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# **FORM 10-K405**

**SUNRISE TELECOM INC - SRTI**

**Filed: March 16, 2001 (period: December 31, 2000)**

Annual report. The Regulation S-K Item 405 box on the cover page is checked

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SECURITIES AND EXCHANGE COMMISSION  
Washington, D.C. 20549

FORM 10-K

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE

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ACT OF 1934

For the fiscal year ended December 31, 2000  
Commission File Number: 0-30757

Sunrise Telecom Incorporated  
(Exact name of Registrant as specified in its charter)

Delaware 77-0291197  
(State or other jurisdiction of (IRS Employer Identification No.)  
incorporation or organization)

22 Great Oaks Blvd., San Jose, California 95119  
(Address of principal executive offices, including zip code)

Registrant's telephone number, including area code: (408) 363-8000

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, par value \$0.001 per share  
(Title of class)

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes  No

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

At March 2, 2001, the aggregate market value of the Common Stock of the registrant held by non-affiliates was \$107,310,964.

As of March 2, 2001, there were 50,000,498 shares of the Registrant's Common Stock outstanding, par value \$0.001.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the proxy statement for the 2001 Annual Meeting of Shareholders are incorporated by reference in Part III.

SUNRISE TELECOM INCORPORATED  
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For the fiscal year ended December 31, 2000

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## FORWARD-LOOKING STATEMENTS

This report on Form 10-K contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities and Exchange Act of 1934, including, without limitation, statements regarding the anticipated growth in the market for telecommunications test equipment and new product development. Except for historical information, the matters discussed in this report on Form 10-K are forward-looking statements that are subject to certain risks and uncertainties that could cause actual results to differ materially from those projected due to certain factors, including those discussed below in Item 7 - Management's Discussion and Analysis of Financial Condition and Results of Operation - Factors Affecting Future Operating Results" and elsewhere in this report. You should not rely on forward-looking statements in this report or in the pages from our Proxy Statement incorporated by reference into this report. The following discussion should be read in conjunction with the consolidated financial statements and notes thereto included elsewhere in this Report on Form 10-K.

### PART I.

#### Item 1. Business

##### Overview

We manufacture and market service verification equipment that enables service providers to pre-qualify facilities for services, verify newly installed services and diagnose problems relating to wireline access services including the new DSL services, fiber optics, cable TV networks and signaling networks. We design our products to maximize technicians' effectiveness in the field and to provide realistic network simulations for equipment manufacturers to test their products. Our customers include incumbent local exchange carriers, competitive local exchange carriers, and other service providers, network infrastructure suppliers and installers throughout North America, Latin America, Europe and the Asia/Pacific region.

Our objective is to be a leading provider of service verification test equipment for a broad range of applications within the global telecommunications industry. The key elements of our strategy are to maintain our position in wireline access verification including DSL service verification equipment, to increase our penetration in the growing market for verification test equipment for fiber optics and cable TV/modem, to continue to expand our remote testing applications, alarm and surveillance and central office testing applications, to continue to expand internationally, to pursue strategic acquisitions and joint ventures and to pursue follow-on sales opportunities by continuing to develop and market hardware modules which can be inserted into the chassis of our service verification equipment.

We were originally incorporated in California as Sunrise Telecom, Inc. in October 1991. In July 2000, we reincorporated in Delaware and changed our name to Sunrise Telecom Incorporated ("Sunrise"). "Sunrise Telecom," "SunSet," and "SunLite" are trademarks of Sunrise Telecom Incorporated. This report on Form 10-K also includes references to registered service marks and trademarks of other entities.

##### Recent Developments

###### Acquisition of Avantron Technologies, Inc.

In January 2001, we acquired Avantron Technologies, Inc., a Canadian company which specializes in the design and manufacture of spectrum analyzers and performance monitoring systems for approximately Cdn. \$17.6 million (approximately U.S. \$11.7 million) in cash and short-term notes payable. The transaction will be accounted for under the purchase method.

##### Industry Background

###### Demand for High-Speed Data Access

The telecommunications industry is undergoing fundamental change and growth worldwide. Following the Telecommunications Act of 1996, competitive local exchange carriers in the United States have been allowed to compete with incumbent local exchange carriers, including the regional Bell operating companies, for local carrier services. The regulatory developments in the telecommunications industry have coincided with a surge in demand for high-speed Internet access and data transmission service. Data traffic in the United States and Canada has surpassed the amount of voice traffic carried on the existing telephone network. Consumers are seeking higher-speed access to bandwidth intensive content and

services, such as highly graphical Web sites, audio, video and software downloads. As an increasing number of Internet users access more and different content, the ability to connect to and receive data from the Internet at high speeds has become and will continue to be more important. Businesses have even greater requirements for high-speed access to implement e-commerce strategies, to access the Internet for a variety of purposes and to provide employees with effective telecommuting capabilities. Outside the United States, there is evidence to suggest that deregulation and the availability of broadband service will continue and will follow the general trends in the United States.

Service providers are responding to the increased demand with the deployment of reliable high-speed, digital networks. One primary investment area is the redesign of the access network to support broadband access to end users. This portion of the network between the customer's premise and the service provider's central office is also known as the "last-mile." The last mile typically consists of copper wires that operate at substantially lower transmission speeds than those offered in the long-haul segment of a network or by some available broadband alternatives. These copper wires were originally intended to carry only analog circuit-switched, low-speed voice signals and, as a result, have become a bottleneck that limits high-speed data transmission. Several access technologies are being deployed to support higher-speed Internet access in the networks, including digital subscriber lines, digital cable TV/MODEM, fiber optics and broadband wireless. In addition, the signaling portion of the network is essential to the integration of new broadband services into the existing telecommunications network. We summarize some of these technologies below.

**Digital Subscriber Line Technology.** Digital subscriber line technology, commonly known as DSL, today transmits data up to 50 times faster than a conventional dial-up modem using the existing copper telephone wires. Various implementations of DSL are being developed and deployed, including asymmetric DSL, known as ADSL, symmetric DSL, known as SDSL, high bit-rate DSL, known as HDSL, and integrated services digital network DSL, known as IDSL. Service providers deploying DSL technology include incumbent local exchange carriers, such as SBC Communications, Inc., Verizon Communications, Inc. and Sprint Corporation.

**Cable TV Networks.** Cable TV operators use two-way cable, cable modems installed in the home, cable modem termination systems installed at major cable concentration points and network headend equipment designed to interface their cable TV networks to video feeds and other networks. Several cable companies are currently offering broadband access services across two-way cable, including AT&T Broadband, Charter Communications, Cox and TimeWarner Cable.

**Fiber Optics.** Fiber optic cables use pulses of light to transmit digital information. Because fiber optic cables support thousands of high-speed, local digital connections onto a single higher-speed connection to the central office or the central side of the cable TV network where the video signals emanate, they offer virtually unlimited bandwidth capacity. Due to their high capacity, fiber optic cables are being used increasingly in the access network in both telecommunications and cable TV applications.

**Signaling.** Telephone systems require a signaling mechanism to set up and end phone calls. These signals serve three basic functions: supervising or monitoring the status of a line on circuit to see if it is busy, idle or requesting service; alerting or indicating the arrival of an incoming call; addressing or transmitting routing and destination signals over the network. Signaling Systems 7, or SS7, is the standard signaling system used by telecom networks worldwide. Signaling networks must support new access technologies to ensure interoperability with the existing telephone network.

We believe that the increasing demand for high-speed bandwidth access and the increasing development and availability to end users of technologies, such as those described above, that support this access will propel the continued growth of the Internet and of network service providers.

#### Challenges of High-Speed Data Services Deployment

Regardless of the type of technology, the successful deployment of high-speed broadband services poses several major challenges to service providers. Physical impairments in cable TV lines and the copper telephone wires upon which DSL technology depends can degrade the quality of the broadband access and, in some cases, prevent any service from being delivered. Examples of physical impairments include the following:

- . shorts, which occur when the twisted pair conductors are touching each other or when one of them comes into contact with a grounded piece of metal;
- . opens, which occur in a variety of ways including when a splice joining two cable segments fails or when a construction crew cuts through a buried cable ;
- . power crosses, which occur when the telephone wire comes into contact with a live AC power source; and

- . wet cables, which occur when the aerial cable is subjected to rain or when the underground cable comes into contact with ground water and the pressurization system (if any) is inadequate to handle the leakage.

In addition to the challenges stated above, asymmetric DSL, or ADSL, service for residential end users faces its own particular challenges. ADSL is designed to share the existing copper telephone wires using splitters or microfilters at the customer premises and central office to break the single line into two service appearances. Although a customer may have a working voice line, several line impairments can kill ADSL service. These impairments include:

- . load coils, which are inductors sometimes placed at 6000 foot intervals on telephone lines to optimize voice transmission;
- . bridge taps, which occur when an existing spare telephone line to one customer location is "tapped" into prior to its endpoint to provide service to another location that has exhausted its supply of existing copper telephone lines, with the result that the line then has two separate customer ends, one at the original location and the other at the new location;
- . AM radio interference, where the AM radio spectrum covers the same frequencies used in ADSL, high bit-rate DSL, or HDSL, high speed symmetric DSL, or SDSL, and T1 frequencies; and
- . intra-cable crosstalk between high frequency service twisted pairs, where the twisted pairs act as long antennas placed in the same cable bundles, effectively transmitting onto one another creating excessive levels of background noise.

Because these problems may only be diagnosed and repaired effectively in the field, many DSL service providers send field technicians to verify every line before they hand over service to their customers.

Cable TV and fiber optic networks face similar challenges. The cable TV network was used originally to support one-way analog transmission of video images. Now, digital cable TV networks also support voice and interactive high-speed data services and customers require the same level of reliability as provided by the existing telephone network. Potential problems for reliable and high quality broadband access through cable TV lines include signal return path interference and downstream signal degradation. As a result, cable TV providers believe that cable plant pre-qualification and verification is a prerequisite for the successful implementation of the technology. The widespread deployment of fiber optic technologies into the cable TV and telecommunications access networks also requires field verification equipment to verify and diagnose service problems with these links.

#### The Need for Service Verification Equipment

In order to deploy successfully and maintain the new broadband networks, service providers rely on sophisticated service verification equipment. This equipment allows service providers to pre-qualify facilities for services, verify proper operation of newly installed services and diagnose problems. In addition, equipment manufacturers use service verification equipment to test simulated networks during equipment development and verify the successful production of equipment. Service verification equipment can be grouped into three types: field verification, remote testing and alarm and surveillance.

Field Verification Equipment. Field verification equipment is used by all service providers to probe the actual wires, cables or airwaves to verify that a service works. In the case of a service malfunction, a field technician can use the equipment to locate the exact fault so that repairs can be made. Research and development labs, manufacturing departments and central office technicians also use field verification equipment in their day-to-day operations. Of the three types of service verification equipment, field verification equipment delivers the most detailed service information and is essential to the successful deployment of broadband networks. Service providers have found field verification to be the most effective method to ensure that the lines work as promised before they hand over service to their customers.

Remote Test Equipment. Remote test equipment can help verify services and identify certain types of service malfunctions from a centralized location. The equipment is typically controlled by a centralized test system that automates much of the remote testing process. It is commonly used to determine which section within a 3,000 mile circuit has malfunctioned and to diagnose quickly the nature of a customer's complaint. Due to its centralized and automated nature, remote test equipment is an efficient way to complement field test equipment in the deployment and maintenance of broadband networks.

Alarm and Surveillance Equipment. Alarm and surveillance equipment constantly monitors the telephone network, searching for facility or service degradations, including outages. When a problem is noticed, a report may be sent immediately to an automated trouble diagnostic system or to a human operator who interprets the message and decides what further action is required. Corrective action typically involves field verification or remote test equipment to identify and correct specific problems.

Because the competition for subscribers for high-speed bandwidth access is intense, the quality and reliability of network service has become critical to service providers because of the expense, loss of customers and negative publicity resulting from poor service. Field technicians who use service verification equipment allow service providers to verify and repair service problems effectively and, thus, increase the quality and reliability of the network. We believe that as broadband services are deployed further and as competition for subscribers proliferates, service providers will increasingly depend on advanced field test and monitoring solutions.

#### The Sunrise Solution

We design and manufacture service verification equipment that enables service providers to pre-qualify facilities for services, verify newly installed services and diagnose problems relating to wireline access services including the new DSL services, fiber optic and cable TV and signaling networks. Our products also enable equipment manufacturers to test simulated networks during equipment development and verify the successful production of equipment. Our field products offer the following features:

- . Design Flexibility. We design our products to be flexible and to evolve as customer needs change. Our CM 1000 and SunSet xDSL lines, for example, allow field technicians the ability to upgrade their equipment easily through a variety of plug-in hardware modules. This flexible design allows the customer to adapt the test set to new services and applications as network standards evolve, thereby protecting the customer's investment in the test equipment.
- . Customer Driven Features. Each of our products is highly tailored to our customers' needs. Our marketing engineers continually interact with our customers during the design process to ensure that our products are the best available solution for them.
- . Handheld Design. We design most of our products to be used in the field. Most of our field products weigh less than three pounds and offer handheld convenience. The compact, lightweight design of these products enable field technicians to access problems and verify line operation quickly. The SunSet OCx for example, is the first truly handheld asynchronous transfer mode or ATM-compatible fiber optic field test set for SONET, or synchronous optical network, which is the North American standard for transmissions using fiber optics, which is small enough to be grasped in the palm of the technician's hand. Similarly, our SunSet SDH offers the same flexibility as the SunSet OCx for different international standards.

Because of the design and functionality of our products, we provide the following benefits to our customers:

- . Rapid and Efficient DSL Deployment. Our products allow field and office technicians to test DSL lines rapidly and efficiently to ensure that they are properly connected to the central office and that they can support a specific type and speed of DSL service. In a single device, our products can be used to pre-qualify facilities for services, identify the source of problems and verify the proper operation of newly installed service before handing service over to customers.
- . Improved Network Quality and Reliability. Field and office technicians use our products to diagnose and locate a variety of problems and degradations in broadband service. For example, our xDSL products allow extensive diagnosis and analysis of the physical layers of the copper wire network. This allows service providers to identify and repair problems and to restore service efficiently. As a result, our products support our customers' need to provide high quality and reliable service.

## Strategy

Our objective is to be a leading provider of service verification test equipment for a broad range of applications within the global telecommunications industry. The following are the key elements of our strategy:

- . Maintain Our Position in DSL Service Verification Equipment. We intend to maintain our position in DSL service verification equipment by continuing to enhance the features and functionality of our existing products to serve our customers' rapidly changing needs. In particular, we expect to introduce additional products to address new DSL technologies. We also plan to expand our relationships with the top DSL service providers in the United States and in international markets. In addition, during 2000 we began to supply Lucent Technologies with a customized copper loop test head for their Stinger DSL Access Multiplexor product, which provides service providers with a DSL test solution for DSL line deployment, maintenance and diagnostics functions.
- . Penetrate the Growing Market for Fiber Optic Cable Verification Testing Equipment. We plan to capitalize on the expanding use of fiber optic cable in the telecommunications industry. Our SunSet OCx and SunSet SDH products support testing of higher bandwidth fiber optic networks and we plan to continue to increase the data rates supported by our optical products and develop additional products to support new network applications and technologies based on gigabit optical rates.
- . Provide New Cable TV Verification Solutions. We intend to penetrate the growing market for verification equipment for cable TV by adding features and functionality to increase the applicability of our product offerings. For example, in 2000 we introduced our CM1000, which employs modules to test digital networks with broadband access capabilities. Our modular architecture allows technicians to use a single unit to test a variety of cable TV/ modem services, and the flexibility of the modular architecture also protects a customer's investment in the test equipment. We expect to add new features in this modular form in the future. In January 2001, we acquired Avantron Technologies, a Canadian company which specializes in the design and manufacture of spectrum analyzers and performance monitoring systems. We intend to further address the convergence of voice and data across cable TV networks.
- . Expand Beyond Field Verification Testing. We intend to leverage our expertise in field verification testing to expand into remote testing, alarm and surveillance and central office testing applications. Our Ghepardo signaling products allow technicians to remotely access signaling probes distributed throughout the network. In addition, our Ghepardo products provide alarm and surveillance monitoring and enable equipment developers to exercise and evaluate their network elements' signaling and VoIP capabilities. We have also introduced products aimed at central office testing that are a natural extension of our field testing products. For example, the Copper Loop Test Head ("CLT") is a central office remote testing service for DSL services.
- . Grow Internationally. We plan to expand from our presence in over 60 countries to meet the growing demand for high-speed access solutions and increase our brand recognition internationally. We believe existing service providers in Asia, Europe and Latin America will gradually convert their installed base of analog voice equipment to more efficient DSL equipment due to the advantages of the technology, its superior economics compared to readily available alternatives and the increasing demand for it. In 2000, we introduced a new fiber optics testing product, the Sunset SDH, which provides a combination of SONET/SDH for testing international gateway areas. We intend to add features to our existing products to make our solutions more attractive to service providers in other countries.
- . Pursue Strategic Acquisitions. We plan to continue to make acquisitions and enter into joint ventures on a selected basis. We expect that acquisitions and joint ventures may provide an efficient way of expanding our business, product offerings and access to different customers and market niches.
- . Pursue Follow-On Sales Opportunities. We plan to continue to develop hardware modules that allow our customers to increase the functionality of the products which they have purchased from us. For example, our CM1000 and SunSet xDSL products allow technicians to add hardware cartridges to test different types of services. This feature allows customers to protect their investment in test equipment and generates follow-on sales opportunities as we develop new modules in the future.

## Products

We currently offer two main categories of service verification products: broadband access service verification products and signaling testing products.

### Broadband Access Service Verification Products

Our broadband access service verification products support a wide range of access technologies, including DSL, cable TV and fiber optics, and within each of these technologies, different transmission types, frequencies or speeds and protocols for U.S. and international standards.

We design our products to enable technicians to verify if a broadband service has been properly installed and to help identify and correct problems in case of an error. Our products are designed to be carried into the field by a technician and offer a large graphical display, menu-driven functionality and an easy-to-use interface. In addition, most of our field products weigh less than three pounds, allowing field technicians to carry them easily. Many of our new models support plug-in hardware modules that enable technicians to upgrade our handheld test sets quickly and easily while in the field.

Sales of our DSL products accounted for 100% of our net sales in 1998, approximately 98% in 1999 and approximately 80% in 2000. Although we have recently introduced or acquired fiber optic, cable TV and signaling products, we expect that sales of DSL products will continue to account for a majority of our net sales for the foreseeable future.

We offer a three-year warranty on our DSL and fiber optic products sold in the United States and a one-year warranty for those sold overseas with a two-year extended warranty option at the time of sale. We offer a one-year warranty on our cable TV and signaling products.

Within our broadband access testing products, we manufacture service verification equipment for three main technologies: DSL, cable TV and fiber optics. We describe our major products in each product category below.

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DSL Products

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Global DSL

Global DSL products allow worldwide telecommunications service providers to install and troubleshoot digital copper-based circuits and services. The xDSL series finds data transmission rates and noise margins that can be supported by the line. This series employs modules to test DSL and other digital transmission types, such as T1 which is used by large businesses for broadband access. Our modular architecture allows technicians to use a single unit to test a variety of DSL services. In addition, the flexibility of the modular architecture protects a customer's investment in the test equipment.

- SunSet xDSL Full Chassis . Handheld unit for DSL service verification that also supports the testing of lines for physical impairments. This module supports all Sunrise DSL modules to allow field technicians to test various types of DSL technologies with a single product.
- SunSet xDSL Light Chassis . Handheld unit for DSL service verification only. This product supports all Sunrise DSL modules to allow field technicians to test various types of DSL technologies.
- xDSL RAM . Rack-mount unit to be used in central office applications by central office technicians and frame technicians. The xDSL RAM holds up to six DSL modules for DSL service verification and supports the testing of lines for physical impairments.
- Copper Loop Test Head . Customized copper loop test head for Lucent Technologies' Stinger DSL Access Multiplexor product. Provides service providers with a DSL test solution for DSL line deployment, maintenance and diagnostics functions.
- SunSet ISDN, SunLite BRI . These products support analysis and service verification for the integrated services digital network, known as ISDN. ISDN is an enhanced digital network that offers more bandwidth than the traditional telephone network.

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North American DSL

We design our North American DSL products specifically for the North American market and support applications common to this market such as T1, a standard for digital transmission in North America used by large businesses for broadband access.

- SunSet T1 . Handheld unit that supports transmission testing for T1, including service verification for voice services.
- SunSet T10 . Handheld unit that supports transmission testing for T1, with service verification and diagnostics for multiple data protocols and voice services.
- SunSet T3 . Handheld unit that offers the versatility to test multiple transmission types in a single unit and support areas that have international and North American standards. It also offers service verification and diagnostics for integrated services digital network, known as ISDN, and voice services.

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International DSL

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We design international DSL products specifically for testing lines outside the North American market and to support protocols common to the international market such as E1, a standard for international digital transmission used by large businesses for broadband access.

- SunLite E1 . Handheld unit that supports transmission testing in a small test set for E1.
- SunSet E1, E8 . Handheld unit that supports transmission testing and service verification for E1 and voice services.
- SunSet E10, E20 . Handheld unit that supports transmission testing for E1, and service verification for data protocols, voice and other signaling protocols.
- SunSet PDH . Handheld unit that supports transmission testing for E1 and higher transmission rates.

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Cable TV Products

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- CR1200R . Portable unit to support field transmission analysis for digital and analog cable TV networks for both inbound and outbound signals. It also finds common transmission problems in cable TV digital networks that would inhibit the networks' use for Internet services. The unit is water resistant, portable and can be used without additional equipment.
- CM-1000 . Handheld installation and troubleshooting unit that fully tests DOCSIS Cable Modem installations. The CM1000 uses a built-in cable modem to fully exercise the network on both the downstream and upstream paths. It communicates with the Cable Modem Termination System (CMTS) to characterize the digital performance in both directions.
- AT-2000R . Lightweight, portable, rugged, full-featured CATV Spectrum Analyzer that performs advanced field testing which includes finding fast transient ingress, measuring carrier to noise ratios up to 60 dB at low levels, accurately measuring digital carriers, and performing complex proof of performance testing.
- AT-2000HM . Headend Spectrum Analyzer that provides remote headend testing and return path monitoring. Allows monitoring of signals from 1 MHz to 1 GHz, allowing the forward path to be monitored in addition to the reverse path.

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Fiber Optic Products

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- SunSet OCx . Handheld unit that supports transmission testing for SONET, synchronous optical network, a family of fiber optic transmission rates with many electrical digital signals with different capacities. It includes both electrical and optical signal testing and performs service verification for various services such as asynchronous transfer mode, a very high speed transmission technology, which allows telephone companies to mix formerly incompatible signals, such as voice, video, and data. The SunSet OCx is currently the smallest multi-rate optical test set available.
- SunSet SDH . Handheld unit that supports fiber optic transmission types, such as SONET and synchronous digital hierarchy, a set of international fiber-optic standards, as well as traditional North American and international digital transmission types. Also supports testing for asynchronous transfer mode. The SunSet SDH offers the ability to test SONET and synchronous digital hierarchy in a single unit and facilitates testing in areas where international and U.S. standards co-exist.

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Signaling Testing Products  
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- Ghepardo . Central office unit to analyze major signaling protocols, including SS7, and standard data communication protocols. Open platform design with hardware and software that users can customize easily. Web-based user interface allows users to control our products, including customization of test functions, from anywhere in the world through standard web-browser software.
- VoIP Explorer . Portable unit that provides analysis and simulation for next generation Voice over IP networks using SIP (Session Initiation Protocol), MGCP (Media Gateway Control Protocol), and PacketCable's NCS (Network Call Signaling) protocols. Allows developers to test and stress VoIP equipment and enables service providers to thoroughly evaluate the performance of their networks prior to deployment in the field. The VoIP Explorer's bundled set of tools include quality of service measurements for each call, live call trace and audio monitoring, protocol analysis, as well as simulation and load generation.
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Customers

Our customers include telecommunications service providers, network infrastructure suppliers and installers, technicians and engineers in North America, Latin America, Europe and the Asia/Pacific region. The following is a selected list of our customers in 2000.

