

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2004.

OR

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

For the transition period from _____ to _____.

Commission File Number: 0-30757

Sunrise Telecom Incorporated

(Exact name of Registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

77-0291197

(IRS Employer
Identification No.)

302 Enzo Drive, San Jose, California 95138

(Address of principal executive offices, including zip code)

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

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

Yes ☒ No ☐

Indicate by check mark whether the Registrant is an accelerated filer (as defined in Rule 12b-2 of the Exchange Act.)

Yes ☐ No ☒

As of November 5, 2004, there were 50,524,760 shares outstanding of the Registrant's Common Stock, par value \$0.001.

SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES
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PART I. FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS (unaudited)

SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES CONDENSED CONSOLIDATED BALANCE SHEETS

(In thousands, except share data, unaudited)

	September 30, 2004	December 31, 2003
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 37,641	\$ 39,885
Accounts receivable, net of allowance of \$727 and \$1,380, respectively	9,476	13,112
Inventories	13,065	7,286
Prepaid expenses and other assets	1,017	577
Deferred tax assets	166	5,604
Total current assets	<u>61,365</u>	<u>66,464</u>
Property and equipment, net	26,741	26,929
Restricted cash	306	106
Marketable securities	1,641	2,133
Goodwill	12,570	12,815
Intangible assets, net	3,866	5,869
Deferred tax assets	—	1,660
Other assets	820	631
Total assets	<u>\$ 107,309</u>	<u>\$ 116,607</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term borrowings and current portion of notes payable	\$ 184	\$ 382
Accounts payable	2,297	1,729
Other accrued expenses	9,385	8,979
Income taxes payable	647	23
Deferred revenue	467	660
Total current liabilities	<u>12,980</u>	<u>11,773</u>
Notes payable, less current portion	975	1,095
Deferred tax liabilities	65	—
Deferred revenue	120	178
Other liabilities	3	4
Stockholders' equity:		
Common stock, \$0.001 par value per share; 175,000,000 shares authorized; 52,269,980 and 51,827,926 shares issued as of September 30, 2004 and December 31, 2003, respectively; 50,518,101 and 50,076,047 shares outstanding as of September 30, 2004 and December 31, 2003, respectively	51	50
Additional paid-in capital	69,626	69,099
Deferred stock-based compensation	—	(267)
Retained earnings	22,159	33,294
Accumulated other comprehensive income	1,330	1,381
Total stockholders' equity	<u>93,166</u>	<u>103,557</u>
Total liabilities and stockholders' equity	<u>\$ 107,309</u>	<u>\$ 116,607</u>

See accompanying notes to condensed consolidated financial statements.

SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS
(In thousands, except per share data, unaudited)

	Three Months		Nine Months	
	Ended September 30,		Ended September 30,	
	2004	2003	2004	2003
Net sales	\$ 12,725	\$ 12,338	\$ 41,530	\$ 34,505
Cost of sales	4,005	4,451	11,796	12,969
Gross profit	<u>8,720</u>	<u>7,887</u>	<u>29,734</u>	<u>21,536</u>
Operating expenses:				
Research and development	3,824	3,664	11,538	12,024
Selling and marketing	4,164	3,786	12,424	12,308
General and administrative	2,774	2,463	7,058	7,246
Total operating expenses	<u>10,762</u>	<u>9,913</u>	<u>31,020</u>	<u>31,578</u>
Loss from operations	(2,042)	(2,026)	(1,286)	(10,042)
Other income (expense), net	232	(66)	632	462
Loss before income taxes	(1,810)	(2,092)	(654)	(9,580)
Income tax expense (benefit)	345	(816)	7,974	(3,736)
Net loss	<u>\$ (2,155)</u>	<u>\$ (1,276)</u>	<u>\$ (8,628)</u>	<u>\$ (5,844)</u>
Loss per share:				
Basic and diluted	<u>\$ (0.04)</u>	<u>\$ (0.03)</u>	<u>\$ (0.17)</u>	<u>\$ (0.12)</u>
Shares used in per share computation:				
Basic and diluted	<u>50,504</u>	<u>49,819</u>	<u>50,365</u>	<u>49,665</u>

See accompanying notes to condensed consolidated financial statements.

SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES
CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS
(In thousands, unaudited)

	Nine Months Ended September 30,	
	2004	2003
Cash flows from operating activities:		
Cash received from customers	\$ 45,433	\$ 37,512
Cash paid to suppliers and employees	(43,842)	(38,904)
Income taxes (paid) refunded, net	139	(334)
Interest and other receipts, net	364	712
Net cash provided by (used in) operating activities	<u>2,094</u>	<u>(1,024)</u>
Cash flows from investing activities:		
Sales of marketable securities	687	1,036
Capital expenditures	(2,749)	(1,898)
Acquisition of business, net of cash acquired	—	(554)
Repayment of loan to related party	—	200
Net cash used in investing activities	<u>(2,062)</u>	<u>(1,216)</u>
Cash flows from financing activities:		
Increase in restricted cash	(200)	—
Proceeds from notes payable	—	42
Payments on notes payable	(242)	(409)
Dividends paid	(2,507)	(1,994)
Net proceeds from issuance of common stock	319	231
Proceeds from exercise of stock options	209	154
Net cash used in financing activities	<u>(2,421)</u>	<u>(1,976)</u>
Effect of exchange rate changes on cash and cash equivalents	145	208
Net decrease in cash and cash equivalents	<u>(2,244)</u>	<u>(4,008)</u>
Cash and cash equivalents at the beginning of the period	39,885	36,440
Cash and cash equivalents at the end of the period	<u>\$ 37,641</u>	<u>\$ 32,432</u>

See accompanying notes to condensed consolidated financial statements.

SUNRISE TELECOM INCORPORATED AND SUBSIDIARIES
NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS

(1) Basis of Presentation and Certain Significant Accounting Policies

Sunrise Telecom Incorporated and its subsidiaries (the "Company") develop, manufacture, and market telecommunications, cable broadband, and Internet network service verification equipment that enables service providers to pre-qualify facilities for services, verify newly installed services, and diagnose problems. The Company sells its products on six continents through a worldwide network of manufacturers, sales representatives, distributors, and direct sales people. The Company has wholly-owned subsidiaries in Norcross, Georgia; Taipei, Taiwan; Modena, Italy; Tokyo, Japan; Seoul, Korea; Anjou, Canada; Geneva, Switzerland; Stuttgart, Germany; and Shenzhen, China. It also has a foreign sales corporation in Barbados.

These condensed consolidated financial statements, including the notes to the condensed consolidated financial statements included herein, have been prepared by the Company, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission ("SEC"). Accordingly, they do not include all of the information and footnotes required by accounting principles generally accepted in the United States of America for complete financial statements. In the opinion of management, these financial statements include all adjustments, which are only normal recurring adjustments, necessary for their fair presentation. These financial statements should be read in conjunction with the Company's audited financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2003 filed with the SEC. Certain amounts in the prior period's condensed consolidated financial statements have been reclassified to conform to the current year's presentation.

The interim results presented are not necessarily indicative of results that may be expected for any subsequent interim period or for the full year ending December 31, 2004.

Revenue Recognition

The Company recognizes revenue from a customer order when all of the following criteria are met: persuasive evidence of an arrangement exists, delivery has occurred, the price is fixed or determinable, and collectibility is reasonably assured. For product sales, the Company considers delivery to have occurred when title and risk of loss have been transferred to the customer, which is usually at the time that the product has been picked up by a common carrier. For services, the Company considers delivery to have occurred once the service has been provided. The Company uses objective evidence of fair value to allocate revenue to elements in multiple element arrangements and recognize revenue when the criteria for revenue recognition have been met for each element. In the absence of objective evidence of the fair value of a delivered element, the Company allocates revenue to the fair value of the undelivered elements and the residual revenue to the delivered elements. The price charged when an element is sold separately generally determines fair value.

When the arrangement with the customer includes future obligations or obtaining customer acceptance, the Company recognizes revenue when those obligations have been met or customer acceptance has been received. The Company also defers revenue from the sales of service and support to be provided under its extended warranty programs and recognizes it on a straight-line basis over the extended warranty period. Therefore, total deferred revenue includes amounts received from customers in advance of services and support to be provided under extended warranty programs and amounts received for product sales prior to customer acceptance. Provisions are recorded at the time of sale for estimated product returns, standard warranty obligations, and customer support.

Net Loss Per Share

Basic earnings (loss) per share ("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 potential common equivalent shares outstanding during the period. Potential common equivalent shares consist of common stock issuable upon the exercise of stock options, as calculated using the treasury stock method. For the three and nine months ended September 30, 2004 and 2003, some potential common shares were excluded from the computation of diluted EPS presented in the condensed consolidated statements of operations because their effect would have been anti-dilutive. Specifically, diluted EPS does not include the effect of 4,548,000 and 4,823,000 anti-dilutive potential common equivalent shares for the three months ended September 30, 2004 and 2003, respectively, and 4,539,000 and 4,880,000 anti-dilutive potential common equivalent shares for the nine months ended September 30, 2004 and 2003, respectively.

Stock-Based Compensation

The Company accounts for employee stock-based compensation using the intrinsic-value method, in accordance with Accounting Principles Board ("APB") Opinion No. 25, *Accounting for Stock-Issued to Employees*. Accordingly, deferred compensation cost is recorded for an employee stock option on the date of its grant to the extent that the fair value of the underlying share of common stock exceeds the exercise price for the option. During 1999, the Company recorded deferred stock-based compensation cost for stock options issued to employees at exercise prices that were subsequently determined to have been below the fair value of the stock on the date of grant. In addition, the Company recorded deferred stock-based compensation cost for stock options granted to employees of Sunrise Telecom Pro.Tel Division Srl., a subsidiary of the Company, in the first quarter of 2000. The deferred compensation costs associated with both of these stock option grants were amortized as a charge against operating results on a straight-line basis over the original four-year vesting period of the options. The Company allocated this amortization expense to the same condensed consolidated statement of operations line items to which the other compensation costs of the employees who received the stock option grants were charged. As of March 31, 2004, the Company's deferred stock-based compensation has been completely amortized, and no compensation costs for stock-based compensation have been charged since that date.

