the straight-line method over the estimated useful lives of the related assets, which range from two to five years. Leasehold improvements are amortized over the lesser of the lease term or five years. When an asset is sold or retired, the cost and related accumulated depreciation or amortization are eliminated, and the resulting gain or loss, if any, is recognized in income (loss) from operations in the consolidated statement of operations. The Company reviews property and equipment for impairment in the same manner as intangible assets discussed below.

Software development costs associated with internal use software are incurred in three stages of development: the preliminary project stage, the application development stage and the post-implementation stage. Costs incurred during the preliminary project and post-implementation stages are expensed as incurred. Certain qualifying costs incurred during the application development stage are capitalized as property and equipment. Internal use software is amortized on a straight-line basis over its estimated useful life of three years, beginning when the software is ready for its intended use.

***Intangible Assets and Goodwill***

Intangible assets are comprised of certain intangible assets arising from the 2012 acquisition of NET, comprised of developed technology, customer relationships and internal use software, which are amortized over their estimated useful lives of three to five years; the 2014 acquisition of PT, comprised of developed technology and customer relationships, which are amortized over their estimated useful lives of six to seven years; the 2015 acquisition of the SDN Business, comprised of developed technology, which is amortized over its estimated useful life of seven years and the September 2016 acquisition of Taqua, comprised of developed technology and customer relationships, which are amortized over their estimated useful lives of six to eight years. Intangible assets are reviewed for impairment when events or changes in circumstances indicate that their carrying amounts may not be recoverable based upon the estimated undiscounted cash flows. Recoverability of intangible assets with estimated lives and other long-lived assets is measured by a comparison of the carrying amount of an asset or asset group to future net undiscounted cash flows expected to be generated by the asset or asset group. If these comparisons indicate that an asset is not recoverable, the Company will recognize an impairment loss for the amount by which the carrying value of the asset or asset group exceeds the related estimated fair value. Estimated fair value is based on either discounted future operating cash flows or appraised values, depending on the nature of the asset. See Note 9 for additional information regarding the Company's intangible assets.

Goodwill is recorded when the consideration for an acquisition exceeds the fair value of net tangible and identifiable intangible assets acquired. Goodwill is not amortized, but instead is tested for impairment at least annually or if indicators of potential impairment exist by comparing the fair value of the Company's reporting unit to its carrying value.

The Company's annual testing for impairment of goodwill is completed as of November 30. The Company operates as a single operating segment with one reporting unit and consequently evaluates goodwill for impairment based on an evaluation of the fair value of the Company as a whole. The Company performed its step one assessments as proscribed by *Intangibles - Goodwill and Other (ASC Topic 350)* for each of the years ended December 31, 2016, 2015 and 2014 and concluded each year that it was not more likely than not that the fair value of the Company's reporting unit was less than its carrying value.

***Other Assets***

Other assets are primarily comprised of the long-term portion of deferred cost of goods sold, prepaid expenses and deposits.

***Stock-Based Compensation***

The Company's stock-based compensation cost is measured at the grant date based on the fair value of the award and is recognized as expense over the requisite service period, which generally represents the vesting period, and includes an estimate

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements (Continued)**

of the awards that will be forfeited.

The Company uses the Black-Scholes valuation model for estimating the fair value on the date of grant of stock options. The fair value of stock option awards is affected by the Company's stock price as well as valuation assumptions, including the volatility of Sonus' stock price, expected term of the option, risk-free interest rate and expected dividends.

In 2015, the Company began to grant performance-based stock units ("PSUs") that include a market condition to certain of its executives. The Company uses a Monte Carlo simulation approach to model future stock price movements based upon the risk-free rate of return, the volatility of each entity and the pair-wise covariance between each entity. These results are then used to calculate the grant date fair values of the PSUs.

***Research and Development Costs***

Research and development costs are expensed as incurred.

***Software Development Costs***

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 until the product is available for general release. The Company has determined that technological feasibility is established at the time a working model of the software is completed. The Company's process for developing software is essentially completed concurrently with the establishment of technological feasibility. Accordingly, no costs have been capitalized to date.

***Concentrations of Credit Risk and Single Source Suppliers***

The financial instruments that potentially subject Sonus to concentrations of credit risk are cash, cash equivalents, investments and accounts receivable. The Company's cash equivalents and investments were managed by one financial institution at December 31, 2016 and two financial institutions at December 31, 2015.

Certain components and software licenses from third parties used in Sonus' products are procured from single sources of supply. 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.

Sonus had four contract manufacturers at December 31, 2016, of which one is primarily relied upon. Failure to manage the activities of these manufacturers or any disruption in these relationships could result in the disruption in the supply of its products and in delays in the fulfillment of the Company's customer orders.

***Advertising Costs***

Advertising costs are expensed as incurred and included as a component of Sales and marketing expense in the Company's consolidated statements of operations. Advertising expenses were \$0.1 million for the year ended December 31, 2016, \$0.9 million for the year ended December 31, 2015 and \$1.5 million for the year ended December 31, 2014.

***Operating Segments***

The Company operates in a single segment. 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 in making decisions regarding resource allocation and assessing performance. To date, the chief operating decision maker has made such decisions and assessed performance at the company level, as one segment. The Company's chief operating decision maker is its President and Chief Executive Officer.

***Loss Contingencies and Reserves***

*Loss Contingencies.* Sonus is subject to ongoing business risks arising in the ordinary course of business that affect the estimation process of the carrying value of assets, the recording of liabilities and the possibility of various loss contingencies.

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements (Continued)**

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. Sonus regularly evaluates current information available to determine whether such amounts should be adjusted and records changes in estimates in the period they become known.

*Allowance for Doubtful Accounts* . Sonus establishes billing terms at the time it negotiates purchase agreements with its customers. Sonus monitors its outstanding receivables for timely payments and potential collection issues. An allowance for doubtful accounts is estimated based on Sonus' assessment of the collectability of specific customer accounts.

*Accrual for Royalties* . Sonus accrues for royalties for technology that it licenses from vendors based on established royalty rates and usage. In certain cases, Sonus has been contacted by third parties who claim that Sonus' products infringe on certain intellectual property of the third party. Sonus evaluates these claims and accrues amounts only when it is probable that the obligation has been incurred and the amounts are reasonably estimable.

*Reserve for Litigation and Legal Fees* . Sonus is subject to various legal claims. Sonus reserves for legal contingencies and legal fees when it is probable that a loss has been incurred and the amounts are reasonably estimable.

***Accounting for Income Taxes***

Deferred tax assets and liabilities are recognized for the expected future consequences of events that have been reflected in the consolidated financial statements. Deferred tax assets and liabilities are determined based on the differences between the book and tax bases of assets and liabilities and operating loss carryforwards, using tax rates expected to be in effect for the years in which the differences are expected to reverse. Such differences arise primarily from stock-based compensation, depreciation, accruals and reserves, acquired intangible assets, deferred revenue, tax credits, net operating loss carryforwards and allowances for accounts receivable. Sonus records valuation allowances to reduce deferred income tax assets to the amount that is more likely than not to be realized.

Sonus has not provided for U.S. income taxes on the undistributed earnings of non-U.S. subsidiaries, as the Company plans to permanently reinvest these amounts. Cumulative undistributed foreign earnings were approximately \$28 million at each of December 31, 2016 and December 31, 2015 . Generally, the undistributed foreign earnings become subject to U.S. taxation upon the remittance of dividends and under certain other circumstances. The Company has been taxed on certain earnings of its non-U.S. subsidiaries. Previously taxed earnings were approximately \$16 million at each of December 31, 2016 and December 31, 2015. Thus, \$12 million of the undistributed earnings at each of December 31, 2016 and December 31, 2015 are subject to U.S. income taxes on undistributed earnings. The Company's non-U.S. subsidiaries had cash balances aggregating approximately 4% of the Company's total cash and investments, which the Company believes is indicative of its policy of reinvesting the undistributed earnings of its subsidiaries. The Company has a significant federal net operating loss ("NOL") carryforward which could be offset upon a distribution depending on the timing of such distribution. The Company does not believe it is practicable to estimate with reasonable accuracy the hypothetical amount of the unrecognized deferred tax liability on its undistributed foreign earnings given the large number of tax jurisdictions involved and the many factors and assumptions required to estimate the amount of the U.S. federal income tax on the undistributed earnings after reduction for the available foreign tax credits.

The Company determines whether it is more likely than not that a tax position will be sustained upon examination. If it is not more likely than not that a position will be sustained, no amount of the benefit attributable to the position is recognized. The tax benefit to be recognized of any tax position that meets the more likely than not recognition threshold is calculated as the largest amount that is more than 50% likely of being realized upon resolution of the contingency. The Company accounts for interest and penalties related to uncertain tax positions as part of its provision for income taxes.

***Recent Accounting Pronouncements***

In January 2017, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2017-04, which simplifies the accounting for goodwill impairments by eliminating step two from the goodwill impairment test. Instead, if the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. ASU 2017-04 also clarifies the requirements for excluding and allocating foreign currency translation adjustments to reporting units related to an entity's testing of reporting units for goodwill impairment, clarifies that an entity should consider income tax effects from any tax

SONUS NETWORKS, INC.

Notes to Consolidated Financial Statements (Continued)

deductible goodwill on the carrying amount of the reporting unit when measuring the goodwill impairment loss, if applicable. ASU 2017-04 is effective for the Company beginning January 1, 2020 for both interim and annual reporting periods, with early adoption permitted. The Company is currently assessing the potential impact of the adoption of ASC 2017-04 on its consolidated financial statements.

In October 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-16 ("ASU 2016-16"), which removes the prohibition in Accounting Standards Codification ("ASC") 740, *Income Taxes*, against the immediate recognition of the current and deferred income tax effects of intra-entity transfers of assets other than inventory. ASU 2016-16 is intended to reduce the complexity of GAAP and diversity in practice related to the tax consequences of certain types of intra-entity asset transfers, particularly those involving IP. ASU 2016-16 is effective for the Company beginning January 1, 2019 for both interim and annual reporting periods. The Company does not believe that the adoption of this standard will have a material impact on its consolidated financial statements.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments* ("ASU 2016-15"), which amends the guidance in ASC 230 on the classification of certain cash receipts and payments in the statement of cash flows. The primary purpose of ASU 2016-15 is to reduce the diversity in practice that has resulted from the lack of consistent principles on this topic. ASU 2016-15 adds or clarifies guidance on eight cash flow issues, including debt prepayment or debt extinguishment costs, settlement of zero-coupon debt instruments or certain other debt instruments, contingent consideration payments made after a business combination, proceeds from the settlement of insurance claims, proceeds from the settlement of corporate-owned life insurance policies, distributions received from equity method investees, beneficial interests in securitization transactions and separately identifiable cash flows and application of the predominance principle. ASU 2016-15 is effective for the Company beginning January 1, 2018 for both interim and annual reporting periods, with early adoption permitted. Entities must apply the guidance retrospectively to all periods presented but may apply it prospectively from the earliest date practicable if retrospective application would be impracticable. The Company does not expect that the adoption of ASU 2016-13 will have a material impact on its consolidated financial statements.

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"), which adds an impairment model that is based on expected losses rather than incurred losses. Under ASU 2016-13, an entity recognizes an allowance its estimate of expected credit losses, which the FASB believes will result in more timely recognition of such losses. ASU 2016-13 is effective for the Company beginning January 1, 2020 for both interim and annual reporting periods, with early adoption permitted. The Company does not expect that the adoption of ASU 2016-13 will have a material impact on its consolidated financial statements.

In March 2016, the FASB issued ASU 2016-09, *Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting* ("ASU 2016-09"), which simplifies several aspects of the accounting for employee share-based payment transactions, including the accounting for income taxes, forfeitures and statutory tax withholding requirements, as well as classification in the statement of cash flows. ASU 2016-09 was effective for the Company beginning January 1, 2017 for both interim and annual reporting periods. Under ASU 2016-09, the Company will now recognize unrealized excess tax benefits. Due to the Company's full valuation allowance on its federal and state income taxes, the adoption of ASU 2016-09 will not impact the Company's accounting for income taxes. Without the valuation allowance, the Company estimates it would recognize a deferred tax asset approximating \$6 million upon adoption of ASU 2016-09. The Company has elected to continue to apply forfeiture rates to its expense attribution related to stock options, restricted stock awards and restricted stock units, as the Company believes that such continued application results in more accurate expense attribution over the life of these equity grants.

In February 2016, the FASB issued ASU 2016-02, *Leases (Topic 842) Section A - Leases: Amendments to the FASB Accounting Standards Codification* ("ASU 2016-02"), its new standard on accounting for leases. ASU 2016-02 introduces a lessee model that brings most leases onto the balance sheet. The new standard also aligns many of the underlying principles of the new lessor model with those in ASC 606, the FASB's new revenue recognition standard (i.e., those related to evaluating when profit can be recognized). Furthermore, ASU 2016-02 addresses other concerns related to the current leases model. For example, ASU 2016-02 eliminates the current GAAP requirement for an entity to use bright-line tests in determining lease classification. ASU 2016-02 is effective for the Company for both interim and annual periods beginning January 1, 2019. The Company is currently assessing the potential impact of the adoption of ASU 2016-02 on its consolidated financial statements.

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements (Continued)**

In November 2015, the FASB issued ASU 2015-17, *Balance Sheet Classification of Deferred Taxes* ("ASU 2015-17"), which requires entities to present deferred tax assets and deferred tax liabilities as noncurrent in the condensed consolidated balance sheet. Netting of deferred tax assets and deferred tax liabilities is still required under ASU 2015-17. ASU 2015-17 is effective for the Company for its annual report for the year ending December 31, 2018 and for interim period reporting beginning January 1, 2019, with early adoption permitted. The Company elected to early-adopt ASU 2015-17 prospectively and accordingly, reclassified its net current deferred tax asset totaling \$1.0 million to its noncurrent net deferred tax asset as of December 31, 2015. No prior periods were retrospectively adjusted. The early adoption of ASU 2015-17 did not have a material impact on the Company's consolidated financial statements.

In September 2015, the FASB issued ASU 2015-16, *Simplifying the Accounting for Measurement-Period Adjustments* ("ASU 2015-16"), which eliminates the requirement to restate prior periods to reflect adjustments made to provisional amounts recognized in a business combination. Under ASU 2015-16, an acquirer must recognize adjustments to provisional amounts that are identified during the measurement period in the reporting period in which the adjustment amounts are determined, rather than retrospectively, as had previously been required. ASU 2015-16 also requires acquirers to present separately on the face of the income statement, or disclose in the notes, the portion of the amount recorded in current period earnings by line item that would have been recorded in previous reporting periods if the adjustment to the provisional amounts had been recognized as of the acquisition date. ASU 2015-16 was effective for the Company as of January 1, 2016. The adoption of ASU 2015-16 did not have a material impact on the Company's consolidated financial statements.