AT&T Corporation	SBC Communications Inc. (consisting of
AOL Time Warner, Inc.	Ameritech Corporation, Nevada Bell, Pacific
Allegiance Telecom, Inc.	Bell, Southern New England Telephone, Advanced
Bell Canada Enterprises, Inc.	Solutions, Inc. and Southwestern Bell
BellSouth Telecom, Inc.	Telephone Company)
Chunghwa Telecom Co., Ltd.	Sprint Corporation
Covad Communications Group, Inc.	Telefonica S.A.
France Telecom	Telefonos de Mexico, S.A.
Korea Telecom	Teligent, Inc.
Lucent Technologies, Inc.	Telkom SA, Ltd
Network Telephone Corp.	Verizon Communications, Inc.

As of December 31, 2000, we had sold versions of our products to over 1,800 customers in over 60 countries. Affiliates of SBC Communications accounted for approximately 41% of our net sales in 1999 and 16% in 2000. Additionally, in 2000, approximately 17% of our net sales were generated from an OEM product sold to Solectron, a new customer who integrates this product into the Stinger DSLAM that it manufactures for Lucent Technologies. Besides SBC Communications and Solectron, no individual customer accounted for 10% or more of our net sales in 1998, 1999 or 2000. We expect that we will continue to depend upon a relatively limited number of customers for substantially all of our revenues in future periods. See "Item 7 --Factors Affecting Future Operating Results--Customer Concentration."

Sales, Marketing and Customer Service

Sales. We sell our products to telecommunications service providers, network infrastructure suppliers and installers, technicians and engineers through manufacturers' representatives, independent distributor organizations and our direct sales force.

In the United States, we sell our products through 15 manufacturers' representatives companies who are supported by our in-house direct sales force. Manufacturers' representatives are paid on a commission basis to sell our products and have exclusive rights in their respective regions. Our manufacturers' representatives solicit orders from the customer, and we ship our products directly to the customer. We pay commissions once payment is received from the customer. Our direct sales force consists of 20 employees who focus on sales in the United States, including a team of regional sales managers who direct the efforts of our manufacturers' representatives, regional account managers who focus on specific accounts within a region and our Vice President of North American Sales, who directs the sales effort in North America.

Outside the United States, we sell our products through 90 independent distributor organizations, which are directed by our regional directors of marketing and sales. Once a sale is made, we sell our product to the distributor who then resells the product to the end user. We sell our products to our independent distributor organizations at a discount off our list price. International sales were \$12.0 million or approximately 42% in 1998, \$12.2 million or approximately 20% in 1999 and \$29.7 million or approximately 26% in 2000. We expect that international sales will continue to account for a significant portion of our net sales in future periods. In addition to our network of international distributors, we have sales people located in Beijing, China; Tokyo, Japan; Seoul, Korea and Modena, Italy. Additionally, in January 2001 we acquired Avantron Technologies and now maintain a sales office in Montreal, Canada and plan to open new offices in other locations in the future. See "Item 7 --Factors Affecting Future Operating Results--Risks of International Operations." For information regarding export sales and international operations, see Note 14 of notes to consolidated financial statements of Sunrise.

We sell our products predominantly to large telecommunications service providers. These prospective customers generally commit significant resources to an evaluation of our and our competitors' products and require each vendor to expend substantial time, effort and money educating the prospective customer about the value of the vendor's solutions. Consequently, sales to this type of customer generally require an extensive sales effort throughout the prospective customer's organization and final approval by an executive officer or other senior level employee. The result is lengthy sales and implementation cycles, which make sales forecasting difficult. In addition, even after a large telecommunications service provider has approved our product for purchase, their future purchases are uncertain because we do not enter into long-term supply agreements or requirements contracts with those parties. Delays associated with potential customers' internal approval and contracting procedures, procurement practices, testing and acceptance processes are common and may cause potential sales to be delayed or foregone. As a result of these and related factors, the sales cycle of new products for large customers typically ranges from six to 24 months.

Marketing. We market and promote sales of our products by the following activities:

- . Our product marketing group researches new opportunities, prepares product definitions with our research and development group and defines new features to create new products;
- . The overall marketing group hosts a variety of seminars several times a year in the United States, Asia, Europe and Latin America to improve the sales effectiveness of our manufacturers' representatives and international distributors;
- . Our product marketing engineers, regional sales managers and account managers travel extensively with our manufacturers' representatives and international distributors to develop new product opportunities with customers and to support their presentations;
- . The marketing communications group maintains a public Web site, publishes brochures and specification sheets and generates press releases and publicity to increase our recognition in the telecommunications industry;
- . Our technical publications group prepares user's manuals, field manuals, quick reference guides, and product operation videos to serve the needs of our users;
- . Our training department prepares customer training presentations and sponsors Sunrise University, a factory-based xDSL training program for our customers.

Customer Service. We believe that customer service following the sale of our products is a critical ingredient to our success. We provide customer service in numerous ways, including:

- . providing rapid instrument repair services;
- . operating a 24 hour per day telephone support line to help customers who are having difficulty using our products in their particular application;
- . maintaining a proprietary Web site containing on-line, up-to-the-minute product repair information for our distributors' international repair centers, with a factory-certified technician training program for our distributors' international repair center technicians; and
- . measuring the satisfaction of our customers and communicating this information to our quality group.

## Research and Development

We have assembled a team of highly skilled engineering professionals who are experienced at designing telecommunications service verification test equipment. Our engineering personnel have expertise in a number of fields, including interfacing test equipment with digital loop carrier, voice and data switching technology, local loop equipment and operations support systems. We spent approximately \$6.2 million on research and development in 1998, \$10.7 million in 1999 and \$17.6 million in 2000. Research and development represents our largest direct employment expense. At December 31, 2000, we had a total of 117 employees engaged in research and development in San Jose, California; Norcross, Georgia; Springfield, Virginia; and Modena, Italy.

We believe that our continued success depends on our ability to anticipate and respond to changes in the telecommunications industry and anticipate and satisfy our customers preferences and requirements. Accordingly, we continually review and evaluate technological and regulatory changes affecting the telecommunications industry and seek to offer products and capabilities that solve customers' operational challenges and improve their efficiency. In general, we spend anywhere from two months to four years developing a new product.

## Regulations and Industry Standards

Our products are designed to comply with a significant number of industry standards and regulations, some of which are evolving as new technologies are deployed. In the United States, our products must comply with various regulations defined by the Federal Communications Commission and Underwriters Laboratories as well as industry standards established by Telcordia Technologies, Inc., formerly Bellcore, and the American National Standards Institute. Internationally, our products must comply with standards established by the European Committee for Electrotechnical Standardization, the European Committee for Standardization, the European Telecommunications Standards Institute, telecommunications authorities in various countries as well as with recommendations of the International Telecommunications Union. The failure of our products to comply, or delays in compliance, with the various existing and evolving standards could negatively impact our ability to sell our products.

## Manufacturing

Our production process consists of planning, procurement, fabrication, rework, system assembly, system final test, software option customization and shipping. We purchase substantially all parts, including resistors, integrated circuit boards, LCDs and printed circuit boards, from distributors and manufacturers worldwide. We package these parts into kits and send them to contract manufacturers to assemble them into printed circuit boards. We perform substantially all remaining manufacturing operations. We maintain sourcing and manufacturing operations in San Jose, California; Norcross, Georgia; Taipei, Taiwan and Modena, Italy. In January 2001, we acquired Avatron Technologies, and now also maintain manufacturing facilities in Montreal, Canada. In 2000, we performed the majority of sourcing, contract manufacturing and final assembly in San Jose, California. We have obtained ISO-9001 certification for our San Jose, California and Modena, Italy operations.

In 1998, we formed a subsidiary in Taiwan, Taiwan Sunrise Telecom Company Limited, as a turn-key manufacturer and local procurement operation. We also own an equity interest of approximately thirteen percent in Top Union, an assembly company located in Taipei, Taiwan that performs module assembly as part of the Taiwan Sunrise Telecom Company Limited turn-key operation. We intend to increase the use of outsource manufacturing for our more mature products. We believe that outsourcing will lower our manufacturing costs, in particular our labor costs, provide us with more flexibility to scale our operations to meet changing demand and allow us to focus our engineering resources on new product development and product enhancements.

In our manufacturing process, we purchase many key products, such as microprocessors, bus interface chips, optical components and oscillators, from a single source or from that product's sole supplier. We rely exclusively on third-party subcontractors to manufacture certain sub-assemblies and we have retained, from time to time, third party design services in the development of our products. We do not have long-term supply agreements with these vendors. In general, we make advance purchases of some products and components to ensure an adequate supply, particularly for products that require lead times of up to six months to manufacture. For a discussion of the risks associated with our reliance on these third parties, see "Item 7 --Factors Affecting Future Operating Results--Dependence on Sole and Single Source Suppliers."

## Competition

The market for field verification test equipment is fragmented and intensely competitive, both in and outside the United States, and is subject to rapid technological change, evolving industry standards and regulatory developments. We compete with a number of United States and international suppliers that vary in size and in the scope and breadth of the products and services offered. The following table sets forth our principal competitors in each of our product categories.

Product Category	Principal Competitors
Digital Subscriber Line	Acterna Corporation, Agilent Technologies, Inc., Tollgrade Communications, Inc. and Turnstone Systems, Inc.
Fiber Optics SONET/SDH	Digital Lightwave, Inc., Acterna Corporation and Agilent Technologies, Inc.
Cable TV	Acterna Corporation and Agilent Technologies, Inc.
Signaling	Inet Technologies, Inc. and GN Nettest

We expect that, as our industry and market evolves, new competitors or alliances among competitors could emerge and acquire significant market share. We anticipate that competition in our market will increase with the result that we will face greater threats to our market share, price pressure on our products and the likelihood that, over time, our profitability may decrease.

We believe that the principal competitive factors in our market include:

- . a continued high level of investment in research and development and marketing;
- . speed of new product introductions to market;
- . depth of product functionality;
- . ease of installation, integration and use;
- . system reliability and performance;
- . price and financing terms;
- . technical support and customer service;
- . size and stability of the vendor's operations; and
- . compliance with government and industry standards.

## Intellectual Property and Proprietary Technology

Our intellectual property, including our proprietary technology, processes and know-how, trade secrets, patents, trademarks and copyrights, is important to our business and to our continued success. We have two patents relating to communications testers, and we have filed several applications for additional patents with the U.S. Patent and Trademark Office. Additionally, our newly acquired subsidiary, Avantron Technologies, has three additional patent applications pending that relate to spectrum analyzers. Our research and development and manufacturing process typically involves the use and development of a variety of forms of intellectual property and proprietary technology, although no one form of this intellectual property and proprietary technology is material to our business. In addition, we incorporate software that we license from several third party sources into our products. These licenses generally renew automatically on an annual basis. We believe that alternative technologies for this licensed software are available both domestically and internationally.

We protect our proprietary technology by:

- . relying on intellectual property law, including patent, trade secret, copyright and trademark law and by initiating litigation where necessary to enforce our rights;
- . limiting access to our software, documentation and other proprietary information; and
- . entering into confidentiality agreements with our employees.

We may receive in the future notices from holders of patents that raise issues as to possible infringement by our products. As the number of telecommunications test, measurement, and network management products increases and the functionality of these products further overlaps, we believe that we may become subject to allegations of infringement given the nature of the telecommunications industry and the high incidence of these kinds of claims. Questions of infringement and the validity of patents in the field of telecommunications technologies involve highly technical and subjective analyses. These kinds of proceedings are time consuming and expensive to defend or resolve, result in substantial diversion of management resources, cause product shipment delays or could force us to enter into royalty or license agreements rather than dispute the merits of the proceeding initiated against us. For more information regarding the risks to our intellectual property, see "Item 7 --Factors Affecting Future Operating Results--Intellectual Property Risks."

#### Employees

At December 31, 2000, we had a total of 353 full-time employees, consisting of 275 in the United States, 27 in Taiwan and 51 in Italy, and approximately 14 temporary employees. Of the total permanent employees, 117 were engaged in research and development, 81 were engaged in sales, marketing and customer support, 108 were engaged in operations and 47 were engaged in administration and finance. Additionally, in January 2001, we acquired Avantron Technologies, a Canadian company with 41 employees, the majority of whom are engineers and technologists. None of our employees is subject to a collective bargaining agreement. The employees of our Pro.Tel subsidiary are protected by certain provisions of Italian law. We believe that our relations with our employees are good. See "Item 7 --Factors Affecting Future Operating Results--Need for New Personnel" and "--Dependence on Key Employees."

#### Executive Officers

The names and ages of our executive officers as of December 31, 2000 are as follows:

Name	Age	Position(s)
Paul Ker-Chin Chang.....	42	Chief Executive Officer, President and Director
Paul A. Marshall.....	43	Chief Operating Officer, Vice President Marketing and Director
Robert C. Pfeiffer.....	38	Chief Technology Officer, Vice President Engineering and Director
Peter L. Eidelman.....	34	Chief Financial Officer and Treasurer

Paul Ker-Chin Chang co-founded Sunrise in October 1991 and has served as Chief Executive Officer, President and Chairman since that time. From 1984 to 1991, Mr. Chang was employed as Engineering Supervisor for the Wiltron division of Anritsu Corporation, a manufacturer of communications test equipment. Mr. Chang holds an M.S. in Electrical Engineering from the University of Kansas at Lawrence and a B.S. in Physics from Tunghai University in Taiwan.

Paul A. Marshall co-founded Sunrise in October 1991 and has served as Chief Operating Officer since December 1999, as Vice President of Marketing since March 1992 and as a director since October 1991. Mr. Marshall also served as Chief Financial Officer of Sunrise until December 1999. From 1980 to 1992, Mr. Marshall held various positions with the Wiltron division of Anritsu Corporation, most recently as Marketing Staff Engineer. Mr. Marshall holds an M.B.A. from the Harvard Business School and a B.S. in Mechanical Engineering from the University of California at Davis.

Robert C. Pfeiffer co-founded Sunrise in October 1991 and has served as Vice President of Engineering and director since that time. Additionally, Mr. Pfeiffer served Sunrise as Secretary from October 1991 until July 2000 and Chief

Technology Officer since December 1999. From June 1989 to October 1991, Mr. Pfeiffer was employed as a Telecommunication R&D Engineer for the Wiltron division of Anritsu Corporation. Mr. Pfeiffer holds an M.B.A. and a B.S. in Electrical Engineering from Santa Clara University. Mr. Pfeiffer has announced that he will retire effective March 22, 2001.

Peter L. Eidelman joined Sunrise in July 1997 and has served as Chief Financial Officer and Treasurer since December 1999. Mr. Eidelman served as Sunrise's Treasurer and Director of Finance and Administration from January 1999 to December 1999 and as Director of Tax, Finance and Accounting from July 1997 to January 1999. Mr. Eidelman was employed as a Manager of Tax, Accounting and Compliance for Amdahl Corporation, an enterprise solution company, from July 1994 to July 1997. From November 1988 to July 1993, Mr. Eidelman was employed as a Tax Manager at Coopers & Lybrand, an international accounting firm. Mr. Eidelman holds a B.B.A. in Accounting from the University of Massachusetts at Amherst. Mr. Eidelman is a member of the A.I.C.P.A. and Tax Executive Institute.

#### Item 2. Properties

Our current headquarters and manufacturing facility occupies approximately 47,000 square feet in San Jose, California under a lease that expires in November 2004. We are building near our current headquarters a new 91,700 square foot facility to accommodate our need for an increase in manufacturing capacity and employees. The new facility is scheduled for completion in March 2001. We also lease approximately 16,500 square feet of office and manufacturing space in Norcross, Georgia; approximately 7,300 square feet of office space in Springfield, Virginia; approximately 10,000 square feet of office and manufacturing space in Modena, Italy; 6,000 square feet of office space in Taipei, Taiwan; a liaison office in Beijing, China; and sales offices in Seoul, Korea and Tokyo, Japan. Additionally, as a result of our acquisition of Avantron Technologies in January 2001, we now lease an additional 10,000 square feet of office and manufacturing space in Montreal, Canada.

#### Item 3. Legal Proceedings

We are not currently a party to any material legal proceedings. In September 1999, the United States District Court for the Northern District of California entered final judgment against Electrodata, Inc. stating that it had literally infringed our U.S. Patent No. 5,619,489, entitled Handheld Communications Tester. The court also entered judgment against Electrodata that the patent claims at issue were valid and the patent was enforceable. Electrodata thereupon appealed. On January 9, 2001, the United States Court of Appeals for the Federal Circuit heard Electrodata's appeal. On January 13, 2001, the Federal Circuit affirmed the judgment of the District Court. Electrodata has since submitted payment to us in satisfaction of the judgment.

#### Item 4. Submission of matters to a vote of security holders.

None.

PART II.

Item 5. Market for Registrant's common equity and related stockholder matters.

Information About Our Common Stock

Our common stock has been traded on the Nasdaq National Market under the symbol SRTI since our initial public offering on July 13, 2000. The following table sets forth, for the periods indicated, the highest and lowest closing sale prices for our common stock, as reported by the Nasdaq National Market.

2000	High	Low
----	----	---
Third Quarter.....	\$61.00	\$27.50
Fourth Quarter.....	\$26.00	\$ 3.25

As of December 31, 2000, there were approximately 133 holders of record of our common stock.

We declared and paid a \$0.015 per share cash dividend on our common stock in 1999. We did not declare or pay any cash dividend on our common stock in 2000. In the future, our board of directors will determine whether we will pay dividends on our common stock. Our line of credit restricts the payment of dividends on our common stock to dividends payable in common stock and to \$1.0 million payable in any one fiscal year.

Use of Our Initial Public Offering Proceeds

Our registration statement (Registration No. 333-32070) under the Securities Act of 1933, as amended, for our initial public offering became effective on July 12, 2000. A total of 4,600,000 shares of common stock were registered and 3,817,428 shares of our common stock were sold to an underwriting syndicate. Chase H&Q, CIBC World Markets and U.S. Bancorp Piper Jaffray were the managing underwriters of the offering. An additional 782,572 shares of common stock were sold on behalf of selling stockholders as part of the same offering. All shares were sold to the public at a price of \$15.00 per share.

In connection with the offering, we paid approximately \$4.0 million in underwriting discounts and commissions to the underwriters. Offering proceeds, net of aggregate expenses to us of approximately \$1.6 million, were approximately \$51.6 million. None of the net proceeds from the offering were paid directly or indirectly to any director, officer, general partner of the Company or its associates, persons owning 10 percent or more of any class of equity securities of the Company or an affiliate of the Company.

We have used \$2.4 million of the net proceeds from the offering to repay amounts drawn under our line of credit and \$979,000 to repay notes payable. Additionally, in January 2001 we used \$10.2 million of the net proceeds for the acquisition of Avantron Technologies. Funds that have not been used have been invested in money market funds, auction rate securities and marketable debt securities. None of the costs and expenses related to the offering were paid directly or indirectly to any director, officer, general partner of the Company or its associates, persons owning 10 percent or more of any class of equity securities of the Company or an affiliate of the Company.

We intend to use the remaining net proceeds of the offering for working capital and general corporate purposes, including the construction of our new facility and capital expenditures made in the ordinary course of our business. We may also apply a portion of the proceeds of the offering to acquire businesses or products and technologies that are complementary to our business and product offerings.

Item 6. Selected Financial Data

The table below sets forth summary consolidated financial information for the periods indicated. It is important that you read this information together with the section entitled "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our audited consolidated financial statements and the notes to them included elsewhere in this report on Form 10-K.

	Year Ended December 31,				
	1996	1997	1998	1999	2000
(in thousands, except per share data)					
<b>Consolidated Statement of Net Income:</b>					
Net sales.....	\$20,174	\$29,064	\$28,535	\$61,465	\$ 113,481
Cost of sales.....	5,189	7,652	7,590	14,736	32,994
Gross profit.....	14,985	21,412	20,945	46,729	80,487
<b>Operating expenses:</b>					
Research and development.....	1,019	5,892	6,203	10,694	17,555
Sales and marketing.....	5,444	7,645	7,764	15,215	22,694
General and administrative.....	1,019	1,632	2,243	3,912	9,790
Total operating expenses.....	9,514	15,169	16,210	29,821	50,039
Income from operations.....	5,471	6,243	4,735	16,908	30,448
Other income, net.....	51	112	224	327	1,909
Income before income taxes.....	5,522	6,355	4,959	17,235	32,357
Income taxes.....	2,081	1,899	1,588	6,291	11,972
Net income.....	\$ 3,441	\$ 4,456	\$ 3,371	\$10,944	\$ 20,385
Dividends.....	\$ 60	\$ 89	\$ 89	\$ 223	\$ --
<b>Earnings per share: /(1)/</b>					
Basic.....	\$ 0.08	\$ 0.10	\$ 0.08	\$ 0.25	\$ 0.43
Diluted.....	\$ 0.08	\$ 0.10	\$ 0.07	\$ 0.24	\$ 0.41
<b>Shares used in computing earnings per share: /(1)/</b>					
Basic.....	44,954	44,645	44,537	44,667	47,374
Diluted.....	45,071	44,896	45,003	45,824	49,610
December 31,					
	1996	1997	1998	1999	2000
(in thousands)					
<b>Consolidated Balance Sheet Data:</b>					
Cash and cash equivalents.....	\$ 638	\$ 2,409	\$ 5,030	\$ 8,615	\$ 56,298
Working capital.....	4,832	8,087	10,164	16,360	81,967
Total assets.....	11,260	14,678	17,193	38,266	125,556
Notes payable, less current portion.....	--	--	--	638	1,047
Total stockholders' equity.....	6,402	10,462	13,570	25,471	105,644

(1) See Note 1 of the notes to consolidated financial statements for a detailed explanation of the determination of the number of shares used to compute basic and diluted earnings per share.

Item 7. Managements' Discussion and Analysis of Financial Condition and Results of Operation.

In addition to the other information in this report, certain statements in the following Management's Discussion and Analysis of Financial Condition and Results of Operation (MD&A) are forward-looking statements. When used in this report, the word "expects," "anticipates," "estimates," and similar expressions are intended to identify forward-looking statements. Such statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties are set forth below under "Factors Affecting Future Operating Results." The following discussion should be read in conjunction with our condensed consolidated financial statements and notes thereto included elsewhere in this report.

Overview

We manufacture and market service verification equipment to pre-qualify, verify and diagnose telecommunications and Internet networks. We design our products to maximize technicians' effectiveness in the field and to provide realistic network simulations for equipment manufacturers to test their products. Our customers include incumbent local exchange carriers, competitive local exchange carriers, and other service providers, network infrastructure suppliers and installers throughout North America, Latin America, Europe and the Asia/Pacific region.

In July 2000, we completed our initial public offering of 4.6 million shares at \$15 per share, including 600,000 over-allotment shares, of which 782,572 shares were sold by selling stockholders. Net proceeds to us from the offering after underwriters' fees and expenses of approximately \$5.7 million totaled approximately \$51.6 million.

Sources of Net Sales

We sell our products predominantly to large telecommunications service providers. These prospective customers generally commit significant resources to an evaluation of our and our competitors' products and require each vendor to expend substantial time, effort and money educating the prospective customer about the value of the proposed solutions. Delays associated with potential customers' internal approval and contracting procedures, procurement practices, testing and acceptance processes are common and may cause potential sales to be delayed or foregone. As a result of these and related factors, the sales cycle of new products for large customers typically ranges from six to 24 months. Substantially all of our sales are made on the basis of purchase orders rather than long-term agreements or requirements contracts. As a result, we commit resources to the development and production of products without having received advance or long-term purchase commitments from customers.

To date, a significant portion of our net sales has resulted from a small number of relatively large orders from a limited number of customers. In 1999 and 2000, we sold approximately \$25.8 million and \$18.0 million, respectively, of our products to affiliates of SBC Communications, which represented approximately 41% and 16%, respectively, of our net sales. In 2000, sales to SBC Communications affiliates decreased from the prior year primarily due to a higher sales volume of light chassis DSL products which have lower average selling prices than full chassis DSL products. As a percentage of sales, sales to SBC Communications affiliates have decreased due to our expanding customer base and the growth of our business as well as a change in the product mix purchased. Additionally, in 2000, approximately \$19.6 million or 17% of our net sales were generated from an OEM product sold to Solectron, a new customer who integrates this product into the Stinger DSLAM that it manufactures for Lucent Technologies. We anticipate that our operating results for any given period will continue to be dependent to a significant extent on large purchase orders, which can be delayed or cancelled by our customers without penalty. In addition, we anticipate that our operating results for a given period will continue to be dependent on a small number of customers.