If compensation expense for the Company's stock-based compensation plans had been determined in a manner consistent with the fair value approach described in Statement of Financial Accounting Standards ("SFAS") No. 123, *Accounting for Stock-Based Compensation*, as amended by SFAS No. 148, *Accounting for Stock-Based Compensation-Transition and Disclosure-an Amendment of FASB Statement No. 123*, the Company's net loss and loss per share, as reported, would have changed to the pro forma amounts indicated below (in thousands, except per share data):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2004	2003	2004	2003
Net loss, as reported	\$ (2,155)	\$ (1,276)	\$ (8,628)	\$ (5,844)
Add: Stock-based employee compensation expense included in reported net loss, net of applicable tax effects	—	290	267	907
Deduct: Stock-based employee compensation expense determined using fair value based method for all awards, net of applicable tax effects	(528)	(571)	(1,922)	(1,712)
Net loss, pro forma	<u>\$ (2,683)</u>	<u>\$ (1,557)</u>	<u>\$ (10,283)</u>	<u>\$ (6,649)</u>
Loss per share, as reported:				
Basic and diluted	<u>\$ (0.04)</u>	<u>\$ (0.03)</u>	<u>\$ (0.17)</u>	<u>\$ (0.12)</u>
Loss per share, pro forma:				
Basic and diluted	<u>\$ (0.05)</u>	<u>\$ (0.03)</u>	<u>\$ (0.20)</u>	<u>\$ (0.13)</u>

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2004	2003	2004	2003
Dividend yield	1.6%	None	1.4%	None
Expected term	5 years	5 years	5 years	4 years
Risk-free interest rate	3.42%	3.31%	3.40%	3.01%
Volatility rate	69%	73%	70%	72%

(2) Recent Accounting Pronouncements

In March 2004, the Emerging Issues Task Force (“EITF”) reached a consensus on Issue No. 03-1, *The Meaning of Other-Than-Temporary Impairment and Its Application to Certain Investments*. EITF 03-1 provides guidance regarding other-than-temporary impairment models for marketable debt and equity securities accounted for under SFAS No. 115, *Accounting for Certain Investments in Debt and Equity Securities* and non-marketable equity securities accounting for under the cost method. The EITF developed a three-step method to evaluate whether an impairment of an investment is other-than-temporary. On September 30, 2004, the Financial Accounting Standards Board (“FASB”) approved the issuance of FASB Staff Position EITF 03-1-1, which delays the effective date of EITF 03-1 until additional guidance is issued for the application of its impairment recognition and measurement provisions. The Company does not expect that the adoption of EITF 03-1 will have a material effect on its consolidated financial position, results of operations, or cash flows.

(3) Comprehensive Loss

Comprehensive loss comprises net loss and other comprehensive income (loss). Other comprehensive income (loss) includes certain changes in the equity of the Company that are excluded from net loss. The components of the Company's comprehensive income (loss) were as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2004	2003	2004	2003
Net loss	<u>\$ (2,155)</u>	<u>\$ (1,276)</u>	<u>\$ (8,628)</u>	<u>\$ (5,844)</u>
Other comprehensive income (loss):				
Change in unrealized gain (loss) on available-for-sale investments	255	189	193	585
Reclassification adjustment for gain on available-for-sale investments realized in net income	(35)	—	(452)	—
Change in foreign currency translation adjustments	<u>(12)</u>	<u>(38)</u>	<u>118</u>	<u>398</u>
Other comprehensive income (loss), before income taxes	208	151	(141)	983
Income tax benefit (expense) related to items of other comprehensive income (loss)	<u>(76)</u>	<u>(66)</u>	<u>90</u>	<u>(206)</u>
Total comprehensive loss	<u>\$ (2,023)</u>	<u>\$ (1,191)</u>	<u>\$ (8,679)</u>	<u>\$ (5,067)</u>

(4) Inventories

Inventories consisted of the following (in thousands):

	September 30, 2004	December 31, 2003
Raw materials	\$ 6,549	\$ 2,429
Work-in process	4,368	2,861
Finished goods	<u>2,148</u>	<u>1,996</u>
	<u>\$ 13,065</u>	<u>\$ 7,286</u>

(5) Marketable Securities

Marketable securities at September 30, 2004 and December 31, 2003 consisted of common stock of Top Union Electronics Corp. ("Top Union"), a Taiwan R.O.C. corporation. The Company has classified this investment as an available-for-sale security, which is stated at fair value with the unrealized gain presented as a separate component of stockholders' equity.

During the three months ended September 30, 2004, the Company sold 108,000 shares of Top Union stock, realizing gains of \$35,000. During the nine months ended September 30, 2004, the Company sold 895,000

shares of Top Union stock, realizing gains of \$452,000. During the three and nine months ended September 30, 2004, the Company received stock dividends from Top Union of 350,515 and 593,092 shares, respectively, valued at \$173,000 and \$366,000, respectively. At September 30, 2004, the Company held 3,163,480 shares of Top Union stock.

At September 30, 2004, the Company revalued its Top Union shares to their fair value of \$1,641,000. This resulted in an unrealized gain of \$255,000 for the three-month period then ended, which the Company recorded as other comprehensive income of \$166,000, net of a tax effect of \$89,000. Unrealized gains for the nine months ended September 30, 2004 were \$193,000, which the Company recorded as other comprehensive income of \$126,000, net of a tax effect of \$67,000. At September 30, 2004, the cumulative unrealized gain on this investment was \$826,000.

The Company determines the appropriate classification of debt and equity securities as trading, available for sale, or held to maturity at the time of purchase and reevaluates this designation at each balance sheet date. Investments classified as available for sale are reported at market value, with unrealized gains and losses, net of tax, reported as a separate component of other comprehensive 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, net in the Company's condensed consolidated statement of operations. Investment securities available for current operations are classified as current assets, and all other investment securities are classified as non-current assets on the Company's condensed consolidated balance sheet.

(6) Goodwill and Other Acquired Intangible Assets

The changes in the carrying amount of goodwill during the nine months ended September 30, 2004 were as follows (in thousands):

Balance at December 31, 2003	\$ 12,815
Adjustment to previously recorded purchase price	(236)
Effect of foreign currency translation	<u>(9)</u>
Balance at September 30, 2004	<u>\$ 12,570</u>

During 2004, the Company adjusted goodwill due to the resolution of an income tax uncertainty related to one of its business acquisitions.

The Company will perform its next annual impairment test of goodwill, as required by SFAS No. 142, *Goodwill and Other Intangible Assets*, during the quarter ending December 31, 2004.

Acquired intangible assets consisted of the following (in thousands):

September 30, 2004			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortized intangible assets:			
Developed technology	\$ 11,241	\$ (8,388)	\$ 2,853
Non-compete	895	(641)	254
License	637	(426)	211
Patents	151	(36)	115
Other	88	(25)	63
	<u>\$ 13,012</u>	<u>\$ (9,516)</u>	<u>3,496</u>
Unamortized intangible assets:			
Patents pending			309
Other			61
			<u>370</u>
Intangible assets, net			<u>\$ 3,866</u>

December 31, 2003			
	Gross Carrying Amount	Accumulated Amortization	Net Carrying Amount
Amortized intangible assets:			
Developed technology	\$ 12,305	\$ (7,635)	\$ 4,670
Non-compete	1,498	(1,082)	416
License	560	(291)	269
Patents	144	(28)	116
Other	112	(19)	93
	<u>\$ 14,619</u>	<u>\$ (9,055)</u>	<u>5,564</u>
Unamortized intangible assets:			
Patents pending			263
Other			42
			<u>305</u>
Intangible assets, net			<u>\$ 5,869</u>

The Company amortizes intangible assets on a straight-line basis over their estimated useful lives of two to ten years. Aggregate amortization expense for the three months ended September 30, 2004 and 2003 was \$697,000 and \$786,000, respectively, and for the nine months ended September 30, 2004 and 2003 was \$2,202,000 and \$2,595,000, respectively. Amortization expense is classified as a general and administrative expense on the Company's condensed consolidated statement of operations.

The estimated future aggregate annual amortization expense for acquired intangible assets as of September 30, 2004 is as follows (in thousands):

Three months ending December 31, 2004	\$ 623
Year ending December 31,	
2005	1,713
2006	778
2007	188
2008	70
2009	63
Thereafter	61
	<u>\$ 3,496</u>

(7) Other Assets

Other assets consisted of the following (in thousands):

	September 30, 2004	December 31, 2003
Insurance deposits	\$ 446	\$ 384
Other deposits	374	247
	<u>\$ 820</u>	<u>\$ 631</u>

(8) Liability for Product Warranties

Changes in the Company's liability for product warranties, which is part of other accrued expenses, during the nine months ended September 30, 2004 and the year ended December 31, 2003 are as follows (in thousands):

	Balance at Beginning of Period	Warranties Issued	Warranties Settled	Balance at End of Period
Nine months ended				
September 30, 2004	\$ 1,038	\$ 374	\$ (351)	\$ 1,061
Year ended December 31, 2003	1,306	318	(586)	1,038

(9) Short-term Borrowings and Notes Payable

As a result of various acquisitions completed during prior years, the Company had six non-interest bearing notes payable at September 30, 2004. The aggregate outstanding balance on these notes was \$229,000. Notes payable also included an unsecured loan from the Italian government, which bears interest at 2% per year and is to be repaid by semiannual principal payments over an eight-year period that began in 2003. At September 30, 2004, the outstanding balance on this loan was \$888,000. The Company had short-term borrowings and other debt totaling \$42,000 at September 30, 2004.