In July 2015, the FASB issued ASU 2015-11, *Simplifying the Measurement of Inventory* ("ASU 2015-11"), which simplifies the measurement of inventory by requiring entities to measure most inventory at the lower of cost and net realizable value, replacing the previous requirement to measure most inventory at the lower of cost or market. ASU 2015-11 does not apply to inventories that are measured by using either the last-in, first-out method or the retail inventory method. ASU 2015-11 was effective for the Company for both interim and annual reporting periods beginning January 1, 2017. The adoption of ASU 2015-11 is not expected to have a material impact on the Company's consolidated financial statements.

In August 2014, the FASB issued ASU 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern* ("ASU 2014-15"), which provides guidelines for determining when and how to disclose going concern uncertainties in the financial statements. The new standard requires management to perform interim and annual assessments of an entity's ability to continue as a going concern within one year of the date the financial statements are issued. An entity must provide certain disclosures if conditions or events raise substantial doubt about the entity's ability to continue as a going concern. ASU 2014-15 was effective for the Company for annual periods beginning January 1, 2017, and interim periods thereafter, with early adoption permitted. The adoption of ASU 2014-15 is not expected to have a material impact on the Company's consolidated financial statements.

In June 2014, the FASB issued ASU 2014-12, *Compensation - Stock Compensation (Topic 718): Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period (a consensus of the FASB Emerging Issues Task Force)* ("ASU 2014-12"). ASU 2014-12 clarifies that entities should treat performance targets that can be met after the requisite service period of a share-based payment award as performance conditions that affect vesting. Therefore, an entity would not record compensation expense (measured as of the grant date without taking into account the effect of the performance target) related to an award for which transfer to the employee is contingent on the entity's satisfaction of a performance target until it becomes probable that the performance target will be met. ASU 2014-12 does not contain any new disclosure requirements. ASU 2014-12 was effective for the Company as of January 1, 2016. The adoption of ASU 2014-12 did not have a material impact on the Company's consolidated financial statements.

In May 2014, the FASB issued ASU 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"), its final standard on revenue from contracts with customers. ASU 2014-09 outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. The core principle of the revenue model is that an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. In applying the revenue model to contracts within its scope, an entity identifies the contract(s) with a customer, identifies the performance obligations in the contract, determines the transaction price, allocates the transaction price to the performance obligations in the contract and recognizes revenue when (or as) the entity satisfies a performance obligation. ASU 2014-09 applies to all contracts with customers that are within the scope of

**SONUS NETWORKS, INC.****Notes to Consolidated Financial Statements (Continued)**

other topics in the FASB ASC. Certain of ASU 2014-09's provisions also apply to transfers of nonfinancial assets, including in-substance nonfinancial assets that are not an output of an entity's ordinary activities (i.e., property, plant and equipment; real estate; or intangible assets). Existing accounting guidance applicable to these transfers has been amended or superseded. In August 2015, the FASB issued ASU 2015-14, *Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date* ("ASU 2015-14"), which defers the original effective date of interim and annual reporting periods by one year. As a result, the Company will not be required to apply the new revenue standard until annual reporting periods beginning after December 15, 2017. In March 2016, the FASB issued ASU 2016-08, *Principal Versus Agent Considerations (Reporting Revenue Gross Versus Net)* ("ASU 2016-08") to clarify certain aspects of the principal-versus-agent guidance in its new revenue recognition standard in response to feedback received from the FASB-International Accounting Standards Board joint revenue recognition transition resource group. ASU 2016-08 clarifies the implementation guidance on principal-versus-agent considerations regarding how an entity determines whether it is a principal or an agent for each specified good or service promised to the customer and how an entity determines the nature of each specified good or service. ASU 2016-08 also provides clarification regarding the application of the principal-versus-agent guidance. In April 2016, the FASB issued ASU 2016-10, *Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing* ("ASU 2016-10"), which amends certain aspects of the guidance in ASU 2014-09 on identifying performance obligations, including immaterial promised goods or services, shipping and handling activities and identifying when promises represent performance obligations; and licensing implementation guidance, including determining the nature of an entity's promise in granting a license, sales-based and usage-based royalties, restrictions of time, geographical location and use, and renewals of licenses that provide a right to use IP. In May 2016, the FASB issued ASU 2016-11, *Revenue Recognition (Topic 605) and Derivatives and Hedging (Topic 815)* ("ASU 2016-11"), which rescinds certain SEC guidance from the Codification in response to announcements made by the SEC staff at the Emerging Issues Task Force's March 3, 2016 meeting, and which supersedes certain SEC observer comments on the topics of revenue and expense recognition for freight services in process, accounting for shipping and handling fees and costs, accounting for consideration given by a vendor to a customer and accounting for gas-balancing arrangements upon the adoption of ASU 2014-09. In May 2016, the FASB issued ASU 2016-12, *Revenue from Contracts with Customers (Topic 606)* ("ASU 2016-12"), which amends certain aspects of ASU 2014-09, including regarding collectability, the presentation of sales tax and other similar taxes collected from customers, non-cash consideration, contract modifications and completed contracts at transition. ASU 2016-08, ASU 2016-10, ASU 2016-11 and ASU 2016-12 are effective at the same time as ASU 2014-09 (as amended by ASU 2015-14). The Company continues to assess the potential impact of the adoption of these ASUs on its consolidated financial statements, and currently believes that such adoption will, in general, accelerate the recognition of revenue (i.e., more revenue will be recognized upon delivery than is currently recognized ratably or upon payment) compared to the current standards in effect, in particular, sales of software-only products and sales to customers currently accounted for on a cash basis. The Company currently expects to adopt these ASUs using the modified retrospective option.

**(3) BUSINESS ACQUISITIONS****Taqua, LLC**

On the Taqua Acquisition Date, the Company acquired Taqua, a privately-held company. Taqua enables the transformation of software-based service provider networks to deliver next-generation voice, video and messaging services, including VoIP, VoWiFi and Voice over Long-Term Evolution ("VoLTE"). The Company believes that the acquisition of Taqua will, among other things, accelerate the Company's mobile strategy by adding a Virtualized Mobile Core ("VMC") Platform and an IP Multimedia Subsystem ("IMS") Service Core and expand the Company's fixed portfolio by adding a Class 5 Softswitch (the T7000) for network transformation projects and a Multimedia Controller used in IP Peering applications (the T7100), both of which were complementary to Sonus' product offerings. In consideration for the acquisition of Taqua, Sonus paid \$19.9 million in cash to the sellers on the Taqua Acquisition Date, net of cash acquired. The Company also entered into an Earn-Out Agreement, dated as of September 26, 2016, with Taqua Holdings, LLC and Jeffrey L. Brawner, the seller representative in the transaction, under which there is the potential for additional cash payments of up to \$65 million in the aggregate to the sellers if certain annual revenue thresholds are exceeded as measured annually through 2020. The Company had initially recorded \$10.0 million of contingent consideration as of the Taqua Acquisition Date, with the estimate based on historical sales and probability weighted cash flows related to forecasted sales. Because there are unobservable inputs to the valuation methodology that are significant to the measurement of its fair value, namely, forecasted sales, the Company had categorized the earn-out at Level 3 within the fair value hierarchy. During the fourth quarter of 2016, the Company reassessed the historical and updated forecasted sales and accordingly, reversed the previous estimated contingent consideration such that as of December 31, 2016,

## SONUS NETWORKS, INC.

## Notes to Consolidated Financial Statements (Continued)

no incremental contingent consideration was recorded.

The transaction has been accounted for as a business combination and the financial results of Taqua have been included in the Company's consolidated financial statements for the period subsequent to its acquisition.

As of December 31, 2016, the valuation of acquired assets, identifiable intangible assets and certain accrued liabilities is preliminary. The Company is still in the process of investigating the facts and circumstances existing as of the Taqua Acquisition Date in order to finalize its valuation, particularly, short-term assets and liabilities, including accounts receivable, inventory, accrued expenses and intangible assets. During the fourth quarter of 2016, the Company recorded changes to the initial preliminary purchase price allocation. The primary adjustments recorded in the fourth quarter of 2016 were the aforementioned reversal of the \$10.0 million of previously recorded contingent consideration, a reduction of \$12.1 million to the developed technology intangible asset and an increase of \$5.5 million to the customer relationship intangible asset. These adjustments, as well as other immaterial adjustments to other balance sheet accounts, resulted in a net reduction to goodwill of \$2.7 million. Based on this updated preliminary purchase price allocation, the Company recorded \$9.1 million of goodwill, which is primarily due to expected synergies between the combined companies and expanded market opportunities resulting from the expanded product offering portfolio. The goodwill is deductible for tax purposes. The Company expects to finalize the valuation of the assets acquired and liabilities assumed in the first half of 2017.

A summary of the preliminary allocation of the purchase consideration for Taqua as of December 31, 2016 is as follows (in thousands):

<b>Fair value of consideration transferred:</b>	
Cash, net of cash acquired	\$ 19,919
<b>Fair value of assets acquired and liabilities assumed:</b>	
Current assets	3,347
Property and equipment	1,478
Intangible assets:	
Developed technology	2,100
Customer relationships	9,510
Goodwill	9,083
Other noncurrent assets	23
Current liabilities	(5,039)
Long-term liabilities	(583)
	<u>\$ 19,919</u>

The valuation of the acquired intangible assets is inherently subjective and relies on significant unobservable inputs. The Company used an income approach to value the acquired developed technology and customer relationship intangible assets. The preliminary valuation for each of these intangible assets was based on estimated projections of expected cash flows to be generated by the assets, discounted to the present value at discount rates commensurate with perceived risk. The valuation assumptions take into consideration the Company's estimates of technology attrition and revenue growth projections. The Company is amortizing the identifiable intangible assets in relation to the expected cash flows from the individual intangible assets over their respective useful lives (see Note 9).

The Company's revenue for the year ended December 31, 2016 included \$1.9 million of revenue attributable to Taqua since the Taqua Acquisition Date. The inclusion of Taqua's operations for the period from the Taqua Acquisition Date to December 31, 2016 in the Company's financial results for the year ended December 31, 2016 increased the Company's loss by \$4.7 million. The Company has not provided pro forma financial information, as the historical amounts are not significant to the Company's consolidated financial statements.

**SDN Business of Treq Labs, Inc.**

On the Treq Asset Acquisition Date, the Company acquired from Treq the SDN Business. The SDN Business provides

## SONUS NETWORKS, INC.

## Notes to Consolidated Financial Statements (Continued)

solutions that optimize networks for voice, video and UC for both enterprise and service provider customers. The Company believes that the acquisition of the SDN Business has helped to accelerate Sonus' delivery of its SDN strategy. In consideration for the acquisition of the SDN Business, Sonus paid \$10.1 million in cash on the Treq Asset Acquisition Date, and an additional consideration payment of \$750,000 on each of July 2, 2015 and January 4, 2016. The Company also entered into an Earn-Out Agreement, dated as of January 2, 2015, with Treq and Karl F. May, the seller representative in the transaction (the "Earn-Out Agreement"), under which the Company agreed to issue up to an aggregate of 1.3 million shares of common stock over a three-year period subsequent to the Treq Asset Acquisition Date if aggregate revenue thresholds of at least \$60 million are achieved by the SDN Business during that period, and up to an aggregate of an additional 2.2 million shares of common stock ( 3.5 million shares in total) if aggregate revenue thresholds of at least \$150 million are achieved by the SDN Business during that period. If the initial revenue thresholds are not met, no shares will be issued. Based on historical and forecasted sales, no incremental contingent consideration was recorded either initially as of the Treq Asset Acquisition Date or through December 31, 2016 . Any shares issued pursuant to the Earn-Out Agreement will be issued in reliance on the exemption from registration available under Section 4(a)(2) of the Securities Act of 1933, as amended (the "Securities Act"), and will be subsequently registered for resale under the Securities Act by the Company.

The transaction has been accounted for as a business combination. The Company finalized its valuation of the identifiable intangible assets in the second quarter of fiscal 2015. Based on the purchase price allocation, the Company recorded \$1.0 million of goodwill, primarily due to expected synergies between the combined companies and expanded market opportunities. The goodwill is deductible for tax purposes.

A summary of the allocation of the purchase consideration for the SDN Business is as follows (in thousands):

<b>Fair value of consideration transferred:</b>	
Cash, net of cash acquired	\$ 11,647
<b>Fair value of assets acquired:</b>	
Intangible assets:	
In-process research and development	\$ 9,100
Developed technology	1,500
Goodwill	1,047
	<u>\$ 11,647</u>

The valuation of the acquired intangible assets is inherently subjective and relies on significant unobservable inputs. The Company used an income approach to value the acquired in-process research and development and developed technology intangible assets. The valuation for each of these intangible assets was based on estimated projections of expected cash flows to be generated by the assets, discounted to the present value at discount rates commensurate with perceived risk. The valuation assumptions take into consideration the Company's estimates of technology attrition and revenue growth projections. In the three months ended September 25, 2015, the Company reclassified \$7.5 million of its in-process research and development intangible assets to its developed technology intangible assets. During the three months ended March 31, 2016, the Company reclassified the remaining \$1.6 million of in-process research and development intangible assets to its developed technology intangible assets. These amounts were reclassified from in-process research and development intangible assets to developed technology intangible assets in the periods that the related products became generally available and began to record amortization expense for such developed technology intangible assets. Accordingly, at December 31, 2016, the Company no longer had an in-process research and development intangible asset. The Company is amortizing the identifiable intangible assets in relation to the expected cash flows from the individual intangible assets over their respective useful lives (see Note 9 ).

The Company has not disclosed the amount of revenue or earnings of the SDN Business since the SDN Business Acquisition Date or pro forma financial information, as these amounts are not significant to the Company's consolidated financial statements.

**Performance Technologies, Incorporated**

On the PT Acquisition Date, the Company acquired all of the outstanding common stock of PT for cash consideration of \$35.0 million , or \$3.75 per share of PT common stock. This acquisition has enabled Sonus to expand its solutions portfolio with signaling technology and acquire expertise to enable mobile service providers to offer new real-time multimedia services

**SONUS NETWORKS, INC.****Notes to Consolidated Financial Statements (Continued)**

through their mobile infrastructure. Delivering these services across the LTE next-generation mobile networks will require adoption of the next-generation signaling technology known in the industry as Diameter Signal. The acquisition of PT has allowed Sonus to diversify its product portfolio with an integrated, virtualized Diameter and SIP-based solution and deliver strategic value to service providers seeking to offer new multimedia services through mobile, cloud-based, real-time communications.

The transaction has been accounted for as a business combination and the financial results of PT have been included in the Company's consolidated financial statements starting on the PT Acquisition Date.

The Company finalized the valuation of acquired assets, identifiable intangible assets, uncertain tax liabilities and certain accrued liabilities in the fourth quarter of 2014. The Company recorded \$8.8 million of goodwill, primarily due to expected synergies between the combined companies and expanded market opportunities. The goodwill is not deductible for tax purposes.