Currently, competition in the telecommunications equipment market is intense and is characterized by declining prices due to increased competition, new products and increasing unit volumes. Due to competition and potential pricing pressures from large customers in the future, we expect that the average selling price and gross margins for our products will decline over time. If we fail to reduce our production costs accordingly, our gross margins will correspondingly decline. See "Factors Affecting Future Operating Results--Competition" and "--Risks of the Telecommunications Industry."

During the last three years, a substantial portion of our net sales were derived from customers located outside of the United States, and we believe that continued growth will require expansion of our sales in international markets. Currently, we maintain a procurement support and manufacturing facility in Taipei, Taiwan, a representative liaison office in Beijing, China, a foreign sales corporation in Barbados and manufacturing, research and development and sales facilities in Modena, Italy and sales offices in Tokyo, Japan and Seoul, Korea. As a result of our acquisition of Avantron Technologies in January 2001, we now maintain research and development and sales facilities in Montreal, Canada and expect to establish additional international sales and other offices in the future. Prior to our acquisition of Pro.Tel, international sales have been



denominated solely in U.S. dollars and, accordingly, we have not historically been exposed to fluctuations in non-U.S. currency exchange rates related to these sales activities. Since our acquisition of Pro.Tel in February 2000, we now have a small amount of sales denominated in Euro and have begun to use derivative instruments to hedge our foreign exchange risks. To date, foreign exchange risks from these sales have not been material to our operations. We have also been exposed to fluctuations in non-U.S. currency exchange rates related to our procurement activities in Taiwan. In the future, we expect that a growing portion of international sales may be denominated in currencies other than U.S. dollars, thereby exposing us to gains and losses on non-U.S. currency transactions. We may choose to limit such exposure by entering into various hedging strategies. See "Factors Affecting Future Operating Results--Risks of International Operations."

We recognize product sales at the time of shipment unless we have future obligations or customer acceptance is required, in which case revenue is recognized when these obligations have been met or the customer accepts the product. We offer a three-year warranty covering parts and labor on our DSL and fiber optic products sold in the United States and a one-year warranty covering parts and labor for those products sold overseas with a two-year extended warranty option at time of sale. Our cable TV and signaling products are covered by a one-year warranty. Sales of extended warranties are deferred and recognized over the extended warranty term, which is generally two years. We charge estimated warranty costs to cost of sales when the related sales are recognized. We recognize revenue for out-of-warranty repair when we ship the repaired product.

#### Cost of Sales

Our cost of sales consist primarily of:

- . direct material costs of product components, manuals, product documentation and product accessories sold;
- . production wages, taxes and benefits;
- . production allocated occupancy costs;
- . warranty costs;
- . the costs of board level assembly by third party contract manufacturers; and
- . scrapped material used in the production process.

Our industry is characterized by limited supply chains and long lead times for materials and components we use in the manufacture of our products. If we underestimate our requirements, we may have inadequate inventory, resulting in additional costs to our products to expedite delivery of certain long lead time components. An increase in the cost of components could result in lower margins.

Additionally, these long lead times have in the past, and may in the future, cause us to attempt to mitigate these lead times by purchasing larger quantities of some parts, increasing our investment in inventory and the risk of the parts' obsolescence. Any subsequent write-off of inventory could also result in lower margins. See "Factors Affecting Future Operating Results--Dependence on Sole and Single Source Suppliers".

We recognize direct cost of sales as we ship product. We expense scrapped materials, wages, taxes, benefits and allocated occupancy costs as incurred.

#### Operating Costs

We classify our operating expenses into three general operational categories: sales and marketing, research and development and general and administrative. Our operating expenses also include the amortization of deferred stock-based compensation and goodwill and other intangible assets. We classify all charges to the sales and marketing, research and development and general and administrative expense categories based on the nature of the expenditures. Although each of these three categories includes expenses that are unique to the category type, there are commonly recurring expenditures that are typically included in these categories, such as salaries, amortization of stock-based compensation, employee benefits, travel and entertainment costs, allocated communication, rent and facilities costs and third party professional service fees. The sales and marketing category of operating expenses also includes expenditures specific to the sales and marketing group, such as those relating to commissions, public relations and advertising, trade shows and marketing materials.

We allocate the total cost of overhead and facilities to each of the functional areas that use overhead and facilities based upon the facilities square footage used by each of these areas. These allocated charges include facility rent and utilities for the corporate office, communications charges and depreciation expense for office furniture and equipment.

In 1999 and 2000, we recorded deferred stock-based compensation expense of approximately \$205,000 and \$1,954,000, respectively, related to the grant of options to purchase our common stock at exercise prices subsequently deemed to be below fair market value. Total compensation expense related to options granted in 1999 and the first quarter of 2000 will be amortized on a straight-line basis to the departments in which the employees received these below market option grants over the respective four-year vesting periods of the options. In 1999 and 2000, we allocated amortization of deferred stock-based compensation expense of \$17,000 and \$264,000, respectively, to cost of sales, \$111,000 and \$773,000, respectively, to research and development expense, \$58,000 and \$586,000, respectively, to sales and marketing expense and \$18,000 and \$331,000, respectively, to general and administrative expense. At December 31, 2000, approximately \$6,611,000 of deferred stock-based compensation expense remained to be amortized at a rate not exceeding \$549,000 per quarter.

#### Acquisitions

In July 1999, we acquired Hukk Engineering ("Hukk"), a manufacturer of digital cable testing equipment. We accounted for the Hukk Engineering acquisition as a purchase and recorded goodwill and other intangibles of approximately \$2.5 million to be amortized on a straight-line basis over the next five years. In February 2000, we acquired Pro.Tel. S.r.l. ("Pro.Tel"), an Italian manufacturer of distributed network signaling analysis equipment, and its U.S. affiliate and the assets of an unrelated U.S. distributor. We accounted for the Pro.Tel acquisition as a purchase and recorded goodwill and other intangibles of approximately \$9.4 million to be amortized on a straight-line basis over the next two to five years, based on the expected life of the underlying assets. In addition, we recorded stock-based compensation for stock options granted to employees of Pro.Tel in the first quarter of 2000 in the amount of approximately \$6.5 million to be amortized on a straight-line basis over their four year vesting period. In January 2001, we acquired all of the outstanding stock of Avantron Technologies, a Canadian company which specializes in the design and manufacture of spectrum analyzers and performance monitoring systems for approximately Cdn. \$17.6 million (approximately U.S. \$11.7 million) in cash and short-term notes payable. The transaction will be accounted for under the purchase method. We believe that acquisitions and joint ventures may be an important part of our growth and competitive strategy. "Factors Affecting Future Operating Results--Acquisitions."

#### Results of Operations

The following table sets forth certain operating data as a percentage of net sales for the periods indicated:

	Percentage of Net Sales		
	Year Ended December 31,		
	1998	1999	2000
	-----	-----	-----
Net sales.....	100.0%	100.0%	100.0%
Cost of sales.....	26.6	24.0	29.1
	-----	-----	-----
Gross profit.....	73.4	76.0	70.9
Operating expenses:			
Research and development.....	21.7	17.4	15.5
Sales and marketing.....	27.2	24.7	20.0
General and administrative.....	7.9	6.4	8.6
	-----	-----	-----
Total operating expenses.....	56.8	48.5	44.1
	-----	-----	-----
Income from operations.....	16.6	27.5	26.8
Other income, net.....	0.8	0.5	1.7
	-----	-----	-----
Income before income taxes.....	17.4	28.0	28.5
Income taxes.....	5.6	10.2	10.5
	-----	-----	-----
Net income.....	11.8%	17.8%	18.0%
	=====	=====	=====

Comparison of Years Ended December 31, 1999 and 2000

Net Sales. Net sales increased approximately 85% from \$61.5 million in 1999 to \$113.5 million in 2000. Sales of our DSL products accounted for approximately \$30.4 million of the net sales increase, our new fiber optics products accounted for approximately \$14.0 million of the net sales increase, our new signaling products accounted for approximately \$4.7 million of the net sales increase, and our cable TV products accounted for approximately \$2.9 million of the net sales increase over the prior year.

Sales in 2000 increased \$38.2 million or 76% in North America, \$6.0 million or 138% in Europe, \$4.5 million or 80% in Asia and \$3.3 million or 275% in Latin America as compared to sales in 1999. The strong increase in North American sales is primarily due to sales of our DSL and fiber optic products. Our DSL products accounted for approximately \$19.7 million of the increase in North American sales for the year in part due to sales of our new customized Copper Loop Test Head for Lucent Technologies' Stinger DSLAM, which totaled approximately \$19.6 million or 17% of net sales for 2000. Sales of our new fiber optics products accounted for approximately \$11.8 million of the increase in North American sales for the year. Our new signaling products accounted for approximately \$3.8 million of the increase in North American sales for the year, and sales of our cable TV products accounted for approximately \$2.9 million of the increase in North American sales for the year.

International sales increased to approximately \$29.7 million, or 26% of net sales in 2000 from approximately \$12.2 million or 20% of net sales in 1999. The increase in international sales is primarily due to increased sales of our DSL product line and our expanded international operations.

Cost of Sales. Cost of sales consists primarily of direct material, warranty and personnel costs related to the manufacturing of our products and allocated overhead. Cost of sales increased approximately 124% from \$14.7 million in 1999 to \$33.0 million in 2000. Cost of sales represented approximately 24% of net sales in 1999 and approximately 29% in 2000. The increase as a percentage of net sales resulted primarily from a higher sales volume of light chassis DSL products which have lower average selling prices than full chassis DSL products and the introduction of our new fiber optics and cable TV product lines which generated lower gross margins than the mix of products sold during the prior year. We expect that cost of sales expenses will continue to increase as a percentage of sales for the foreseeable future as our OEM relationships expand and our light chassis DSL and cable TV products increase as a percentage of our overall product mix.

Research and Development. Research and development expenses consist primarily of the costs of payroll and benefits for engineers, equipment and consulting services. Research and development expenses increased approximately 64% from \$10.7 million in 1999 to \$17.6 million in 2000. The increase in absolute dollars was primarily due to costs associated with increased staffing dedicated to research and development activities. These research and development expenses represented approximately 17% of net sales during 1999 and approximately 15% in 2000. The decrease as a percentage of net sales in 2000 was primarily attributable to increased product sales relative to research and development expenditures. We expect that research and development expenses will increase in absolute dollars for the foreseeable future as we intend to continue to invest in product development.

Sales and Marketing. Sales and marketing expenses consist primarily of manufacturers' representatives and direct sales commissions, personnel, travel and facilities expenses related to sales and marketing, and trade show and advertising expenses. Sales and marketing expenses increased approximately 49% from \$15.2 million in 1999 to \$22.7 million in 2000. The increase in absolute dollars in 2000 was primarily related to increased staffing to support expanded product offerings and increased marketing and promotional activities. These sales and marketing expenses represented approximately 25% of net sales during 1999 and approximately 20% in 2000. The decrease as a percentage of net sales during 2000 was primarily due to increased OEM sales which have led to lower commission, occupancy, and salary and related expenses as a percentage of sales. We expect that sales and marketing expenses will increase in absolute dollars for the foreseeable future as we intend to continue to invest in our sales and marketing capabilities.

General and Administrative. General and administrative expenses consist primarily of personnel, facilities and other costs of our finance and administrative departments, legal and accounting expenses as well as the amortization of goodwill and other intangible assets related to acquisitions treated as purchase business combinations. General and administrative expenses increased approximately 150% from \$3.9 million in 1999 to \$9.8 million in 2000. These general and administrative expenses represented approximately 6% of net sales during 1999 and approximately 9% in 2000. The increase in both absolute dollars and as a percentage of net sales was primarily related to increased staffing and related costs associated with the growth of our business, amortization of goodwill and other intangible assets related to recent business acquisitions and amortization of deferred stock-based compensation. We anticipate that general and administrative expenses will continue to increase in absolute dollars for the foreseeable future as we accommodate our growth, add related infrastructure and incur expenses related to being a public company.

Other Income, Net. Other income, net represents primarily interest earned on cash and investment balances net of interest expense on notes payable and short-term borrowings under our line of credit. In 2000, we also recorded a \$381,000 gain on a forward contract. Other income, net increased from \$327,000 in 1999 to \$1.9 million in 2000. The increase in 2000 resulted primarily from increased interest earned on higher balances of cash and cash equivalents resulting from increased cash flow from operations, a gain on a forward contract and interest income earned on the net proceeds received from our initial public offering in July 2000.

Income Taxes. Income taxes consist of federal, state and international income taxes. We recorded income tax expense of \$6.3 million in 1999 and \$12.0 million in 2000. Our effective income tax rates were 32% in 1999 and 37% in 2000. The effective income tax rate is higher in 2000 than in 1999 primarily due to higher levels of income, charges from non-cash amortization of goodwill and deferred stock-based compensation, and an increased concentration of sales in local jurisdictions with higher tax rates.

#### Comparison of Years Ended December 31, 1998 and 1999

Net Sales. Net sales increased approximately 115.4% from \$28.5 million in 1998 to \$61.5 million in 1999. Sales of our xDSL products accounted for approximately \$30.0 million of the \$33.0 million increase in net sales in 1999. Sales to affiliates of SBC Communications represented approximately \$22.8 million of the increase in 1999. We also introduced two new products in the second half of 1999, the SunSet OCx and SS500, to address the fiber optic transmissions testing market.

Cost of Sales. Cost of sales increased approximately 94.2% from \$7.6 million in 1998 to \$14.7 million in 1999. Cost of sales represented approximately 26.6% of net sales in 1998 and approximately 24.0% in 1999. The decrease as a percentage of net sales during 1999 resulted primarily from an increase in domestic sales, which have higher gross margins than international sales as a percentage of net sales and lower manufacturing costs due to volume discounts.

Research and Development. Research and development expenses increased approximately 72.4% from \$6.2 million in 1998 to \$10.7 million in 1999. The increase in absolute dollars was primarily due to costs associated with increased staffing dedicated to research and development activities. These research and development expenses represented approximately 21.7% of net sales during 1998 and approximately 17.4% in 1999. The decrease as a percentage of net sales in 1999 was primarily attributable to increased product sales relative to research and development expenditures.

Sales and Marketing. Sales and marketing expenses increased approximately 96.0% from \$7.8 million in 1998 to \$15.2 million in 1999. The increase in absolute dollars in 1999 was primarily related to increased staffing to support expanded product offerings, increased marketing and promotional activities and an increase in commissions paid to the independent manufacturers' representatives. These sales and marketing expenses represented approximately 27.2% of net sales during 1998 and approximately 24.7% in 1999. The decrease as a percentage of net sales during 1999 was primarily due to relatively higher growth in sales in North America as a percentage of net sales.

General and Administrative. General and administrative expenses increased approximately 74.4% from \$2.2 million in 1998 to \$3.9 million in 1999. The increase in absolute dollars was primarily related to increased staffing and related costs associated with the growth of our business and professional and legal fees associated with our successful patent lawsuit against Electrodata, Inc. These general and administrative expenses represented approximately 7.9% of net sales during 1998 and approximately 6.4% in 1999. The slight decrease as a percentage of net sales during 1999 was primarily due to relatively higher growth in net sales and our ability to leverage our base of resources to support a larger organization.

Other Income, Net. Other income, net increased from \$224,000 in 1998 to \$327,000 in 1999. The increase in 1999 resulted from increased interest earned on higher balances of cash and cash equivalents resulting from increased cash flow from operations, partially offset by interest expense attributable to notes payable.

Income Taxes. We recorded income tax expense of \$1.6 million in 1998 and \$6.3 million in 1999. Our effective income tax rates were 32.0% in 1998 and 36.5% in 1999. The effective income tax rate was higher in 1999 than in 1998 primarily due to higher levels of income as well as an increased concentration of sales in local jurisdictions with higher tax rates.

## Backlog

Our backlog of customer orders at December 31, 2000 was approximately \$8.0 million compared to approximately \$11.0 million at December 31, 1999. Variations in the size and delivery schedules of purchase orders that we receive, as well as changes in customers' delivery requirements may result in substantial fluctuations in the amount of backlog orders for our products from quarter to quarter. Accordingly, we believe that our backlog cannot be considered a meaningful indicator of our future financial results.

## Seasonality

Our sales have been seasonal in nature with the largest portion of quarterly sales tied to the buying patterns of our customers which, in past years, have often increased during the last calendar quarter of the year as customers spent the unused portion of their yearly budget. As a result, in the past, our first quarter sales tended to decrease from the prior quarter. However, in the fourth quarter of 2000, we did not see a sales increase resulting from customers spending available budget dollars. In the future, we expect that our quarterly operating results may fluctuate significantly and will be difficult to predict given the nature of our business. Many factors could cause our operating results to fluctuate from quarter to quarter in the future, including the lengthy and unpredictable buying patterns of our customers, and the degree to which our customers allocate and spend their yearly budgets.

## Liquidity and Capital Resources

Historically, we have financed our operations and satisfied our capital expenditure requirements primarily through cash flow from operations and borrowings under our line of credit. Additionally, in July of 2000, we received net proceeds totaling approximately \$51.6 million from our initial public offering. As of December 31, 1999 and 2000, we had working capital of approximately \$16.3 million and \$82.0 million, respectively, and cash and short-term investments of approximately \$8.6 million and \$62.6 million, respectively.

Cash provided by operating activities was approximately \$4.5 million in 1998, \$10.1 million in 1999 and \$13.4 million in 2000. Operating cash flows increased during 2000 as compared with the prior year as a result of increases in accounts receivable and inventory required to meet our expected future sales targets, increases in prepaid expenses and other assets for deposits related to both our new building and our increased marketing activities, and an increase in deferred income taxes. These uses of cash were partially offset by positive cash flow generated from increased levels of income from operations, increased non-cash charges for depreciation and amortization and amortization of deferred stock-based compensation, and an increase in accounts and commissions payable and accrued compensation and related benefits.

Cash used in investing activities was approximately \$1.7 million in 1998, \$6.2 million in 1999 and \$16.9 million in 2000. Our use of cash in investing activities in 1999 was primarily related to a \$2.7 million cash deposit for the purchase of land for and construction of our new facility, a \$782,000 payment relating to the Hukk Engineering acquisition and \$2.7 million of purchases of property and equipment. In 2000, cash used in investing activities included approximately \$4.7 million for acquisitions, \$6.3 million for purchases of marketable equity securities, \$5.6 million for capital expenditures and \$241,000 for the purchase of a long-term investment. Cash used for capital expenditures increased in 2000 primarily as a result of purchases of general office equipment to support our growth, research and development laboratory equipment and demonstration equipment required for the introduction of new products and an increase in the number of our distribution channels. We believe that capital expenditures in the first quarter of 2001 will include approximately \$18.0 million relating to the construction of our new facility in San Jose, California, which we are building to accommodate our need for an increase in manufacturing capacity and employees, and approximately \$3.0 million for additional equipment, furniture and fixtures relating to the new facility.

During 1998 and 1999, we used approximately \$263,000 and \$311,000 in cash for financing activities, respectively, as compared to the same period in 2000 where we generated approximately \$51.2 million. Our use of cash in financing activities in 1999 was primarily related to the repurchase of \$202,000 of our common stock and cash dividends of \$223,000, offset by proceeds of \$177,000 from the exercise of stock options. In 2000, cash provided by financing activities was primarily due to net proceeds of approximately \$51.6 million from our initial public offering in July 2000, net proceeds of approximately \$500,000 received from stock issued pursuant to our employee stock purchase plan, and \$798,000 received from the exercise of stock options, partially offset by \$1.6 million used for repayments of notes payable.

Currently, we have a line of credit from Bank of America, N.A. for up to \$9.0 million in borrowings at the bank's prime rate less 0.25% which expires on May 1, 2001. At December 31, 1999 and 2000, there were no balances outstanding

under the line of credit. Borrowings under the line of credit are secured by our inventory and accounts receivable. The agreement governing the line of credit contains covenants, which we were in compliance with at December 31, 1999 and 2000, that, among other things:

- . requires us to maintain various financial covenants, including profitability and current ratios;
- . limits capital expenditures;
- . restricts the payment of dividends on our common stock to dividends payable in common stock and to \$1.0 million payable in any one fiscal year; and
- . restricts our ability to redeem our common stock beyond 20% of our net income for the prior fiscal year.

We believe that the net proceeds received by us from our initial public offering, together with current cash balances, cash flows from operations and available borrowings under our line of credit will be sufficient to meet our anticipated cash needs for working capital, capital expenditures and other activities for at least the next 12 months. After that, if current sources are not sufficient to meet our needs, we may seek additional equity or debt financing. In addition, any material acquisition of complementary businesses, products or technologies or material joint venture could require us to obtain additional equity or debt financing. We cannot assure you that such additional financing would be available on acceptable terms, if at all.

#### Factors Affecting Future Operating Results

Quarterly Fluctuations--Because our quarterly operating results have fluctuated significantly in the past and are likely to fluctuate significantly in the future, our stock price may decline and may be volatile.

In the past, we have experienced significant fluctuations in our quarterly results due to a number of factors beyond our control. In the future, we expect that our quarterly operating results may fluctuate significantly and will be difficult to predict given the nature of our business. Many factors could cause our operating results to fluctuate from quarter to quarter in the future, including the following:

- . the size and timing of orders from our customers, in each case exacerbated by the lengthy and unpredictable buying patterns of our customers, and our ability to ship these orders on a timely basis;
- . the degree to which our customers have allocated and spent their yearly budgets, which has, in some cases, resulted in higher net sales in our fourth quarter;
- . the uneven pace of technology innovation, the development of products responding to these technology innovations by us and our competitors and customer acceptance of these products and innovations;
- . the varied degree of price, product and technology competition, which has been buffeted by the rapid changes in the telecommunications industry and our customers' and competitors' responses to these changes;
- . the relative percentages of our products sold domestically and internationally; and
- . the mix of the products we sell and the varied margins associated with these products.

The factors listed above may affect our business and stock price in several ways, including the following:

- . Given the high fixed costs relating to overhead, research and development, and advertising and marketing, among others, if our net sales are below our expectations in any quarter, the negative effect may be magnified by our inability to adjust spending in a timely manner.
- . As a result of the above, our stock price may decline and may be volatile, particularly if public market analysts and investors perceive these factors to exist, whether or not that perception is accurate.
- . Finally, the above factors, taken together may make it more difficult for us to issue additional equity in the future or raise debt financing to fund future acquisitions and accelerate growth.

Customer Concentration--A limited number of customers account for a high percentage of our net sales, and any adverse factor affecting these customers or our relationship with these customers could cause our net sales to decrease.

Our customer base is highly concentrated, and a relatively small number of companies have accounted for a large percentage of our net sales. Net sales from our top five customers in the United States represented approximately 16% of net sales in 1998, 49% in 1999 and 42% in 2000. Our largest customers over this period have been affiliates of SBC Communications Inc., which include Pacific Bell Telephone Company, Southwestern Bell Telephone Company, Ameritech Corporation, Nevada Bell, Advanced Solutions, Inc. and Southern New England Telephone and which in total accounted for approximately 41% of net sales in fiscal 1999 and 16% in 2000. Additionally, sales to a new customer in 2000, Solectron, a contract manufacturer for Lucent Technologies' Stinger DSLAM, represented approximately 17% of sales in 2000. No customer is presently obligated to purchase a specific amount of products or to provide us with binding forecasts of purchases for any period. We expect that we will continue to depend upon SBC Communications' affiliates and other major customers for a substantial portion of our net sales in future periods. We cannot guarantee that our future net sales, including those from SBC Communications' affiliates, will be comparable to our fiscal 2000 net sales. The loss of a major customer or the reduction, delay or cancellation of orders from one or more of our significant customers could cause our net sales and, therefore, profits to decline. In addition, many of our customers are able to exert substantial negotiating leverage over us. As a result, they may cause us to lower our prices and negotiate other forms and provisions that may negatively affect our business and profits.

Dependence on DSL--Substantially all of our sales have been from our DSL products. If the market for DSL services does not continue to grow as we anticipate, our net sales could decline.