Annual amounts to be repaid under all notes payable are as follows (in thousands):

Three months ending December 31, 2004	\$ 57
Year ending December 31,	
2005	218
2006	218
2007	174
2008	137
2009	140
Thereafter	215
	<u>\$ 1,159</u>

(10) Income Taxes

The Company recorded income tax expense of \$7,974,000 for the nine months ended September 30, 2004. Of this amount, \$7,349,000 was the result of recording a valuation allowance against all of the Company's net deferred tax assets in most jurisdictions during the three months ended March 31, 2004. The remaining \$625,000 of income tax expense pertains to certain foreign subsidiaries that had taxable income. The expense for recording the valuation allowance is a non-cash item, and the recording of this expense does not imply that the Company owes additional income taxes.

(11) Segment Information

SFAS No. 131, *Disclosures 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 considers its Chief Executive Officer ("CEO") to be its chief operating decision-maker. The CEO reviews financial information presented on a consolidated basis, accompanied by disaggregated information about net sales 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 condensed consolidated statements of operations. Therefore, the Company operates in a single operating segment, which encompasses the design, manufacture, and sale of equipment for testing telecommunications, cable broadband, and Internet networks.

The Company attributes its net sales to geographic regions based on the destination to which its products are shipped. Net sales information for the different geographic regions in which the Company sells its products is as follows (in thousands):

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2004	2003	2004	2003
North America (United States and Canada)	\$ 7,136	\$ 8,010	\$ 22,506	\$ 21,747
Asia/Pacific	3,332	2,274	10,611	6,613
Europe/Africa/Middle East	1,974	1,954	7,762	5,382
Latin America	283	100	651	763
	<u>\$ 12,725</u>	<u>\$ 12,338</u>	<u>\$ 41,530</u>	<u>\$ 34,505</u>

Long-lived assets, which consist primarily of property and equipment, were located in the following geographic regions (in thousands):

	September 30, 2004	December 31, 2003
North America (United States and Canada)	\$ 24,611	\$ 25,170
Asia/Pacific	1,503	1,042
Europe/Africa/Middle East	627	717
	<u>\$ 26,741</u>	<u>\$ 26,929</u>

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2004	2003	2004	2003
Wireline access	\$ 4,869	\$ 4,552	\$ 18,845	\$ 14,142
Cable broadband	3,828	3,990	10,972	9,955
Fiber optics	2,985	3,253	8,797	8,780
Protocol	1,043	543	2,916	1,628
	<u>\$ 12,725</u>	<u>\$ 12,338</u>	<u>\$ 41,530</u>	<u>\$ 34,505</u>

No single customer accounted for 10% or more of the Company's sales during the three and nine months ended September 30, 2004. Sales to one customer, Verizon Communications Inc., were \$1,585,000 or 13% of the Company's total sales, during the three months ended September 30, 2003 and \$3,793,000 or 11% of the Company's total sales, during the nine months ended September 30, 2003. No other single customer accounted for 10% or more of the Company's total sales during the three and nine months ended September 30, 2003.

(12) Statement of Cash Flows

The Company presents its condensed consolidated statement of cash flows using the direct method. Following is a reconciliation of net income (loss) to net cash provided by operating activities:

	Nine Months Ended September 30,	
	2004	2003
Net loss	\$ (8,628)	\$ (5,844)
Adjustments to reconcile net loss to net cash provided by (used in)		
operating activities:		
Depreciation and amortization	5,522	5,762
Amortization of deferred stock-based compensation	267	1,486
Provision for (reversal of) losses on accounts receivable	(329)	42
Loss on disposal of property and equipment	184	212
Purchased in-process research and development	—	37
Gain on sale of marketable securities	(452)	—
Deferred income taxes	7,253	(459)
Changes in operating assets and liabilities (net of acquisition balances):		
Accounts receivable	3,903	3,664
Inventories	(6,426)	(1,260)
Prepaid expenses and other assets	(781)	(189)
Accounts payable and accrued expenses	972	(198)
Income taxes payable	860	(3,621)
Deferred revenue	(251)	(656)
Cash provided by (used in) operating activities	<u>\$ 2,094</u>	<u>\$ (1,024)</u>

(13) Litigation

On March 31, 2004, Acterna, LLC ("Acterna") filed a lawsuit against the Company and Consultronics, Ltd. and Consultronics, Inc. (the latter two, collectively, "Consultronics") in the United States District Court for the District of Maryland. Acterna alleged that the Company's SunSet xDSL and SunSet MTT products infringe its United States Patent Nos. 6,064,721 (the "'721 patent'"), 6,385,300 (the "'300 patent'"), and 6,590,963 (the "'963 patent'") and that the Company's STT product infringes its United States Patent No. 5,511,108 (the "'108 patent'"). Acterna also alleged that the Consultronics CoLT 450 product infringes its '721 patent. Acterna seeks injunctive relief, unspecified damages, and attorneys' fees and costs. In October 2004, the Company learned that Acterna and Consultronics had reached a settlement with respect to Acterna's claim against Consultronics and that the matter with respect to Consultronics had been dismissed with prejudice.

On April 23, 2004, the Company filed a lawsuit against Acterna in the United States District Court for the Northern District of California. The lawsuit alleged that Acterna's ANT-5 SDH Access Tester and ANT-20 Advanced Network Tester infringe the Company's United States Patent No. 5,619,489 (the "'489 patent'"). The Company seeks injunctive relief, unspecified damages, and attorneys' fees and costs.

On September 7, 2004, Acterna filed an answer in the United States District Court for the Northern District of California, seeking declaratory judgment that its ANT-5 SDH Access Tester and ANT-20 Advanced Network Tester do not infringe the '489 patent, that the '489 patent is invalid, and that the '489 patent is unenforceable. At the same time, Acterna also filed a counterclaim against the Company, alleging that certain of the Company's products, namely the CM 1000, CM 500, CM 250, N1776A, AT 2000 and AT 2500, all of which are manufactured and sold by subsidiaries of the Company, infringe its United States Patent No. 5,751,766 (the "'766 patent'"). Acterna seeks injunctive relief, unspecified damages and attorneys fees and costs.

The Company believes that the lawsuits against it are without merit, and the Company intends to defend itself vigorously against the allegations that Acterna is making against it. Specifically, the Company is defending itself against Acterna's allegations and is seeking declaratory judgment that its products do not infringe any of the '721 patent, the '300 patent, the '963 patent, the '108 patent, or the '766 patent; that the '721 patent, the '300 patent, the '963 patent, the '108 patent, and the '766 patent are invalid; and that the '721 patent, the '300 patent, the '963 patent, the '108 patent, and the '766 patent are unenforceable. In addition, the Company is seeking declaratory judgment that its products do not infringe a sixth, recently issued Acterna patent, United States Patent No. 6,738,454 (the "'454 patent"). The '454 patent is a continuation patent related to the '721 patent, the '300 patent, and the '963 patent. The Company also seeks declaratory judgment that the '454 patent is invalid and unenforceable.

The Company is presently unable to estimate the likely costs of the litigation and/or any settlement with Acterna.

From time to time, the Company may be involved in litigation or other legal proceedings, including those noted above, relating to claims arising out of its day-to-day operations or otherwise. Litigation is inherently uncertain, and the Company could experience unfavorable rulings. Should it experience an unfavorable ruling, there exists the possibility of a material adverse impact on its financial condition, results of operations, or cash flows or on its business for the period in which the ruling occurs and/or future periods.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

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. Words such as "expects", "anticipates", "estimates", "intends", "plans", "believes", "may", "might", "will", and similar words and expressions are intended to identify forward-looking statements. In particular, our stated expectation for the range of our revenue for the quarter ending December 31, 2004 is a forward-looking statement. Forward-looking statements are subject to risks and uncertainties that could cause actual results to differ materially from those projected. Such risks and uncertainties include, but are not necessarily limited to, those set forth below under "Risk 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 develop, manufacture, and market telecommunications, cable broadband, and Internet network service verification equipment that enables service providers to pre-qualify facilities for services, verify newly installed services, and diagnose problems. Our products offer broad functionality, leading edge technology, and compact size. The types of telecommunications services that our products can test include wireline access services (including DSL), fiber optics, cable broadband 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, cable companies, competitive local exchange carriers, and other service providers, network infrastructure suppliers, and installers throughout North America, Latin America, Europe, Africa, the Middle East, and the Asia/Pacific region.

For the past four years, many companies in the telecommunications industry throughout the world have been experiencing decreased profitability resulting from several factors. The most significant of these factors are the overbuilding of certain portions of the telecommunications infrastructure during the late 1990s and the increased overlap between the previously separate businesses of wireless, local telephone service, cable television service, and satellite television service, which has led to increased competition. We have been affected by this downturn, and after nine consecutive years of profitability, we were unprofitable during each of the years ended December 31, 2002 and 2003 and during the nine months ended September 30, 2004. However, we continued to generate positive cash flows from operating activities during this time, and we ended the third quarter of 2004 with a strong cash position and very low debt levels. We compete in the challenging telecommunications equipment market by pursuing a strategy of offering products that address the needs of a diverse group of telecommunications service providers and by investing heavily in research and development to create high-quality products that address evolving telecommunications technologies in innovative ways. We also work to minimize the operating costs necessary to execute this strategy.