A summary of the allocation of the purchase consideration for PT is as follows (in thousands):

<b>Fair value of consideration transferred:</b>	
Cash, net of cash acquired	\$ 35,022
Fair value of equity awards assumed (see Note 15)	1,671
Fair value of total consideration	<u>\$ 36,693</u>
<b>Fair value of assets acquired and liabilities assumed:</b>	
Marketable securities	\$ 2,315
Other current assets	9,337
Property and equipment	2,251
Intangible assets	17,100
Goodwill	8,781
Current liabilities	(2,762)
Other long-term liabilities	(329)
	<u>\$ 36,693</u>

The valuation of the acquired intangible assets is inherently subjective and relies on significant unobservable inputs. The Company used an income approach to value the acquired developed technology and customer relationships intangible assets. The valuation for each of these intangible assets was based on estimated projections of expected cash flows to be generated by the assets, discounted to the present value at discount rates commensurate with perceived risk. The valuation assumptions take into consideration the Company's estimates of contract renewal, technology attrition and revenue growth projections. The Company is amortizing the identifiable intangible assets in relation to the expected cash flows from the individual intangible assets over their respective useful lives. These intangible assets have a weighted average useful life of 6.8 years (see Note 9).

The identifiable intangible assets recorded in connection with the PT acquisition are as follows (in thousands):

Developed technology	\$ 13,200
Customer relationships	3,900
	<u>\$ 17,100</u>

The Company recognized revenue aggregating \$14.6 million in the period from the PT Acquisition Date through December 31, 2014. The Company has not disclosed the amount of earnings of PT since the PT Acquisition Date or pro forma financial information, as these amounts are not significant to the Company's consolidated financial statements.

**Sale of Multi-Protocol Server Business**

On June 20, 2014 (the "MPS Sale Date"), the Company sold its PT Multi-Protocol Server ("MPS") business for \$2.0 million, comprised of \$0.2 million of inventory, \$0.1 million of fixed assets, \$0.2 million of deferred revenue and \$1.9 million of PT goodwill allocable to the MPS business. The Company had acquired the MPS business in connection with the acquisition of PT. The Company incurred \$0.4 million of transaction costs, which are included as a component of General and

## SONUS NETWORKS, INC.

## Notes to Consolidated Financial Statements (Continued)

administrative expenses. The results of operations of the MPS business are excluded from the Company's consolidated results for the period subsequent to the MPS Sale Date.

**Acquisition-Related Expenses**

Acquisition-related expenses include those expenses related to acquisitions that would otherwise not have been incurred by the Company. These expenses include professional and services fees, such as legal, audit, consulting, paying agent and other fees, and expenses related to cash payments to certain former executives of the acquired businesses under their respective change of control agreements. The amount recorded in the year ended December 31, 2016 relates to professional fees in connection with the acquisition of Taqua. The amount recorded in the year ended December 31, 2015 relates to professional fees in connection with the acquisition of the SDN Business. Of the amount recorded in the year ended December 31, 2014, \$1.3 million relates to the acquisition of PT, comprised of \$1.0 million for professional and services fees and \$0.3 million for change of control agreements, and \$0.3 million relates to professional fees in connection with acquisition of the SDN Business.

The components of acquisition-related costs incurred in the years ended December 31, 2016, 2015 and 2014 are as follows (in thousands):

	Year ended December 31,		
	2016	2015	2014
Professional and services fees	\$ 1,152	\$ 131	\$ 1,309
Change of control agreements	—	—	249
	<u>\$ 1,152</u>	<u>\$ 131</u>	<u>\$ 1,558</u>

**(4) EARNINGS (LOSS) PER SHARE**

Basic earnings (loss) per share is computed by dividing net income (loss) by the weighted average number of shares outstanding during the period. For periods in which the Company reports net income, diluted net income per share is determined by using the weighted average number of common and dilutive common equivalent shares outstanding during the period unless the effect is antidilutive.

The calculations of shares used to compute basic and diluted loss per share are as follows (in thousands):

	Year ended December 31,		
	2016	2015	2014
Weighted average shares outstanding—basic	49,385	49,560	50,245
Potential dilutive common shares	—	—	—
Weighted average shares outstanding—diluted	<u>49,385</u>	<u>49,560</u>	<u>50,245</u>

Options to purchase the Company's common stock, unvested shares of restricted stock, shares underlying unvested performance-based stock grants and shares in connection with future purchases under the Company's Amended and Restated 2000 Employee Stock Purchase Plan, as amended (the "ESPP"), aggregating 8.0 million shares for the year ended December 31, 2016 have not been included in the computation of diluted loss per share because their effect would have been antidilutive. Options to purchase the Company's common stock, unvested shares of restricted stock and unvested performance-based equity awards for which the performance conditions had been satisfied aggregating 8.2 million shares for the year ended December 31, 2015 and 8.0 million shares for the year ended December 31, 2014 have not been included in the computation of diluted loss per share because their effect would have been antidilutive.

**(5) CASH EQUIVALENTS AND INVESTMENTS**

The Company invests in debt and equity instruments, primarily U.S. government-backed, municipal and corporate obligations, which management believes to be high quality (investment grade) credit instruments.

During the year ended December 31, 2016, the Company sold \$1.1 million of its available-for-sale securities that were impacted by the Money Market Reform Act, which became effective October 14, 2016 for institutional money markets, to avoid any negative impact on the Company's institutional money market investments. The Company also sold \$3.8 million of

**SONUS NETWORKS, INC.**
**Notes to Consolidated Financial Statements (Continued)**

its available-for-sale securities during the year ended December 31, 2016. The Company recognized nominal gross gains and losses from the sales of these securities. The Company did not sell any of its available-for-sale securities during the year ended December 31, 2015. During the year ended December 31, 2014, the Company sold \$45.9 million of its available-for-sale securities and realized gross gains aggregating \$46,000, which are included as a component of Other income, net, in the Company's consolidated statement of operations for that period. The Company did not realize any gross losses on these sales.

Investments with continuous unrealized losses for one year or greater at December 31, 2016 were nominal; however, since the Company does not intend to sell these securities and does not believe it will be required to sell any securities before they recover in value, it does not believe these declines are other-than-temporary.

On a quarterly basis, the Company reviews its investments to determine if there have been any events that could create a credit impairment. Based on its reviews, the Company does not believe that any impairment existed with its current holdings at December 31, 2016.

The amortized cost, gross unrealized gains and losses and fair value of the Company's cash equivalents and investments at December 31, 2016 and 2015 were comprised of the following (in thousands):

	December 31, 2016			
	Amortized cost	Unrealized gains	Unrealized losses	Fair value
<i>Cash equivalents</i>	\$ 6,619	\$ —	\$ —	\$ 6,619
<i>Short-term investments</i>				
Municipal obligations	\$ 3,264	\$ —	\$ (3)	\$ 3,261
U.S. government agency notes	16,477	3	(3)	16,477
Corporate debt securities	41,893	4	(45)	41,852
Certificates of deposit	246	—	—	246
	<u>\$ 61,880</u>	<u>\$ 7</u>	<u>\$ (51)</u>	<u>\$ 61,836</u>
<i>Investments</i>				
U.S. government agency notes	\$ 19,473	\$ 3	\$ (39)	\$ 19,437
Corporate debt securities	10,520	—	(44)	10,476
Certificates of deposit	2,458	—	—	2,458
	<u>\$ 32,451</u>	<u>\$ 3</u>	<u>\$ (83)</u>	<u>\$ 32,371</u>
	December 31, 2015			
	Amortized cost	Unrealized gains	Unrealized losses	Fair value
<i>Cash equivalents</i>	\$ 7,122	\$ —	\$ —	\$ 7,122
<i>Short-term investments</i>				
Municipal obligations	\$ 3,910	\$ —	\$ (1)	\$ 3,909
U.S. government agency notes	3,450	—	(2)	3,448
Corporate debt securities	46,736	2	(56)	46,682
Commercial paper	3,994	—	—	3,994
Certificates of deposit	500	—	—	500
	<u>\$ 58,590</u>	<u>\$ 2</u>	<u>\$ (59)</u>	<u>\$ 58,533</u>
<i>Investments</i>				
Municipal obligations	\$ 2,165	\$ —	\$ (4)	\$ 2,161
U.S. government agency notes	1,999	—	(13)	1,986
Corporate debt securities	29,541	2	(85)	29,458
	<u>\$ 33,705</u>	<u>\$ 2</u>	<u>\$ (102)</u>	<u>\$ 33,605</u>

The Company's available-for-sale debt securities that are classified as Investments in the consolidated balance sheet mature after one year but within two years or less from the balance sheet date.

SONUS NETWORKS, INC.

Notes to Consolidated Financial Statements (Continued)

**Fair Value Hierarchy**

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. As such, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or a liability. The three-tier fair value hierarchy is based on the level of independent, objective evidence surrounding the inputs used to measure fair value. A financial instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is as follows:

*Level 1.* Level 1 applies to assets or liabilities for which there are quoted prices in active markets for identical assets or liabilities.

*Level 2.* Level 2 applies to assets or liabilities for which there are inputs that are directly or indirectly observable in the marketplace, such as quoted prices for similar assets or liabilities in active markets or quoted prices for identical assets or liabilities in markets with insufficient volume or infrequent transactions (less active markets).

*Level 3.* Level 3 applies to assets or liabilities for which there are unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of the assets or liabilities.

The following table shows the fair value of the Company's financial assets at December 31, 2016 and 2015. These financial assets are comprised of the Company's available-for-sale debt securities and reported under the captions Cash and cash equivalents, Short-term investments and Investments in the consolidated balance sheets (in thousands):

	Total carrying value at December 31, 2016	Fair value measurements at December 31, 2016 using:		
		Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
<i>Cash equivalents</i>	\$ 6,619	\$ 6,619	\$ —	\$ —
<i>Short-term investments</i>				
Municipal obligations	\$ 3,261	\$ —	\$ 3,261	\$ —
U.S. government agency notes	16,477	—	16,477	—
Corporate debt securities	41,852	—	41,852	—
Certificates of deposit	246	—	246	—
	\$ 61,836	\$ —	\$ 61,836	\$ —
<i>Investments</i>				
U.S. government agency notes	\$ 19,437	\$ —	\$ 19,437	\$ —
Corporate debt securities	10,476	—	10,476	—
Certificates of deposit	2,458	—	2,458	—
	\$ 32,371	\$ —	\$ 32,371	\$ —

**SONUS NETWORKS, INC.**  
**Notes to Consolidated Financial Statements (Continued)**

	Total carrying value at December 31, 2015	Fair value measurements at December 31, 2015 using:		
		Quoted prices in active markets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
<i>Cash equivalents</i>	\$ 7,122	\$ 7,122	\$ —	\$ —
<i>Short-term investments</i>				
Municipal obligations	\$ 3,909	\$ —	\$ 3,909	\$ —
U.S. government agency notes	3,448	—	3,448	—
Corporate debt securities	46,682	—	46,682	—
Commercial paper	3,994	—	3,994	—
Certificates of deposit	500	—	500	—
	<u>\$ 58,533</u>	<u>\$ —</u>	<u>\$ 58,533</u>	<u>\$ —</u>
<i>Investments</i>				
Municipal obligations	\$ 2,161	\$ —	\$ 2,161	\$ —
U.S. government agency notes	1,986	—	1,986	—
Corporate debt securities	29,458	—	29,458	—
	<u>\$ 33,605</u>	<u>\$ —</u>	<u>\$ 33,605</u>	<u>\$ —</u>

The Company's marketable securities and investments have been valued with the assistance of valuations provided by third-party pricing services, as derived from such services' pricing models. Inputs to the models may include, but are not limited to, reported trades, executable bid and asked prices, broker/dealer quotations, prices or yields of securities with similar characteristics, benchmark curves or information pertaining to the issuer, as well as industry and economic events. The pricing services may use a matrix approach, which considers information regarding securities with similar characteristics to determine the valuation for a security. The Company is ultimately responsible for the consolidated financial statements and underlying estimates. Accordingly, the Company assesses the reasonableness of the valuations provided by the third-party pricing services by reviewing actual trade data, broker/dealer quotes and other similar data, which are obtained from quoted market prices or other sources.

**(6) ACCOUNTS RECEIVABLE, NET**

Accounts receivable, net, consisted of the following (in thousands):

	December 31,	
	2016	2015
Accounts receivable, gross	\$ 53,872	\$ 51,543
Allowance for doubtful accounts	(10)	(10)
Accounts receivable, net	<u>\$ 53,862</u>	<u>\$ 51,533</u>

The activity in the Company's allowance for doubtful accounts was as follows (in thousands):

Year ended December 31,	Balance at beginning of year	Charges to expense	Write-offs	Balance at end of year
2016	\$ 10	\$ 10	\$ (10)	\$ 10
2015	\$ 58	\$ 17	\$ (65)	\$ 10
2014	\$ 157	\$ 92	\$ (191)	\$ 58

**SONUS NETWORKS, INC.**  
**Notes to Consolidated Financial Statements (Continued)**

**(7) INVENTORY**

Inventory consisted of the following (in thousands):

	December 31,	
	2016	2015
On-hand final assemblies and finished goods inventories	\$ 15,346	\$ 17,136
Deferred cost of goods sold	4,237	5,975
	19,583	23,111
Less current portion	(18,283)	(23,111)
Noncurrent portion (included in Other assets)	\$ 1,300	\$ —

**(8) PROPERTY AND EQUIPMENT**

Property and equipment consisted of the following (in thousands):

	Useful Life	December 31,	
		2016	2015
Equipment	3 years	\$ 63,622	\$ 63,667
Software	2-3 years	19,378	17,463
Furniture and fixtures	3-5 years	698	675
Leasehold improvements	Shorter of the life of the lease or estimated useful life (1-5 years)	11,757	11,615
		95,455	93,420
Less accumulated depreciation and amortization		(83,714)	(79,800)
Property and equipment, net		\$ 11,741	\$ 13,620

The Company recorded depreciation and amortization expense related to property and equipment of \$8.0 million for the year ended December 31, 2016, \$12.0 million for the year ended December 31, 2015 and \$11.5 million for the year ended December 31, 2014. During each of the years ended December 31, 2016 and 2015, the Company disposed of certain property and equipment that was fully depreciated at the time of disposal, which resulted in reductions in both Cost and Accumulated depreciation.

Property and equipment under capital leases included in the amounts above were as follows (in thousands):

	December 31,	
	2016	2015
Cost	\$ 173	\$ 137
Less accumulated depreciation	(68)	(9)
Property and equipment under capital leases, net	\$ 105	\$ 128

The net book values of the Company's property and equipment by geographic area were as follows (in thousands):

	December 31,	
	2016	2015
United States	\$ 7,939	\$ 9,145
Asia/Pacific	2,963	3,098
Europe	593	818
Other	246	559
	\$ 11,741	\$ 13,620

**SONUS NETWORKS, INC.**  
**Notes to Consolidated Financial Statements (Continued)**

**(9) INTANGIBLE ASSETS AND GOODWILL**

The Company's intangible assets at December 31, 2016 and 2015 consisted of the following (in thousands):

<u>December 31, 2016</u>	Weighted average amortization period (years)	Cost	Accumulated amortization	Net carrying value
Developed technology	6.54	\$ 34,980	\$ 16,453	\$ 18,527
Customer relationships	5.78	19,540	7,870	11,670
Internal use software	3.00	730	730	—
	6.23	<u>\$ 55,250</u>	<u>\$ 25,053</u>	<u>\$ 30,197</u>

<u>December 31, 2015</u>	Weighted average amortization period (years)	Cost	Accumulated amortization	Net carrying value
Intellectual property	*	\$ 1,600	\$ —	\$ 1,600
Developed technology	6.42	31,280	10,415	20,865
Customer relationships	5.57	10,030	6,408	3,622
Internal use software	3.00	730	730	—
	6.19	<u>\$ 43,640</u>	<u>\$ 17,553</u>	<u>\$ 26,087</u>

\* An in-process research and development intangible asset has an indefinite life until the product is generally available, generally at which time such asset is reclassified to developed technology.