In 1999 and 2000, sales of our DSL products represented approximately 98% and 80% of our net sales, respectively. Currently, our DSL products are primarily used by a limited number of incumbent local exchange carriers, including the regional Bell operating companies, and competitive local exchange carriers, who offer DSL services. A competitive local exchange carrier is a company that, following the Telecommunications Act of 1996, is authorized to compete in a local communications services market. These parties, and other Internet service providers and users, are continuously evaluating alternative high-speed data access technologies, including cable modems, fiber optics, wireless technology and satellite technologies, and may at any time adopt these competing technologies. These competing technologies may ultimately prove to be superior to DSL services and reduce or eliminate the demand for our DSL products.

In addition, the availability and quality of DSL service may be impaired by technical limitations and problems of the existing copper wire network on which DSL service runs, such as:

- . the distance of end users from the central office of the incumbent local exchange carrier, which is typically limited to between 12,000 and 18,000 feet;
- . the quality and degree of interference with the copper wire network;
- . the configuration of the copper wire network, which may degrade or prevent DSL service;
- . the ability of DSL networks and operational support systems of service providers to connect and manage a substantial number of online end users at high speeds, while achieving reliable and high quality service; and
- . the vulnerability of the copper wire network to physical damage from natural disasters and other unanticipated telecommunications failures and problems.

Accordingly, our future success is substantially dependent upon whether DSL technology gains widespread market acceptance by these companies, end users of their services and other Internet service providers and users.

To date, our customers have deployed DSL equipment, including our products, in substantially larger volumes than their current subscriber count. The inability of our current or future customers to acquire and retain subscribers as planned, or to respond to competition for their services or reduced demand for their services, could cause them to reduce or eliminate their DSL deployment plans. If our customers are forced to reduce or eliminate their DSL deployment plans, our sales to them will decline.

Use of Field Technicians--If service providers reduce their use of field technicians and successfully implement a self-service installation model, demand for our products could decrease.

To ensure quality service, our major service provider customers, including SBC Communications, historically sent a technician who uses our product into the field to verify service for installations. SBC Communications, Qwest Communications and Verizon Communications encourage customers to install DSL themselves. By encouraging customers to install DSL themselves, these phone companies intend to reduce their expenses and expedite installation for their customers. To encourage self-installation, these companies offer financial incentives. Additionally, SBC Communications has created a subsidiary, Advanced Solutions, Inc., to provide installation services which further reduces the need for the local telephone company technician to carry a test set that can emulate both a DSL modem and find DSL physical layers problems. If SBC Communications and other service providers successfully implement these plans or choose to send technicians into the field only after a problem has been reported, or if alternative methods of verification become available, such as remote verification, the need for field technicians and the need for our products could decrease.

Sales Implementation Cycles--The length and unpredictability of the sales and implementation cycles for our products makes it difficult to forecast quarterly revenues.

Sales of our products often entail an extended decision-making process on the part of prospective customers. We frequently experience delays following initial contact with a prospective customer and expend substantial funds and management effort pursuing these sales. Our ability to forecast the timing and amount of specific sales is therefore limited. As a result, the uneven buying patterns of our customers may cause fluctuations in our quarterly operating results, which could cause our stock price to decline.

Other sources of delays that lead to long sales cycles, or even a sales loss, include: potential customers' internal approval and contracting procedures, procurement practices, and testing and acceptance processes. As a result, the sales cycle for larger deployment of selected products typically ranges from six to 24 months for new deployment of selected product sales, and up to six months for occasional large selected product sales. The deferral or loss of one or more significant sales could significantly affect operating results in a particular quarter, especially if there are significant sales and marketing expenses associated with the deferred or lost sales.

Product Enhancements--If we are unable to enhance our existing products and successfully manage the development of new products, our future success may be threatened.

The market for our products is characterized by rapid technological advances, changes in customer requirements and preferences, evolving industry and customer-specific protocol standards and frequent new product enhancements and introductions. Our existing products and our products currently under development could be rendered obsolete by the introduction of products for telecommunications networks involving competing technologies, by the evolution of alternative technologies or new industry protocol standards and by rival products introduced by our competitors. These market conditions are made more complex and challenging by the high degree to which the telecommunications industry is fragmented.

We believe our future success will depend, in part, upon our ability, on a timely and cost-effective basis, to continue to:

- . anticipate and respond to varied and rapidly changing customer preferences and requirements, a process made more challenging by our customers' buying patterns;
- . anticipate and develop new products and solutions for networks based on emerging technologies, such as the asynchronous transfer mode protocol that packs digital information into cells to be routed across a network, and Internet telephony, which comprises voice, video, image and data across the Internet, that are likely to be characterized by continuing technological developments, evolving industry standards and changing customer requirements;
- . invest in research and development to enhance our existing products and to introduce new verification and diagnostic products for the telecommunications, Internet, cable network and other markets; and
- . support our products by investing in effective advertising, marketing and customer support.

We cannot assure you that we will accomplish these objectives, and our failure to do so could have a material adverse impact on our market share, business and financial results.

Potential Product Liability--Our products are complex, and our failure to detect errors and defects may subject us to costly repairs, product returns under warranty and product liability litigation.

Our products are complex and may contain undetected defects or errors when first introduced or as enhancements are released. These errors may occur despite our testing and may not be discovered until after a product has been shipped and used by our customers. Many of the products that we ship contain known imperfections that we consider to be insignificant at the time of shipment. We may misjudge the seriousness of a product imperfection and allow it to be shipped to our customers. These risks are compounded by the fact that we offer over 20 products, with multiple hardware and software modifications, which makes it more difficult to ensure high standards of quality control in our manufacturing process. The existence of these errors or defects could result in costly repairs and/or returns of products under warranty and, more generally, in delayed market acceptance of the product or damage to our reputation and business.

In addition, the terms of our customer agreements and purchase orders, which provide us with protection against unwarranted claims of product defect and error, may not protect us adequately from unwarranted claims against us, unfair verdicts if a claim were to go to trial, settlement of these kinds of claims or future regulation or laws regarding our products. Our defense against these claims in the future, regardless of their merit, could result in substantial expense to us, diversion of management time and attention, damage to our business reputation and hurt our ability to retain existing customers or attract new customers.

Managing Growth--We may have difficulties managing our expanding operations, which could reduce our chances of maintaining our profitability.

We have recently experienced rapid growth in revenues and in our business generally that has placed, and we expect will continue to place, a significant strain on our management and operations. For example, our revenues have increased from approximately \$28.5 million in 1998 to \$61.5 million in 1999 and to \$113.5 million in 2000, our number of employees has increased from 118 at December 31, 1998 to 353 at December 31, 2000, and we have made three significant acquisitions, that of Hukk Engineering, Pro.Tel, and Avantron Technologies. As a result of our historical and expected growth, we face several risks, including:

- . the need to improve our operational, financial, management, informational and control systems;
- . the need to hire, train and retain highly skilled personnel in a market where there are already severe shortages of these kinds of personnel, as we discuss below; and
- . the possibility that our management's attention will be diverted from running our business to the needs of managing a public company.

We cannot assure you that we will be able to manage this growth profitably.

Competition--Competition could reduce our market share and decrease our net sales.

The market for our products is fragmented and intensely competitive both in and outside the United States, and is subject to rapid technological change, evolving industry standards, regulatory developments and varied and changing customer preferences and requirements. We compete with a number of United States and international suppliers that vary in size and in the scope and breadth of the products and services offered. The following table sets forth our principal competitors in each of our product categories.

Product Category -----	Principal Competitors -----
Digital Subscriber Line	Acterna Corporation, Agilent Technologies, Inc., Tollgrade Communications, Inc. and Turnstone Systems, Inc.
Fiber Optics SONET/SDH	Digital Lightwave, Inc., Acterna Corporation and Agilent Technologies, Inc.
Cable TV	Acterna Corporation and Agilent Technologies, Inc.
Signaling	Inet Technologies, Inc. and GN Nettest

Many of these competitors have longer operating histories, larger installed customer bases, longer relationships with customers, wider name recognition and product offerings and greater financial, technical, marketing, customer service and other resources than we do.

We expect that, as our industry and market evolves, new competitors or alliances among competitors with existing and new technologies could emerge and acquire significant market share. We anticipate that competition in our market will increase and we will face greater threats to our market share, price pressure on our products and the likelihood that, over time, our profitability may decrease. In addition, it is difficult to assess accurately the market share of our products or of Sunrise overall because of the high degree of fragmentation in the market for DSL service verification equipment, in particular, and for high-speed data access technology, in general. As a result, it may be difficult for us to forecast accurately trends in the market, which of our products will be the most competitive over the longer term and, thus, what is the best use of our human and other forms of capital. We cannot assure you that we will be able to compete effectively.

Need for New Personnel--If we cannot hire and train the R&D, manufacturing, sales, and marketing personnel we need to support our anticipated growth, our plans for continued expansion will be hampered.

Our business requires engineers, technicians and other highly trained and experienced personnel. In particular, since our products require a sophisticated selling effort targeted at several key people within our prospective customers' organizations, we have a special need for experienced sales personnel as well as specialized engineers. In addition, the complexity of our products and the difficulty of configuring and maintaining them require highly trained customer service and support personnel. If we continue to grow, we will need to hire a significant number of engineering, sales, marketing and customer service and support personnel in the future, in and outside the United States. Given that competition for such persons is intense, especially in the San Francisco Bay Area, we may not be successful in attracting and retaining these individuals. Our failure to hire, train and keep these kinds of employees could impair our ability to grow profitably. In addition, if we do hire new personnel, the addition of significant numbers of new personnel will require us to incur significant start-up expenses, including procurement of office space and equipment, initial training costs, and may result in low productivity rates of these new personnel. These start-up expenses may adversely affect our future operating results.

Reliance On Non-U.S. Workers--If U.S. immigration policies prevent us from hiring or retaining the workers we need, our growth may be limited.

In the past we have filled a significant portion of our new personnel needs, particularly for our engineers, with non-U.S. citizens holding temporary work visas that allow these persons to work in the United States for a limited period of time. We rely on these non-U.S. workers because of the shortage of engineers, technicians and other highly skilled and experienced workers in the telecommunications industry in the United States, in general, and in the San Francisco Bay Area, in particular. Regulations of the Immigration and Naturalization Service permit non-U.S. workers a limited number of extensions for their visas and also set quotas regarding the number of non-U.S. workers U.S. companies may hire. As a result, we face the risk that a portion of our existing employees may not be able to continue to work for us, thereby disrupting our operations, and that we may not be able to hire the number of engineers, technicians and other highly skilled and experienced workers that we need to grow our business. Furthermore, changes in these regulations could exacerbate these risks.

Dependence on Key Employees--If one or more of our senior managers were to leave, we could experience difficulties in replacing them and our operating results could suffer.

Our success depends to a significant extent upon the continued service and performance of a relatively small number of key senior management, technical, sales and marketing personnel. The loss of Paul Ker-Chin Chang and Paul A. Marshall,

in particular, could likely harm our business. Neither of these individuals is bound by an employment agreement with us, and we do not carry key man life insurance on them. In addition, competition for senior level personnel with telecommunications knowledge and experience is intense. If any of our senior managers were to leave Sunrise, we would need to devote substantial resources and management attention to replace them. As a result, management attention may be diverted from managing our business and we may need to pay higher compensation to replace these employees.

Risks of International Operations--Our plan to expand sales in international markets could lead to higher operating expenses and may subject us to unpredictable regulatory and political systems.

Sales to customers located outside of the United States represented 42% of our net sales in 1998, 20% in 1999 and 26% in 2000, and we expect international revenues to continue to account for a significant percentage of net sales for the foreseeable future. In addition, an important part of our strategy calls for further expansion into international markets. As a result, we will face various risks relating to our international operations, including:

- . potentially higher operating expenses, resulting from the establishment of international offices, the hiring of additional personnel and the localization and marketing of products for particular countries' technologies;
- . the need to establish relationships with government-owned or subsidized telecommunications providers as well as additional distributors;
- . fluctuations in foreign currency exchange rates and the risks of using hedging strategies to minimize our exposure to these fluctuations, which have been heightened by our recent acquisitions of Pro.Tel and Avantron Technologies, whose revenues have been and are likely to continue to be in Italian lira and Canadian dollars, respectively; and
- . potentially adverse tax consequences related to acquisitions and operations, including the ability to claim goodwill deductions and a foreign tax credit against U.S. federal income taxes, especially since Italy has a higher tax rate.

We cannot assure you that one or more of these factors will not materially and adversely affect our ability to expand into international markets, our revenues and profits.

In addition, the Asia/Pacific region has experienced instability in many of its economies and significant devaluations in local currencies. Approximately 20% of our sales in 1998, 9% of our sales in 1999 and 9% of our sales in 2000 were derived from customers located in this region. These instabilities may continue or worsen, which could have a materially adverse effect on our results of operations. If international revenues are not adequate to offset the additional expense of expanding international operations, our future growth and profitability could suffer.

Dependence on Sole and Single Source Suppliers--Because we depend on a limited number of suppliers and some sole and single source suppliers that are not contractually bound in the long-term, our future supply of product components is uncertain. This could lead to manufacturing difficulties.

In our manufacturing process, we purchase many key products, such as microprocessors, bus interface chips, optical components and oscillators, from a single source or sole supplier and we license certain software from third parties. We rely exclusively on third-party subcontractors to manufacture some sub-assemblies, and we have retained, from time to time, third party design services in the development of our products. We do not have long-term supply agreements with these vendors. In general, we make advance purchases of some products and components to ensure an adequate supply, particularly for products that require lead times of up to nine months to manufacture. In the past, we have experienced supply problems as a result of financial or operational difficulties of our suppliers, shortages, discontinuations resulting from component obsolescence or other shortages or allocations of supplies. Our reliance on these third parties involves a number of risks, including:

- . the unavailability of critical products and components on a timely basis, on commercially reasonable terms or at all;
- . if products or software licenses were to become unavailable, the need to qualify new or alternative products or develop or license new software for our use and/or to reconfigure our products and manufacturing process, each of which could be lengthy and expensive;
- . the likelihood that, if these products are not available, we would suffer an interruption in the manufacture and shipment of our products until the products or alternatives become available;

- . reduced control over product quality and cost, risks exacerbated by the need to respond, at times, to unanticipated changes and increases in customer orders; and
- . the unavailability of, or interruption in, access to some process technologies.

In addition, the purchase of these components on a sole source basis subjects us to risks of price increases and potential quality assurance problems. This dependence magnifies the risk that we may not be able to ship our products on a timely basis to satisfy customers' orders. We cannot assure you that one or more of these factors will not cause delays or reductions in product shipments or increases in product costs, which in turn could have a material adverse effect on our business.

Manufacturing Capacity--If demand for our products exceeds our manufacturing capacity, our revenues may suffer.

In the past, demand for our products has put increased pressure on our manufacturing capacity. For example, our revenues have increased from approximately \$28.5 million in 1998 to \$61.5 million in 1999 and to \$113.5 million in 2000. If we are not able to increase our manufacturing capacity in the time necessary to meet demand, if we experience difficulty in obtaining parts or components needed for manufacturing, or if demand exceeds our expectations, we may experience insufficient manufacturing capacity. If our manufacturing capacity does not keep pace with product demand, we will not be able to fulfill orders in a timely manner which in turn could have a material adverse effect on our revenues and on our overall business.

Acquisitions--We have acquired three significant companies and intend to pursue further acquisitions in the future. These activities involve numerous risks, including the use of cash, amortization of goodwill and the diversion of management attention.

Recently, we acquired three companies, Hukk Engineering in July 1999, Pro.Tel in February 2000, and Avantron Technologies in January 2001. As a result of these and other smaller acquisitions, we face numerous risks, including:

- . integrating the existing management, sales force, technicians and other personnel into one existing culture and business;
- . combining manufacturing, administrative and management information and other control systems into our corresponding systems;
- . developing and implementing an integrated business strategy from what had been previously three independent companies; and
- . developing compatible or complementary products and technologies from previously independent operations. For Hukk Engineering and Avantron Technologies, this means addressing the convergence of telephony and cable products.

The risks stated above will be made more difficult because Hukk Engineering is located in Norcross, Georgia; Avantron Technologies is located in Montreal, Canada and Pro.Tel is located in Modena, Italy and Springfield, Virginia. In addition, if we make future acquisitions, these risks will be exacerbated by the need to integrate additional operations at a time when we may not have fully integrated Hukk Engineering, Pro.Tel, and Avantron Technologies.

If we pursue further acquisitions, we will face similar risks as those above additional risks, including:

- . the diversion of our management's attention and the expense of identifying and pursuing suitable acquisition candidates, whether or not consummated;
- . negotiating and closing these transactions;
- . the potential need to fund these acquisitions by dilutive issuances of equity securities and by incurring debt; and
- . the potential negative effect on our financial statements from the increase in goodwill and other intangibles, the write-off of research and development costs and the high cost and expenses of completing acquisitions.

We cannot assure you that we will locate suitable acquisition candidates or that, if we do, we will be able to acquire them and then integrate them successfully and efficiently into our business.

Risks of the Telecommunications Industry--We face several risks regarding the telecommunications industry, including the possible effects of its rapid and unpredictable growth, the possible effects of consolidation among our principal customers and the risk that deregulation will slow.

Since the passage of the Telecommunication Act of 1996, the telecommunications industry has experienced rapid growth. This has and will likely continue to lead to great innovations in technology, intense competition, short product life cycles and, to some extent, regulatory uncertainty in and outside the United States. The course of the development of the telecommunications industry is, however, difficult to predict. As a result, companies who operate in this industry have a difficult time forecasting future trends and developments and the acceptance of competing technologies. One possible effect of this uncertainty is that there may be, in the future, a delay or a reduction in these companies' investment in their business and purchase of related equipment, such as our products, and a reduction in their and our access to capital. Moreover, in the short-term, deregulation may result in a delay or a reduction in the procurement cycle because of the general uncertainty involved with the transition period of businesses.

The telecommunications industry has been experiencing consolidation among its primary participants, such as incumbent local exchange carriers and competitive local exchange carriers, several of whom are our primary customers. For example, in recent years, SBC acquired Pacific Bell and Ameritech, both of which were customers of ours. Continued consolidation may cause delay or cause cancellation of orders for our products. In addition, the consolidation of our customers will likely provide them with greater negotiating leverage with us and may lead them to pressure us to lower the prices of our products.

Because the market for our products has grown with the deregulation of portions of the telecommunications industry, we face the risk that these trends may slow or may be reversed. For example, in the United States, there is litigation pending that challenges the validity of the Telecommunications Act of 1996 and the local telephone competition rules adopted by the Federal Communications Commission to implement that act. If deregulation in international markets and in the United States were to slow or to take an unanticipated course, the telecommunications industry might suffer the following effects:

- . greater consolidation of providers of high-speed access technologies, which may not favor the development of DSL technology and which might provide these companies with greater negotiating leverage regarding the prices and other terms of the DSL products and services they purchase;
- . uncertainty regarding judicial and administrative proceedings, which may affect the pace at which investment and deregulation continue to occur;
- . a general slowdown in economic activity relating to the telecommunications industry and a consequent multiplier effect on the general economy;
- . reduced investment in the telecommunications industry in general and in DSL technology in particular due to increased uncertainty regarding the future of the industry and this technology; and
- . delay in purchase orders of service verification equipment, such as our products, if they were to reduce their investment in new high-speed access technologies.

Intellectual Property Risks--Policing any unauthorized use of our intellectual property by third parties and defending any intellectual property infringement claims against us could be expensive and disrupt our business.

Our intellectual property and proprietary technology is an important part of our business, and we depend on the development and use of various forms of intellectual property and proprietary technology. As a result, we are subject to several related risks, including the risks of unauthorized use of our intellectual property and the costs of protecting our intellectual property.

Much of our intellectual property and proprietary technology is not protected by patents. If unauthorized persons were to copy, obtain or otherwise misappropriate our intellectual property or proprietary technology without our approval, the value of our investment in research and development would decline, our reputation and brand could be diminished and we would likely suffer a decline in revenue. We believe these risks, which are present in any business in which intellectual property and proprietary technology play an important role, are exacerbated by the difficulty in finding unauthorized use of

intellectual property in our business, the increasing incidence of patent infringement in our industry in general and the difficulty of enforcing intellectual property rights in some foreign countries.

In addition, litigation has in the past been, and may in the future be, necessary to enforce our intellectual property rights. This kind of litigation is time-consuming and expensive to prosecute or resolve, and results in substantial diversion of management resources. We cannot assure you that we will be successful in that litigation, that our intellectual property rights will be held valid and enforceable in any litigation or that we will otherwise be able to protect our intellectual property and proprietary technology.

Concentration of Control--Our executive officers and directors retain significant control over us, which allows them to decide the outcome of matters submitted to stockholders for approval. This influence may not be beneficial to all stockholders.

Paul Ker-Chin Chang, Paul A. Marshall and Robert C. Pfeiffer beneficially own approximately 26%, 24% and 13% of our outstanding shares of common stock. Consequently, these three individuals, acting together, are able to control the election of our directors and the approval of significant corporate transactions that must be submitted to a vote of stockholders. In addition, Mr. Chang, Mr. Marshall and Mr. Pfeiffer constitute three of the six members of the board of directors and have significant influence in directing the actions taken by the directors. The interests of these persons may conflict with your interests as stockholders, and the actions they take or approve may be contrary to those desired by other stockholders. This concentration of ownership and control of the management and affairs of our company may also have the effect of delaying or preventing a change in control of our company that stockholders may consider desirable.

Anti-takeover Provisions--Anti-takeover provisions in our charter documents could prevent or delay a change of control, and as a result, negatively impact our stockholders.

Some provisions of our certificate of incorporation and bylaws may have the effect of discouraging, delaying or preventing a change in control of our company or unsolicited acquisition proposals that you, as a stockholder, may consider favorable. These provisions provide for:

- . authorizing the issuance of "blank check" preferred stock;
- . a classified board of directors with staggered, three-year terms;
- . prohibiting cumulative voting in the election of directors;
- . requiring super-majority voting to effect certain amendments to our certificate of incorporation and by-laws;
- . limiting the persons who may call special meetings of stockholders;
- . prohibiting stockholder action by written consent; and
- . establishing advance notice requirements for nominations for election to the board of directors or for proposing matters that can be acted upon at stockholders meetings.

Some provisions of Delaware law and our stock incentive plans may also have the effect of discouraging, delaying or preventing a change in control of our company or unsolicited acquisition proposals. These provisions also could limit the price that some investors might be willing to pay in the future for shares of our common stock.

Item 7A. Qualitative and Quantitative Disclosure about Market Risk

We sell our products in North America, Asia, Latin America and Europe. As a result, our financial results could be affected by factors such as changes in foreign currency exchange rates. Prior to our acquisition of Pro.Tel, international sales had been denominated solely in U.S. dollars and, accordingly, we had not historically been exposed to fluctuations in non-U.S. currency exchange rates related to these sales activities. Since our acquisition of Pro.Tel in February 2000, we now have a small amount of sales denominated in Euro and have begun to use derivative instruments to hedge our foreign exchange risks. To date, foreign exchange risks from these sales have not been material to our operations.

We are exposed to the impact of interest rate changes and changes in the market values of our investments. Our exposure to market rate risk for changes in interest rates relates primarily to our investment portfolio. We have not used derivative financial instruments in our investment portfolio. We invest our excess cash in debt instruments of the U.S. Government and its agencies, and in high-quality corporate issuers and, by policy, limit the amount of credit exposure to any one issuer. We protect and preserve our invested funds by limiting default, market and reinvestment risk.

Investments in both fixed rate and floating rate interest earning instruments carry a degree of interest rate risk. Fixed rate securities may have their fair market value adversely impacted due to a rise in interest rates, while floating rate securities may produce less income than expected if interest rates fall. Due in part to these factors, our future investment income may fall short of expectations due to changes in interest rates or we may suffer losses in principal if forced to sell securities which have declined in market value due to changes in interest rates. Due to the nature of our investments, we anticipate no material market risk exposure.

Item 8. Financial Statements and Supplementary Data

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INDEPENDENT AUDITORS' REPORT

The Board of Directors and Stockholders  
Sunrise Telecom Incorporated

We have audited the accompanying consolidated balance sheets of Sunrise Telecom Incorporated and subsidiaries as of December 31, 1999 and 2000, and the related consolidated statements of net income, stockholders' equity and comprehensive income, and cash flows for each of the years in the three-year period ended December 31, 2000. These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

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

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Sunrise Telecom Incorporated and subsidiaries as of December 31, 1999 and 2000, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2000, in conformity with accounting principles generally accepted in the United States of America.