We assess the overall performance of our business primarily through the use of financial metrics. Management seeks to manage the Company for profitability and growth. In general, profitability provides an indication of our ability to generate positive present and future cash flows from our operating activities for the future benefit of our investors, although non-cash items can also influence profitability. The key components of our profitability are net sales, cost of sales, and operating expenses. See the discussion in the next paragraph and the "Comparison of Three-Month Periods Ended September 30, 2004 and 2003" and the "Comparison of Nine-Month Periods Ended September 30, 2004 and 2003" sections of this MD&A for more information about our profitability. We seek to generate growth by investing in new products to tap into new market needs and to increase share in existing markets.

Our net loss for the nine months ended September 30, 2004, calculated in accordance with accounting principles generally accepted in the United States, was \$8.6 million. This amount included the effect of a charge for recording a valuation allowance on our net deferred tax assets for most jurisdictions. This was a

non-cash charge and does not imply that we owe additional income taxes, but the charge did increase our net loss by \$7.3 million from what it otherwise would have been. Without this non-cash charge, our net loss for the nine months ended September 30, 2004 would have been \$1.3 million. We believe that it is important to consider what our net loss would have been without this charge, because we have not previously had any similar charges and believe that we are unlikely to have any similar charges in the future. Therefore, considering our financial results without this charge may provide a more meaningful indication of our future prospects than the presentation of our operating results that includes this charge. This non-cash charge is discussed further in the "Comparison of Nine-Month Periods Ended September 30, 2004 and 2003" section of this MD&A.

Our results for the nine months ended September 30, 2004 have been generally similar to the same period of 2003. Our net sales for the three and nine months ended September 30, 2004 exceeded net sales for the same periods during 2003. However, our backlog at September 30, 2004 was \$5.7 million, which was a \$0.7 million decrease from backlog of \$6.4 million at December 31, 2003 and a \$1.8 million decrease from backlog of \$7.5 million at September 30, 2003, but was a \$0.9 million increase from backlog of \$4.8 million at June 30, 2004. Based on the September 30, 2004 backlog and fourth quarter order expectations, we expect sales for the three months ending December 31, 2004 to be between \$12.0 million and \$16.0 million.

Sources of Net Sales

We generate our cash flows primarily from selling telecommunications network testing equipment, and our future cash flows are largely dependent on our continuing ability to sell our products and collect cash from our customers for those sales. We consider investments in research and development and selling and marketing activities to be critical to our ability to generate strong sales volume in the future, and we continually seek to offer new products to meet our customers' needs. Notably, during the three months ended September 30, 2004, we introduced micro OTDR and optical channel monitor modules for our SunSet MTT product line and enhanced the capabilities of one of our fiber-optics field testing sets, the SunSet SDH.

We sell our products predominantly to large telecommunications service providers. This group of customers generally commits significant resources to the evaluation of our and our competitors' products and requires each vendor to expend substantial time, effort, and money educating them about the value of the proposed solutions before they agree to purchase any amount of products. Delays associated with potential customers' internal approval and contracting procedures, procurement practices, and 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 twenty-four months. During the past three years, we have observed a significant decline in capital spending in the telecommunications industry, which may lengthen the sales cycle further. However, during 2005, we expect this decline to be balanced by the need for telecommunications companies to invest in fiber optic distribution and IP transmission infrastructure to upgrade the bandwidth offered to customers and provide a combination of voice, Internet, and video services. We believe that our heavy investment in product development has laid the groundwork for providing new solutions for these emerging needs, which will result in new revenue streams for us.

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. We anticipate that our operating results for any given period will continue to be dependent on purchase orders, which can be delayed or cancelled by our customers without penalty.

Historically, a significant portion of our net sales has come from a small number of relatively large orders from a limited number of customers. Sales to our top 10 customers were 38% and 51% of our total net sales during the three-month periods ended September 30, 2004 and 2003, respectively, and were 39% and 42% of our total net sales during the nine-month periods ended September 30, 2004 and 2003, respectively.

During the three and nine months ended September 30, 2004, we did not have sales to any one customer that were 10% or more of our total sales. Sales to one customer, Verizon Communications Inc., were \$1.6 million, or 13% of our total sales, during the three months ended September 30, 2003 and \$3.8 million, or 11% of our total sales, during the nine months ended September 30, 2003. No other single customer accounted for 10% or more of our sales during the three and nine months ended September 30, 2003. In general, we anticipate that our operating results for any given period will continue to be dependent on a relatively small number of customers.

Our sales have been seasonal in nature and tied to the buying patterns of our customers. Prior to 2000, the largest volume of quarterly sales had usually been during the last calendar quarter of the year, as customers spent the unused portions of their annual budgets. In 2000 and 2001, there was a change in this fourth quarter seasonality as our customers had fewer remaining unused budget dollars available with which to generate increased fourth quarter sales. In 2002 and 2003, however, we saw a return to the pre-2000 pattern, with increased sales in the fourth quarter. On the other hand, our sales for the first quarter are typically substantially lower than for the preceding fourth quarter, as our customers usually do not release and begin spending their annual budgets until late in the first quarter. This pattern continued during the first quarter of 2004, and sales increased during the second quarter. However, during the third quarter of 2004, sales decreased from the second quarter, which is not unusual and occurred during 2001 and 2002. We do expect a reoccurrence of the usual upturn in fourth quarter sales during 2004 in comparison to the third quarter of 2004. Beyond that, market conditions in our industry are currently too uncertain for us to predict whether these patterns will continue into 2005. We expect that our quarterly operating results may fluctuate significantly and will be difficult to predict due to the lengthy and unpredictable buying patterns of our customers, the degree to which our customers allocate and spend their yearly budgets, competitors' products, and the timing of our customers' budget processes. See "Risk Factors Affecting Future Operating Results—Quarterly Fluctuations."

Currently, competition in the telecommunications and cable equipment market is intense and is characterized by declining prices, new products, and reduced customer demand. Because of these market conditions and potential pricing pressures from large customers in the future, we expect that the average selling price for our products will decline over time. If we fail to reduce our production costs accordingly or fail to introduce higher margin new products, there will be a corresponding decline in our gross profit percentage. See "Risk Factors Affecting Future Operating Results—Competition" and "—Risks of the Telecommunications Industry."

A substantial portion of our net sales have come from customers located outside of the United States, and we believe that future growth may depend on growth of our sales in international markets. These sales are primarily U.S. dollar denominated, which limits our financial exposure to currency exchange rate fluctuations. Currently, we have a manufacturing facility in Taipei, Taiwan; a manufacturing, research, development, and sales facility in Anjou, Canada; a manufacturing, research, development, and sales facility in Modena, Italy; and a research and development facility in Geneva, Switzerland. We also have sales offices in Tokyo, Japan; Seoul, Korea; Stuttgart, Germany; Modena, Italy; Shenzhen, China; and Barbados.

We have a small amount of sales denominated in Euros and the Canadian dollar, and in prior years we have used derivative financial instruments to hedge foreign exchange risks. At September 30, 2004, we had no derivative financial instruments. To date, foreign exchange exposure from sales has not been material to our operations. We also have been exposed to fluctuations in non-U.S. currency exchange rates related to our manufacturing activities in Taiwan. In the future, 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 this exposure by using hedging strategies. See "Risk Factors Affecting Future Operating Results—Risks of International Operations."

Cost of Sales

Our cost of sales consists primarily of the following:

- Direct material costs of product components, manuals, product documentation, and product accessories;
- Production wages, taxes, and benefits;
- Allocated production overhead costs;
- Warranty costs;
- Costs of board level assembly by third party contract manufacturers; and
- Scrapped and reserved material originally purchased for use in the production process.

We recognize direct cost of sales, wages, taxes, benefits, and allocated overhead costs at the same time we recognize revenue for products sold. We expense scrapped materials as incurred.

Our industry is characterized by limited sources and long lead times for the materials and components that we use to manufacture our products. If we underestimate our requirements, we may have inadequate inventory, resulting in additional product costs for expediting delivery of 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 purchase larger quantities of some parts than needed to meet firm production requirements, increasing our investment in inventory and the risk of the parts' obsolescence. Any subsequent write-off of inventory could result in lower margins. See "Risk Factors Affecting Future Operating Results—Dependence on Sole and Single Source Suppliers."

Operating Costs

We classify our operating expenses into three general categories: research and development, selling and marketing, and general and administrative. Our operating expenses include stock-based compensation expense and amortization of certain intangible assets. We classify charges to the research and development, selling and marketing, 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, each category also includes common types of expenditures, such as salaries, amortization of stock-based compensation, employee benefits, travel and entertainment costs, communications costs, rent and facilities costs, and third party professional service fees. The selling and marketing category of operating expenses also includes expenditures specific to our sales and marketing groups, such as commissions, public relations and advertising, trade shows, and marketing materials. The research and development category of operating expenses also includes expenditures specific to the research and development group, such as design and prototyping costs. The general and administrative category of operating expenses also includes expenditures specific to the general and administrative group, such as legal and professional fees and amortization of identifiable intangible assets.

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

During the nine months ended September 30, 2004 and 2003, we recorded amortization of deferred stock-based compensation expense of \$0.3 million and \$1.5 million, respectively, related to the grant of stock options at exercise prices subsequently deemed to be below fair market value. Compensation expense related to these options, which were granted in 1999 and the first quarter of 2000, has been amortized on a straight-line basis over the respective four-year vesting periods of the options and charged to the departments of the employees who received these option grants. During the first nine months of 2004, we allocated amortization of deferred stock-based compensation expense of \$0.1 million to research and development expense, \$0.1 million to selling and marketing expense, and \$0.1 million to general and administrative expense. During the first nine months of 2003, we allocated amortization of deferred stock-based compensation expense of \$0.2 million to cost of sales, \$0.5 million to research and development expense, \$0.5 million to selling and marketing expense, and \$0.3 million to general and administrative

expense. At September 30, 2004, no further deferred stock-based compensation expense remained to be amortized.