Amortization expense for intangible assets for the years ended December 31, 2016, 2015 and 2014 was as follows (in thousands):

	Year ended December 31,			Statement of operations classification
	2016	2015	2014	
Developed technology	\$ 6,038	\$ 5,222	\$ 2,464	Cost of revenue - product
Customer relationships	1,462	1,723	1,889	Sales and marketing
Internal use software	—	162	244	Cost of revenue - product
	<u>\$ 7,500</u>	<u>\$ 7,107</u>	<u>\$ 4,597</u>	

Estimated future amortization expense for the Company's intangible assets at December 31, 2016 was as follows (in thousands):

<u>Years ending December 31,</u>	
2017	\$ 9,139
2018	6,615
2019	5,608
2020	4,166
2021	2,395
Thereafter	<u>2,274</u>
	<u>\$ 30,197</u>

Goodwill is recorded when the consideration for an acquisition exceeds the fair value of net tangible and identifiable intangible assets acquired. The changes in the carrying value of the Company's goodwill in the years ended December 31, 2016 and 2015 were as follows (in thousands):

**SONUS NETWORKS, INC.**  
**Notes to Consolidated Financial Statements (Continued)**

	Year ended December 31,	
	2016	2015
Balance at January 1		
Goodwill	\$ 43,416	\$ 42,369
Accumulated impairment losses	(3,106)	(3,106)
	40,310	39,263
Acquisition of Taqua	9,083	—
Acquisition of SDN Business	—	1,047
Balance at December 31	\$ 49,393	\$ 40,310

The components of the Company's goodwill balances at December 31, 2016 and 2015 were as follows:

	December 31,	
	2016	2015
Goodwill	\$ 52,499	\$ 43,416
Accumulated impairment losses	(3,106)	(3,106)
	\$ 49,393	\$ 40,310

**(10) ACCRUED EXPENSES**

Accrued expenses consisted of the following (in thousands):

	December 31,	
	2016	2015
Employee compensation and related costs	\$ 15,879	\$ 22,180
Other	10,007	9,783
	\$ 25,886	\$ 31,963

**(11) RESTRUCTURING ACCRUALS**

The Company has committed to streamlining operations and reducing operating costs by closing and consolidating certain facilities and reducing its worldwide workforce. Accordingly, the Company recorded restructuring expense aggregating \$2.7 million in the year ended December 31, 2016, \$2.1 million in the year ended December 31, 2015 and \$5.6 million in the year ended December 31, 2014.

**2016 Restructuring Initiative**

In July 2016, the Company announced a program to further accelerate its investment in new technologies as the communications industry migrates to a cloud-based architecture (the "2016 Restructuring Initiative"). The Company expects to record restructuring expense aggregating between \$3 million and \$4 million in connection with this action, resulting in expected annual savings of approximately \$6 million to \$8 million. The Company recorded \$1.5 million of expense in the year ended December 31, 2016 and expects to record the remaining expense by the end of the second quarter of 2017. The Company intends to utilize the majority of the savings to shift headcount toward new strategic initiatives, such as new products and an expanded go-to-market footprint in selected geographies and discrete vertical markets. A summary of the 2016 Restructuring Initiative accrual activity for the year ended December 31, 2016 is as follows:

	Balance at January 1, 2016	Initiatives charged to expense	Adjustments for changes in estimate	Cash payments	Balance at December 31, 2016
Severance	\$ —	\$ 1,484	\$ —	\$ (987)	\$ 497

SONUS NETWORKS, INC.

Notes to Consolidated Financial Statements (Continued)

The Company expects that the amounts accrued under the 2016 Restructuring Initiative will be paid by end of the fourth quarter of 2017.

**Taqua Restructuring Initiative**

In connection with the acquisition of Taqua, the Company's management approved a restructuring plan in the third quarter of 2016 to eliminate certain redundant positions within the combined companies. On October 24, 2016, the Audit Committee of the Board of Directors of the Company approved a broader Taqua restructuring plan related to headcount and redundant facilities (both restructuring plans, the "Taqua Restructuring Initiative"). In connection with this initiative, the Company recorded \$1.2 million in the year ended December 31, 2016. The Company anticipates it will record additional future expense in connection with this initiative for headcount and redundant facilities aggregating approximately \$1 million. A summary of the Taqua Restructuring Initiative accrual activity for the year ended December 31, 2016 is as follows:

	Balance at January 1, 2016	Initiatives charged to expense	Adjustments for changes in estimate	Cash payments	Balance at December 31, 2016
Severance	\$ —	\$ 971	\$ —	\$ (587)	\$ 384
Facilities	—	218	—	—	218
	<u>\$ —</u>	<u>\$ 1,189</u>	<u>\$ —</u>	<u>\$ (587)</u>	<u>\$ 602</u>

The Company expects that the amounts accrued under the Taqua Restructuring Initiative will be paid by the end of the second quarter of 2017.

**2015 Restructuring Initiative**

To better align the Company's cost structure to its then-current revenue expectations, in April 2015, the Company announced a cost reduction review. As part of this review, on April 16, 2015, the Company initiated a restructuring plan to reduce its workforce by approximately 150 positions, or 12.5% of its worldwide workforce (the "2015 Restructuring Initiative"). In connection with the 2015 Restructuring Initiative, the Company recorded \$3.8 million of restructuring expense for severance and related costs in the year ended December 31, 2015. The Company recorded \$67,000 in the year ended December 31, 2016 to adjust the amount expected to ultimately be paid for severance. Summaries of the 2015 Restructuring Initiative accrual for the years ended December 31, 2016 and 2015 are as follows (in thousands):

	Balance at January 1, 2016	Initiatives charged to expense	Adjustments for changes in estimate	Cash payments	Balance at December 31, 2016
Severance	\$ 749	\$ —	\$ 67	\$ (648)	\$ 168

	Balance at January 1, 2015	Initiatives charged to expense	Adjustments for changes in estimate	Cash payments	Balance at December 31, 2015
Severance	\$ —	\$ 3,804	\$ —	\$ (3,055)	\$ 749

The Company expects that the remaining amount accrued under the 2015 Restructuring Initiative will be paid by the end of 2017.

**2012 Restructuring Initiative**

In August 2012, the Company announced that it had committed to a restructuring initiative to streamline operations and reduce operating costs by closing and consolidating certain facilities and reducing its worldwide workforce (the "2012 Restructuring Initiative"). The Company regularly reviews its restructuring accruals against expected cash expenditures to determine if adjustments are required. As a result of such reviews, the Company recorded a net credit to restructuring expense

## SONUS NETWORKS, INC.

## Notes to Consolidated Financial Statements (Continued)

aggregating \$1.7 million in the year ended December 31, 2015. This amount is comprised of credits of \$1.4 million in connection with a settlement with the landlord of the Company's Fremont, California facility to vacate the facility without penalty or future payments, \$0.3 million in connection with a settlement with the landlord of the Company's Dulles, Virginia facility for an amount that was lower than had previously been accrued and \$0.1 million in connection with changes in the amounts of severance ultimately paid to certain individuals. These credits were partially offset by \$0.1 million of incremental expense related to vacating the Company's Rochester, New York facility. As of December 31, 2016, the payments related to the 2012 Restructuring Initiative had been completed. A summary of the 2012 Restructuring Initiative accrual activity for the year ended December 31, 2015 is as follows (in thousands):

Year ended December 31, 2015	Balance at January 1, 2015	Initiatives charged to expense	Adjustments for changes in estimate	Cash payments	Balance at December 31, 2015
Severance	\$ 1,682	\$ —	\$ (67)	\$ (1,615)	\$ —
Facilities	3,652	—	(1,589)	(2,063)	—
	<u>\$ 5,334</u>	<u>—</u>	<u>\$ (1,656)</u>	<u>\$ (3,678)</u>	<u>\$ —</u>

**Balance Sheet Classification**

At December 31, 2016, the long-term portion of accrued restructuring was approximately \$62,000 and represented future lease payments on restructured facilities. At December 31, 2015, the Company's accrued restructuring was all classified as current.

**(12) DEBT****Credit Agreement**

The Company entered into a credit agreement by and among the Company, as Borrower, Bank of America, N.A. ("Bank of America"), as Administrative Agent, Swing Line Lender and L/C Issuer, and the other lenders from time to time party thereto on June 27, 2014, which agreement was amended by a First Amendment to Credit Agreement on June 26, 2015 (the "Credit Agreement"), which agreement was amended by a First Amendment to Credit Agreement on June 26, 2015 (the "First Amendment") and further amended by a Second Amendment to Credit Agreement on June 13, 2016 (the "Second Amendment" and collectively with the Credit Agreement and the First Amendment, the "Amended Credit Agreement"). Certain terms of the Credit Agreement have been amended by the Second Amendment, including, among other things: (i) an increase of the commitments from \$15 million to \$20 million; (ii) an extension of the maturity date from June 30, 2016 to June 30, 2017; (iii) a reduction to the aggregate amount of cash and cash equivalents that the Loan Parties (as defined below) are required to hold at any time from \$85 million to \$50 million; and (iv) a reduction of the commitment fee on the unused commitments available for borrowing from 0.15% to 0.1125%. The Amended Credit Agreement provides that the Company may select the interest rates under the credit facility from among the following options: (i) the Eurodollar Rate (which is defined as the rate per annum equal to the London Interbank Offered Rate plus 1.5% per annum) for a Eurodollar Rate Loan; and (ii) the highest of (a) the Federal Funds Rate plus 1/2 of 1%, (b) the rate of interest in effect on the borrowing date as publicly announced from time to time by Bank of America as its prime rate, and (c) the monthly Eurodollar Rate plus 1%.

The obligations of the Company under the Amended Credit Agreement are guaranteed by Sonus International, Inc., Sonus Federal, Inc., Taqua, LLC and Network Equipment Technologies, Inc. ("NET") (collectively with the Company, the "Loan Parties") pursuant to a Master Continuing Guaranty and are secured by the assets of the Loan Parties pursuant to a Security and Pledge Agreement.

The Amended Credit Agreement contains affirmative, negative and financial covenants customary for financings of this type. The negative covenants include limitations on liens, indebtedness, fundamental changes, dispositions, restricted payments, investments, transactions with affiliates, certain restrictive agreements and compliance with sanctions laws and regulations. The total revenues of the Loan Parties cannot be less than an aggregate of \$50 million as of the last day of the Loan Parties' fiscal quarter, computed on a fiscal quarterly basis. The credit facility will become due on June 30, 2017, subject to acceleration upon certain specified events of default, including, without limitation, payment defaults, defaults in the

**SONUS NETWORKS, INC.****Notes to Consolidated Financial Statements (Continued)**

performance of affirmative and negative covenants, the inaccuracy of representations or warranties, bankruptcy and insolvency-related defaults, defaults relating to judgments, an ERISA Event (as defined in the Credit Agreement), the failure to pay specified indebtedness and a change of control default.

The Company did not have any amounts outstanding under the Amended Credit Agreement at December 31, 2016 .

**Assumed Debt - NET Acquisition**

In December 2007 , NET issued \$85.0 million of 3 3/4% Convertible Senior Notes due December 15, 2014 (the "2007 Notes") in a private placement, of which \$10.5 million in principal remained outstanding at the NET Acquisition Date, and under which NET remained obligated after the acquisition. The 2007 Notes bore interest at a rate of 3 3/4 % per annum and matured on December 15, 2014 .

The \$2.4 million in aggregate principal underlying the 2007 Notes was paid in full on December 4, 2014 and accordingly, at December 31, 2014, NET's obligations under the 2007 Notes were discharged.

**(13) LONG-TERM LIABILITIES**

Long-term liabilities consisted of the following (in thousands):

	December 31,	
	2016	2015
Capital lease obligations	\$ 124	\$ 131
Deferred rent	1,812	2,606
Restructuring	1,267	749
Other	790	844
	<u>3,993</u>	<u>4,330</u>
Current portion	(2,360)	(1,570)
Long-term liabilities, net of current portion	<u>\$ 1,633</u>	<u>\$ 2,760</u>

**(14) COMMON STOCK REPURCHASES AND UNDERWRITTEN OFFERING****Stock Buyback Program**

On July 29, 2013, the Company announced that its Board of Directors had authorized a stock buyback program to repurchase up to \$100 million of the Company's common stock from time to time on the open market or in privately negotiated transactions. The timing and amount of any shares repurchased will be determined by the Company's management based on its evaluation of market conditions and other factors. The Company may elect to implement a 10b5-1 repurchase program, which would permit shares to be repurchased when the Company might otherwise be precluded from doing so under insider trading laws. The buyback program does not have a fixed expiration date but may be suspended or discontinued at any time. The buyback program is being funded using the Company's working capital.

During the year ended December 31, 2016 , the Company spent \$9.5 million , including transaction fees, to repurchase and retire 1.3 million shares of its common stock under the buyback program. During the year ended December 31, 2015 , the Company spent \$7.9 million , including transaction fees, to repurchase and retire 0.6 million shares of its common stock under the buyback program.

At December 31, 2016 , the Company had \$5.4 million remaining under the stock buyback program for future repurchases.

**Underwritten Offering**

On March 20, 2014, the Company announced the commencement of an underwritten public offering of 7.5 million shares of its common stock on behalf of Galahad Securities Limited and its affiliated entities (collectively, the "Legatum Group"). The underwriter of the offering was granted a 30 -day option to purchase up to 1.125 million additional shares from

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements (Continued)**

the Legatum Group. The Legatum Group received all the proceeds from the underwritten offering; no shares in the underwritten offering were sold by Sonus or any of its officers or directors. Sonus purchased 4.3 million shares of its common stock from the underwriter for \$17.4410 per share, the price equal to the price paid by the underwriter to the Legatum Group in the underwritten offering, for a total of \$75.3 million, including transaction fees of \$0.3 million. This repurchase was not completed under the Company's stock buyback program. Sonus funded the share repurchase with cash on hand. The repurchased shares were retired upon completion of the transaction.

**(15) STOCK-BASED COMPENSATION PLANS**

**Amended and Restated Stock Incentive Plan**

The Company's 2007 Stock Incentive Plan (the "2007 Plan") was approved at, and became effective on the date of, the Company's Annual Meeting of Stockholders on November 12, 2007. The 2007 Plan provides for the award of options to purchase the Company's common stock ("stock options"), stock appreciation rights ("SARs"), restricted stock awards ("RSAs"), restricted stock units ("RSUs"), performance-based stock awards ("PSAs"), PSUs and other stock-based awards to employees, officers, directors (including those directors who are not employees or officers of the Company), consultants and advisors of the Company and its subsidiaries.