/s/ KPMG LLP

Mountain View, California  
January 24, 2001

## SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES

## CONSOLIDATED BALANCE SHEETS

(in thousands, except share data)

ASSETS	December 31,	
	1999	2000
Current assets:		
Cash and cash equivalents.....	\$ 8,615	\$56,298
Investment in marketable debt securities.....	--	6,300
Accounts receivable, net of allowance of \$252 and \$982, respectively.....	9,524	18,419
Inventories.....	7,612	13,330
Prepaid expenses and other assets.....	214	1,748
Deferred tax asset.....	2,050	4,245
Total current assets.....	28,015	100,340
Property and equipment, net.....	4,417	8,580
Intangible assets, net of accumulated amortization of \$222 and \$2,696, respectively.....	2,324	11,725
Deferred tax asset	--	799
Other assets.....	3,510	4,112
Total assets.....	\$38,266	\$125,556
	=====	=====
	LIABILITIES AND STOCKHOLDERS' EQUITY	
Current liabilities:		
Accounts payable.....	\$ 1,701	\$ 2,578
Current portion of notes payable.....	219	780
Other accrued expenses.....	6,688	12,581
Income taxes payable.....	2,814	1,888
Deferred revenue.....	233	546
Total current liabilities.....	11,655	18,373
Deferred tax liability.....	171	--
Notes payable, less current portion.....	638	1,047
Other liabilities.....	331	492
Commitments		
Stockholders' equity:		
Preferred stock, \$0.001 par value per share; 10,000,000 authorized shares; none issued and outstanding.....	--	--
Common stock, \$0.001 par value per share; 175,000,000 shares authorized; 44,913,000 and 49,941,000 shares issued and outstanding as of December 31, 1999 and 2000, respectively.....	45	50
Additional paid-in capital.....	3,915	68,317
Deferred stock-based compensation.....	(2,065)	(6,611)
Retained earnings.....	23,576	43,961
Accumulated other comprehensive loss.....	--	(73)
Total stockholders' equity.....	25,471	105,644
Total liabilities and stockholders' equity.....	\$ 38,266	\$125,556
	=====	=====

See accompanying notes to consolidated financial statements.

## SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF NET INCOME

(in thousands, except per share data)

	Years Ended December 31,		
	1998	1999	2000
Net sales .....	\$ 28,535	\$61,465	\$113,481
Cost of sales.....	7,590	14,736	32,994
Gross profit.....	20,945	46,729	80,487
Operating expenses:			
Research and development.....	6,203	10,694	17,555
Sales and marketing.....	7,764	15,215	22,694
General and administrative.....	2,243	3,912	9,790
Total operating expenses.....	16,210	29,821	50,039
Income from operations.....	4,735	16,908	30,448
Other income, net.....	224	327	1,909
Income before income taxes.....	4,959	17,235	32,357
Income taxes.....	1,588	6,291	11,972
Net income.....	\$ 3,371	\$10,944	\$ 20,385
Earnings per share:			
Basic.....	\$ 0.08	\$ 0.25	\$ 0.43
Diluted.....	\$ 0.07	\$ 0.24	\$ 0.41
Shares used in computing earnings per share:			
Basic.....	44,537	44,667	47,374
Diluted.....	45,003	45,824	49,610

See accompanying notes to consolidated financial statements.

SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES  
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY  
AND COMPREHENSIVE INCOME

(in thousands, except per share data)

	Common Stock		Additional	Deferred	Retained	Accumulated	Total	Comprehensive
	Shares	Amount	Paid-in	Stock-based	Earnings	Other	Stockholders'	Income
	-----	-----	Capital	Compen-	-----	Compre-	Equity	-----
	-----	-----	-----	sation	-----	hensive	-----	-----
	-----	-----	-----	-----	-----	Loss	-----	-----
Balances, December 31, 1997.....	44,616	\$ 45	\$ 467	\$ --	\$ 9,950	\$ --	\$ 10,462	
Exercise of stock options.....	39	--	21	--	--	--	21	
Repurchase of common stock.....	(136)	--	(7)	--	(188)	--	(195)	
Cash dividend of \$.006 per share.....	--	--	--	--	(89)	--	(89)	
Net income.....	--	--	--	--	3,371	--	3,371	\$ 3,371
Comprehensive income.....								\$ 3,371
Balances, December 31, 1998.....	44,519	45	481	--	13,044	--	13,570	
Exercise of common stock options.....	229	--	177	--	--	--	177	
Repurchase of common stock.....	(135)	--	(13)	--	(189)	--	(202)	
Issuance of stock in connection with Hukk acquisition.....	300	--	1,000	--	--	--	1,000	
Deferred stock-based compensation.....	--	--	2,270	(2,270)	--	--	--	
Amortization of deferred stock- based compensation.....	--	--	--	205	--	--	205	
Cash dividend of \$.015 per share.....	--	--	--	--	(223)	--	(223)	
Net income.....	--	--	--	--	10,944	--	10,944	\$ 10,944
Comprehensive income.....								\$ 10,944
Balances, December 31, 1999.....	44,913	45	3,915	(2,065)	23,576	--	25,471	
Exercise of common stock options.....	671	1	797	--	--	--	798	
Common stock issued under Employee Stock Purchase Plan...	40	--	501	--	--	--	501	
Issuance of stock in connection with Pro.Tel acquisition.....	500	--	5,000	--	--	--	5,000	
Common stock issued in Initial Public Offering.....	3,817	4	51,604	--	--	--	51,608	
Deferred stock-based compensation.....	--	--	6,500	(6,500)	--	--	--	
Amortization of deferred stock- based compensation.....	--	--	--	1,954	--	--	1,954	
Change in unrealized gain on available-for-sale investments, net.....	--	--	--	--	--	3	3	3
Cumulative translation adjustment.....	--	--	--	--	--	(76)	(76)	(76)
Net income.....	--	--	--	--	20,385	--	20,385	20,385
Comprehensive income.....								\$ 20,312
Balances, December 31, 2000.....	49,941	\$ 50	\$ 68,317	\$ (6,611)	\$ 43,961	\$ (73)	\$ 105,644	

See accompanying notes to consolidated financial statements.

## SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES

## CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)

	Year Ended December 31,		
	1998	1999	2000
Cash flows from operating activities:			
Net income.....	\$ 3,371	\$ 10,944	\$ 20,385
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization.....	739	1,205	4,271
Amortization of deferred stock-based compensation.....	--	205	1,954
Loss (gain) on the sale of property and equipment.....	(21)	156	87
Deferred income taxes.....	(1)	(1,055)	(3,183)
Changes in operating assets and liabilities (net of acquisition balances):			
Accounts receivable.....	1,246	(4,721)	(8,205)
Inventories.....	(406)	(4,536)	(5,775)
Prepaid expenses and other assets.....	44	(259)	(1,640)
Other accrued expenses.....	(1,619)	6,112	6,090
Income taxes payable.....	789	2,107	(977)
Deferred revenue.....	400	(32)	365
Net cash provided by operating activities.....	4,542	10,126	13,372
Cash flows from investing activities:			
Purchase of long-term investment.....	(607)	(39)	(241)
Purchases of marketable debt securities.....	--	--	(6,298)
Capital expenditures.....	(1,051)	(2,734)	(5,614)
Acquisitions of Hukk and Pro. Tel, net of cash acquired.....	--	(782)	(4,717)
Deposit on land and building.....	--	(2,675)	--
Net cash used in investing activities.....	(1,658)	(6,230)	(16,870)
Cash flows from financing activities:			
Proceeds from short-term borrowings.....	--	--	2,890
Payment of short-term borrowing.....	--	--	(2,890)
Payments on notes payable.....	--	(63)	(1,649)
Repurchase of common stock.....	(195)	(202)	--
Cash dividends.....	(89)	(223)	--
Net proceeds from issuance of common stock.....	--	--	52,108
Proceeds from exercise of stock options.....	21	177	798
Net cash provided by (used in) financing activities.....	(263)	(311)	51,257
Effect of exchange rates on cash.....	--	--	(76)
Net increase in cash and cash equivalents.....	2,621	3,585	47,683
Cash and cash equivalents, beginning of year.....	2,409	5,030	8,615
Cash and cash equivalents, end of year.....	\$ 5,030	\$ 8,615	\$ 56,298
Supplement disclosures of cash flow information:			
Cash paid during the year:			
Interest.....	\$ 2	\$ 2	\$ 125
Income taxes.....	\$ 799	\$ 5,365	\$ 15,958
Noncash investing and financing activities:			
Stock issued for acquisitions of Hukk and Pro.Tel.....	\$ --	\$ 1,000	\$ 5,000
Unrealized gain on marketable securities and investments..	\$ --	\$ --	\$ 3
Promissory note issued in connection with acquisition....	\$ --	\$ --	\$ 1,000
Deferred stock-based compensation.....	\$ --	\$ 2,270	\$ 6,500

See accompanying notes to consolidated financial statements.

SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

(1) Business and Significant Accounting Policies

(a) Business

Sunrise Telecom Incorporated and subsidiaries (the "Company") was incorporated as Sunrise Telecom, Inc. in California in October 1991. In July 2000, the Company reincorporated in Delaware and changed its name to Sunrise Telecom Incorporated (see Note 9. Capital Stock). The Company manufactures and markets service verification equipment to pre-qualify, verify and diagnose telecommunications and Internet networks. The Company markets and distributes its products via a worldwide network of manufacturers, sales representatives, distributors, and a direct sales force throughout six continents. The Company has wholly owned subsidiaries in Norcross, Georgia; Taipei, Taiwan; Modena, Italy; Seoul, Korea; Tokyo, Japan; a representative liaison office in Beijing, China; and a foreign sales corporation in Barbados.

(b) Principles of Consolidation

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

(c) Revenue Recognition

Revenue is recognized when earned. The Company recognizes revenue from product sales upon shipment, assuming collectibility of the resulting receivable is probable. When the arrangement with the customer includes future obligations or obtaining customer acceptance, revenue is recognized when those obligations have been met or customer acceptance has been received. Revenue from services and support provided under the Company's extended warranty programs is deferred and recognized on a straight-line basis over the warranty period. Deferred revenue represents amounts received from customers in advance of services and support to be provided or prior to customer acceptance. Provisions are recorded at the time of sale for estimated product returns, standard warranty and customer support.

(d) Warranty Cost

The Company provides standard warranties covering parts and labor on all its hardware products. Estimated warranty costs for such standard warranties are charged to cost of sales when the related sales are recognized.

(e) Research and Development

Development costs incurred in the research and development of new products and enhancements to existing products are expensed as incurred until the product has been completed, tested, and is ready for commercial manufacturing. To date, hardware and software development projects have been completed concurrently with the establishment of commercial manufacturing and technological feasibility in the form of a working model, respectively. Accordingly, no development costs have been capitalized.

(f) Cash Equivalents and Short-term Investments

The Company considers all highly liquid investments with a maturity of 90 days or less when acquired to be cash equivalents. Cash equivalents as of December 31, 1999 and 2000 consist primarily of cash on deposit with banks, money market funds, auction rate securities and marketable debt securities. The Company determines the appropriate classification of debt and equity securities at the time of purchase and reevaluates such designation as of each balance sheet date. Investments classified as available for sale are reported at market value, with the unrealized gains and losses, net of tax, reported as a separate component of other comprehensive income (loss) in stockholders' equity. Realized gains and losses on sales of investments and declines in value determined to be other than temporary are included in other income (expense).

(g) Fair Value of Financial Instruments

For certain financial instruments, including cash and cash equivalents, accounts receivable, accounts payable, notes payable, and accrued expenses, recorded amounts approximate fair value due to the relatively short maturity period.

(h) Inventories

Inventories are stated at the lower of cost or market. Cost is determined using the first-in, first-out method.

(i) Property and Equipment

Equipment, furniture, fixtures, and leasehold improvements are stated at cost. Depreciation and amortization is computed by the straight-line method over the shorter of the estimated useful life of the asset or the lease term. The estimated useful lives of all assets are five years.

The Company reviews property and equipment for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. Recoverability of property and equipment is measured by comparison of its carrying amount to the future net cash flows the property and equipment are expected to generate. If such assets are considered to be impaired, the impairment to be recognized is measured by the amount by which the carrying amount of the property and equipment exceeds its fair market value. To date, the Company has made no adjustments to the carrying values of its property and equipment.

(j) Intangible Assets

Intangibles include the fair value of issued and pending patents, technology, noncompete agreements, and goodwill. The Company amortizes such intangibles on a straight-line basis over two to five years based on expected lives of patents, technology, noncompete agreements, and goodwill.

The Company reviews intangible assets for impairment based on a comparison of the fair value of the intangibles relating to the acquisition to their carrying value.

(k) Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

(l) Business and Concentrations of Credit Risk

Financial instruments, which potentially subject the Company to concentrations of credit risk, consist primarily of cash equivalents and accounts receivable. The Company's cash equivalents are primarily in highly liquid money market funds. The Company believes no significant concentrations of credit exist with respect to these financial instruments. Concentrations of credit risk with respect to trade receivables are limited as the majority of the Company's sales are derived from large telephone operating companies and other telecommunication companies located throughout the world. The Company performs ongoing credit evaluations of its customers. Based on management's evaluation of potential credit losses, the Company believes its allowances for doubtful accounts are adequate. The Company had one customer that accounted for 8%, 41%, and 16% of its net sales for the years ended December 31, 1998, 1999 and 2000, respectively, and \$2,833,000 and \$361,000 of its accounts receivable as of December 31, 1999 and 2000, respectively. A second customer accounted for 17% of sales for the year ended December 31, 2000, and \$3,155,000 of the Company's accounts receivable as of December 31, 2000.

The Company's customers are concentrated in the telecommunications industry. Accordingly, the Company's future success depends upon the buying patterns of such customers and the continued demand by such customers for the Company's products. Additionally, the telecommunications equipment market is characterized by rapidly changing technology, evolving industry standards, changes in end user requirement, and frequent new product introductions and

enhancements. Furthermore, the telecommunications industry has experienced and is expected to continue to experience consolidation. The Company's continued success will depend upon its ability to enhance existing products and to develop and introduce, on a timely basis, new products and features that keep pace with technological developments and emerging industry standards. Furthermore, as a result of its international sales, the Company's operations are subject to risks of doing business abroad, including but not limited to, fluctuations in the value of currency, longer payment cycles, and greater difficulty in collecting accounts receivable. While to date these factors have not had an adverse material impact on the Company's consolidated results of operations, there can be no assurance that there will not be such an impact in the future.

(m) Earnings per Share ("EPS")

Basic EPS is computed using the weighted-average number of common shares outstanding during the period. Diluted EPS is computed using the weighted-average number of common and dilutive common equivalent shares outstanding during the period. Dilutive common equivalent shares consist of common stock issued in the Pro.Tel acquisition and common stock issuable upon exercise of stock options using the treasury stock method.

The following is a reconciliation of the shares used in the computation of basic and diluted EPS (in thousands):

	Years Ended December 31,		
	1998	1999	2000
	----	----	----
Basic EPS--weighted-average number of common shares outstanding.....	44,537	44,667	47,374
Effect of dilutive common equivalent shares:			
Stock options outstanding.....	466	1,157	2,111
Stock issued in acquisition subject to put arrangement.....	-----	-----	125
			-----
Diluted EPS--weighted-average number of common shares and common equivalent shares outstanding.....	45,003	45,824	49,610
	=====	=====	=====

Pursuant to Securities and Exchange Commission Staff Accounting Bulletin No. 98, convertible preferred stock and common stock granted for nominal consideration prior to the anticipated effective date of an initial public offering (IPO) must be included in the calculation of basic and diluted net income per share as if they had been outstanding for all periods presented. To date, the Company has not had any issuances or grants for nominal consideration.

(n) Stock-Based Compensation

The Company uses the intrinsic-value method in accordance with Accounting Principles Board ("APB") Opinion No. 25, Accounting for Stock-Issued to Employees, to account for employee stock-based compensation. Accordingly, compensation cost is recorded on the date of grant to the extent the fair value of the underlying share of common stock exceeds the exercise price for a stock option or the purchase price for a share of common stock. During 1999, the Company issued stock options to employees which were subsequently determined to have been issued below the fair value of the stock on the date of grant. In addition, we recorded stock-based compensation for stock options granted to employees of Pro.Tel in the first quarter of 2000 in the amount of approximately \$6.5 million. The compensation cost associated with these stock options is amortized as a charge against income on a straight-line basis over the four year vesting period of the options. The Company has allocated the amortization of deferred stock-based compensation to the departments in which the related employee's services are charged. Pursuant to Statement of Financial Accounting Standards ("SFAS") No. 123, Accounting for Stock-Based Compensation, the Company discloses the pro forma effect of using the fair value method of accounting for employee stock-based compensation arrangements.

(o) Use of Estimates

The preparation of financial statements in accordance with generally accepted accounting principles requires management to make estimates and assumptions that affect the reporting of assets and liabilities and the disclosure of

contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the period. Accordingly, actual results could differ from those estimates.

(p) Foreign Currency Translation

The functional currency for the Company's foreign subsidiary located in Taiwan is the U.S. dollar. Accordingly, the Company remeasures monetary assets and liabilities of this foreign subsidiary at year-end exchange rates while nonmonetary items are remeasured at historical rates. Income and expense accounts are remeasured at the average rates in effect during the year, except for depreciation which is remeasured at historical rates. Remeasurement adjustments and transaction gains and losses are recognized in income in the year of occurrence.

The functional currency for the Company's foreign subsidiary located in Italy is the local currency. Accordingly, the Company applies the current exchange rate to translate the subsidiary's assets and liabilities and the weighted average exchange rate to translate the subsidiary's revenues, expenses, gains and losses into U.S. dollars. Translation adjustments are included as a separate component of comprehensive income within stockholders' equity in the accompanying consolidated financial statements.

In December 2000, the Company recorded a \$381,000 gain on a forward contract used to hedge the purchase price of a pending Canadian acquisition.

(q) Comprehensive Income

Comprehensive income comprises net income and other comprehensive income. Comprehensive income includes certain changes in equity of the Company that are excluded from net income, including foreign currency translation adjustments. The components of comprehensive income, net of tax, are as follows (in thousands):

	1999	2000
	----	----
Net income.....	\$10,944	\$20,385
Change in unrealized gain on available-for-sale investments, net.....	-	3
Cumulative translation adjustment.....	-	(76)
	-----	-----
Total comprehensive income.....	\$10,944	\$20,312
	=====	=====

(r) Advertising Expense

The cost of advertising is expensed as incurred. Such costs are included in selling and marketing expense and totaled approximately \$848,000, \$1,023,000 and \$1,866,000 during the years ended December 31, 1998, 1999 and 2000, respectively.

(s) Recent Accounting Pronouncements

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, Accounting for Derivative Instruments and Hedging Activities. SFAS No. 133 establishes accounting and reporting standards, requiring that every derivative instrument be recorded in the balance sheet as either an asset or liability measured at its fair value. SFAS No. 133, as recently amended, is effective for fiscal years beginning after June 30, 2000. Management believes the adoption of SFAS No. 133 will not have a material effect on the Company's financial position or results of operations.

In December 1999, the Securities and Exchange Commission issued Staff Accounting Bulletin ("SAB") No. 101 "Revenue Recognition in Financial Statements." The Company adopted SAB No. 101 in the fourth quarter of the current fiscal year. The adoption of SAB No. 101 has not had a material effect on the Company's financial position or results of operations.

Effective July 1, 2000, the Company adopted Financial Accounting Standards Board Interpretation No. 44 ("FIN 44") "Accounting for Certain Transactions Involving Stock Compensation - an Interpretation of Accounting Principles

Board ("APB") Opinion No. 25." FIN 44 clarifies the application of APB Opinion No. 25. The adoption of FIN 44 has not had a material effect on the Company's financial position or results of operations.

(2) Related Party Transactions

One of the significant stockholders of the Company is also the owner of Telecom Research Center. During 1998, 1999 and 2000, the Company purchased equipment used in its manufacturing process totaling \$84,000, \$58,000 and \$143,000, respectively, from Telecom Research Center. As of December 31, 1999 there were no accounts payable due to Telecom Research Center. As of December 31, 2000, there was \$35,000 in accounts payable due to Telecom Research Center. The terms of these transactions were similar to those of unrelated parties.

During 1999 and 2000, the Company issued employee promissory notes in an aggregate principal amount of \$50,000 and \$35,000, respectively. The notes bear interest at rates up to 7.75% per annum and are payable monthly with the final payment due in December 2004. As of December 31, 2000, the outstanding balances totaled approximately \$70,000.

(3) Financial Statement Details

Inventories

Inventory consisted of the following (in thousands):

	December 31,	
	1999	2000
	----	----
Raw materials.....	\$2,553	\$ 8,987
Work in process.....	2,704	2,070
Finished goods.....	2,355	2,273
	-----	-----
	\$7,612	\$13,330
	=====	=====

Property and Equipment

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

	December 31,	
	1999	2000
	----	----
Equipment.....	\$6,352	\$11,786
Furniture and fixtures.....	494	937
Leasehold improvements.....	171	307
	-----	-----
	7,017	13,030
Less accumulated depreciation and amortization.....	2,600	4,450
	-----	-----
	\$4,417	\$ 8,580
	=====	=====

Other Accrued Expenses

Other accrued expenses consisted of the following (in thousands):

	December 31,	
	1999	2000
	----	----
Accrued compensation and other related benefits.....	\$3,399	\$ 5,988
Commissions payable.....	1,344	2,052
Sales tax payable.....	857	222
Accrued warranty.....	733	1,459
Other accrued expenses.....	355	2,860
	-----	-----
	\$6,688	\$12,581
	=====	=====

(4) Valuation and Qualifying Accounts

A summary of valuation and qualifying accounts are as follows (in thousands):

	Balance at Beginning of Year -----	Charged to Costs and Expenses -----	Deductions -----	Balance at End of Year -----
Allowance for doubtful accounts:				
1998.....	\$ 21	\$202	\$ 3	\$220
1999.....	220	32	--	252
2000.....	252	852	122	982

(5) Minority Investment

During 1998, the Company acquired 1,666,667 shares (approximately 16.4%) of the common stock of Top Union Electronics (Top Union), a Taiwan R.O.C. corporation, for a purchase price of \$607,000. Top Union is a subcontractor manufacturer utilized by the Company for the manufacture of certain products. During 1999 and 2000, the Company invested an additional \$39,000 and \$241,000, respectively, in Top Union as part of two of three external rounds of third-party financing obtained by Top Union. This investment by the Company was less than 16.4% of the total financing raised by Top Union and, thus, diluted the Company's ownership of Top Union to 13.4%. The Company accounts for this investment using the cost method of accounting. The Company evaluates the fair value of its investment based on the valuation associated with third party external rounds of financing. To date no impairment charges have been recognized.

(6) Other Assets and Commitments

Other assets as of December 31, 1999 and 2000 consisted principally of a deposit in the amount of \$2,675,000 and \$2,842,000, respectively, for the Company's new facility, currently under construction, which is estimated to be completed in March 2001. The total cost of the new facility is estimated to be \$18,000,000.

(7) Notes Payable and Line of Credit

In connection with various acquisitions completed during 1999 and 2000, the Company had four non-interest bearing notes payable outstanding at December 31, 2000. Annual amounts to be repaid under these notes total \$738,000, \$438,000, \$410,000 and \$200,000 for 2001, 2002, 2003 and 2004, respectively.

The Company has a \$9,000,000 revolving line of credit with a financial institution that expires on May 1, 2001, bearing interest at the bank's prime rate less 0.25% (9.25% at December 31, 2000). The agreement, which is collateralized by the receivables and inventories of the Company, contains certain financial covenants and restrictions. As of December 31, 2000, there were no balances outstanding under the line of credit.

The remaining borrowings consisted of borrowings from various Italian financial institutions, which bear interest at variable rates, ranging from 7.25% to 8% at December 31, 2000, based on the ABI prime rate. At December 31, 2000, approximately \$50,000 had been drawn down under these facilities. Generally, these foreign credit lines do not require commitment fees or compensating balances and are cancelable at the option of the Company or the financial institutions.

(8) Leases

The Company leases its facilities under several operating lease agreements which require the Company to pay property taxes and normal maintenance. Future minimum lease payments, under these agreements, as of December 31, 2000, are as follows (in thousands):

Year Ending December 31, -----	
2001.....	\$ 983
2002.....	1,022
2003.....	931
2004.....	813
2005.....	68
	-----
	\$3,817
	=====

Rent expense for the years ended December 31, 1998, 1999 and 2000 was approximately \$415,000, \$511,000, and \$931,000, respectively.