Also, during the nine months ended September 30, 2004 and 2003, we charged \$2.2 million and \$2.6 million, respectively, to general and administrative expense for amortization of intangible assets obtained through business acquisitions.

Litigation

On March 31, 2004, Acterna, LLC ("Acterna") filed a lawsuit against us in the United States District Court for the District of Maryland alleging that our SunSet xDSL, SunSet MTT, and STT products infringe certain patents owned by Acterna. We are defending ourselves against Acterna's allegations and are seeking declaratory judgment that our products do not infringe these patents and another related patent that Acterna did not assert against us. On April 23, 2004, we filed a lawsuit against Acterna in the United States District Court for the Northern District of California asserting that two of Acterna's products infringe a patent owned by us. On September 7, 2004, Acterna filed an answer and counterclaim against us in the United States District Court for the Northern District of California, seeking declaratory judgment that their products do not infringe our patent and alleging that certain products manufactured and sold by our subsidiaries infringe a patent owned by Acterna. We believe that Acterna's lawsuits against us are without merit, and we intend to vigorously defend against the claims being made against us. However, we cannot assure you as to the outcome of this litigation, nor can we presently estimate any potential losses or costs to us that might result from this litigation. See "Part II—Other Information: Item 1. Legal Proceedings." See also "Risk Factors Affecting Future Operating Results—Intellectual Property Risks" in this MD&A.

Results of Operations

Comparison of Three-Month Periods Ended September 30, 2004 and 2003

Net Sales. Net sales increased 3% to \$12.7 million for the three months ended September 30, 2004, from \$12.3 million for the same period of 2003. Sales of our wire line access products increased by \$0.4 million, sales of our cable broadband products decreased by \$0.2 million, sales of our fiber optics products decreased by \$0.3 million, and sales of our protocol products increased by \$0.5 million. The increase in wireline access product sales was generally driven by demand for our xDSL-CLT products, product accessories, and servicing of our products, which offset a small decrease in sales of our SunSet MTT products. Among cable broadband products, decreased sales of our CaLan product lines and decreased revenue from servicing our products were only partially offset by increased sales of our CM product lines and AT2500R systems. Among fiber optics products, a decrease in sales of our SunSet OcX and SunSet SDH products were partially offset by increased sales of fiber optics modules for our SunSet MTT and increased sales of our Luciol products. The increase in protocol product sales is due to sales of our NeTracker and 3G Master products. During the three months ended September 30, 2004, our revenues were not significantly affected by changes in prices.

Sales for the three months ended September 30, 2004 decreased \$0.9 million, or 11%, in North America, and increased \$1.0 million, or 47%, in Asia and \$0.2 million, or 183%, in Latin America, compared with the same period of 2003. Sales were unchanged in Europe/Africa/Middle East. The decrease in North American sales was primarily due to decreased sales of our wireline access and fiber optics products, which were partially offset by increased sales of our cable broadband products. Our growth in Asia is largely the result of our ongoing development of distribution channels in this region and development of products demanded in the region, leading to increased sales of wireline access, cable broadband, and protocol products, which offset a decrease in sales of fiber optics products. Our sales in Europe largely depend on ongoing development of distribution channels in that region and products for the region, which lead to increased sales of wireline access, cable broadband, and protocol products, which offset a decrease in sales of fiber optics products. Sales to Latin America remain a small part of our business; small changes in order volume from this region can represent large percentage fluctuations, as was the case during the three months ended September 30, 2004. International sales, including sales to Canada, increased to \$5.6 million,

or 44% of total net sales, for the three months ended September 30, 2004, from \$4.7 million, or 38% of net sales, for the same period of 2003.

Cost of Sales. Cost of sales decreased 10% to \$4.0 million for the three months ended September 30, 2004, from \$4.5 million for the same period of 2003. The following factors were the primary contributors to the decrease in cost of sales. During the three months ended September 30, 2004, we charged \$0.3 million less to the reserve for excess and obsolete inventory than during the same period of 2003. Since there has been no continuation into 2004 of the decline in sales that we were experiencing during the first nine months of 2003, we did not need to reserve significant additional amounts of inventory as excess or obsolete during the three months ended September 30, 2004. We wrote off \$0.3 million of inventory related to the relocation of our wireless product operations during the three months ended September 30, 2003; we did not need to record any similar charges during the same period of 2004. Furthermore, the combined effect of decreased stock-based compensation expense, increased absorption of labor and overhead into our inventory, and other cost variances contributed \$0.1 million to the decline in our cost of sales. Partially offsetting these decreases was an increase in cost of sales of \$0.2 million due to a combination of increased sales volume and direct material cost rates. Cost of sales represented 32% and 36% of net sales for the three months ended September 30, 2004 and 2003, respectively.

Research and Development. Research and development expenses increased 4% to \$3.8 million for the three months ended September 30, 2004, from \$3.7 million for the same period of 2003. This increase is primarily due to a \$0.3 million increase in payroll costs, which were partially offset by a \$0.2 million decrease in stock-based compensation charges. Stock-based compensation charges ended because we fully amortized the deferred stock-based compensation, which related to certain options issued during 1999 and 2000. Research and development expenses were 30% of net sales during the three months ended September 30, 2004 and 2003. Research and development expenses tend to fluctuate from period to period, depending on requirements at the various stages of our product development cycles. Through our research and development activities, we are attempting to balance two conflicting strategic priorities. The first is to tightly control costs in response to sales volume that has significantly decreased over the last three years. The second is to continue to develop products that address customer needs in a rapidly changing and very competitive market. In any given time period, research and development expenses may increase in absolute dollars and/or as a percentage of sales, as we continue to invest in product development and expand our product lines.

Selling and Marketing. Selling and marketing expenses increased 10% to \$4.2 million for the three months ended September 30, 2004, from \$3.8 million for the same period of 2003. This increase is primarily due to a \$0.2 million increase in payroll costs and a \$0.3 million increase in costs for travel, trade shows, and outside marketing services. We have increased headcount and increased our selling and marketing activities. These increases were partially offset by a \$0.1 million decrease in stock-based compensation charges. Selling and marketing expenses were 33% and 31% of net sales for the three months ended September 30, 2004 and 2003, respectively.

General and Administrative. General and administrative expenses increased 13% to \$2.8 million for the three months ended September 30, 2004, from \$2.5 million for the same period of 2003. This increase is primarily from increased legal fees related to our litigation with Acterna and from other professional service costs, which have increased as a result of higher audit costs and the increased costs for supporting our widening network of international sales offices. Decreased costs from the end of our stock-based compensation charges were offset by increased payroll costs. General and administrative expenses were 22% and 20% of net sales for the three months ended September 30, 2004 and 2003, respectively. General and administrative expenses may increase in absolute dollars in future periods, as we expect legal expenditures to increase as a result of our patent litigation with Acterna. See the discussion of our litigation in the "Overview" section of this MD&A.

Other Income, Net. Other income, net primarily consists of interest earned on cash and investment balances, gains and losses on assets, liabilities, and transactions denominated in foreign currencies, and realized investment gains and losses. Other income, net increased to \$0.2 million for the three months

ended September 30, 2004, from a \$0.1 million expense for the same period of 2003. This was primarily due to foreign exchange fluctuations.

Income Taxes Expense (Benefit). Income tax expense (benefit) consists primarily of federal, state, and international income taxes. We recorded income tax expense of \$0.3 million for the three months ended September 30, 2004 and an income tax benefit of \$0.8 million for the same period of 2003. During the three months ended March 31, 2004, we recorded a valuation allowance against our deferred tax assets in most jurisdictions. Therefore, our income tax expense during the three months ended September 30, 2004 pertained only to certain foreign subsidiaries that had taxable income. Our income tax benefit during the three months ended September 30, 2003 was the result of applying a 39% effective tax rate to our net loss before income taxes.

Comparison of Nine-Month Periods Ended September 30, 2004 and 2003

Net Sales. Net sales increased 20%, to \$41.5 million, for the nine months ended September 30, 2004 from \$34.5 million for the same period of 2003. Sales of our wire line access products increased by \$4.7 million, sales of our cable broadband products increased by \$1.0 million, and sales of our protocol products increased by \$1.3 million. Sales of our fiber optics products were unchanged. The increase in wireline access product sales was generally driven by demand for our SunSet MTT, xDSL-CLT, SunSet E20, PC-ADSL, and wireline accessory products. Among cable broadband products, increased sales of our AT2500R system more than offset decreased sales of our CM and CaLan product lines, and among fiber optics products, a decrease in sales of our SunSet OcX product was offset by increased sales of the SunSet 10G products and increased sales of fiber optics modules for our SunSet MTT. The increase in protocol product sales is due to sales of our NeTracker and 3G Master products. During the nine months ended September 30, 2004, our revenues were not significantly affected by changes in prices.

Sales for the nine months ended September 30, 2004 increased \$0.8 million, or 4%, in North America, \$4.0 million, or 61%, in Asia, and \$2.4 million, or 44%, in Europe/Africa/Middle East, compared with the same period of 2003. These increases were partially offset by a sales decrease of \$0.2 million, or 15%, in Latin America. The increase in North American sales was primarily due to increased sales of our wireline access and cable broadband products, which were partially offset by decreased sales of our fiber optics products. Our growth in Asia reflects the results of our ongoing development of distribution channels in this region, leading to increased sales of wireline access, cable broadband, fiber optics, and protocol products, and our growth in Europe is the result of ongoing development of distribution channels in that region, as well, leading to growth in sales of wireline access, cable broadband, fiber optics, and protocol products. Sales to Latin America remain a small part of our business; small changes in order volume from this region can represent large percentage fluctuations. International sales, including sales to Canada, increased to \$20.4 million, or 49% of total net sales, for the nine months ended September 30, 2004, from \$13.6 million, or 39% of net sales during the same period of 2003.