At its 2016 Annual Meeting of Stockholders held on June 9, 2016 (the "2016 Annual Meeting"), the Company's stockholders approved (i) changing the name of the 2007 Plan to the Amended and Restated Stock Incentive Plan (the "Stock Plan") and (ii) other amendments to the Stock Plan including, among other things, to:

- Increase the number of shares of the Company's common stock authorized for issuance under the Stock Plan by 800,000 shares;
- Extend the Stock Plan's termination date through June 9, 2026, the tenth anniversary of the 2016 Annual Meeting;
- Revise the rate at which RSAs, RSUs, PSAs and PSUs (collectively, "full value awards") are counted against the shares of common stock available for issuance under the Stock Plan from 1.61 shares for every one share subject to such award to 1.50 shares for every one share subject to such award (the "fungible share pool formula"). Shares of common stock subject to full value awards that were granted under any prior ratio that applied at the time such awards were granted will continue to return to the Stock Plan upon forfeiture of such awards at the respective previous ratio of 1.50, 1.57 and 1.61, as applicable;
- Increase the maximum number of shares of the Company's common stock with respect to which awards may be granted to any participant under the Stock Plan to 1,000,000 shares per calendar year;
- Increase the maximum number of shares of the Company's common stock with respect to which awards may be granted under the Stock Plan to any director who is not an employee of the Company at the time of grant to 100,000 shares per calendar year; and
- Prohibit stock options and SARs granted under the Stock Plan from (i) providing for the payment or accrual of dividend equivalents or (ii) containing any provision entitling the grantee to the automatic grant of additional stock options or SARs, as applicable, in connection with the exercise of the original stock option or SAR, as applicable.

In June 2016, the Compensation Committee of the Company's Board of Directors (the "Compensation Committee") voted to change the standard vesting terms for awards of stock options, RSAs and RSUs granted after June 9, 2016 as follows:

- Stock options will generally vest over a period of three years, with one-third of the stock options vesting on the first anniversary of the grant date and the remaining two-thirds vesting in equal monthly increments thereafter through the third anniversary of the grant date. Stock options had previously generally vested over a period of four years, with one-fourth of the stock options vesting on the first anniversary of the grant date and the remaining three-fourths vesting in equal monthly increments thereafter through the fourth anniversary of the grant date.

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements (Continued)**

- RSAs and RSUs (collectively, the "restricted stock grants") will generally vest over a period of three years, with one-third of the shares underlying the grant vesting on the first anniversary of the grant date and the remaining two-thirds vesting in equal increments semi-annually through the third anniversary of the grant date. Restricted stock grants had previously vested over a period of four years, with one-fourth of the shares underlying the grant vesting on the first anniversary of the grant date and the remaining three-fourths vesting in equal increments semi-annually through the fourth anniversary of the grant date.

The Company neither adjusted nor intends to adjust the vesting schedules of stock options or restricted stock grants awarded prior to June 9, 2016 to reflect the new three-year vesting schedules.

At December 31, 2016, there were 1.7 million shares available for future issuance under the Stock Plan. Under the fungible share pool formula, the number of total shares available for future awards under the Stock Plan would be reduced by the fungible share pool multiple of 1.50. Accordingly, the total number of shares awarded in the future under the Stock Plan could be less than the number of shares currently available for issuance.

**2008 Stock Incentive Plan**

In connection with the acquisition of NET, the Company assumed NET's 2008 Equity Incentive Plan and subsequently renamed it the 2008 Stock Incentive Plan (the "2008 Plan"). In December 2014 all of the unissued shares under the 2008 Plan were transferred to the 2007 Plan (now the Stock Plan). Any outstanding awards under the 2008 Plan that in the future expire, terminate, are canceled, surrendered or forfeited, or are repurchased by the Company will be returned to the Stock Plan. Accordingly, at December 31, 2016, there were no shares available for future issuance under the 2008 Plan.

**2012 Stock Incentive Plan**

In connection with the acquisition of PT, the Company assumed PT's 2012 Amended Performance Technologies, Incorporated Omnibus Incentive Plan, and subsequently renamed it the 2012 Stock Incentive Plan (the "2012 Plan"). In December 2014 all of the unissued shares under the 2012 Plan were transferred to the 2007 Plan (now the Stock Plan). Any outstanding awards under the 2012 Plan that in the future expire, terminate, are canceled, surrendered or forfeited, or are repurchased by the Company will be returned to the Stock Plan. Accordingly, at December 31, 2016, there were no shares available for future issuance under the 2012 Plan.

**Executive Equity Arrangements**

On April 1, 2016, the Company granted an aggregate of 131,250 PSUs with both market and service conditions to six of its executives (the "2016 PSUs"). The terms of the 2016 PSUs are such that up to one-third of the shares subject to the 2016 PSUs will vest, if at all, on each of the first, second and third anniversaries of the date of grant (collectively, the "2016 PSU Vesting Dates") depending on the Company's total shareholder return ("TSR") compared to the TSR of the companies included in the NASDAQ Telecommunications Index for the same fiscal year, measured by the Compensation Committee after each of the 2016, 2017 and 2018 fiscal years, respectively (as used in this paragraph, each, a "Performance Period"). The shares determined to be earned will vest on the anniversary of the grant date following each Performance Period. Shares subject to the 2016 PSUs that fail to be earned will be forfeited. The 2016 PSUs included a market condition that required the use of a Monte Carlo simulation approach to model future stock price movements based upon the risk-free rate of return, the volatility of each entity, and the pair-wise covariance between each entity. These results were then used to calculate the grant date fair values of the 2016 PSUs. Because the 2016 PSUs have market conditions, the Company is required to record expense for the 2016 PSUs through the final 2016 PSU Vesting Date of April 1, 2019, regardless of the number of shares that are ultimately earned.

On March 16, 2015, the Company granted an aggregate of 131,250 PSUs with both market and service conditions to eight of its executives (the "2015 PSUs"). The terms of the 2015 PSUs are such that up to one-third of the shares subject to the 2015 PSUs will vest, if at all, on each of the first, second and third anniversaries of the date of grant (collectively, the "2015 PSU Vesting Dates") depending on the Company's TSR compared to the TSR of the companies included in the NASDAQ Telecommunications Index for the same Performance Period, measured by the Compensation Committee at the end of each of the 2015, 2016 and 2017 fiscal years, respectively (as used in this paragraph, each, a "Performance Period"). The shares determined to be earned will vest on the anniversary of the grant date following each Performance Period. Shares subject to the 2015 PSUs that fail to be earned will be forfeited. The 2015 PSUs included a market condition that required the use of a Monte

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**Notes to Consolidated Financial Statements (Continued)**

Carlo simulation approach to calculate the grant date fair values of the 2015 PSUs. Because the 2015 PSUs have market conditions, the Company is required to record expense for the 2015 PSUs through the final 2015 PSU Vesting Date of March 16, 2018, regardless of the number of shares that are ultimately earned, if any. In February 2016, the Compensation Committee determined that the performance metrics for the 2015 PSUs were not achieved for the 2015 Performance Period. Accordingly, 37,081 shares in the aggregate, representing one-third of the 2015 PSUs held by the then-remaining six executives, were forfeited, and are reported as such in the performance-based units table below.

In connection with the Company's annual incentive program, 22 executives of the Company were given the choice to receive all or half of their fiscal year 2015 bonuses (the "2015 Bonus"), if any were earned, in the form of shares of the Company's common stock (the "2015 Bonus Shares"). Each executive could also elect not to participate in this program and to earn his or her 2015 Bonus, if any, in the form of cash. Under this program, the amount of the 2015 Bonus, if any, for each executive would be determined by the Compensation Committee. The number of shares of the Company's common stock that would be granted to those executives who elected to receive their 2015 Bonus entirely in the form of shares of common stock would be calculated by dividing an amount equal to 1.5 times each executive's 2015 Bonus earned by \$20.55, the closing price of the Company's common stock on January 2, 2015. The number of shares of the Company's common stock that would be granted to those executives who elected to receive one-half of their 2015 Bonus in the form of shares of common stock would be calculated by dividing an amount equal to 1.5 times one-half of each executive's 2015 Bonus earned by \$20.55, with the cash portion equal to 50% of their respective 2015 Bonus earned. Under this program, the 2015 Bonus, if any, would be granted and/or paid on a date concurrent with the timing of the payout of bonuses under the Company-wide incentive bonus program and would be fully vested on the date of grant. Of the eligible executives, 16 elected to receive their entire 2015 Bonus in shares of common stock, five elected to receive 50% of their 2015 Bonus in shares of common stock and 50% in cash, and one elected not to participate and instead to receive his entire 2015 Bonus in cash. The Company determined that the grant date criteria for the 2015 Bonus Shares was met on July 2, 2015, and accordingly, recorded stock-based compensation expense based on the grant date fair value of \$6.79 per share. Subsequent to that date, in September 2015, the Compensation Committee considered the impact on employee retention and incentive compensation caused by the drop in the price of the Company's common stock since January 2, 2015, and indicated its intent to pay all such executives their 2015 Bonus, if any was earned, in cash. As a result, at September 25, 2015, the Company reclassified the stock-based compensation expense recorded through that date in connection with the 2015 Bonus Shares aggregating \$1.0 million from Additional paid-in capital to Accrued expenses and recorded incremental bonus expense of \$1.3 million related to the estimated 2015 Bonus payment. The Company recorded bonus expense in the fourth quarter of 2015 and paid the cash bonuses in March 2016.

In June 2014, the Company modified the outstanding stock options that had been granted to its non-employee members of the Board of Directors (the "Board Members") to extend the exercise period to the lesser of three years from the date that a Board Member stepped down from his or her position on the Board of Directors or the remaining contractual life of the respective stock options. In connection with this modification, the Company recorded \$0.7 million of incremental stock-based compensation expense in 2014. This expense is included as a component of General and administrative expense in the Company's consolidated statement of operations for the year ended December 31, 2014.

On January 2, 2014, Raymond P. Dolan, the Company's President and Chief Executive Officer, elected to accept shares of restricted stock in lieu of base salary for the period from January 1, 2014 through December 31, 2014. Accordingly, the Company granted Mr. Dolan restricted stock (the "2014 Dolan Salary Shares") on January 2, 2014, with the number granted calculated by dividing an amount equal to 1.5 times Mr. Dolan's base salary for the period from January 1, 2014 through December 31, 2014 by the closing price of the Company's common stock on the date of grant. The 2014 Dolan Salary Shares vested on December 31, 2014. Effective September 16, 2014, Mr. Dolan's annual base salary was increased from \$500,000 to \$600,000. For the remainder of 2014, such increase was prorated and paid in cash and was not subject to any stock-for-cash election. The Company recorded stock-based compensation expense related to the 2014 Dolan Salary Shares ratably from January 1, 2014 to December 31, 2014.

In January 2014, 21 of the Company's executives were given the choice to receive all or half of their fiscal year 2014 bonuses (the "2014 Bonus"), if any were earned, in the form of shares of the Company's common stock (the "2014 Bonus Shares"). Each executive could also elect not to participate in this program and to earn his or her 2014 Bonus in the form of cash. The amount of the 2014 Bonus was determined by the Compensation Committee on February 19, 2015. The number of 2014 Bonus Shares that was granted to those executives who elected to receive their 2014 Bonus entirely in the form of shares of common stock was calculated by dividing an amount equal to 1.5 times each executive's 2014 Bonus earned by the closing price of the Company's common stock on January 2, 2014. The number of 2014 Bonus Shares that was granted to those

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**Notes to Consolidated Financial Statements (Continued)**

executives who elected to receive one-half of their 2014 Bonus in the form of shares of common stock was calculated by dividing an amount equal to 1.5 times one-half of each executive's 2014 Bonus earned by the closing price of the Company's common stock on January 2, 2014, with the cash portion equal to 50% of their respective 2014 Bonus earned. The 2014 Bonus Shares were granted on February 20, 2015 and vested immediately. Each executive who received the 2014 Bonus Shares was obligated to hold such shares for at least one year, until February 20, 2016. Of the eligible executives, 17 elected to receive their entire 2014 Bonus in shares of common stock and 4 elected to receive 50% of their 2014 Bonus in shares of common stock and 50% in cash. The Company determined that the grant date criteria for accounting purposes for the 2014 Bonus Shares was met on July 9, 2014, and accordingly, the Company determined that the grant date fair value of the 2014 Bonus Shares was \$19.25 per share, the closing price of the Company's common stock on that date. The Company recorded expense through February 20, 2015, when the shares were issued.

In connection with the October 2016 separation of one executive from the Company and in accordance with his employment agreement with the Company, as amended, the Company accelerated the vesting of certain unvested stock options, RSAs and PSUs. The accelerated RSAs and PSUs are reported as "Vested" in the respective tables below.

In connection with the separation of three executives from the Company during 2015 and in accordance with their respective employment agreements with the Company, the Company accelerated the vesting of certain unvested stock options, RSAs and PSUs.

**Stock Options**

Options are issued to purchase shares of common stock of the Company at prices that are equal to the fair market value of the shares on the date the option is granted. Options granted under the Stock Plan generally expire ten years from the date of grant. Outstanding options under the 2008 Plan generally expire seven years from the date of grant. Outstanding options under the 2012 Plan generally expire five years from the date of grant. The grant date fair value of options, adjusted for estimated forfeitures, is recognized as expense on a straight-line basis over the requisite service period, which is generally the vesting period. Forfeitures are estimated based on historical experience.

The activity related to the Company's outstanding stock options during the year ended December 31, 2016 was as follows:

	Number of Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value (in thousands)
Outstanding at January 1, 2016	6,352,208	\$ 15.99		
Granted	172,450	\$ 8.31		
Exercised	(23,070)	\$ 6.63		
Forfeited	(202,233)	\$ 14.32		
Expired	(689,249)	\$ 16.99		
Outstanding at December 31, 2016	<u>5,610,106</u>	\$ 15.73	5.32	\$ 109
Vested or expected to vest at December 31, 2016	5,541,766	\$ 15.75	5.29	\$ 108
Exercisable at December 31, 2016	4,754,860	\$ 15.81	4.91	\$ 105

The grant date fair values of options to purchase common stock granted in the years ended December 31, 2016, 2015 and 2014 were estimated using the Black-Scholes valuation model with the following assumptions:

	Year ended December 31,		
	2016	2015	2014
Risk-free interest rate	1.00% - 1.61%	1.46%-1.75%	1.53%-2.70%
Expected dividends	—	—	—
Weighted average volatility	54.8%	54.3%	60.8%
Expected life (years)	5.0-10.0	5.0-6.0	4.5-6.0

**SONUS NETWORKS, INC.****Notes to Consolidated Financial Statements (Continued)**

The risk-free interest rate used is the average U.S. Treasury Constant Maturities Rate for the expected life of the award. The expected dividend yield of zero is based on the fact that the Company has never paid dividends and has no present intention to pay cash dividends. The expected life for stock options is based on a combination of the Company's historical option patterns and expectations of future employee actions.