(9) Capital Stock

Common Stock

In April 2000, the Company's Board of Directors authorized a three-for-one stock split of its common stock. All share amounts in the accompanying consolidated financial statements have been retroactively adjusted to reflect the stock split.

Prior to its initial public offering, the Company established a program of repurchasing common stock in order to offer liquidity to its stockholders. Repurchases were offered based on valuations performed by the Company of the fair value of its stock at the time of repurchase. During 1998 and 1999, the Company repurchased approximately 136,000 and 135,000 shares of common stock for \$195,000 and \$202,000, respectively.

Stock Issued in Acquisition Subject to Put Agreement

On February 22, 2000, the Company issued 500,001 shares of its common stock to the former Pro. Tel shareholders as part of the total purchase price for Pro. Tel. (see Note 11. Acquisitions) and granted those shareholders the right to "put" their shares back to the Company for cash at \$10.00 per share on May 22, 2000. On May 22, 2000, the former Pro. Tel shareholders elected not to sell these shares back to the Company.

Recapitalization

On July 10, 2000, the Company was reincorporated into Delaware with the authorization of 175,000,000 shares of \$0.001 par value per share common stock and 10,000,000 shares of \$0.001 par value preferred stock.

Initial Public Offering

On July 12, 2000, the Company completed its initial public offering of 4.6 million shares at \$15 per share, including 600,000 over-allotment shares, of which 782,572 shares were sold by selling stockholders. Net proceeds to the Company from the offering after underwriters' fees and expenses of approximately \$5.7 million totaled approximately \$51.6 million.

(10) Stock Compensation Plans

2000 Employee Stock Purchase Plan

In April 2000, the Company's Board of Directors approved the adoption of the 2000 Employee Stock Purchase Plan (the "Purchase Plan") and reserved 600,000 shares of common stock for issuance thereunder. The Purchase Plan became effective upon the Company's initial public offering. The Purchase Plan permits eligible employees to purchase common stock through payroll deductions of up to 15% of the employee's total base compensation, not to exceed \$25,000 in any plan year,

excluding bonuses, commissions and overtime at a price equal to 85% of the lower of the fair market value of the common stock on the first day of the offering period or on the last day of the purchase period.

#### Stock Option Plan

In April 2000, the Company's Board of Directors approved the adoption of the 2000 Stock Plan (the "Stock Plan.") The Stock Plan became effective upon the Company's initial public offering. The total number of shares reserved for issuance under the stock plan equals 3,750,000 shares of common stock plus 5,250,000 that remained reserved for issuance under the 1993 stock option plan as of the date the stock plan becomes effective for a total of 9,000,000 shares. All outstanding options under the 1993 stock option plan will be administered under the 2000 Stock Plan but will continue to be governed by their existing terms.

Options may be granted as incentive stock options or nonstatutory stock options at the fair market value of such shares on the date of grant as determined by the Board of Directors. Options granted prior to 1996 expire 5 years from the date of grant and are exercisable in 3 equal annual installments commencing 1 year from the date of grant. Upon termination of employment, the optionee may exercise any such vested options within 30 days of termination. Options granted subsequent to 1996 vest over a 4-year period, and expire at the end of 10 years from the date of grant, or sooner, if terminated by the Board of Directors.

The options granted under the 1993 stock option plan include a provision whereby the option holder may elect at any time to exercise the option prior to the full vesting of the option. Unvested shares so purchased are subject to a repurchase right by the Company at the original purchase price. Such right shall lapse at a rate equivalent to the vesting period of the original option. As of December 31, 1998, 1999 and 2000 shares issued and subject to repurchase were 6,750, 25,161 and 144,525, respectively.

Option activity is summarized as follows:

	Years Ended December 31,					
	1998		1999		2000	
	Number of Options	Weighted- Average Price Per Share	Number of Options	Weighted- Average Price Per Share	Number of Options	Weighted- Average Price Per Share
Outstanding at beginning of period.....	1,290,360	\$0.91	1,811,145	\$1.09	2,453,100	\$ 1.46
Granted at market value.....	663,000	1.43	--	--	627,437	11.66
Granted at less than..... market value.....	--	--	1,079,100	1.88	650,001	--
Exercised.....	(38,715)	0.55	(229,095)	0.77	(671,150)	1.19
Canceled.....	(103,500)	1.20	(208,050)	1.14	(138,028)	3.83
Options at end of period.....	1,811,145	1.09	2,453,100	1.46	2,921,360	3.28
Weighted-average fair value of options granted during the period with exercise prices at fair value.....		\$0.14		\$ --		\$ 5.89
Weighted-average fair value of options granted during the period with exercise prices less than market value at date of grant.....		\$ --		\$2.58		\$10.00

Information regarding the stock options outstanding as of December 31, 2000, is summarized in the table below.

Range of Exercise Prices	Shares Outstanding	Options Outstanding		Vested Options	
		Weighted-Average Remaining Contractual Life (years)	Weighted-Average Exercise Price	Vested shares	Weighted-Average Exercise Price
\$0.00	650,001	9.16	\$ 0.00	--	\$ 0.00
0.60	99,950	5.28	0.60	99,950	0.60
1.10-1.50	1,053,650	7.55	1.40	576,750	1.32
2.17	527,850	8.78	2.17	140,775	2.17
10.00	406,245	9.21	10.00	--	10.00
11.00	92,963	9.50	11.00	--	11.00
15.00	5,001	9.53	15.00	--	15.00
20.38	85,700	9.80	20.38	--	20.38
	-----			-----	
	2,921,360			817,475	
	=====			=====	

The Company uses the intrinsic-value based method to account for its employees stock-based compensation plan. For options granted in 1998, no compensation cost has been recognized in the accompanying consolidated financial statements for options granted under this plan as the exercise price of each option equaled or exceeded the fair value of the underlying common stock as of the grant date. With respect to options granted in 1999 and 2000, the Company has recorded unearned stock-based compensation of approximately \$2,270,000 and \$6,500,010, respectively, for the difference at the grant date between the exercise price and the fair value.

The deferred compensation represents the aggregate difference, at the date of grant, between the respective exercise price of stock options and the estimated fair value of the underlying common stock. The total unearned stock-based compensation recorded for all option grants through December 31, 2000, will be amortized as follows for the years ending December 31: 2001, \$2,192,000; 2002, \$2,192,000; 2003, \$1,988,000; and 2004, \$238,000. The amount of deferred stock compensation expense to be recorded in future periods could decrease if options for which accrued but unvested compensation has been recorded are forfeited.

If compensation for the Company's stock-based compensation plans had been determined in a manner consistent with the fair value approach described in SFAS No. 123, the Company's net income and earnings per share, as reported, would have been reduced to the pro forma amounts indicated below (in thousands, except per share data):

	Years Ended December 31,		
	1998	1999	2000
Net income applicable to common stock:			
As reported.....	\$3,371	\$10,944	\$20,385
Adjusted pro forma.....	3,318	10,883	10,190
Basic earnings per share:			
As reported.....	0.08	0.25	0.43
Adjusted pro forma.....	0.07	0.24	0.22
Diluted earnings per share:			
As reported.....	0.07	0.24	0.41
Adjusted pro forma.....	0.07	0.24	0.21

The provisions of SFAS No. 123 are effective for options granted beginning January 1, 1996. Options vest over several years and new options are generally granted each year. Because of these factors, the pro forma effect shown above may not be representative of the pro forma effect of SFAS No. 123 in future years.

For the purposes of computing pro forma net income, the fair value of each option grant is estimated on the date of grant using the Black-Scholes option pricing model. The assumptions used to value the option grant are as follows:

	Years Ended December 31,		
	1998	1999	2000
Dividend yield .....	2.60%	None	None
Expected term.....	4 years	4 years	4 years
Risk-free interest rate.....	5.45%	5.66%	4.90%
Volatility rate.....	None	None	0.602

(11) Acquisitions

Hukk

In July 1999, the Company acquired all of the outstanding stock of Hukk, a developer of cable TV service verification equipment. The Company paid approximately \$800,000 in cash and acquisition costs, \$900,000 in notes payable, and 300,000 shares of the Company's common stock valued at \$1,000,000 based on an independent valuation. The transaction has been accounted for under the purchase method. The results of Hukk and the estimated fair value of assets acquired and liabilities assumed are included in the Company's financial statements from the date of acquisition. In connection with the Hukk acquisition, the purchase price has been allocated to the assets and liabilities assumed based upon fair values on the date of acquisition, as follows (in thousands):

Current assets.....	\$ 349
Property and equipment, net.....	65
Intangibles and goodwill associated with acquisition....	2,495
Current liabilities.....	(209)
	-----
	\$2,700
	=====

Intangibles include the fair value of technology and noncompete agreements with resulting excess purchase price allocated to goodwill. The Company amortizes such intangibles on a straight-line basis over four to five years based on expected lives of technologies, noncompete agreements, and goodwill. If the identified technologies are not successfully developed, the Company may not utilize the value assigned to intangible assets.

Pro.Tel

On February 22, 2000, the Company acquired all the outstanding shares of Pro.Tel. Srl and subsidiaries, an Italian manufacturer of distributed network signal analysis equipment. The Company paid approximately \$4,100,000 in cash and acquisition costs, a note payable related to a non-compete agreement for \$500,000, payable over four years, and 500,001 shares of the Company's stock valued at \$5,000,000.

The transaction has been accounted for under the purchase method. The results of Pro.Tel and the estimated fair value of assets acquired and liabilities assumed are included in the Company's financial statements from the date of acquisition. In connection with the Pro.Tel acquisition, the purchase price has been allocated to the assets and liabilities assumed based upon fair values on the date of acquisition, as follows (in thousands):

Current assets.....	\$1,068
Property and equipment, net.....	177
Intangible assets:	
Developed technology.....	\$4,365
Acquired workforce.....	108
Non-compete covenant.....	500
Goodwill.....	4,367
	-----
Total intangible assets.....	9,340
Other long term assets.....	29
Current liabilities.....	(998)
	-----
	\$9,616
	=====

The Company amortizes such intangibles on a straight-line basis over two to five years based on expected lives of technologies, non-compete agreements, acquired workforce and goodwill. If the identified technologies are not successfully developed, the Company may not utilize the value assigned to intangible assets.

Pro.Tel USA

On February 4, 2000, the Company acquired all of the assets of Pro.Tel USA for \$400,000 cash and a \$100,000 note repayable in May 2000. The transaction has been accounted for under the purchase method. The results of this acquired entity are included from the date of acquisition and are not material to the Company's results of operations.

Pro Forma Results of Operations

The following summary prepared on an unaudited pro forma basis reflects the condensed consolidated results of operations for the years ended December 31, 1999 and 2000, assuming Hukk and Pro.Tel had been acquired at the beginning of the periods presented (in thousands, except per share data):

	Year Ended December 31,	
	1999	2000
	----	----
Net sales.....	\$63,716	\$113,725
Net income.....	\$ 7,885	\$ 19,825
Basic earnings per share.....	\$ 0.17	\$ 0.42
Shares used in pro forma per share computation.....	45,317	47,582

The pro forma results are not necessarily indicative of what would have occurred if the acquisitions had been in effect for the periods presented. In addition, they are not intended to be a projection of future results and do not reflect the synergies that might be achieved from combined operations.

(12) 401(k) Plan

In 1996, the Company adopted a 401(k) Plan (the Plan). Participation in the Plan is available to all full-time employees. Each participant may elect to contribute up to 15% of his or her annual salary, but not to exceed the statutory limit as prescribed by the Internal Revenue Code. The Company may make discretionary contributions to the Plan. These contributions vest annually over seven years. Contributions to the Plan of \$291,000, \$747,000 and \$639,000 were made by the Company in 1998, 1999, and 2000, respectively.

(13) Income Taxes

The provision for income taxes consisted of the following (in thousands):

	1998	1999	2000
	----	----	----
Current expense:			
Federal.....	\$1,506	\$6,394	\$13,218
State.....	83	952	1,937
	-----	-----	-----
	1,589	7,346	15,155
	-----	-----	-----
Deferred expense (benefit):			
Federal.....	16	(960)	(2,692)
State.....	(17)	(95)	(491)
	-----	-----	-----
	(1)	(1,055)	(3,183)
	-----	-----	-----
	\$1,588	\$6,291	\$11,972
	=====	=====	=====

Income tax expense differed from the amounts computed by applying the U.S. federal income tax rate of 35% to pretax income as a result of the following (in thousands):

	1998	1999	2000
Computed "expected" tax.....	\$1,736	\$6,032	\$11,325
State taxes, net of federal income tax benefit..	44	557	940
Research credit.....	(366)	(480)	(691)
Foreign sales corporation benefit.....	(188)	(109)	(288)
Nondeductible compensation.....	--	87	199
Nondeductible goodwill amortization.....	--	44	143
Tax-exempt interest.....	--	--	(126)
Other, net.....	362	160	470
	-----	-----	-----
	\$1,588	\$6,291	\$11,972
	=====	=====	=====

The types of temporary differences that give rise to significant portions of the Company's deferred tax assets and liabilities are set out below (in thousands):

	December 31,	
	1999	2000
	----	----
Deferred tax assets:		
Inventory reserves and additional costs capitalized..	\$ 156	\$ 480
Accrued compensation and vacation.....	528	1,945
Allowance for doubtful accounts.....	108	408
Other accruals and reserves.....	623	1,292
Net operating losses and start-up costs.....	304	3
Tax credits.....	240	--
Intangible amortization.....	--	1,011
State income taxes.....	332	678
	-----	-----
Total gross deferred tax assets.....	2,291	5,817
	-----	-----
Deferred tax liabilities:		
Property and equipment.....	(313)	(512)
Unrealized exchange gains.....	(30)	(20)
Federal tax cost of net state deferred assets.....	(69)	(241)
	-----	-----
Total deferred tax liabilities.....	(412)	(773)
	-----	-----
Net deferred tax assets.....	\$1,879	\$5,044
	=====	=====

In assessing the realizability of deferred tax assets, management considers whether it is more likely than not that some portion or all of the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Based on the level of historical taxable income and projections for future taxable income over the periods which the deferred tax assets are deductible, management believes it is more likely than not that the Company will realize the benefits of such deferred assets.

#### (14) Segment Information

SFAS No. 131, Disclosure About Segments of an Enterprise and Related Information, establishes standards for the manner in which public companies report information about operating segments, products, services, geographic areas, and major customers in annual and interim financial statements. The method of determining what information to report is based on the way that management organizes the operating segments within the enterprise for making operating decisions and assessing financial performance.

The Company's chief operating decision-maker is considered to be the Company's Chief Executive Officer ("CEO"). The CEO reviews financial information presented on a consolidated basis accompanied by disaggregated information about revenue by geographic region for purposes of making operating decisions and assessing financial performance. The consolidated financial information reviewed by the CEO is the same as the information presented in the accompanying consolidated statements of net income. In addition, as the Company's assets are primarily located in its corporate offices in the United States and not allocated to any specific segment, the Company does not produce reports for or

measures the performance of its segments based on any asset-based metrics. Therefore, the Company operates in a single operating segment the design, manufacture, and sale of digital test equipment for telecommunications, transmission, and signaling applications.

Revenue information regarding operations in the different geographic regions is as follows (in thousands):

	Years Ended December 31,		
	1998	1999	2000
Net sales:			
North America.....	\$17,028	\$50,168	\$ 88,469
Europe.....	4,684	4,364	10,407
Asia/Pacific.....	5,668	5,742	10,144
Latin America.....	1,155	1,191	4,461
	-----	-----	-----
	\$28,535	\$61,465	\$113,481
	=====	=====	=====

Revenue information by product category is as follows (in thousands):

	Years Ended December 31,		
	1998	1999	2000
Digital Subscriber Line.....	\$28,535	\$59,895	\$ 90,317
Fiber Optics.....	--	236	14,236
Cable TV.....	--	1,334	4,273
Signaling.....	--	--	4,655
	-----	-----	-----
	\$28,535	\$61,465	\$113,481
	=====	=====	=====

(15) Subsequent Events

In January 2001, the Company acquired all of the outstanding stock of Avantron Technologies, a Canadian company which specializes in the design and manufacture of spectrum analyzers and performance monitoring systems. The purchase price was approximately Cdn. \$17.6 million (approximately U.S. \$11.7 million) in cash and short-term notes payable. The transaction will be accounted for under the purchase method.

(16) Quarterly Financial Data (unaudited)

	Quarter Ended							
	Mar. 31, 1999	June 30, 1999	Sept. 30, 1999	Dec. 31, 1999	Mar. 31, 2000	June 30, 2000	Sept. 30, 2000	Dec. 31, 2000
	----	----	----	----	----	----	----	----
	(in thousands, except per share data)							
Net sales.....	\$ 8,090	\$16,410	\$14,511	\$22,454	\$19,791	\$27,485	\$35,085	\$31,120
Gross profit.....	5,809	12,409	11,048	17,463	14,203	7,982	10,034	21,730
Income from operations.....	1,451	4,399	3,510	7,548	4,334	7,332	10,992	7,791
Net income.....	1,046	3,034	2,460	4,404	2,773	4,575	7,325	5,712
Earnings per share:								
Basic.....	\$ 0.02	\$ 0.07	\$ 0.05	\$ 0.10	\$ 0.06	\$ 0.10	\$ 0.15	\$ 0.11
Diluted.....	\$ 0.02	\$ 0.07	\$ 0.05	\$ 0.10	\$ 0.06	\$ 0.10	\$ 0.14	\$ 0.11
Shares used in per share computation:								
Basic.....	44,540	44,551	44,728	44,844	45,060	45,451	49,178	49,761
Diluted.....	45,517	45,606	45,963	46,207	47,032	47,638	51,855	51,874

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

PART III.

Item 10. Directors and Executive Officers of the Registrant.

The information required by this Item with respect to our executive officers is incorporated herein by reference from the information under Item 1 of Part I of this Report. Reference is made to the information responsive to Items 401 and 405 of Regulation S-K contained in our definitive Proxy Statement relating to our 2001 Annual Meeting of Shareholders which will be filed with the U.S. Securities and Exchange Commission within 120 days after the close of the Company's fiscal year ended December 31, 2000, pursuant to Rule 14a-6(b) under the Securities and Exchange Act of 1934, as amended; said information is incorporated herein by reference.

Item 11. Executive Compensation.

Reference is made to the information responsive to Item 402 of Regulation S-K contained in our definitive Proxy Statement relating to our 2001 Annual Meeting of Shareholders which will be filed with the U.S. Securities and Exchange Commission within 120 days after the close of our fiscal year ended December 31, 2000, pursuant to Rule 14a-6(b) under the Securities Exchange Act of 1934, as amended; said information is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management.

Reference is made to the information responsive to Item 403 of Regulation S-K contained in our definitive Proxy Statement relating to our 2001 Annual Meeting of Shareholders which will be filed with the U.S. Securities and Exchange Commission within 120 days after the close of our fiscal year ended December 31, 2000, pursuant to Rule 14a-6(b) under the Securities Exchange Act of 1934, as amended; said information is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions.

Reference is made to the information responsive to Item 404 of Regulation S-K contained in our definitive Proxy Statement relating to our 2001 Annual Meeting of Shareholders which will be filed with the U.S. Securities and Exchange Commission within 120 days after the close of our fiscal year ended December 31, 2001, pursuant to Rule 14a-6(b) under the Securities Exchange Act of 1934, as amended; said information is incorporated herein by reference.

PART IV.

Item 14. Exhibits, Financial Statement Schedules, and Reports on Form 8-K.

(a) The following documents are filed as part of this report:

(1) Our Consolidated Financial Statements are included in Part II, Item 8:

Independent Auditors' Report

Consolidated Balance Sheets

Consolidated Statements of Net Income

Consolidated Statements of Shareholders' Equity and Comprehensive Income

Consolidated Statements of Cash Flows

Notes to Consolidated Financial Statements

(2) Supplementary Consolidated Financial Statement Schedule as of and for the years ended December 31, 2000, 1999 and 1998:

None.

All other schedules are omitted because of the absence of conditions under which they are required or because the required information is included in the consolidated financial statements or notes thereto.

(3) Exhibits:

See attached Exhibit Index.

(b) Reports on Form 8-K

There were no reports on Form 8-K filed during the last quarter of the year ended December 31, 2000.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the city of San Jose, State of California on March 15, 2001.

SUNRISE TELECOM INCORPORATED

By: /s/ Paul Ker-Chin Chang  
 -----  
 Paul Ker-Chin Chang  
 President and Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1934, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated:

Signature -----	Title -----	Date ----
/s/ Paul Ker-Chin Chang ----- Paul Ker-Chin Chang	President and Chief Executive Officer (Principal Executive Officer)	March 15, 2001
/s/ Peter L. Eidelman ----- Peter Eidelman	Chief Financial Officer (Principal Accounting Officer)	March 15, 2001
/s/ Paul A. Marshall ----- Paul A. Marshall	Director	March 15, 2001
/s/ Robert C. Pfeiffer ----- Robert C. Pfeiffer	Director	March 15, 2001
/s/ Patrick Peng-Koon Ang ----- Patrick Peng-Koon Ang	Director	March 15, 2001
/s/ Henry P. Huff ----- Henry P. Huff	Director	March 15, 2001
/s/ Jennifer J. Walt ----- Jennifer J. Walt	Director	March 15, 2001

EXHIBIT INDEX

Set forth below is a list of exhibits that are being filed or incorporated by reference into this Form 10-K:

Exhibit Number -----	Description -----
2.1	Share Purchase Agreement dated January 8, 2001 among each of the shareholders of Avantron Technologies Inc. and Sunrise Telecom Avantron Division Corp., a Nova Scotia unlimited liability company and wholly-owned subsidiary of Sunrise (Incorporated by reference from Exhibit 2.1 to Sunrise's Report on Form 8-K dated February 1, 2001).
3.1	Amended and Restated Certificate of Incorporation.
3.2	Amended and Restated Bylaws.
4.1	Specimen Stock Certificate (Incorporated by reference from Exhibit 4.1 to Registration Statement No. 333-32070).
10.1	Lease Agreement dated June 22, 1999 between Sunrise and Great Oaks Properties (Incorporated by reference from Exhibit 10.1 to Registration Statement No. 333-32070).
10.2	Purchase and Sale Agreement and Escrow Instructions dated November 5, 1999 between Sunrise and Enzo Drive, LLC (Incorporated by reference from Exhibit 10.2 to Registration Statement No. 333-32070).
10.3	Loan Agreement dated April 21, 2000 between Sunrise and Bank of America (Incorporated by reference from Exhibit 10.3 to Registration Statement No. 333-32070).
10.4	Stock Purchase Agreement dated July 30, 1999 between Sunrise, Hukk Engineering, Inc., Clifford D. Brown, Robert L. Richards and James A. Barker (Incorporated by reference from Exhibit 10.4 to Registration Statement No. 333-32070).
10.5	Master Agreement dated February 22, 2000 between Sunrise and Franco Messori, Franco Corradini, Angelo Baccarani and Lucia Barbara Silvani and Master Agreement dated February 22, 2000 between Sunrise and Giuliano Sala, Gian Piero Brandolini, Pietro Zucchini, Aldo Baccarani and Franco Montanari (Incorporated by reference from Exhibit 10.5 to Registration Statement No. 333-32070).
10.6	Form of Indemnification Agreement between Sunrise and each of its Officers and Directors (Incorporated by reference from Exhibit 10.6 to Registration Statement No. 333-32070). +
10.7	2000 Stock Option Plan (Incorporated by reference from Exhibit 10.7 to Registration Statement No. 333-32070). +
10.8	2000 Employee Stock Purchase Plan (Incorporated by reference from Exhibit 10.8 to Registration Statement No. 333-32070). +
10.9	2001 Executive Officer Bonus Plan.* +
21.1	List of Subsidiaries.
23.1	Consent of KPMG LLP

\*Material has been omitted pursuant to a request for confidential treatment.

+Indicates management contract or compensatory plan, contract or arrangement.