Cost of Sales. Cost of sales decreased 9% to \$11.8 million for the nine months ended September 30, 2004, from \$13.0 million for the same period of 2003. The following factors were the primary contributors to the decrease in cost of sales. During the nine months ended September 30, 2004, we used materials with an original cost of \$0.6 million that had previously been fully reserved as excess in the production of products that we sold during that period. Also, during the nine months ended September 30, 2004, we needed to reserve an additional \$0.1 million of inventory as excess or obsolete, while we needed to reserve \$0.9 million during the same period of 2003. These items net to a \$1.4 million reduction in cost of goods sold between the two periods. Second, we have seen a significant increase in the proportion of our products manufactured at our plant in Taiwan. This has been the main driver behind payroll and other cost savings of \$0.9 million between the two periods. Partially offsetting these decreases was a net increase in cost of sales of \$1.1 million due to the net effect of changes in sales volume and direct material cost rates between the two periods. Cost of sales represented 28% and 38% of net sales for the nine months ended September 30, 2004 and 2003, respectively.

Research and Development. Research and development expenses decreased 4% to \$11.5 million for the nine months ended September 30, 2004, from \$12.0 million for the same period of 2003. This decrease is primarily due to a \$0.4 million decrease in stock-based compensation charges. Research and development expenses were 28% and 35% of net sales for the nine months ended September 30, 2004 and 2003, respectively.

Selling and Marketing. Selling and marketing expenses increased 1% to \$12.4 million for the nine months ended September 30, 2004, from \$12.3 million for the same period of 2003. This increase is the net effect of a \$0.2 million increase in commissions and sales bonuses, resulting from the increase in our net sales, and a \$0.2 million increase in outside marketing service costs, which were largely offset by a \$0.4 million decrease in our stock-based compensation charges. Selling and marketing expenses were 30% and 36% of net sales for the nine months ended September 30, 2004 and 2003, respectively.

General and Administrative. General and administrative expenses decreased 3% to \$7.1 million for the nine months ended September 30, 2004, from \$7.2 million for the same period of 2003. The decrease in general and administrative expense resulted primarily from a \$0.4 million decrease in amortization of intangible assets, a net \$0.3 million reversal in our allowance for doubtful accounts, and a \$0.2 million decrease in stock-based compensation charges. The reduction in our allowance for doubtful accounts is the result of our ability to collect more of our accounts receivable than we had originally forecast based on our historical experience. The reduction in amortization of intangible assets is the result of completing the amortization of intangible assets acquired during 1999 and 2000. These decreases were partially offset by a \$0.7 million increase in legal, accounting, and other professional services expenses. The increase in legal fees is primarily related to our litigation with Acterna; the increase in accounting and other professional service costs is primarily the result of higher audit costs and the increased costs of supporting our widening network of international sales offices. General and administrative expenses were 17% and 21% of net sales for the nine months ended September 30, 2004 and 2003, respectively.

Other Income, Net. Other income, net primarily represents interest earned on cash and investment balances, gains and losses on assets, liabilities, and transactions denominated in foreign currencies, and realized investment gains and losses. Other income, net increased 37%, to \$0.6 million for the nine months ended September 30, 2004, from \$0.5 million for the same period of 2003. This was primarily due to a \$0.5 million gain that we realized on the sale of 895,000 shares of the common stock of Top Union, which was partially offset by foreign exchange and interest income fluctuations.

Income Taxes Expense (Benefit). Income tax expense (benefit) consists primarily of federal, state, and international income taxes. We recorded income tax expense of \$8.0 million for the nine months ended September 30, 2004 and an income tax benefit of \$3.7 million for the same period of 2003. Of the 2004 expense, \$7.3 million was the result of recording a valuation allowance against our net deferred tax assets in most jurisdictions during the three months ended March 31, 2004. The remaining \$0.7 million of income tax expense pertained to certain foreign subsidiaries that had taxable income. Our income tax benefit during the nine months ended September 30, 2003 was the result of applying a 39% effective tax rate to our net loss before income taxes.

We determined the valuation allowance on deferred tax assets in accordance with the provisions of Statement of Financial Accounting Standards ("SFAS") No. 109, *Accounting for Income Taxes*, which require that we weigh both positive and negative evidence in order to ascertain whether it is more likely than not that deferred tax assets will be realized. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and for the future tax consequences attributable to operating losses and tax credit carryforwards. The ultimate realization of deferred tax assets is dependent on the generation of future taxable income during the periods in which the related temporary differences become deductible. We evaluated all significant available positive and negative evidence, including the existence of cumulative net losses in recent periods, benefits that could be realized from available tax strategies, and forecasts of future taxable income, in determining the need for a valuation allowance on our deferred tax assets. We intend to maintain this valuation allowance until sufficient

positive evidence, such as the resumption of a consistent earnings pattern, exists to support its reversal in accordance with SFAS No. 109. If some or all of the valuation allowance were reversed, our statement of operations for the period in which the reversal occurred would include an income tax benefit for the amount that was reversed, in addition to the effect of any changes in deferred tax assets and liabilities occurring during that period. Until such time, we will not record any significant tax benefits on any future operating losses.

Liquidity and Capital Resources

Cash Requirements and Capital Resources

At September 30, 2004 and December 31, 2003, we had working capital of \$48.4 million and \$54.7 million, respectively, and cash and cash equivalents of \$37.6 million and \$39.9 million, respectively. The fair value of our investment in marketable securities was \$1.6 million and \$2.1 million at September 30, 2004 and December 31, 2003, respectively. This investment consisted entirely of the common stock of Top Union, which we consider to be "available-for-sale", as that term is defined in SFAS No. 115, *Accounting for Certain Investments in Debt and Equity Securities*. Accordingly, we carry this investment at its fair value on our balance sheet, with the unrealized gain deferred as a component of stockholders' equity. Because our holding is large relative to the normal trading volume in Top Union stock, we do not consider this to be a liquid investment, and therefore, we classify it as a non-current asset. During the nine months ended September 30, 2004, we realized a gain of \$0.5 million by selling shares of these securities with a cost basis of \$0.2 million for \$0.7 million.

We have generated positive cash flows from our operating activities every year since 1992. We believe that current cash balances and future cash flows from operations will be sufficient to meet our anticipated cash needs for our operations, complete needed business projects, achieve our plans and objectives, meet financial commitments, meet working capital requirements, make capital expenditures, and fund other activities well beyond the next 12 months. However, large acquisitions of complementary businesses, products, or technologies, or material joint ventures 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.

Sources and Uses of Cash

In general, we have financed our operations and capital expenditures primarily using cash flows generated by our operating activities, and we foresee continuing to rely on cash flows from our operating activities and existing cash resources to fund our business activities during at least the next 12 months.

Cash provided by operating activities was \$2.1 million during the nine months ended September 30, 2004, compared with cash used by operating activities of \$1.0 million during the same period of 2003. The \$3.1 million increase in cash provided by operating activities was primarily due to a \$7.9 million increase in cash collected from customers, and it was partially offset by a \$4.9 million increase in cash paid to suppliers and employees. The increase in cash collected from customers is attributable to our increased sales during the nine months ended September 30, 2004 and the three months ended December 31, 2003 over the comparable periods in 2003 and 2002. The increase in cash paid to suppliers and employees was primarily in support of these increased sales. Our inventories were unusually low, at \$7.3 million, at December 31, 2003. We have increased our inventories to \$13.1 million at September 30, 2004 in order to support our anticipated fourth quarter sales and to maintain increased safety stock levels for optimal timeliness in shipping customer orders. In general, our ability to continue to generate positive cash flows from operations will depend on our ability to generate and collect cash from future sales, while maintaining a cost structure lower than those sales amounts. Therefore, sales volume is the most significant uncertainty in our ability to maintain positive cash flows from operations.

Cash used in investing activities was \$2.1 million during the nine months ended September 30, 2004, compared with \$1.2 million during the same period of 2003. During the nine months ended September 30, 2004, we made \$2.7 million in capital expenditures and received \$0.7 million from the sale of marketable securities. During the nine months ended September 30, 2003, capital expenditures were \$1.9 million, and we spent \$0.6 million for the acquisition of GIE GmbH. During that period, we received \$1.0 million from the sale upon maturity of our holdings of auction rate securities and marketable debt securities and \$0.2 million from repayment on a loan to a related party that was made during 2002. As of September 30, 2004, we had no plans for large capital expenditures outside the usual course of those needed for our ongoing production, research and development, and selling and marketing activities.

Cash used in financing activities was \$2.4 million during the nine months ended September 30, 2004, compared with \$2.0 million during the same period of 2003. During the first nine months of 2004, the primary financing activities that used cash were cash dividends of \$2.5 million, the repayment of \$0.2 million on notes payable, and a \$0.2 million increase in restricted cash. The primary financing activities that provided cash were \$0.3 million in proceeds from the issuance of shares under our employee stock purchase plan ("ESPP") and \$0.2 million from employees exercising stock options. During the first nine months of 2003, the primary financing activities that used cash were cash dividends of \$2.0 million and the repayment of \$0.4 million on notes payable. The primary financing activities that provided cash were \$0.2 million in proceeds from the issuance of shares under our ESPP and \$0.2 million from employees exercising stock options.