The weighted average grant-date fair values of options granted during the year were \$4.39 for the year ended December 31, 2016 , \$7.30 for the year ended December 31, 2015 and \$8.32 for the year ended December 31, 2014 .

The total intrinsic values of options exercised during the year were \$42,000 for the year ended December 31, 2016 , \$0.9 million for the year ended December 31, 2015 and \$5.1 million for the year ended December 31, 2014 .

The Company received cash from option exercises of \$153,000 in the year ended December 31, 2016 , \$1.8 million in the year ended December 31, 2015 and \$10.1 million in the year ended December 31, 2014 .

**Restricted Stock Grants - Restricted Stock Awards and Restricted Stock Units**

The Company's outstanding restricted stock grants consist of both RSAs and RSUs. Holders of unvested RSAs have voting rights and rights to receive dividends, if declared; however, these rights are forfeited if the underlying unvested RSA shares are forfeited. Holders of unvested RSUs do not have such voting and dividend rights. The grant date fair value of restricted stock grants, adjusted for estimated forfeitures, is recognized as expense on a straight-line basis over the requisite service period. The fair value of restricted stock grants is determined based on the market value of the Company's shares on the date of grant.

The activity related to the Company's RSAs for the year ended December 31, 2016 was as follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested balance at January 1, 2016	1,512,783	\$ 13.48
Granted	1,666,682	\$ 7.70
Vested	(757,580)	\$ 12.65
Forfeited	(391,857)	\$ 10.09
Unvested balance at December 31, 2016	<u>2,030,028</u>	<u>\$ 9.69</u>

The activity related to the Company's RSUs for the year ended December 31, 2016 was as follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested balance at January 1, 2016	95,361	\$ 16.05
Granted	53,400	\$ 7.58
Vested	(35,193)	\$ 16.05
Forfeited	(3,349)	\$ 16.05
Unvested balance at December 31, 2016	<u>110,219</u>	<u>\$ 11.95</u>

The total fair value of restricted stock grant shares vested was \$10.1 million in the year ended December 31, 2016 , \$8.5 million in the year ended December 31, 2015 and \$6.7 million in the year ended December 31, 2014 .

**Performance-Based Stock Grants - Performance-Based Stock Units**

In 2016, the Company's outstanding performance-based stock grants consisted of PSUs. Holders of unvested PSUs do not have voting and dividend rights. The Company recognizes the grant date fair value of PSUs on a graded attribution basis through the vest date of the respective awards so long as it remains probable that the related service conditions will be satisfied.

**SONUS NETWORKS, INC.**  
**Notes to Consolidated Financial Statements (Continued)**

The activity related to the Company's PSUs for the year ended December 31, 2016 was as follows:

	Shares	Weighted Average Grant Date Fair Value
Unvested balance at January 1, 2016	111,250	\$ 14.68
Granted	131,250	\$ 10.24
Vested	(18,438)	\$ 12.34
Forfeited	(76,977)	\$ 12.57
Unvested balance at December 31, 2016	<u>147,085</u>	<u>\$ 12.11</u>

The total fair value of performance-based stock grant shares vested was \$0.2 million in the year ended December 31, 2016, \$0.6 million in the year ended December 31, 2015 and \$1.7 million in the year ended December 31, 2014.

**ESPP**

The ESPP is designed to provide eligible employees of the Company and its participating subsidiaries an opportunity to purchase common stock of the Company through accumulated payroll deductions.

The ESPP provides for six-month consecutive offering periods, with the purchase price of the stock equal to 85% of the lesser of the market price on the first or last day of the offering period. The maximum number of shares of common stock an employee may purchase during each offering period is 500, subject to certain adjustments pursuant to the ESPP.

At December 31, 2016, 5.0 million shares, the maximum number of shares that may be issued under the ESPP, were authorized, and 1.7 million shares were available under the ESPP for future issuance.

**Stock-Based Compensation**

The consolidated statements of operations included stock-based compensation for the years ended December 31, 2016, 2015 and 2014 as follows (in thousands):

	Year ended December 31,		
	2016	2015	2014
Product cost of revenue	\$ 359	\$ 317	\$ 337
Service cost of revenue	1,314	1,524	1,449
Research and development	5,014	5,439	5,759
Sales and marketing	6,209	5,423	5,437
General and administrative	6,872	8,996	10,932
	<u>\$ 19,768</u>	<u>\$ 21,699</u>	<u>\$ 23,914</u>

There was no income tax benefit for employee stock-based compensation expense for the years ended December 31, 2016, 2015 and 2014 due to the valuation allowance recorded.

At December 31, 2016, there was \$20.9 million, net of expected forfeitures, of unrecognized stock-based compensation expense related to unvested stock options, RSAs, RSUs and PSUs. This expense is expected to be recognized over a weighted average period of approximately two years.

**Common Stock Reserved**

Common stock reserved for future issuance at December 31, 2016 consists of the following:

Stock Plan	1,718,751
ESPP	1,681,134
	<u>3,399,885</u>

## SONUS NETWORKS, INC.

## Notes to Consolidated Financial Statements (Continued)

The Company's policy is to issue authorized but unissued shares upon the exercise of stock options, grant restricted common stock awards and units and performance-based stock awards and units, and authorize the purchase of shares of the Company's common stock under the ESPP.

**(16) EMPLOYEE DEFINED CONTRIBUTION PLAN**

The Company offers a 401(k) savings plan to eligible employees. In the years ended December 31, 2015 and 2014, the Company did not provide a matching contribution for deferral contributions made by employees. However, in June 2016, at the recommendation of the Compensation Committee, the Company's Board of Directors elected to reinstate a discretionary limited 401(k) match program of up to \$2,000 per year (\$1,000 per each half-year) per eligible employee, contingent upon the Company's achievement of certain financial metric targets set by the Compensation Committee. The matching contribution became effective July 1, 2016. The Company recorded \$0.6 million of expense related to its employee defined contribution plan in the year ended December 31, 2016. The Company did not record expense related to its employee defined contribution plan in the years ended December 31, 2015 or 2014.

**(17) INCOME TAXES**

The components of loss from continuing operations before income taxes consisted of the following (in thousands):

	Year ended December 31,		
	2016	2015	2014
Income (loss) before income taxes:			
United States	\$ (11,973)	\$ (29,595)	\$ (16,582)
Foreign	557	(293)	1,941
	<u>\$ (11,416)</u>	<u>\$ (29,888)</u>	<u>\$ (14,641)</u>

The provision (benefit) for income taxes from continuing operations consisted of the following (in thousands):

	Year ended December 31,		
	2016	2015	2014
Provision (benefit) for income taxes:			
Current:			
Federal	\$ 12	\$ 60	\$ 23
State	24	150	150
Foreign	1,378	982	926
Total current	<u>1,414</u>	<u>1,192</u>	<u>1,099</u>
Deferred:			
Federal	(301)	(7,069)	(3,885)
State	(1,007)	4,962	(1,656)
Foreign	338	155	414
Change in valuation allowance	2,072	2,767	6,242
Total deferred	<u>1,102</u>	<u>815</u>	<u>1,115</u>
Total	<u>\$ 2,516</u>	<u>\$ 2,007</u>	<u>\$ 2,214</u>

**SONUS NETWORKS, INC.**  
**Notes to Consolidated Financial Statements (Continued)**

A reconciliation of the Company's effective tax rate for continuing operations to the statutory federal rate is as follows:

	Year ended December 31,		
	2016	2015	2014
U.S. statutory income tax rate	(35.0)%	(35.0)%	(35.0)%
State income taxes, net of federal benefit	—	—	(4.9)
Foreign income taxes	7.9	3.6	5.1
Settlement of foreign tax audit	5.2	—	—
Foreign deemed dividends	5.0	1.7	11.5
Stock-based compensation	38.9	14.4	12.0
Tax credits	(11.6)	(3.3)	(14.6)
Valuation allowance	1.9	24.3	29.8
Goodwill amortization	6.7	2.2	4.8
Meals and entertainment	1.4	0.8	2.5
Tax gain on sale of acquired assets	—	—	4.2
Other, net	1.6	(2.0)	(0.3)
Effective income tax rate	<u>22.0 %</u>	<u>6.7 %</u>	<u>15.1 %</u>

The following is a summary of the significant components of deferred income tax assets and liabilities (in thousands):

	December 31,	
	2016	2015
<b>Assets:</b>		
Net operating loss carryforwards	\$ 77,425	\$ 76,970
Research and development tax credits	24,440	22,412
Other tax credits	230	230
Intangible assets	9,270	7,128
Deferred revenue	3,176	3,936
Accrued expenses	6,699	8,706
Inventory	5,010	6,103
Stock-based compensation	14,295	13,594
Other temporary differences	2,892	2,623
	<u>143,437</u>	<u>141,702</u>
Valuation allowance	(141,895)	(139,823)
Total deferred tax assets	<u>1,542</u>	<u>1,879</u>
<b>Liabilities:</b>		
Purchased intangible assets	(3,047)	(2,282)
Total deferred tax liabilities	<u>(3,047)</u>	<u>(2,282)</u>
Total net deferred tax assets	<u>\$ (1,505)</u>	<u>\$ (403)</u>
<b>Reported as:</b>		
Deferred income taxes - noncurrent assets	\$ 1,542	\$ 1,879
Deferred income taxes - noncurrent liabilities	(3,047)	(2,282)
	<u>\$ (1,505)</u>	<u>\$ (403)</u>

At December 31, 2016, the Company had cumulative NOLs of \$226.5 million for federal income tax purposes and \$111.2 million for state income tax purposes. The federal NOL carryforwards expire at various dates from 2020 through 2034. The state NOL carryforwards expire at various dates from 2017 through 2036. Of the federal NOL, \$150.8 million is attributable to stock option deductions. The Company's federal NOL carryforwards for tax return purposes are \$22.7 million greater than its recognized federal NOL for financial reporting purposes, primarily due to excess tax benefits (stock-based compensation deductions in excess of book compensation costs) not recognized for financial statement purposes until realized. The tax benefit of this loss would be recognized for financial statement purposes in the period in which the tax benefit reduces income taxes payable, which will not be recognized until the Company recognizes a reduction in taxes payable from all other NOL carryforwards. In addition, the Company had \$14.3 million of deferred tax assets as of December 31, 2016 related to compensation expenses recognized for financial reporting purposes that are not deductible for tax purposes until options are exercised or shares vest. The ultimate realization of the benefit related to stock options is directly associated with the price of



**SONUS NETWORKS, INC.****Notes to Consolidated Financial Statements (Continued)**

the Company's common stock. Employees will not exercise the underlying options unless the current market price exceeds the option exercise price.

The Company also has available federal and state research and development credit carryforwards of approximately \$25 million that expire at various dates from 2017 through 2036.

In November 2015, the FASB issued ASU 2015-17, which requires entities to present deferred tax assets and deferred tax liabilities as noncurrent in the consolidated balance sheet. The Company elected to early-adopt ASU 2015-17 and accordingly, reclassified its net current deferred tax asset totaling \$1.0 million to its noncurrent net deferred tax asset as of December 31, 2015. No prior periods were retrospectively adjusted.

During 2016 and 2015, the Company performed an analysis to determine if, based on all available evidence, it considered it more likely than not that some portion or all of the recorded deferred tax assets will not be realized in a future period. As a result of the Company's evaluation, the Company concluded that there was insufficient positive evidence to overcome the more objective negative evidence related to its cumulative losses and other factors. Accordingly, the Company has maintained a valuation allowance against its domestic deferred tax asset amounting to \$141.9 million at December 31, 2016 and \$139.8 million at December 31, 2015.

A reconciliation of the Company's unrecognized tax benefits is as follows (in thousands):

	2016	2015	2014
Unrecognized tax benefits at January 1	\$ 8,888	\$ 8,875	\$ 8,861
Increases related to current year tax positions	36	13	14
Increases related to prior period tax positions	723	—	—
Decreases related to prior period tax positions	(81)	—	—
Settlements	(597)	—	—
Unrecognized tax benefits at December 31	<u>\$ 8,969</u>	<u>\$ 8,888</u>	<u>\$ 8,875</u>

The Company recorded liabilities for potential penalties and interest of \$80,721 for the year ended December 31, 2016, \$13,000 for the year ended December 31, 2015 and \$14,000 for the year ended December 31, 2014. The Company does not expect its unrecognized tax benefits to change materially over the next 12 months. Due to the Company's valuation allowance at December 31, 2016, none of the Company's unrecognized tax benefits, if recognized, would affect the effective tax rate.

The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction, as well as various state and foreign jurisdictions. Generally, the tax years 2013 through 2015 remain open to examination by the major taxing jurisdictions to which the Company is subject. The Company's federal NOLs generated prior to 2013 could be adjusted on examination even though the year in which the loss was generated is otherwise closed by the statute of limitations. The Company's primary state jurisdiction, Massachusetts, has open periods from 2011 through 2013.

The acquisition of PT was accounted for as a taxable business combination and the Company carried over the existing tax basis of the acquired assets and liabilities as the Company did not make the election under Section 338(g) of the Internal Revenue Code to have the transaction treated as an asset acquisition election to step up the basis in the acquired assets and liabilities to fair market value for tax purposes. Deferred taxes were recorded as part of the business combination based on the differences between the tax basis of the acquired assets or liabilities and their reported amounts for financial reporting purposes. The Company concluded that there was insufficient positive evidence to overcome the more objective negative evidence related to cumulative losses and other factors. Accordingly, the Company recorded a valuation allowance against the acquired deferred tax assets. As a result of the change in control of PT, the NOL and credit carryforwards are limited under Internal Revenue Code Section 382.

The Company acquired approximately \$26 million of federal and state NOL carryforwards and federal and state research and development credit carryforwards as a result of the PT acquisition. Under the provisions of the Internal Revenue Code, the NOL and tax credit carryforwards are subject to review and possible adjustment by the Internal Revenue Service and state tax authorities. NOL and tax credit carryforwards may become subject to an annual limitation in the event of certain cumulative changes in the ownership of significant shareholders over a three-year period in excess of 50%, as defined under Sections 382 and 383 of the Internal Revenue Code, as well as similar state provisions. This could limit the amount of tax attributes that can

**SONUS NETWORKS, INC.**

**Notes to Consolidated Financial Statements (Continued)**

be utilized annually to offset future taxable income or tax liabilities. The amount of the annual limitation is determined based on the value of the Company immediately prior to the ownership change. Subsequent ownership changes may further affect the limitation in future years. The Company has not performed a comprehensive Section 382 study to determine any potential loss limitation with regard to NOL carryforwards and tax credits acquired as a result of the PT acquisition.

The acquisition of the SDN Business was a taxable purchase of a business under Section 197 of the Internal Revenue Code. The tax amortization related to the SDN Business goodwill created a deferred tax liability.

The acquisition of Taqua was a taxable purchase of a business under Section 197 of the Internal Revenue Code. The tax amortization related to Taqua goodwill created a deferred tax liability.