FIRST AMENDED AND RESTATED  
CERTIFICATE OF INCORPORATION  
OF  
SUNRISE TELECOM INCORPORATED

The undersigned, Paul Chang and Robert Pfeiffer, hereby certify that:

1. They are the duly elected and acting President and Secretary, respectively, of SUNRISE TELECOM INCORPORATED a Delaware corporation.
2. The Certificate of Incorporation of this corporation was originally filed with the Secretary of State of Delaware on March 7, 2000 under the name of SUNRISE TELECOM INCORPORATED.
3. The Certificate of Incorporation of this corporation shall be amended and restated to read in full as follows:

"ARTICLE I

The name of this corporation is SUNRISE TELECOM INCORPORATED (the "Corporation").

ARTICLE II

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

ARTICLE III

The purpose of the Corporation is to engage in any lawful act or activity for which corporations may be organized under the General Corporation Law of Delaware.

ARTICLE IV

(A) The Corporation is authorized to issue two classes of stock to be designated, respectively, "Common Stock" and "Preferred Stock." The total number of shares which the Corporation is authorized to issue is one hundred eighty-five million (185,000,000) shares, each with a par value of \$0.001 per share. One hundred seventy-five million (175,000,000) shares shall be Common Stock and ten million (10,000,000) shares shall be Preferred Stock.

(B) The Preferred Stock may be issued from time to time in one or more series. The Board of Directors is hereby authorized, by filing a certificate pursuant to the applicable law of

the state of Delaware and within the limitations and restrictions stated in this Certificate of Incorporation, to determine or alter the rights, preferences, privileges and restrictions granted to or imposed upon any wholly unissued series of Preferred Stock and the number of shares constituting any such series and the designation thereof, or any of them; and to increase or decrease the number of shares of any series subsequent to the issuance of shares of that series, but not below the number of shares of such series then outstanding. In case the number of shares of any series shall be so decreased, the shares constituting such decrease shall resume the status which they had prior to the adoption of the resolution originally fixing the number of shares of such series.

#### ARTICLE V

The number of directors of the Corporation shall be fixed from time to time by a bylaw or amendment thereof duly adopted by the Board of Directors.

#### ARTICLE VI

This Article VI shall become effective only when the Corporation qualifies for an exemption from Section 2115 of the California Corporations Code (the "Effective Time").

On or prior to the date on which the Corporation first provides notice of an annual meeting of the stockholders following the Effective Time, the Board of Directors of the Corporation shall divide the directors into three classes, as nearly equal in number as reasonably possible, designated Class I, Class II and Class III, respectively. Directors shall be assigned to each class in accordance with a resolution or resolutions adopted by the Board of Directors. At the first annual meeting of stockholders or any special meeting in lieu thereof following the Effective Time, the terms of the Class I directors shall expire and Class I directors shall be elected for a full term of three years. At the second annual meeting of stockholders or any special meeting in lieu thereof following the Effective Time, the terms of the Class II directors shall expire and Class II directors shall be elected for a full term of three years. At the third annual meeting of stockholders or any special meeting in lieu thereof following the Effective Time, the terms of the Class III directors shall expire and Class III directors shall be elected for a full term of three years. At each succeeding annual meeting of stockholders or special meeting in lieu thereof, directors elected to succeed the directors of the class whose terms expire at such meeting shall be elected for a full term of three years.

Prior to the Effective Time, the provisions of the preceding paragraph shall not apply, and all directors shall be elected at each annual meeting of stockholders or any special meeting in lieu thereof to hold office until the next annual meeting or special meeting in lieu thereof.

Notwithstanding the foregoing provisions of this Article VI, each director shall serve until his or her successor is duly elected and qualified or until his or her death, resignation, or removal. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director.

Any vacancies on the Board of Directors resulting from death, resignation, disqualification, removal, or other causes shall be filled by either (i) the affirmative vote of the holders of a majority of the voting power of the then-outstanding shares of voting stock of the Corporation entitled to vote generally in the election of directors (the "Voting Stock") voting together as a single class; or (ii) by the affirmative vote of a majority of the remaining directors then in office, even though less than a quorum of the Board of Directors. Subject to the rights of any series of Preferred Stock then outstanding, newly created directorships resulting from any increase in the number of directors shall, unless the Board of Directors determines by resolution that any such newly created directorship shall be filled by the stockholders, be filled only by the affirmative vote of the directors then in office, even though less than a quorum of the Board of Directors, or by a sole remaining director. Any director elected in accordance with the preceding sentence shall hold office for the remainder of the full term of the class of directors in which the new directorship was created or the vacancy occurred and until such director's successor shall have been elected and qualified. Any director, or the entire Board of Directors, may be removed from office, with or without cause, by the holders of a majority of the Voting Stock.

#### ARTICLE VII

In the election of directors, each holder of shares of any class or series of capital stock of the Corporation shall be entitled to one vote for each share held. No stockholder will be permitted to cumulate votes at any election of directors.

#### ARTICLE VIII

No action shall be taken by the stockholders of the Corporation other than at an annual or special meeting of the stockholders, upon due notice and in accordance with the provisions of the Bylaws of the Corporation (the "Bylaws"), and no action shall be taken by the stockholders by written consent.

#### ARTICLE IX

The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute, and all rights conferred upon stockholders herein are granted subject to this reservation. Notwithstanding the foregoing, the provisions set forth in Articles VI, X, XIII and XIV of this Certificate of Incorporation may not be repealed or amended in any respect without the affirmative vote of holders of at least 66-2/3% of the voting power of all of the then-outstanding shares of the voting stock of the Corporation entitled to vote.

ARTICLE X

(A) Except as otherwise provided in the Bylaws, the Bylaws may be altered or amended or new Bylaws adopted by the affirmative vote of at least 66-2/3% of the voting power of all of the then-outstanding shares of the voting stock of the Corporation entitled to vote. The Board of Directors of the Corporation is expressly authorized to adopt, amend or repeal Bylaws.

(B) The directors of the Corporation need not be elected by written ballot unless the Bylaws so provide.

(C) Advance notice of stockholder nominations for the election of directors or of business to be brought by the stockholders before any meeting of the stockholders of the Corporation shall be given in the manner provided in the Bylaws.

ARTICLE XI

Meetings of stockholders may be held within or without the State of Delaware, as the Bylaws may provide. The books of the Corporation may be kept (subject to any provision contained in the statutes) outside the State of Delaware at such place or places as may be designated from time to time by the Board of Directors or in the bylaws of the Corporation.

ARTICLE XII

The Corporation shall have perpetual existence.

ARTICLE XIII

(A) To the fullest extent permitted by the General Corporation Law of Delaware, as the same may be amended from time to time, a director of the Corporation shall not be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director. If the General Corporation Law of Delaware is hereafter amended to authorize, with the approval of a corporation's stockholders, further reductions in the liability of a corporation's directors for breach of fiduciary duty, then a director of the Corporation shall not be liable for any such breach to the fullest extent permitted by the General Corporation Law of Delaware, as so amended.

(B) Any repeal or modification of the foregoing provisions of this Article XIII shall not adversely affect any right or protection of a director of the Corporation with respect to any acts or omissions of such director occurring prior to such repeal or modification.

ARTICLE XIV

(A) To the fullest extent permitted by applicable law, the Corporation is also authorized to provide indemnification of (and advancement of expenses to) such agents (and any other persons to which Delaware law permits the Corporation to provide indemnification) through Bylaw provisions, agreements with such agents or other persons, vote of stockholders or disinterested directors or otherwise, in excess of the indemnification and advancement otherwise

permitted by Section 145 of the General Corporation Law of Delaware, subject only to limits created by applicable Delaware law (statutory or non-statutory), with respect to actions for breach of duty to a corporation, its stockholders, and others.

(B) Any repeal or modification of any of the foregoing provisions of this Article XIV shall not adversely affect any right or protection of a director, officer, agent or other person existing at the time of, or increase the liability of any director of the Corporation with respect to any acts or omissions of such director, officer or agent occurring prior to such repeal or modification."

\* \* \*

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The foregoing First Amended and Restated Certificate of Incorporation has been duly adopted by this Corporation's Board of Directors and stockholders in accordance with the applicable provisions of Section 228, 242 and 245 of the General Corporation Law of the State of Delaware.

Executed at San Jose, California, on the 10th day of July, 2000.

/s/ Paul Ker-Chin Chang  
-----  
Paul K.C. Chang, President

/s/ Robert C. Pfeiffer  
-----  
Robert C. Pfeiffer, Secretary

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BYLAWS  
OF  
SUNRISE TELECOM INCORPORATED  
(AS AMENDED AND RESTATED EFFECTIVE JULY 18, 2000)

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BYLAWS  
OF  
SUNRISE TELECOM INCORPORATED

ARTICLE I  
CORPORATE OFFICES  
-----

1.1       Registered Office.  
-----

The address of the Corporation's registered office in the State of Delaware is 1209 Orange Street, Wilmington, County of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

1.2       Other Offices.  
-----

The Board of Directors may at any time establish other offices at any place or places where the Corporation is qualified to do business.

ARTICLE II  
MEETINGS OF STOCKHOLDERS  
-----

2.1       Place Of Meetings.  
-----

Meetings of stockholders shall be held at any place, within or outside the State of Delaware, designated by the Board of Directors. In the absence of any such designation, stockholders' meetings shall be held at the registered office of the Corporation.

2.2       Annual Meeting.  
-----

(a) The annual meeting of stockholders shall be held each year on a date and at a time designated by resolution of the Board of Directors. At the meeting, directors shall be elected and any other proper business may be transacted.

(b) Nominations of persons for election to the Board of Directors of the Corporation and the proposal of business to be transacted by the stockholders may be made at an annual meeting of stockholders (i) pursuant to the Corporation's notice with respect to such meeting, (ii) by or at the direction of the Board of Directors or (iii) by any stockholder of the Corporation who was a stockholder of record at the time of giving of the notice provided for in this Section 2.2, who is entitled to vote at the meeting and who has complied with the notice procedures set forth in this Section 2.2.

(c) For nominations or other business to be properly brought before an annual meeting by a stockholder pursuant to clause (iii) of paragraph (b) of this Section 2.2, the stockholder must have given timely notice thereof in writing to the secretary of the Corporation, as provided in Section 2.5, and such business must be a proper matter for stockholder action under the General Corporation Law of Delaware.

(d) Only such business shall be conducted at an annual meeting of stockholders as shall have been brought before the meeting in accordance with the procedures set forth in these Bylaws. The chairman of the meeting shall determine whether a nomination or any business proposed to be transacted by the stockholders has been properly brought before the meeting and, if any proposed nomination or business has not been properly brought before the meeting, the chairman shall declare that such proposed business or nomination shall not be presented for stockholder action at the meeting.

(e) For purposes of this Section 2.2, "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or a comparable national news service.

(f) Nothing in this Section 2.2 shall be deemed to affect any rights of stockholders to request inclusion of proposals in the Corporation's proxy statement pursuant to Rule 14a-8 under the Exchange Act.

2.3 Special Meeting.  
-----

(a) A special meeting of the stockholders may be called at any time by the Board of Directors, or by the chairman of the board, or by the president.

(b) Nominations of persons for election to the Board of Directors may be made at a special meeting of stockholders at which directors are to be elected pursuant to such notice of meeting (i) by or at the direction of the Board of Directors or (ii) by any stockholder of the Corporation who is a stockholder of record at the time of giving of notice provided for in Section 2.5, who shall be entitled to vote at the meeting and who complies with the notice procedures set forth in Section 2.5.

2.4 Notice Of Stockholder's Meetings; Affidavit Of Notice.  
-----

All notices of meetings of stockholders shall be in writing and shall be sent or otherwise given in accordance with this Section 2.4 of these Bylaws not less than 10 nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting (or such longer or shorter time as is required by Section 2.5 of these Bylaws, if applicable). The notice shall specify the place, date, and hour of the meeting, and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Written notice of any meeting of stockholders, if mailed, is given when deposited in the United States mail, postage prepaid, directed to the stockholder at his address as it appears on the records of the Corporation. An affidavit of the secretary or an assistant secretary or of the transfer agent of the Corporation that

the notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein.

2.5 Advance Notice Of Stockholder Nominees And Other Stockholder  
-----  
Proposals.  
-----

Only persons who are nominated in accordance with the procedures set forth in this Section 2.5 shall be eligible for election as directors. Nominations of persons for election to the Board of Directors of the Corporation may be made at a meeting of stockholders by or at the direction of the Board of Directors or by any stockholder of the Corporation entitled to vote for the election of directors at the meeting who complies with the notice procedures set forth in this Section 2.5. Such nominations, other than those made by or at the direction of the Board of Directors, shall be made pursuant to timely notice in writing to the secretary of the Corporation. Stockholders may bring other business before the annual meeting, provided that timely notice is provided to the secretary of the Corporation in accordance with this section, and provided further that such business is a proper matter for stockholder action under the General Corporation Law of Delaware. To be timely, a stockholder's notice shall be delivered to or mailed and received at the principal executive offices of the Corporation not less than 90 days nor more than 120 days prior to the anniversary date of the prior year's meeting; provided, however, that in the event that (i) the date of the annual meeting is more than 30 days prior to or more than 60 days after such anniversary date, and (ii) less than 60 days notice or prior public disclosure of the date of the meeting is given or made to stockholders, notice by the stockholder to be timely must be so received not later than the close of business on the 10th day following the day on which such notice of the date of the meeting was mailed or such public disclosure was made. Such stockholder's notice shall set forth (a) as to each person whom the stockholder proposes to nominate for election or re-election as a directors, (i) the name, age, business address and residence address of such person, (ii) the principal occupation or employment of such person, (iii) the class and number of shares of the Corporation which are beneficially owned by such person and (iv) any other information relating to such person that is required to be disclosed in solicitations of proxies for election of directors, or is otherwise required, in each case pursuant to Regulation 14A under the Securities Exchange Act of 1934 (including, without limitation, such person's written consent to being named in the proxy statement as a nominee and to serving as a director if elected); (b) as to any other business that the stockholder proposes to bring before the meeting, a brief description of such business, the reasons for conducting such business at the meeting and any material interest in such business of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made; and (c) as to the stockholder giving the notice and the beneficial owner, if any, on whose behalf the proposal is made (i) the name and address of the stockholder, as they appear on the Corporation's books, and of such beneficial owner and (ii) the class and number of shares of the Corporation which are owned of record by such stockholder and beneficially by such beneficial owner. At the request of the Board of Directors any person nominated by the Board of Directors for election as a director shall furnish to the secretary of the Corporation that information required to be set forth in a stockholder's notice of nomination which pertains to the nominee. No person shall be eligible for election as a director of the Corporation unless nominated in accordance with the procedures set forth in this Section 2.5. The chairman of the meeting shall, if the facts warrant, determine and declare to the meeting that a nomination was not made in accordance with the procedures prescribed by the Bylaws, and

if he or she should so determine, he or she shall so declare to the meeting and the defective nomination shall be disregarded.

2.6 Quorum.  
-----

The holders of a majority of the stock issued and outstanding and entitled to vote thereat, present in person or represented by proxy, shall constitute a quorum at all meetings of the stockholders for the transaction of business except as otherwise provided by statute or by the Certificate of Incorporation. If, however, such quorum is not present or represented at any meeting of the stockholders, then either (a) the chairman of the meeting or (b) the stockholders entitled to vote thereat, present in person or represented by proxy, shall have power to adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present or represented. At such adjourned meeting at which a quorum is present or represented, any business may be transacted that might have been transacted at the meeting as originally noticed.

2.7 Adjourned Meeting; Notice.  
-----

When a meeting is adjourned to another time or place, unless these Bylaws otherwise require, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken. At the adjourned meeting the Corporation may transact any business that might have been transacted at the original meeting. If the adjournment is for more than 30 days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each stockholder of record entitled to vote at the meeting.

2.8 Conduct Of Business.  
-----

The chairman of any meeting of stockholders shall determine the order of business and the procedure at the meeting, including the manner of voting and the conduct of business.

2.9 Voting.  
-----

(a) The stockholders entitled to vote at any meeting of stockholders shall be determined in accordance with the provisions of Section 2.11 of these Bylaws, subject to the provisions of Sections 217 and 218 of the General Corporation Law of Delaware (relating to voting rights of fiduciaries, pledgors and joint owners of stock and to voting trusts and other voting agreements).

(b) Except as may be otherwise provided in the Certificate of Incorporation, each stockholder shall be entitled to one vote for each share of capital stock held by such stockholder.

2.10 Waiver Of Notice.  
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Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the Certificate of Incorporation or these Bylaws, a written

waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the stockholders need be specified in any written waiver of notice unless so required by the Certificate of Incorporation or these Bylaws.

2.11 Record Date For Stockholder Notice; Voting.  
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In order that the Corporation may determine the stockholders entitled to notice of or to vote at any meeting of stockholders or any adjournment thereof or entitled to receive payment of any dividend or other distribution or allotment of any rights, or entitled to exercise any rights in respect of any change, conversion or exchange of stock or for the purpose of any other lawful action, the Board of Directors may fix, in advance, a record date, which shall not be more than 60 nor less than 10 days before the date of such meeting, nor more than 60 days prior to any other action. If the Board of Directors does not so fix a record date:

(a) The record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held.

(b) The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating thereto.

A determination of stockholders of record entitled to notice of or to vote at a meeting of stockholders shall apply to any adjournment of the meeting; provided, however, that the Board of Directors may fix a new record date for the adjourned meeting.

2.12 Proxies.  
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Each stockholder entitled to vote at a meeting of stockholders may authorize another person or persons to act for such stockholder by a written proxy, signed by the stockholder and filed with the secretary of the Corporation, but no such proxy shall be voted or acted upon after three years from its date, unless the proxy provides for a longer period. A proxy shall be deemed signed if the stockholder's name is placed on the proxy (whether by manual signature, typewriting, electronic or telegraphic transmission or otherwise) by the stockholder or the stockholder's attorney-in-fact. The revocability of a proxy that states on its face that it is irrevocable shall be governed by the provisions of Section 212(e) of the General Corporation Law of Delaware.

ARTICLE III

DIRECTORS

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3.1 Powers.

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Subject to the provisions of the General Corporation Law of Delaware and any limitations in the Certificate of Incorporation or these Bylaws relating to action required to be approved by the stockholders or by the outstanding shares, the business and affairs of the Corporation shall be managed and all corporate powers shall be exercised by or under the direction of the Board of Directors.

3.2 Number Of Directors.

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The number of directors constituting the entire Board of Directors shall be six (6).

Thereafter, this number may be changed by a resolution of the Board of Directors or of the stockholders, subject to Section 3.4 of these Bylaws. No reduction of the authorized number of directors shall have the effect of removing any director before such director's term of office expires.

3.3 Election, Qualification And Term Of Office Of Directors.

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Directors need not be stockholders unless so required by the Certificate of Incorporation or these Bylaws, wherein other qualifications for directors may be prescribed. The directors shall be divided into three classes, as nearly equal in number as possible, designated "Class I," "Class II" and "Class III." Directors of each class shall serve for a term ending on the third annual meeting of stockholders following the annual meeting at which such class was elected, except that the term of office of the initial Class I director shall expire on the date of the annual meeting in 2001, the term of office of the initial Class II directors shall expire on the date of the annual meeting in 2002 and the term of office of the initial Class III directors shall expire on the date of the annual meeting in 2003. The foregoing notwithstanding, each director shall serve until his or her successor shall have been duly elected and qualified, unless such director shall die, resign, retire or be disqualified or removed. At all elections of directors, the directors chosen to succeed those directors whose terms then expire shall be identified as being of the same class as the directors they succeed. If for any reason the number of directors in the various classes shall not be as nearly equal as possible, the Board of Directors may redesignate any director into a different class in order that the balance of directors in such classes shall be as nearly equal as possible.

3.4 Resignation And Vacancies.

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Any director may resign at any time upon written notice to the attention of the secretary of the Corporation. When one or more directors so resigns and the resignation is effective at a future date, a majority of the directors then in office, including those who have so resigned, shall have power to fill such vacancy or vacancies, the vote thereon to take effect when such resignation or resignations shall become effective, and each director so chosen shall hold office as provided in this section in the filling of other vacancies. A vacancy created by the

removal of a director by the vote of the stockholders or by court order may be filled only by the affirmative vote of a majority of the shares represented and voting at a duly held meeting at which a quorum is present (which shares voting affirmatively also constitute a majority of the quorum. Each director so elected shall hold office until the next annual meeting of the stockholders and until a successor has been elected and qualified.

Unless otherwise provided in the Certificate of Incorporation or these Bylaws:

(a) Vacancies and newly created directorships resulting from any increase in the authorized number of directors elected by all of the stockholders having the right to vote as a single class may be filled by a majority of the directors then in office, although less than a quorum, or by a sole remaining director.

(b) Whenever the holders of any class or classes of stock or series thereof are entitled to elect one or more directors by the provisions of the Certificate of Incorporation, vacancies and newly created directorships of such class or classes or series may be filled by a majority of the directors elected by such class or classes or series thereof then in office, or by a sole remaining director so elected.

If at any time, by reason of death or resignation or other cause, the Corporation should have no directors in office, then any officer or any stockholder or an executor, administrator, trustee or guardian of a stockholder, or other fiduciary entrusted with like responsibility for the person or estate of a stockholder, may call a special meeting of stockholders in accordance with the provisions of the Certificate of Incorporation or these Bylaws, or may apply to the Court of Chancery for a decree summarily ordering an election as provided in Section 211 of the General Corporation Law of Delaware.

If, at the time of filling any vacancy or any newly created directorship, the directors then in office constitute less than a majority of the whole Board of Directors (as constituted immediately prior to any such increase), then the Court of Chancery may, upon application of any stockholder or stockholders holding at least 10% of the total number of the shares at the time outstanding having the right to vote for such directors, summarily order an election to be held to fill any such vacancies or newly created directorships, or to replace the directors chosen by the directors then in office as aforesaid, which election shall be governed by the provisions of Section 211 of the General Corporation Law of Delaware as far as applicable.

3.5 Place Of Meetings; Meetings By Telephone.  
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The Board of Directors of the Corporation may hold meetings, both regular and special, either within or outside the State of Delaware. Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, members of the Board of Directors, or any committee designated by the Board of Directors, may participate in a meeting of the Board of Directors, or any committee, by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and such participation in a meeting shall constitute presence in person at the meeting.

3.6 Regular Meetings.  
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Regular meetings of the Board of Directors may be held without notice at such time and at such place as shall from time to time be determined by the Board of Directors.

3.7 Special Meetings; Notice.  
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Special meetings of the board of directors for any purpose or purposes may be called at any time by the chairman of the board, the president, any vice president, the secretary or any two (2) directors.

Notice of the time and place of special meetings shall be delivered personally or by telephone to each director or sent by first-class mail or telegram, charges prepaid, addressed to each director at that director's address as it is shown on the records of the Corporation. If the notice is mailed, it shall be deposited in the United States mail at least four (4) days before the time of the holding of the meeting. If the notice is delivered personally or by telephone, telecopy, telegram, telex or other similar means of communication, it shall be delivered at least twenty-four (24) hours before the time of the holding of the meeting, or on such shorter notice as the person or persons calling such meeting may deem necessary and appropriate in the circumstances. Any oral notice given personally or by telephone may be communicated either to the director or to a person at the office of the director who the person giving the notice has reason to believe will promptly communicate it to the director. The notice need not specify the purpose of the place of the meeting, if the meeting is to be held at the principal executive office of the Corporation.

3.8 Quorum.  
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At all meetings of the Board of Directors, a majority of the authorized number of directors shall constitute a quorum for the transaction of business and the act of a majority of the directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically provided by statute or by the Certificate of Incorporation. If a quorum is not present at any meeting of the Board of Directors, then the directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum is present.

A meeting at which a quorum is initially present may continue to transact business notwithstanding the withdrawal of directors, if any action taken is approved by at least a majority of the required quorum for that meeting.

3.9 Waiver Of Notice.  
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Whenever notice is required to be given under any provision of the General Corporation Law of Delaware or of the Certificate of Incorporation or these Bylaws, a written waiver thereof, signed by the person entitled to notice, whether before or after the time stated therein, shall be deemed equivalent to notice. Attendance of a person at a meeting shall constitute a waiver of notice of such meeting, except when the person attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at,

nor the purpose of, any regular or special meeting of the directors, or members of a committee of directors, need be specified in any written waiver of notice unless so required by the Certificate of Incorporation or these Bylaws.