Our outstanding debt at September 30, 2004 consisted primarily of a \$0.9 million loan from the Italian government for research and development use that is payable in semi-annual payments starting in the second half of 2003 and ending in 2011, and six notes payable, related to acquisitions, totaling \$0.2 million that are being paid in quarterly installments ending in 2007. We have not used off-balance sheet financing arrangements, issued or purchased derivative instruments linked to our stock, or used our stock as a form of liquidity. We do not believe that there are any known or reasonably likely changes in credit ratings or ratings outlook, or an inability to achieve such changes, which would have any significant impact on our operations. We are not subject to any debt covenants that we believe might have a material impact on our business.

Debt Instruments, Guarantees, and Related Covenants

We have low levels of debt, and our operating, financing, and investing activities are not subject to any significant constraints related to outstanding debt, guarantees, or other contingent obligations. We are not, and during at least the next 12 months are not reasonably likely to be, in breach of debt covenants, and we are not subject to any significant debt covenants that may limit our ability to borrow additional funds or issue equity securities.

Off-Balance Sheet Arrangements

As of September 30, 2004, we did not have any off-balance sheet arrangements that have or are reasonably likely to have a material effect on our current or future financial condition, revenues or expenses, results of operations, liquidity, or capital resources.

Contractual Obligations

During the nine months ended September 30, 2004, there were no material changes outside the ordinary course of our business in long-term debt obligations, capital lease obligations, operating lease obligations, purchase obligations, or any other long-term liabilities reflected on our condensed consolidated balance sheet.

Critical Accounting Policies

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires us to make estimates, assumptions, and judgments that affect the amounts reported in our condensed consolidated financial statements and the accompanying notes. We base our estimates on historical experience and various other assumptions that we believe to be reasonable. Although these estimates are based on our present best knowledge of the future impact of current events and actions, actual results may differ from these estimates, assumptions, and judgments. We consider "critical" those accounting policies that require our most subjective or complex judgments, which often result from a need to make estimates about the effect of matters that are inherently uncertain, and that are among the most important of our accounting policies to the portrayal of our financial condition and results of operations.

We believe that the following accounting policies are critical to understanding our historical and future performance, as these policies relate to the more significant areas involving management's judgments and estimates:

- Allowance for doubtful accounts receivable,
- Valuation of excess and obsolete inventory,
- Valuation of goodwill and other intangible assets,
- Product warranties,
- Deferred income tax assets and liabilities, and
- Revenue recognition.

Our management has reviewed our critical accounting policies and the related disclosures with our Audit Committee. These policies and our procedures related to these policies are described further in our Annual Report on Form 10-K for the year ended December 31, 2003 in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," under the heading "Critical Accounting Policies."

Risk 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 be volatile.**

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

- The size and timing of orders from our customers, which may be exacerbated by the increased length and unpredictability of our customers' buying patterns and limitations on our ability to ship these orders on a timely basis;
- The degree to which our customers have allocated and spent their yearly budgets;
- The uneven pace of technological innovation, the development of products responding to these technological innovations by us and our competitors, and customer acceptance of these products and innovations;

- The varied degree of price, product, and technology competition, and our customers' and competitors' responses to these changes;
- The relative percentages of our products sold domestically and internationally;
- The mix of the products we sell and the varied margins associated with these products;
- The timing of our customers' budget processes; and
- Economic downturns reducing demand for telecommunication and cable equipment and services.

The factors listed above may affect our business and stock price in several ways. Given our high fixed costs from overhead, research and development, advertising and marketing, general and administrative, and other activities necessary to run our business, if our net sales are below our expectations in any quarter, we may not be able to adjust spending accordingly. For example, during 2002, our net sales declined 31% from 2001, but our operating expenses only declined 13%, mainly because of the relatively high fixed costs in our operations. Our stock price may decline and may be volatile, particularly if public market analysts and investors perceive the factors listed above to exist. Furthermore, 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.

Reduced Sales—Our sales have declined from the levels of three years ago and we are experiencing difficulty predicting future operating results.

During the last four quarters, our sales have increased over the same quarters in the preceding years. However, because of unfavorable economic and market conditions over the last three years, our quarterly sales have generally declined or been flat since the beginning of 2001. We had a sequential decline in sales from the second to the third quarter of 2004, and we are still unable to predict future sales with a high level of precision and are currently unable to provide long-term guidance for future financial performance. The conditions contributing to this difficulty include the following:

- Uncertainty regarding the capital spending plans of the major telecommunications and cable carriers upon whom we depend for sales;
- The telecommunications and cable carriers' current limited access to capital required for expansion;
- More limited near-term sales visibility; and
- General market and economic uncertainty.

Based on these and other factors, many of our major customers have reduced, modified, cancelled, or rescheduled orders for our products and have expressed uncertainty as to their future requirements.

Sales Implementation Cycles—The length and unpredictability of the sales and implementation cycles for our products makes it difficult to forecast 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 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 current and potential customers' internal budgeting procedures, internal approval and contracting procedures, procurement practices, and testing and acceptance processes. Recently, our customers' budgeting procedures have lengthened. The sales cycle for larger deployments now typically range from six to twenty-four months. The deferral or loss of one or more significant sales could significantly affect our operating results, especially if there are significant selling and marketing expenses associated with the deferred or lost sales.

***Dependence on Wireline Access Products*—A significant portion of our sales have been from our wireline access products, which makes our future sales and overall business vulnerable to product obsolescence and technological change.**

Sales of our DSL and other wireline access products represented 45% of our net sales during the first nine months of 2004 and 44% during the full year 2003. 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.

***Product Development*—If we are unable to develop new products successfully and enhance our existing 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 involving competing technologies, by the evolution of alternative technologies or new industry protocol standards, or by the rival products of our competitors. These market conditions are more complex and challenging because of the high degree to which the telecommunications industry is fragmented.

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

- 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 ensure 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.

Furthermore, our percentage of net sales devoted to research and development may be considered high for our level of sales. If these efforts do not result in the development of products that generate strong sales for us or if we do not continue to reduce these expenditures, our profit levels will not return to their desired levels. If we reduce this spending, we may not be able to develop needed new products, which could negatively impact our sources of new revenues.

***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 significantly.**

Our customer base is concentrated, and historically a relatively small number of companies have accounted for a large percentage of our net sales. Net sales from our top ten customers represented approximately 39% of total net sales during the nine months ended September 30, 2004 and 45% in the full year 2003. In general, our customers are not subject to long-term supply contracts with us and are not obligated to purchase a specific amount of products from us or to provide us with binding forecasts of purchases for any period.

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 the prices that we charge them, and they may successfully negotiate other terms and provisions that may negatively affect our business and profits.

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

The market for our products is fragmented and intensely competitive, both inside 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 that they offer.

The following table sets forth our principal competitors in each of our product categories:

<u>Product Category</u>	<u>Principal Competitors</u>
Wireline Access	3M Dynatel; Acterna LLC; Agilent Technologies, Inc.; Consultronics, Ltd.; Fluke Corporation; Trend Communications
Fiber Optics	Acterna LLC; Agilent Technologies, Inc.; Digital Lightwave, Inc.; Exfo Electro-Optical Engineering Inc.; NetTest; Trend Communications
Cable Broadband	Acterna LLC; Agilent Technologies, Inc.; Trilithic, Inc.
Protocol	Agilent Technologies, Inc.; Inet Technologies, Inc.; 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 have.

We expect that as our industry and markets evolve, new competitors or alliances among competitors with existing and new technologies may emerge and acquire significant market share. We anticipate that competition in our markets will increase, and we will face continued threats to our market share and price pressure on our products. Also, over time, our profitability, if any, may decrease. In addition, it is difficult to assess accurately the market share of our products because of the high degree of fragmentation in the market for service verification equipment. 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 therefore, what is the best use of our cash, human, and other forms of capital.

Managing Growth and Slowdowns—We may have difficulty managing expansions and contractions in our operations, which could reduce our chances of maintaining or restoring our profitability.

We experienced rapid growth in revenues and in our business during 1999 and 2000 followed by significant slowdowns in 2001, 2002, and 2003 that have placed, and may continue to place, a significant strain on our management and operations. For example, our revenues increased to \$113.5 million in 2000

from \$61.5 million in 1999. Then revenues fell to \$79.1 million in 2001, to \$54.3 million in 2002, and then increased only slightly to \$54.9 million in 2003. Our revenues for the nine months ended September 30, 2004 were \$41.5 million, which is an increase over our revenues of \$34.5 million during the same period in 2003. We expect our 2004 annual revenues to be consistent with our 2002 and 2003 annual revenues. As a result of our historical growth and recent slowdown, we face several challenges, including the following:

- Improving our operational, financial, management, informational, and control systems to better support our level of operations;
- Hiring, training, and retaining highly skilled personnel; and
- Managing expenses without impacting development strategies or our long-term goals.

We cannot ensure that we will be able to manage growth or slowdowns successfully or profitably.

Long-term Impact of Cost Controls—The actions we have taken in response to the slowdown in demand for our products and services and any actions we may take in the future could have long-term adverse effects on our business.

Over the past three years, our business generally has experienced lower revenues due to decreased or cancelled customer orders. To scale back our operations and to reduce our expenses in response to this decreased demand for our products and services and lower revenue, we have reduced portions of our workforce, restricted hiring, reduced most employee salaries, restricted pay increases, and reduced discretionary spending.

There are several risks inherent in our efforts to lower our cost structure. These include the risk that we will not be able to reduce expenditures quickly enough and maintain them at a level necessary to restore profitability and that we may have to undertake further restructuring initiatives that would entail additional charges. In addition, there is the risk that cost-containment initiatives will impair our future ability to develop and market products effectively, to manage and control our business, and to remain competitive. Each of these initiatives could have long-term effects on our business by reducing our pool of employee talent, decreasing or slowing improvements in our products, making it more difficult for us to respond to customers, limiting our ability to increase production quickly if and when the demand for our products increases, and limiting our ability to hire and retain key personnel. These circumstances could cause our earnings to be lower than they otherwise might be. Conversely, actions that we may take to stabilize our workforce or improve market share may undo the benefits of our cost controls and cause us to increase expenditures and short-term losses.