**(18) MAJOR CUSTOMERS**

The following customer contributed 10% or more of the Company's revenue in each of the years ended December 31, 2016, 2015 and 2014 :

	Year ended December 31,		
	2016	2015	2014
AT&T	12%	13%	19%

At December 31, 2016 , no customer accounted for 10% or more of the Company's accounts receivable balance. At December 31, 2015 , one customer accounted for 10% or more of the Company's accounts receivable balance, representing approximately 11% of total accounts receivable. The Company performs ongoing credit evaluations of its customers and generally does not require collateral on accounts receivable. The Company maintains an allowance for doubtful accounts and such losses have been within management's expectations.

**(19) GEOGRAPHIC AND SEGMENT INFORMATION**

The Company's classification of revenue by geographic area is determined by the location of the Company's customers. The following table summarizes revenue by geographic area as a percentage of total revenue:

	Year ended December 31,		
	2016	2015	2014
United States	69%	71%	71%
Europe, Middle East and Africa	13	13	13
Japan	10	10	9
Other Asia Pacific	5	4	5
Other	3	2	2
	100%	100%	100%

The Company's service revenue is comprised of the following (in thousands):

	Year ended December 31,		
	2016	2015	2014
Maintenance	\$ 86,995	\$ 89,280	\$ 90,003
Professional services	19,215	17,841	23,868
	\$ 106,210	\$ 107,121	\$ 113,871

**(20) RELATED PARTIES**

H. Brian Thompson, who was an independent member of the Company's Board of Directors until the Company's 2016 Annual Meeting on June 9, 2016, is the Executive Chairman of GTT Communications, Inc., a leading global cloud networking provider to multinational clients ("GTT"). Howard Janzen is an independent member of the Company's Board of Directors and also serves as an independent director of GTT. In October 2015, GTT completed the acquisition of One Source Networks Inc.,

**SONUS NETWORKS, INC.****Notes to Consolidated Financial Statements (Continued)**

a provider of global data, Internet, SIP trunking and managed services ("One Source"). One Source is a customer of the Company. The Company had a well-established and ongoing business relationship with One Source prior to its acquisition by GTT. The Company recognized revenue aggregating approximately \$23,000 from One Source in the period from January 1, 2016 through June 9, 2016, and approximately \$150,000 in the year ended December 31, 2015, pursuant to the terms of a contract between the parties, effective June 28, 2010. The Company believes the terms of this contract are consistent with third-party arrangements that provide similar services.

Since Mr. Thompson is no longer a member of the Company's Board of Directors, the Company's relationship with GTT no longer triggers a related party transaction unless and until any of the Company's directors, executive officers or holders of 5% or more of any class of its capital stock or any member of their immediate family has a direct or indirect material interest in a transaction between the Company and GTT in which the amount involved exceeds or will exceed \$120,000.

As a matter of corporate governance policy and practice, related party transactions are presented and considered by the Audit Committee of the Company's Board of Directors in accordance with the Company's Related Person Transaction Policy.

**(21) COMMITMENTS AND CONTINGENCIES****Leases**

The Company leases its facilities under operating leases, which expire at various times through 2024. The Company is responsible for certain real estate taxes, utilities and maintenance costs under these leases. The Company's corporate headquarters is located in a leased facility in Westford, Massachusetts, consisting of 97,500 square feet under a lease that expires in August 2018.

Escalation clauses, free rent and other lease concessions are recognized on a straight-line basis over the minimum lease term. Rent expense was \$4.5 million for the year ended December 31, 2016, \$5.2 million for the year ended December 31, 2015 and \$6.1 million for the year ended December 31, 2014.

Future minimum payments under operating lease arrangements as of December 31, 2016 were as follows (in thousands):

Years ending December 31,	
2017	\$ 4,600
2018	3,593
2019	2,094
2020	640
2021	266
Thereafter	—
	<u>\$ 11,193</u>

**Litigation and Contingencies**

On April 6, 2015, Ming Huang, a purported shareholder of the Company, filed a Class Action Complaint (Civil Action No. 3:15-02407), alleging violations of the federal securities laws (the "Complaint") in the United States District Court for the District of New Jersey (the "District of New Jersey"), against the Company and two of its officers, Raymond P. Dolan, the Company's President and Chief Executive Officer, and Mark T. Greenquist, the Company's former Chief Financial Officer (collectively, the "Defendants"). On September 21, 2015, in response to motions subsequently filed with the District of New Jersey by four other purported shareholders of the Company seeking status as lead plaintiff, the District of New Jersey appointed Richard Sousa as lead plaintiff (the "Plaintiff"). The Plaintiff claims to represent purchasers of the Company's common stock during the period from October 23, 2014 to March 24, 2015, and seeks unspecified damages. The principal allegation contained in the Complaint is that the Defendants made misleading forward-looking statements concerning the Company's fiscal first quarter of 2015 financial performance. On September 22, 2015, the Company filed a Motion to Transfer (the "Motion to Transfer") this case to the United States District Court for the District of Massachusetts. The Plaintiff filed his opposition to the Motion to Transfer on October 5, 2015, and the Company filed a reply to the Motion to Transfer on October 13, 2015. On March 21, 2016, the District of New Jersey granted the Company's Motion to Transfer. Thus, this case will now be litigated in the United States District Court for the District of Massachusetts (Civil Action No. 1:16-cv-10657-GAO). On May 4, 2016, the Plaintiff filed an amended complaint (the "Amended Complaint"), which is now the operative complaint in this litigation. On June 20, 2016, the Company and the other Defendants filed a Motion to Dismiss the Amended Complaint (the "Motion to Dismiss") and on July 25, 2016, the Plaintiff filed an opposition to the Motion to Dismiss. The Company filed its reply to the Plaintiff's opposition to the Motion to Dismiss on August 15, 2016. A hearing on the Motion to Dismiss is

**SONUS NETWORKS, INC.****Notes to Consolidated Financial Statements (Continued)**

scheduled for February 28, 2017. The Company believes that the Defendants have meritorious defenses to the allegations made in the Amended Complaint and does not expect the results of this suit to have a material effect on its business or consolidated financial statements. The Company is also fully cooperating with an SEC inquiry regarding the development and issuance of the Company's first quarter 2015 revenue and earnings guidance. At this time, it is not possible to predict the outcome of the SEC's inquiry, including whether or not any proceedings will be initiated or, if so, when or how the matter will be resolved and therefore an estimate of the possible range of loss, if any, cannot be made.

In addition, the Company is often a party to disputes and legal proceedings that it considers routine and incidental to its business. Management does not expect the results of any of these actions to have a material effect on the Company's business or consolidated financial statements.

**(22) QUARTERLY RESULTS (UNAUDITED)**

The Company's fiscal year ends on December 31. For fiscal year 2015, the Company reported its first, second and third quarters on a 4-4-5 basis, with the quarter ending on the Friday closest to the last day of each third month. In 2015, the Company's first quarter ended on March 27, 2015, the second quarter ended on June 26, 2015 and the third quarter ended on September 25, 2015.

The following tables present the Company's quarterly operating results for the years ended December 31, 2016 and 2015. 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 the Company's audited consolidated financial statements and related notes.

	First Quarter	Second Quarter	Third Quarter (1)	Fourth Quarter
(In thousands, except per share data)				
<b>Fiscal 2016</b>				
Revenue	\$ 59,151	\$ 60,857	\$ 65,011	\$ 67,572
Cost of revenue	20,748	20,629	21,425	22,178
Gross profit	<u>\$ 38,403</u>	<u>\$ 40,228</u>	<u>\$ 43,586</u>	<u>\$ 45,394</u>
Loss from operations	\$ (3,881)	\$ (2,708)	\$ (4,316)	\$ (2,704)
Net loss	\$ (4,654)	\$ (2,916)	\$ (3,731)	\$ (2,631)
Loss per share (3):				
Basic	\$ (0.09)	\$ (0.06)	\$ (0.08)	\$ (0.05)
Diluted	\$ (0.09)	\$ (0.06)	\$ (0.08)	\$ (0.05)
Shares used in computing loss per share:				
Basic	49,484	49,423	49,402	49,232
Diluted	49,484	49,423	49,402	49,232

**SONUS NETWORKS, INC.**  
**Notes to Consolidated Financial Statements (Continued)**

	First Quarter (2)	Second Quarter	Third Quarter	Fourth Quarter
(In thousands, except per share data)				
<b>Fiscal 2015</b>				
Revenue	\$ 50,145	\$ 54,701	\$ 67,862	\$ 76,326
Cost of revenue	20,915	20,287	22,150	24,025
Gross profit	\$ 29,230	\$ 34,414	\$ 45,712	\$ 52,301
Income (loss) from operations	\$ (18,866)	\$ (15,049)	\$ (1,362)	\$ 4,060
Net income (loss)	\$ (19,359)	\$ (15,343)	\$ (1,896)	\$ 4,703
Income (loss) per share (3):				
Basic	\$ (0.39)	\$ (0.31)	\$ (0.04)	\$ 0.09
Diluted	\$ (0.39)	\$ (0.31)	\$ (0.04)	\$ 0.09
Shares used in computing income (loss) per share:				
Basic	49,423	49,484	49,625	49,685
Diluted	49,423	49,484	49,625	49,906

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- (1) Includes the results of Taqua for the period subsequent to September 26, 2016.
- (2) Includes the results of the SDN Business for the period subsequent to January 2, 2015.
- (3) Income (loss) per share is calculated independently for each of the quarters presented; accordingly, the sum of the quarterly earnings (loss) per share amounts may not equal the total calculated for the year.

## **Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure**

None.

### **Item 9A. Controls and Procedures**

#### **Disclosure Controls and Procedures**

Our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act")), as of the end of the period covered by this Annual Report on Form 10-K. Based on this evaluation, our principal executive officer and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2016 .

#### **Management's Annual Report on Internal Control over Financial Reporting**

Our management, with the participation of our principal executive officer and principal financial officer, is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act. Our internal control system is designed to provide reasonable assurance to our management and Board of Directors regarding the preparation and fair presentation of published financial statements.

Our management assessed the effectiveness of our internal control over financial reporting as of December 31, 2016 . In making its assessment of internal control over financial reporting, our management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control—Integrated Framework (2013)* . Based on this assessment, management concluded that, as of December 31, 2016 , our internal control over financial reporting is effective.

Deloitte & Touche LLP, an independent registered public accounting firm that audited our financial statements included in this Annual Report on Form 10-K, has issued an attestation report on management's internal control over financial reporting, which is included in this Item 9A under the caption "Report of Independent Registered Public Accounting Firm."

#### **Changes in Internal Control over Financial Reporting**

There have been no changes in our internal control over financial reporting during the fiscal quarter ended December 31, 2016 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

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

We have audited the internal control over financial reporting of Sonus Networks, Inc. and subsidiaries (the "Company") as of December 31, 2016, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Annual Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed by, or under the supervision of, the company's principal executive and principal financial officers, or persons performing similar functions, and effected by the company's board of directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of the inherent limitations of internal control over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may not be prevented or detected on a timely basis. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated financial statements as of and for the year ended December 31, 2016 of the Company and our report dated February 27, 2017 expressed an unqualified opinion on those financial statements.

/s/ Deloitte & Touche LLP

Boston, Massachusetts  
February 27, 2017

**Item 9B. Other Information**

None.

**PART III**

**Item 10. Directors, Executive Officers and Corporate Governance**

The information required by this Item 10 is included in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC not later than 120 days after the end of the fiscal year ended December 31, 2016 and is incorporated herein by reference.

**Item 11. Executive Compensation**

The information required by this Item 11 is included in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC not later than 120 days after the end of the fiscal year ended December 31, 2016 and is incorporated herein by reference.

**Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters**

The information required by this Item 12 is included in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC not later than 120 days after the end of the fiscal year ended December 31, 2016 and is incorporated herein by reference.

**Item 13. Certain Relationships and Related Transactions, and Director Independence**

The information required by this Item 13 is included in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC not later than 120 days after the end of the fiscal year ended December 31, 2016 and is incorporated herein by reference.

**Item 14. Principal Accounting Fees and Services**

The information required by this Item 14 is included in our definitive Proxy Statement with respect to our 2017 Annual Meeting of Stockholders to be filed with the SEC not later than 120 days after the end of the fiscal year ended December 31, 2016 and is incorporated herein by reference.

**PART IV**

**Item 15. Exhibits, Financial Statement Schedules**

**1) Financial Statements**

The consolidated financial statements of the Company are listed in the index under Part II, Item 8, of this Annual Report on Form 10-K.

**2) Financial Statement Schedules**

None. All schedules are omitted because they are not applicable, not required under the instructions or the information is contained in the consolidated financial statements, or notes thereto, included herein.

**3) List of Exhibits**

The Exhibits filed as part of this Annual Report on Form 10-K are listed in the Exhibit Index immediately preceding such Exhibits, which Exhibit Index is incorporated herein by reference.

**Item 16. Form 10-K Summary**

Not applicable.



**EXHIBIT INDEX**

<b>Exhibit No.</b>	<b>Description</b>
2.1 **	Agreement and Plan of Merger, dated as of June 18, 2012, by and among Sonus Networks, Inc., Navy Acquisition Subsidiary, Inc. and Network Equipment Technologies, Inc. (incorporated by reference to Exhibit 2.1 to the registrant's Current Report on Form 8-K, filed June 19, 2012 with the SEC).
2.2 **	Agreement and Plan of Merger, dated as of December 12, 2013, by and among Sonus Networks, Inc., Performance Technologies, Incorporated and Purple Acquisition Subsidiary, Inc. (incorporated by reference to Exhibit 2.1 to the registrant's Current Report on Form 8-K, filed December 13, 2013 with the SEC).
3.1	Fourth Amended and Restated Certificate of Incorporation of Sonus Networks, Inc., as amended (incorporated by reference to Exhibit 3.3 to the registrant's Current Report on Form 8-K, filed June 22, 2009 with the SEC).
3.2	Certificate of Designation specifying the terms of the Series A Junior Participating Preferred Stock, par value \$0.01 per share (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K, filed June 27, 2008 with the SEC).
3.3	Second Amended and Restated By-Laws of Sonus Networks, Inc. (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K, filed December 12, 2016 with the SEC).
3.4	Certificate of Elimination of Series A Junior Participating Preferred Stock of Sonus Networks, Inc., as filed with the Secretary of State of the State of Delaware on September 18, 2014 (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K, filed September 18, 2014 with the SEC).
3.5	Certificate of Amendment of Fourth Amended and Restated Certificate of Incorporation of Sonus Networks, Inc. (incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K, filed January 30, 2015 with the SEC).
4.1	Form of Stock Certificate representing shares of Sonus Networks, Inc. Common Stock (incorporated by reference to Exhibit 4.1 to Amendment No. 2 of the registrant's Registration Statement on Form S-1, filed May 19, 2000 with the SEC).
10.1	Registration Rights Agreement, dated as of November 2, 2000, by and among Sonus Networks, Inc. and the Stockholder parties thereto (incorporated by reference to Exhibit 10.1 to the registrant's Registration Statement on Form S-4, filed December 22, 2000 with the SEC).
10.2 +	Amended and Restated 1997 Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the registrant's Registration Statement on Form S-1, filed March 10, 2000 with the SEC).
10.3 +	Form of Notice of Grant of Stock Options and Stock Option Agreement under the 1997 Stock Incentive Plan-Additional Terms and Conditions (incorporated by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q, filed August 20, 2004 with the SEC).
10.4 +	Form of Indemnity Agreement for Officers and Directors (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q, filed August 20, 2004 with the SEC).
10.5 +	Form of Resale Restriction Agreement (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed December 28, 2005 with the SEC).
10.6 +	Form of Consent to Stock Option Amendment (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed December 29, 2006 with the SEC).
10.7 +	Amended and Restated 2000 Employee Stock Purchase Plan, as amended (incorporated by reference to Exhibit 10.7 to the registrant's Annual Report on Form 10-K, filed February 25, 2015 with the SEC).
10.8 +	Senior Management Cash Incentive Plan, as amended on March 28, 2013 (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed April 1, 2013 with the SEC).
10.9 +	Amended and Restated Employment Agreement between Sonus Networks, Inc. and Raymond P. Dolan accepted on February 23, 2015 (incorporated by reference to Exhibit 10.17 to the registrant's Annual Report on Form 10-K, filed February 25, 2015 with the SEC).
10.10	Lease, dated August 11, 2010, between Michelson Farm-Westford Technology Park IV Limited Partnership and Sonus Networks, Inc. with respect to the property located at 4 Technology Park Drive, Westford, Massachusetts (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q, filed November 2, 2010 with the SEC).
10.11	First Amendment to Lease, dated October 27, 2010, between Michelson Farm-Westford Technology Park IV Limited Partnership and Sonus Networks, Inc. with respect to the property located at 4 Technology Park Drive, Westford, Massachusetts (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q, filed November 2, 2010 with the SEC).
10.12 +	2008 Stock Incentive Plan (incorporated by reference to Exhibit 99.1 to the registrant's Registration Statement on Form S-8, filed August 27, 2012 with the SEC).