3.10 Board Action By Written Consent Without A Meeting.  
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Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors, or of any committee thereof, may be taken without a meeting if all members of the Board of Directors or committee, as the case may be, consent thereto in writing and the writing or writings are filed with the minutes of proceedings of the Board of Directors or committee. Written consents representing actions taken by the board or committee may be executed by telex, telecopy or other facsimile transmission, and such facsimile shall be valid and binding to the same extent as if it were an original.

3.11 Fees And Compensation Of Directors.  
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Unless otherwise restricted by the Certificate of Incorporation or these Bylaws, the Board of Directors shall have the authority to fix the compensation of directors. No such compensation shall preclude any director from serving the Corporation in any other capacity and receiving compensation therefor.

3.12 Approval Of Loans To Officers.  
-----

The Corporation may lend money to, or guarantee any obligation of, or otherwise assist any officer or other employee of the Corporation or of its subsidiary, including any officer or employee who is a director of the Corporation or its subsidiary, whenever, in the judgment of the directors, such loan, guaranty or assistance may reasonably be expected to benefit the Corporation. The loan, guaranty or other assistance may be with or without interest and may be unsecured, or secured in such manner as the Board of Directors shall approve, including, without limitation, a pledge of shares of stock of the Corporation. Nothing in this Section 3.2 contained shall be deemed to deny, limit or restrict the powers of guaranty or warranty of the Corporation at common law or under any statute.

3.13 Removal Of Directors.  
-----

Unless otherwise restricted by statute, by the Certificate of Incorporation or by these Bylaws, any director or the entire Board of Directors may be removed, with or without cause, by the holders of a majority of the shares then entitled to vote at an election of directors; provided, however, that if the stockholders of the Corporation are entitled to cumulative voting, if less than the entire Board of Directors is to be removed, no director may be removed without cause if the votes cast against his removal would be sufficient to elect him if then cumulatively voted at an election of the entire Board of Directors.

No reduction of the authorized number of directors shall have the effect of removing any director prior to the expiration of such director's term of office.

3.14 Chairman Of The Board Of Directors.  
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The Corporation may also have, at the discretion of the Board of Directors, a Chairman of the Board of Directors who shall not be considered an officer of the Corporation.

ARTICLE IV

COMMITTEES  
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4.1 Committees Of Directors.  
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The Board of Directors may, by resolution passed by a majority of the whole Board of Directors, designate one or more committees, with each committee to consist of one or more of the directors of the Corporation. The Board of Directors may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors or in the Bylaws of the Corporation, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority to (a) amend the Certificate of Incorporation (except that a committee may, to the extent authorized in the resolution or resolutions providing for the issuance of shares of stock adopted by the Board of Directors as provided in Section 151(a) of the General Corporation Law of Delaware, fix the designations and any of the preferences or rights of such shares relating to dividends, redemption, dissolution, any distribution of assets of the Corporation or the conversion into, or the exchange of such shares for, shares of any other class or classes or any other series of the same or any other class or classes of stock of the Corporation or fix the number of shares of any series of stock or authorize the increase or decrease of the shares of any series), (b) adopt an agreement of merger or consolidation under Sections 251 or 252 of the General Corporation Law of Delaware, (c) recommend to the stockholders the sale, lease or exchange of all or substantially all of the Corporation's property and assets, (d) recommend to the stockholders a dissolution of the Corporation or a revocation of a dissolution, or (e) amend the Bylaws of the Corporation; and, unless the board resolution establishing the committee, the Bylaws or the Certificate of Incorporation expressly so provide, no such committee shall have the power or authority to declare a dividend, to authorize the issuance of stock, or to adopt a certificate of ownership and merger pursuant to Section 253 of the General Corporation Law of Delaware.

4.2 Committee Minutes.  
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Each committee shall keep regular minutes of its meetings and report the same to the Board of Directors when required.

4.3 Meetings And Action Of Committees.  
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Meetings and actions of committees shall be governed by, and held and taken in accordance with, the provisions of Section 3.5 (place of meetings and meetings by telephone), Section 3.6 (regular meetings), Section 3.7 (special meetings and notice), Section 3.8 (quorum), Section 3.9 (waiver of notice), and Section 3.10 (action without a meeting) of these Bylaws, with such changes in the context of such provisions as are necessary to substitute the committee and its members for the Board of Directors and its members; provided, however, that the time of regular meetings of committees may be determined either by resolution of the Board of Directors or by resolution of the committee, that special meetings of committees may also be called by resolution of the Board of Directors and that notice of special meetings of committees shall also be given to all alternate members, who shall have the right to attend all meetings of the committee. The Board of Directors may adopt rules for the government of any committee not inconsistent with the provisions of these Bylaws.

ARTICLE V

OFFICERS  
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5.1 Officers.  
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The officers of the Corporation shall be a chief executive officer, a president, a secretary, and a chief financial officer. The Corporation may also have, at the discretion of the Board of Directors, one or more vice presidents, one or more assistant secretaries, one or more assistant treasurers, and any such other officers as may be appointed in accordance with the provisions of Section 5.3 of these Bylaws. Any number of offices may be held by the same person.

5.2 Appointment Of Officers.  
-----

The officers of the Corporation, except such officers as may be appointed in accordance with the provisions of Sections 5.3 or 5.5 of these Bylaws, shall be appointed by the Board of Directors, subject to the rights, if any, of an officer under any contract of employment.

5.3 Subordinate Officers.  
-----

The Board of Directors may appoint, or empower the chief executive officer or the president to appoint, such other officers and agents as the business of the Corporation may require, each of whom shall hold office for such period, have such authority, and perform such duties as are provided in these Bylaws or as the Board of Directors may from time to time determine.

5.4 Removal And Resignation Of Officers.  
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Subject to the rights, if any, of an officer under any contract of employment, any officer may be removed, either with or without cause, by an affirmative vote of the majority of the Board of Directors at any regular or special meeting of the Board of Directors or, except in

the case of an officer chosen by the Board of Directors, by any officer upon whom such power of removal may be conferred by the Board of Directors.

Any officer may resign at any time by giving written notice to the attention of the secretary of the Corporation. Any resignation shall take effect at the date of the receipt of that notice or at any later time specified in that notice; and, unless otherwise specified in that notice, the acceptance of the resignation shall not be necessary to make it effective. Any resignation is without prejudice to the rights, if any, of the Corporation under any contract to which the officer is a party.

5.5 Vacancies In Offices.  
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Any vacancy occurring in any office of the Corporation shall be filled by the Board of Directors.

5.6 Chief Executive Officer.  
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Subject to such supervisory powers, if any, as may be given by the Board of Directors to the chairman of the board, if any, the chief executive officer of the Corporation shall, subject to the control of the Board of Directors, have general supervision, direction, and control of the business and the officers of the Corporation. He or she shall preside at all meetings of the stockholders and, in the absence or nonexistence of a chairman of the board, at all meetings of the Board of Directors and shall have the general powers and duties of management usually vested in the office of chief executive officer of a corporation and shall have such other powers and duties as may be prescribed by the Board of Directors or these Bylaws.

5.7 President.  
-----

Subject to such supervisory powers, if any, as may be given by the Board of Directors to the chairman of the board (if any) or the chief executive officer, the president shall have general supervision, direction, and control of the business and other officers of the Corporation. He or she shall have the general powers and duties of management usually vested in the office of president of a corporation and such other powers and duties as may be prescribed by the Board of Directors or these Bylaws.

5.8 Vice Presidents.  
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In the absence or disability of the chief executive officer and president, the vice presidents, if any, in order of their rank as fixed by the Board of Directors or, if not ranked, a vice president designated by the Board of Directors, shall perform all the duties of the president and when so acting shall have all the powers of, and be subject to all the restrictions upon, the president. The vice presidents shall have such other powers and perform such other duties as from time to time may be prescribed for them respectively by the Board of Directors, these Bylaws, the president or the chairman of the board.

5.9 Secretary.  
-----

The secretary shall keep or cause to be kept, at the principal executive office of the Corporation or such other place as the Board of Directors may direct, a book of minutes of all

meetings and actions of directors, committees of directors, and stockholders. The minutes shall show the time and place of each meeting, the names of those present at directors' meetings or committee meetings, the number of shares present or represented at stockholders' meetings, and the proceedings thereof.

The secretary shall keep, or cause to be kept, at the principal executive office of the Corporation or at the office of the Corporation's transfer agent or registrar, as determined by resolution of the Board Of Directors, a share register, or a duplicate share register, showing the names of all stockholders and their addresses, the number and classes of shares held by each, the number and date of certificates evidencing such shares, and the number and date of cancellation of every certificate surrendered for cancellation.

The secretary shall give, or cause to be given, notice of all meetings of the stockholders and of the Board of Directors required to be given by law or by these Bylaws. He or she shall keep the seal of the Corporation, if one be adopted, in safe custody and shall have such other powers and perform such other duties as may be prescribed by the Board of Directors or by these Bylaws.

5.10 Chief Financial Officer.  
-----

The chief financial officer shall keep and maintain, or cause to be kept and maintained, adequate and correct books and records of accounts of the properties and business transactions of the Corporation, including accounts of its assets, liabilities, receipts, disbursements, gains, losses, capital retained earnings, and shares. The books of account shall at all reasonable times be open to inspection by any director.

The chief financial officer shall deposit all moneys and other valuables in the name and to the credit of the Corporation with such depositories as may be designated by the Board of Directors. He or she shall disburse the funds of the Corporation as may be ordered by the Board of Directors, shall render to the president, the chief executive officer, or the directors, upon request, an account of all his or her transactions as chief financial officer and of the financial condition of the Corporation, and shall have other powers and perform such other duties as may be prescribed by the Board of Directors or the Bylaws.

5.11 Representation Of Shares Of Other Corporations.  
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The chairman of the board, the chief executive officer, the president, any vice president, the chief financial officer, the secretary or assistant secretary of this Corporation, or any other person authorized by the Board of Directors or the chief executive officer or the president or a vice president, is authorized to vote, represent, and exercise on behalf of this Corporation all rights incident to any and all shares of any other corporation or corporations standing in the name of this Corporation. The authority granted herein may be exercised either by such person directly or by any other person authorized to do so by proxy or power of attorney duly executed by the person having such authority.

5.12 Authority And Duties Of Officers.  
-----

In addition to the foregoing authority and duties, all officers of the Corporation shall respectively have such authority and perform such duties in the management of the business of the Corporation as may be designated from time to time by the Board of Directors or the stockholders.

ARTICLE VI

INDEMNIFICATION OF DIRECTORS,  
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OFFICERS, EMPLOYEES, AND OTHER AGENTS  
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6.1 Indemnification Of Directors And Officers.  
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The Corporation shall, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware, indemnify each of its directors and officers against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the Corporation. For purposes of this Section 6.1, a "director" or "officer" of the Corporation includes any person (a) who is or was a director or officer of the Corporation, (b) who is or was serving at the request of the Corporation as a director or officer of another corporation, partnership, joint venture, trust or other enterprise, or (c) who was a director or officer of a Corporation which was a predecessor corporation of the Corporation or of another enterprise at the request of such predecessor corporation.

6.2 Indemnification Of Others.  
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The Corporation shall have the power, to the maximum extent and in the manner permitted by the General Corporation Law of Delaware, to indemnify each of its employees and agents (other than directors and officers) against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an agent of the Corporation. For purposes of this Section 6.2, an "employee" or "agent" of the Corporation (other than a director or officer) includes any person (a) who is or was an employee or agent of the Corporation, (b) who is or was serving at the request of the Corporation as an employee or agent of another corporation, partnership, joint venture, trust or other enterprise, or (c) who was an employee or agent of a corporation which was a predecessor corporation of the Corporation or of another enterprise at the request of such predecessor corporation.

6.3 Payment Of Expenses In Advance.  
-----

Expenses incurred in defending any action or proceeding for which indemnification is required pursuant to Section 6.1 or for which indemnification is permitted pursuant to Section 6.2 following authorization thereof by the Board of Directors shall be paid by the Corporation in advance of the final disposition of such action or proceeding upon receipt of an undertaking by or on behalf of the indemnified party to repay such amount if it shall

ultimately be determined that the indemnified party is not entitled to be indemnified as authorized in this Article VI.

6.4 Indemnity Not Exclusive.  
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The indemnification provided by this Article VI shall not be deemed exclusive of any other rights to which those seeking indemnification may be entitled under any Bylaw, agreement, vote of shareholders or disinterested directors or otherwise, both as to action in an official capacity and as to action in another capacity while holding such office, to the extent that such additional rights to indemnification are authorized in the Certificate of Incorporation.

6.5 Insurance.  
-----

The Corporation may purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him or her and incurred by him or her in any such capacity, or arising out of his or her status as such, whether or not the Corporation would have the power to indemnify him or her against such liability under the provisions of the General Corporation Law of Delaware.

6.6 Conflicts.  
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No indemnification or advance shall be made under this Article VI, except where such indemnification or advance is mandated by law or the order, judgment or decree of any court of competent jurisdiction, in any circumstance where it appears:

(a) That it would be inconsistent with a provision of the Certificate of Incorporation, these Bylaws, a resolution of the stockholders or an agreement in effect at the time of the accrual of the alleged cause of the action asserted in the proceeding in which the expenses were incurred or other amounts were paid, which prohibits or otherwise limits indemnification; or

(b) That it would be inconsistent with any condition expressly imposed by a court in approving a settlement.

ARTICLE VII

RECORDS AND REPORTS  
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7.1 Maintenance And Inspection Of Records.  
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The Corporation shall, either at its principal executive offices or at such place or places as designated by the Board of Directors, keep a record of its stockholders listing their names and addresses and the number and class of shares held by each stockholder, a copy of these Bylaws as amended to date, accounting books, and other records.

Any stockholder of record, in person or by attorney or other agent, shall, upon written demand under oath stating the purpose thereof, have the right during the usual hours for business to inspect for any proper purpose the Corporation's stock ledger, a list of its stockholders, and its other books and records and to make copies or extracts therefrom. A proper purpose shall mean a purpose reasonably related to such person's interest as a stockholder. In every instance where an attorney or other agent is the person who seeks the right to inspection, the demand under oath shall be accompanied by a power of attorney or such other writing that authorizes the attorney or other agent to so act on behalf of the stockholder. The demand under oath shall be directed to the Corporation at its registered office in Delaware or at its principal place of business.

7.2 Inspection By Directors.  
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Any director shall have the right to examine the Corporation's stock ledger, a list of its stockholders, and its other books and records for a purpose reasonably related to his or her position as a director. The Court of Chancery is hereby vested with the exclusive jurisdiction to determine whether a director is entitled to the inspection sought. The Court may summarily order the Corporation to permit the director to inspect any and all books and records, the stock ledger, and the stock list and to make copies or extracts therefrom. The Court may, in its discretion, prescribe any limitations or conditions with reference to the inspection, or award such other and further relief as the Court may deem just and proper.

7.3 Annual Statement To Stockholders.  
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The Board of Directors shall present at each annual meeting, and at any special meeting of the stockholders when called for by vote of the stockholders, a full and clear statement of the business and condition of the Corporation.

ARTICLE VIII

GENERAL MATTERS  
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8.1 Checks.  
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From time to time, the Board of Directors shall determine by resolution which person or persons may sign or endorse all checks, drafts, other orders for payment of money, notes or other evidences of indebtedness that are issued in the name of or payable to the Corporation, and only the persons so authorized shall sign or endorse those instruments.

8.2 Execution Of Corporate Contracts And Instruments.  
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The Board of Directors, except as otherwise provided in these Bylaws, may authorize any officer or officers, or agent or agents, to enter into any contract or execute any instrument in the name of and on behalf of the Corporation; such authority may be general or confined to specific instances. Unless so authorized or ratified by the Board of Directors or within the agency power of an officer, no officer, agent or employee shall have any power or

authority to bind the Corporation by any contract or engagement or to pledge its credit or to render it liable for any purpose or for any amount.

8.3           Stock Certificates; Partly Paid Shares.  
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The shares of the Corporation shall be represented by certificates, provided that the Board of Directors of the Corporation may provide by resolution or resolutions that some or all of any or all classes or series of its stock shall be uncertificated shares. Any such resolution shall not apply to shares represented by a certificate until such certificate is surrendered to the Corporation. Notwithstanding the adoption of such a resolution by the Board of Directors, every holder of stock represented by certificates and upon request every holder of uncertificated shares shall be entitled to have a certificate signed by, or in the name of the Corporation by the chairman or vice-chairman of the Board of Directors, or the chief executive officer or the president or vice-president, and by the chief financial officer or an assistant treasurer, or the secretary or an assistant secretary of the Corporation representing the number of shares registered in certificate form. Any or all of the signatures on the certificate may be a facsimile. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate has ceased to be such officer, transfer agent or registrar before such certificate is issued, it may be issued by the Corporation with the same effect as if he or she were such officer, transfer agent or registrar at the date of issue.

The Corporation may issue the whole or any part of its shares as partly paid and subject to call for the remainder of the consideration to be paid therefor. Upon the face or back of each stock certificate issued to represent any such partly paid shares, upon the books and records of the Corporation in the case of uncertificated partly paid shares, the total amount of the consideration to be paid therefor and the amount paid thereon shall be stated. Upon the declaration of any dividend on fully paid shares, the Corporation shall declare a dividend upon partly paid shares of the same class, but only upon the basis of the percentage of the consideration actually paid thereon.

8.4           Special Designation On Certificates.  
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If the Corporation is authorized to issue more than one class of stock or more than one series of any class, then the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights shall be set forth in full or summarized on the face or back of the certificate that the Corporation shall issue to represent such class or series of stock; provided, however, that, except as otherwise provided in Section 202 of the General Corporation Law of Delaware, in lieu of the foregoing requirements there may be set forth on the face or back of the certificate that the Corporation shall issue to represent such class or series of stock a statement that the Corporation will furnish without charge to each stockholder who so requests the powers, the designations, the preferences, and the relative, participating, optional or other special rights of each class of stock or series thereof and the qualifications, limitations or restrictions of such preferences and/or rights.

8.5       Lost Certificates.  
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Except as provided in this Section 8.5, no new certificates for shares shall be issued to replace a previously issued certificate unless the latter is surrendered to the Corporation and canceled at the same time. The Corporation may issue a new certificate of stock or uncertificated shares in the place of any certificate previously issued by it, alleged to have been lost, stolen or destroyed, and the Corporation may require the owner of the lost, stolen or destroyed certificate, or the owner's legal representative, to give the Corporation a bond sufficient to indemnify it against any claim that may be made against it on account of the alleged loss, theft or destruction of any such certificate or the issuance of such new certificate or uncertificated shares.

8.6       Construction; Definitions.  
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Unless the context requires otherwise, the general provisions, rules of construction, and definitions in the Delaware General Corporation Law shall govern the construction of these Bylaws. Without limiting the generality of this provision, the singular number includes the plural, the plural number includes the singular, and the term "person" includes both a corporation and a natural person.

8.7       Dividends.  
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The directors of the Corporation, subject to any restrictions contained in (a) the General Corporation Law of Delaware or (b) the Certificate of Incorporation, may declare and pay dividends upon the shares of its capital stock. Dividends may be paid in cash, in property, or in shares of the Corporation's capital stock.

The directors of the Corporation may set apart out of any of the funds of the Corporation available for dividends a reserve or reserves for any proper purpose and may abolish any such reserve. Such purposes shall include but not be limited to equalizing dividends, repairing or maintaining any property of the Corporation, and meeting contingencies.

8.8       Fiscal Year.  
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The fiscal year of the Corporation shall be fixed by resolution of the Board of Directors and may be changed by the Board of Directors.

8.9       Seal.  
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The Corporation may adopt a corporate seal, which may be altered at pleasure, and may use the same by causing it or a facsimile thereof, to be impressed or affixed or in any other manner reproduced.

8.10      Transfer Of Stock.  
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Upon surrender to the Corporation or the transfer agent of the Corporation of a certificate for shares duly endorsed or accompanied by proper evidence of succession, assignation or authority to transfer, it shall be the duty of the Corporation to issue a new

certificate to the person entitled thereto, cancel the old certificate, and record the transaction in its books.

8.11        Stock Transfer Agreements.  
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The Corporation shall have power to enter into and perform any agreement with any number of stockholders of any one or more classes of stock of the Corporation to restrict the transfer of shares of stock of the Corporation of any one or more classes owned by such stockholders in any manner not prohibited by the General Corporation Law of Delaware.

8.12        Registered Stockholders.  
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The Corporation shall be entitled to recognize the exclusive right of a person registered on its books as the owner of shares to receive dividends and to vote as such owner, shall be entitled to hold liable for calls and assessments the person registered on its books as the owner of shares, and shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of another person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Delaware.

ARTICLE IX

AMENDMENTS  
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The Bylaws of the Corporation may be adopted, amended or repealed by the stockholders entitled to vote; provided, however, that the Corporation may, in its Certificate of Incorporation, confer the power to adopt, amend or repeal Bylaws upon the directors. The fact that such power has been so conferred upon the directors shall not divest the stockholders of the power, nor limit their power to adopt, amend or repeal Bylaws.



CONFIDENTIAL TREATMENT REQUESTED. CONFIDENTIAL PORTIONS OF THIS DOCUMENT HAVE BEEN REDACTED AND HAVE BEEN SEPARATELY FILED WITH THE COMMISSION.

[LOGO OF SUNRISE TELECOM INCORPORATED]

2001 Executive Officers Bonus Plan

Executive Officers will participate in the 2001 Executive Officers Bonus Plan (the "Executive Officers Bonus Plan") as stated below, subject to approval by the Compensation Committee of the Board of Directors of the Company.

Executive Officers

-----

Paul K. Chang - CEO & President  
Paul A. Marshall - COO & VP Marketing  
Robert C. Pfeiffer - CTO & VP Engineering  
Peter L. Eidelman - CFO & Treasurer

2001 Executive Officers  
Bonus Plan Formula

1. The Executive Officers Bonus will be based on a percentage of their base compensation for the period enrolled in the plan.
2. The formula will be based on both the year's profit percentage, and sales growth percentage.
3. The bonus formula will include an upside to motivate the Executive Officers to achieve exceptional Company financial performance. It will also include a downside resulting in no annual bonus awarded.
4. The bonus can range from 0 to a maximum of 50% times the base salary for the period enrolled. The Company maintains the right to reduce the calculated amount of the formula to be sure that the employee profit sharing plan for the entire Company employees is not reduced while benefiting the Executive Officers.
5. The 2001 goal is to obtain employee profit sharing between 15% to 25% while maintaining sales growth in excess of [\*] and a net income percentage to equal or exceed [\*] of sales. The Executive Officers Bonus will only exceed 25% when employee profit sharing reaches 25%. Executive Officers Bonus payments will be accrued in excess of 25% in the event of exceptional performance exceeding the stated sales growth and net income percentage stated above.

\* Confidential material redacted and filed separately with the Commission.

6. In the event of a material corporate reorganization, the formula will need to be reevaluated.
7. Yearly net income, yearly sales, previous year sales are as reported on the Company's audited financial statements.

Bonus = [\*]

definitions:

p = year profit % = yearly net income / yearly sales

sg = sales growth percentage = (current year sales - previous year sales) /  
previous year sales

\* Confidential material redacted and filed separately with the Commission.



## LIST OF SUBSIDIARIES

The following table sets forth certain information concerning the principal subsidiaries of Sunrise Telecom Incorporated.

Name ----	State or Other Jurisdiction of Incorporation -----
Hukk Engineering, Inc.	Georgia, U.S.A.
Sunrise Telecom Pro.Tel Division Srl	Italy
Avantron Technologies Co.	Nova Scotia, Canada

The names of certain subsidiaries have been omitted because such unnamed subsidiaries, considered in the aggregate, would not constitute a significant subsidiary as that term is defined in Regulation S-X.



CONSENT OF INDEPENDENT AUDITORS

The Board of Directors and Stockholders  
Sunrise Telecom Incorporated:

We consent to incorporation by reference in the registration statement on Form S-8 (No. 333-43270) of Sunrise Telecom Incorporated, of our report dated January 24, 2001, relating to the consolidated balance sheets of Sunrise Telecom Incorporated and subsidiaries as of December 31, 1999 and 2000, and the related consolidated statements of net income, stockholders' equity and comprehensive income, and cash flows for each of the years in the three-year period ended December 31, 2000, which report appears in the December 31, 2000 annual report on Form 10-K of Sunrise Telecom Incorporated.

KPMG LLP

Mountain View, California  
March 15, 2001

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