- 10.13 + Form of Nonstatutory Stock Option Award Agreement Granted under the 2008 Stock Incentive Plan (incorporated by reference to Exhibit 10.29 to the registrant's Annual Report on Form 10-K, filed March 6, 2013 with the SEC).
- 10.14 + Form of Restricted Stock Award Agreement Granted under the 2008 Stock Incentive Plan (incorporated by reference to Exhibit 10.30 to the registrant's Annual Report on Form 10-K, filed March 6, 2013 with the SEC).
- 10.15 + Form of Letter Agreement between Sonus Networks, Inc. and each of Raymond P. Dolan, Mark Greenquist and Anthony Scarfo (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K, filed January 6, 2014 with the SEC).
- 10.16 + Employment Agreement between Sonus Networks, Inc. and Mark T. Greenquist, accepted on October 24, 2013 (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed October 29, 2013 with the SEC).
- 10.17 + Assumed Performance Technologies, Incorporated 2001 Stock Option Plan (incorporated by reference to Exhibit 99.1 to the registrant's Registration Statement on Form S-8, filed with the SEC effective February 28, 2014).
- 10.18 + Assumed Performance Technologies, Incorporated 2003 Omnibus Incentive Plan (incorporated by reference to Exhibit 99.2 to the registrant's Registration Statement on Form S-8, filed with the SEC effective February 28, 2014).
- 10.19 + 2012 Amended Performance Technologies Incorporated Omnibus Incentive Plan (incorporated by reference to Exhibit 99.3 to the registrant's Registration Statement on Form S-8, filed with the SEC effective February 28, 2014).
- 10.20 + Form of Non-Qualified Stock Option Award Agreement Granted under the 2012 Amended Performance Technologies, Incorporated Omnibus Incentive Plan (incorporated by reference to Exhibit 10.7 to the registrant's Quarterly Report on Form 10-Q, filed April 29, 2014 with the SEC).
- 10.21 + Form of Restricted Stock Agreement Granted under the 2012 Amended Performance Technologies, Incorporated Omnibus Incentive Plan (incorporated by reference to Exhibit 10.8 to the registrant's Quarterly Report on Form 10-Q, filed April 29, 2014 with the SEC).
- 10.22 + Employment Agreement by and between Sonus Networks, Inc. and Jeffrey M. Snider, accepted June 1, 2009 (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q, filed August 3, 2010 with the SEC).
- 10.23 + Amendment to Employment Agreement by and between Sonus Networks, Inc. and Jeffrey M. Snider, accepted February 15, 2014 (incorporated by reference to Exhibit 10.9 to the registrant's Quarterly Report on Form 10-Q, filed April 29, 2014 with the SEC).
- 10.24 + Amendment to Employment Agreement by and between Sonus Networks, Inc. and Jeffrey M. Snider, accepted March 28, 2013 (incorporated by reference to Exhibit 10.10 to the registrant's Quarterly Report on Form 10-Q, filed April 29, 2014 with the SEC).
- 10.25 Credit Agreement, dated as of June 27, 2014 by and among Sonus Networks, Inc. as Borrower, Bank of America, N.A., as Administrative Agent, Swing Line Lender and L/C Issuer, and the other lenders from time to time party thereto (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed June 30, 2014 with the SEC).
- 10.26 First Amendment to Credit Agreement, dated as of June 26, 2015 by and between Sonus Networks, Inc., as Borrower, Bank of America, N.A., as Administrative Agent, Swing Line Lender, L/C Issuer and Lender (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed June 30, 2015 with the SEC).
- 10.27 Second Amendment to Credit Agreement, dated as of June 13, 2016 by and between Sonus Networks, Inc., as Borrower, Bank of America, N.A., as Administrative Agent, Swing Line Lender, L/C Issuer and Lender (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed June 15, 2016 with the SEC).
- 10.28 Security and Pledge Agreement, dated as of June 27, 2014 by and among Sonus Networks, Inc., Sonus International, Inc., Sonus Federal, Inc., Network Equipment Technologies, Inc., Performance Technologies, Incorporated and Bank of America, N.A., as Administrative Agent (incorporated by reference to Exhibit 10.2 to the registrant's Current Report on Form 8-K, filed June 30, 2014 with the SEC).
- 10.29 Master Continuing Guaranty, dated as of June 27, 2014 by and among Sonus Federal, Inc., Network Equipment Technologies, Inc. Performance Technologies, Incorporated and Sonus International, Inc. (incorporated by reference to Exhibit 10.3 to the registrant's Current Report on Form 8-K, filed June 30, 2014 with the SEC).
- 10.30 + Form of Letter Agreement between Sonus Networks, Inc. and each of Raymond P. Dolan, Mark Greenquist, Anthony Scarfo and Jeffrey Snider (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed December 29, 2014 with the SEC).

10.31	Earn-Out Agreement, dated as of January 2, 2015, by and among Sonus Networks, Inc., Treq Labs, Inc. and Karl F. May as the Seller Representative (incorporated by reference to Exhibit 10.1 to the registrant's Current Report on Form 8-K, filed January 8, 2015 with the SEC).
10.32 +	Employment Agreement by and between Sonus Networks, Inc. and Anthony Scarfo, accepted August 25, 2011 (incorporated by reference to Exhibit 10.10 to the registrant's Quarterly Report on Form 10-Q, filed May 2, 2013 with the SEC).
10.33 +	Amendment to Employment Agreement by and between Sonus Networks, Inc. and Anthony Scarfo, accepted February 15, 2013 (incorporated by reference to Exhibit 10.11 to the registrant's Quarterly Report on Form 10-Q, filed May 2, 2013 with the SEC).
10.34 +	Amendment to Employment Agreement by and between Sonus Networks, Inc. and Anthony Scarfo, accepted March 28, 2013 (incorporated by reference to Exhibit 10.12 to the registrant's Quarterly Report on Form 10-Q, filed May 2, 2013 with the SEC).
10.35 +	Employment Agreement between Sonus Networks, Inc. and Kevin Riley, dated July 30, 2014 (incorporated by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q, filed April 29, 2016 with the SEC).
10.36 +	Employment Agreement between Sonus Networks, Inc. and Michael Swade, accepted September 29, 2014 (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q, filed April 29, 2016 with the SEC).
10.37 +	Employment Agreement between Sonus Networks, Inc. and Susan Villare, accepted on February 3, 2012 (incorporated by reference to Exhibit 10.1 to the registrant's Amendment No. 1 to Current Report on Form 8-K/A, filed July 8, 2016 with the SEC).
10.38 +	Letter Agreement between Sonus Networks, Inc. and Susan Villare, accepted on July 7, 2016 (incorporated by reference to Exhibit 10.2 to the registrant's Amendment No. 1 to Current Report on Form 8-K/A, filed July 8, 2016 with the SEC).
10.39 +	Amended and Restated Stock Incentive Plan (incorporated by reference to Exhibit 10.1 to the registrant's Quarterly Report on Form 10-Q, filed July 29, 2016 with the SEC).
10.40 +	Form of Nonstatutory Stock Option Award Agreement Granted under the Amended and Restated Stock Incentive Plan (incorporated by reference to Exhibit 10.2 to the registrant's Quarterly Report on Form 10-Q, filed July 29, 2016 with the SEC).
10.41 +	Form of Restricted Stock Award Agreement Granted under the Amended and Restated Stock Incentive Plan (incorporated by reference to Exhibit 10.3 to the registrant's Quarterly Report on Form 10-Q, filed July 29, 2016 with the SEC).
10.42 +	Form of Restricted Stock Unit Award Agreement (Performance-Based Vesting) for Awards Granted on March 16, 2015 under the 2007 Stock Incentive Plan, as amended (incorporated by reference to Exhibit 10.4 to the registrant's Quarterly Report on Form 10-Q, filed April 27, 2015 with the SEC).
10.43 +	Form of Restricted Stock Unit Award Agreement (Performance-Based Vesting) for Awards Granted under the Amended and Restated Stock Incentive Plan (incorporated by reference to Exhibit 10.4 to the registrant's Quarterly Report on Form 10-Q, filed July 29, 2016 with the SEC).
14.1	Code of Conduct (incorporated by reference to Exhibit 14.1 to the registrant's Current Report on Form 8-K, filed June 7, 2011 with the SEC).
21.1 *	Subsidiaries of the Registrant.
23.1 *	Consent of Independent Registered Public Accounting Firm, Deloitte & Touche LLP
31.1 *	Certificate of Sonus Networks, Inc. Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2 *	Certificate of Sonus Networks, Inc. Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1 #	Certificate of Sonus Networks, Inc. Chief Executive Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2 #	Certificate of Sonus Networks, Inc. Chief Financial Officer Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase
101.LAB	XBRL Taxonomy Extension Label Linkbase

- \* Filed herewith.
- # Furnished herewith.
- + Management contract or compensatory plan or arrangement filed in response to Item 15(a)(3) of the Instructions to the Annual Report on Form 10-K.
- \*\* Schedules and exhibits have been omitted pursuant to Item 601(b)(2) of Regulation S-K. The Registrant hereby undertakes to furnish copies of any of the omitted schedules and exhibits upon request by the U.S. Securities and Exchange Commission.

SONUS NETWORKS, INC.  
SUBSIDIARIES OF THE REGISTRANT

<u>Name</u>	<u>Jurisdiction of Incorporation</u>
Sonus International, Inc.	Delaware
Kineto Wireless, LLC	Delaware
Network Equipment Technologies, Inc.	Delaware
N.E.T. APLA, Inc.	Delaware
Quintum Technologies, LLC	Delaware
Sonus Federal, Inc.	Delaware
Taqua WBH, LLC	Delaware
Sonus Securities Corp.	Massachusetts
Taqua, LLC	Texas
Sonus Networks Australia Pty Ltd.	Australia
Sonus Networks Corp.	Canada
Sonus Networks s.r.o.	Czech Republic
Sonus Networks EURL	France
Sonus Networks GmbH	Germany
Sonus Networks (HK) Limited	Hong Kong
Sonus Networks India Private Limited	India
Sonus Networks Trading Private Limited	India
Nihon Sonus Networks K.K.	Japan
Sonus Networks Korea LLC	Korea
Sonus Networks Malaysia Sdn. Bhd.	Malaysia
Westford Networks Mexico, S. de R.L. de C.V.	Mexico
Sonus Networks (Shanghai) Limited	Shanghai, PRC
Sonus Networks Pte. Ltd.	Singapore
Sonus Networks España, S.R.L.	Spain
Sonus Networks Switzerland GmbH	Switzerland
Sonus Networks Ltd.	United Kingdom
Kineto Wireless UK Limited	United Kingdom
N.E.T. Europe Ltd.	United Kingdom
Performance Technologies UK Ltd.	United Kingdom

**CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

We consent to the incorporation by reference in Registration Statement Nos. 333-61940, 333-66982, and 333-194701 on Form S-3 and Registration Statement Nos. 333-43334, 333-53970, 333-54932, 333-105215, 333-124777, 333-150022, 333-163684, 333-170285, 333-183562, 333-190318, 333-194207, 333-202360, 333-205963, 333-214314 on Form S-8 of our reports dated February 27, 2017, relating to the consolidated financial statements of Sonus Networks, Inc. and subsidiaries, and the effectiveness of Sonus Networks, Inc. and subsidiaries' internal control over financial reporting, appearing in this Annual Report on Form 10-K of Sonus Networks, Inc. for the year ended December 31, 2016.

/s/ Deloitte & Touche LLP

Boston, Massachusetts  
February 27, 2016

**CERTIFICATION PURSUANT TO  
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Raymond P. Dolan, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sonus Networks, Inc.;
2. Based on my knowledge, this 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 report;
3. Based on my knowledge, the financial statements, and other financial information included in this 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 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-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, 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 report is being prepared;
  - (b) Designed such internal control over financial reporting or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 27, 2017

/s/ Raymond P. Dolan

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Raymond P. Dolan  
President and Chief Executive Officer  
(Principal Executive Officer)

**CERTIFICATION PURSUANT TO  
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Susan M. Villare, certify that:

1. I have reviewed this Annual Report on Form 10-K of Sonus Networks, Inc.;
2. Based on my knowledge, this 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 report;
3. Based on my knowledge, the financial statements, and other financial information included in this 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 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-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, 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 report is being prepared;
  - (b) Designed such internal control over financial reporting or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing equivalent functions):
  - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 27, 2017

/s/ Susan M. Villare

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Susan M. Villare  
Chief Financial Officer (Interim) (Principal Financial Officer and Principal  
Accounting Officer)

**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, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Raymond P. Dolan, 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 to his knowledge:

- (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: February 27, 2017

/s/ Raymond P. Dolan

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Raymond P. Dolan  
President and Chief Executive Officer  
(Principal Executive Officer)

**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, 2016 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), the undersigned, Susan M. Villare, Chief Financial Officer (Interim) 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 to his knowledge:

- (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: February 27, 2017

/s/ Susan M. Villare

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Susan M. Villare  
Chief Financial Officer (Interim)  
(Principal Financial Officer and Principal Accounting Officer)