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 49% of our net sales during the first nine months of 2004, 39% of our net sales during the full year 2003, 30% during the full year 2002, and 38% during the full year 2001, 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 the following:

- Potentially higher operating expenses, resulting from the establishment of international offices, the hiring of additional and local personnel, and the localization and marketing of products for particular countries' technologies;
- The need to establish relationships with government-owned or subsidized telecommunications providers and with additional distributors;
- Fluctuations in foreign currency exchange rates and the risks of using hedging strategies to minimize our exposure to these fluctuations;

- 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; and
- Possible disruptions to our customers, sales channels, sources of supply, or production facilities due to wars, terrorist acts, acts of protest or civil disobedience, or other conflicts between or within various nations and due to variations in crime rates and the rule of law between nations.

Any one or more of these factors may materially and adversely affect our ability to expand into international markets or our revenues and profits.

Manufacturing Capacity—If demand for our products does not match our manufacturing capacity, our earnings may suffer.

Because we cannot immediately adapt our production capacity and related cost structures to rapidly changing market conditions, when demand does not meet our expectations, our manufacturing capacity exceeds our production requirements, and profitability may decline. Conversely, if during a market upturn we cannot increase our manufacturing capacity to meet product demand, we will not be able to fulfill orders in a timely manner, which in turn may have a negative effect on our earnings and overall business.

Operations in Taiwan—We rely on our subsidiary in Taiwan to manufacture a substantial portion of our products, and our reputation and results of operations could be adversely affected if this subsidiary does not perform as we expect.

We produce a substantial portion of our products at our subsidiary in Taiwan and plan to concentrate more of our production there in the future. We depend on our subsidiary to produce a sufficient volume of our products in a timely fashion and at satisfactory quality levels. If we fail to manage our subsidiary so that it produces quality products on time and in sufficient quantities, our reputation and results of operations could suffer. In addition, we rely on our Taiwan subsidiary to place orders with suppliers for the components they need to manufacture our products. If they fail to place timely and sufficient orders with their suppliers, our results of operations could suffer.

The cost, quality, and availability of our Taiwan operation are essential to the successful production and sale of our products. Our increasing reliance on this foreign subsidiary for manufacturing exposes us to risks that are not under our immediate control and which could negatively impact our results of operations. For example, a recurrence of the Severe Acute Respiratory Syndrome (SARS) outbreak that occurred in Asia during 2003 could result in quarantines or closure of our manufacturing operation or its suppliers. In addition, transportation delays and interruptions, political and economic disruptions, the imposition of tariffs, quotas, or other import or export controls, changes in governmental policies and regulations, and natural disasters could also adversely impact our Taiwan operation and negatively impact our results of operations. See "Risk Factors Affecting Future Operating Results—Dependence on Sole and Single Source Suppliers" and "—Risks of International Operations" for a discussion of other risks associated with concentrating production activities at a facility that is outside the United States.

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 bound by long-term contracts, our future supply of parts is uncertain.

We purchase many key parts, such as microprocessors, field programmable gate arrays, bus interface chips, optical components, and oscillators, from single source or sole suppliers, 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. In the past, we have experienced supply problems as a result of financial or operating difficulties of our suppliers, shortages, and discontinuations

resulting from component obsolescence or other shortages or allocations by suppliers. Our reliance on these third parties involves a number of risks, including the following:

- The unavailability of critical products and components on a timely basis, on commercially reasonable terms, or at all;
- The unavailability of products or software licenses, resulting in 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, which could be lengthy and expensive processes;
- 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 that are exacerbated by the need to respond, at times, to unanticipated changes and increases in customer orders;
- The unavailability of, or interruption in, access to some process technologies; and
- Exposure to the financial problems and stability of our suppliers.

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 ensure 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.

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 defend ourselves against third party claims or to enforce our own intellectual property rights. This kind of litigation is time-consuming and expensive to defend, prosecute, or resolve, and results in substantial diversion of management resources. We cannot ensure that we will be successful in any such litigation, that our intellectual property rights will be held valid and enforceable, or that we will otherwise be able to successfully defend ourselves or to protect our intellectual property and proprietary technology. See also the discussion of our litigation with Acterna, LLC in the "Overview" section of this MD&A.

In the future, we may receive additional notices from other 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 overlap, 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, and could force us to enter into royalty or license agreements rather than dispute the merits of the proceeding initiated against us.

Potential Product Liability—Our products are complex, and our failure to detect errors and defects may subject us to costly repairs and 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. Also, 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 when we allow it to be shipped to our customers. These risks are compounded by the fact that we offer many 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 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 defects and errors, 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 such claims in the future, regardless of their merit, could result in substantial expense to us, diversion of management time and attention, and damage to our business reputation and our ability to retain existing customers or attract new customers.

Risks of the Telecommunications Industry—We face several risks related to the telecommunications industry, including the possible effects of its unpredictable growth or decline, the possible effects of consolidation among our principal customers, and the risk that deregulation will slow.

After the passage of the Telecommunications Act of 1996, the telecommunications industry experienced rapid growth. The growth led to rapid innovations in technology, intense competition, short product life cycles, and, to some extent, regulatory uncertainty inside and outside the United States. However, the course of the development of the telecommunications industry is difficult to predict. Companies operating in this industry have a difficult time forecasting future trends and developments and forecasting customer acceptance of competing technologies. One possible effect of this uncertainty is that there is, and may continue to be, 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. In addition, 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 growth that occurred after the passage of the Telecommunications Act of 1996 has slowed dramatically, and it is unknown whether or when it will resume. This slowdown has resulted in reduced investment in the telecommunications industry in general and delayed purchase orders for service verification equipment, including our products. It is not possible to predict whether this slowdown will be temporary or sustained.

In addition, 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, GTE and Bell Atlantic, both of which were customers of ours, merged to create Verizon Communications, Inc. Continued consolidation may cause delay or cancellation of orders for our products. 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.

Economic Downturn—Our operating results and financial condition could continue to be harmed if the telecommunications and cable broadband industries remain over supplied.

The economic downturn in the telecommunications and cable broadband industries has been characterized by diminished product demand, excess manufacturing capacity, and the increasing erosion of average selling prices. The downturn has adversely affected the businesses and cash flows of many of our customers and has even caused some of them to file for bankruptcy. We are uncertain how long the current downturn will last. Continuation of the downturn or any further decline in our customers' markets or in general economic conditions would likely result in a further reduction in demand for our products and services and also would further limit our customers' ability to pay for the products that they buy from us. All of these circumstances could harm our financial position, results of operations, cash flows, and stock price and could hinder our ability to reach our goals for restoring long-term profitability and growth.

Goodwill Valuation—Our financial results could be materially and adversely affected if we determine that the book value of goodwill is higher than its fair value.

Our balance sheet at September 30, 2004 includes an amount designated as "goodwill" that represents approximately 12% of our total assets and 13% of our total stockholders' equity. Goodwill arises when an acquirer pays more for a business than the fair value of the acquired tangible and separately measurable intangible net assets. Under accounting pronouncement SFAS No. 142, *Goodwill and Other Intangible Assets*, beginning in January 2002, goodwill is no longer amortized, but it is subject to an "impairment test" at least annually, and more frequently if circumstances indicate a possible impairment. The impairment testing begins with a market capitalization analysis. Under this test, if our market capitalization were to diminish significantly, we would be required to compare the book value of goodwill to its fair value, and if the book value is higher than the fair value, we would record a non-cash impairment charge for the difference, which, depending on the amount, could materially and adversely affect our net income or loss and earnings per share.

Dependence on Key Employees—If one or more of our senior managers were to leave, we could experience difficulty 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. In particular, the loss of either of our two founders, Paul Ker-Chin Chang or Paul A. Marshall, would 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. If any of our senior managers were to leave, 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.

Acquisitions—We have acquired several companies and lines of business, and we may pursue additional acquisitions in the future. These activities involve numerous risks, including the use of cash, acquired intangible assets, and the diversion of management attention.

We have acquired multiple companies and lines of business. As a result of these acquisitions, we face numerous challenges, including the following:

- Integrating the existing management, sales force, technicians, and other personnel into one culture and business;
- Integrating manufacturing, administrative, and management information and other control systems into our existing systems;
- Developing and implementing an integrated business strategy over what had previously been independent companies; and
- Developing compatible or complementary products and technologies from previously independent operations.

The risks stated above are made more difficult because most of the companies we have acquired are located outside of the United States. 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 all of our previous acquisitions.

If we pursue additional acquisitions, we will face similar risks to those outlined above and additional risks, including the following:

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

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

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.

As of September 30, 2004, Paul Ker-Chin Chang, Paul A. Marshall, and Robert C. Pfeiffer beneficially owned approximately 25%, 23%, and 13%, respectively, of our outstanding shares of common stock. Consequently, these three individuals control approximately 61% of our outstanding shares of common stock and to the extent that they act together would be 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 board. The interests of these persons may conflict with the interests of other 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 other 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 some stockholders may consider favorable. These provisions provide for the following:

- 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.

***Sarbanes-Oxley Act of 2002*—We will be required to evaluate our system of internal control over financial reporting and our independent auditors will be required to attest to its effectiveness. Any deficiencies found in our internal control over financial reporting or the inability of our independent auditors to certify its effectiveness could negatively impact our stock price.**

Effective internal controls are necessary for us to provide reliable financial reports and effectively prevent fraud. Pursuant to Section 404 of the Sarbanes-Oxley Act of 2002, we will be required, beginning with our fiscal year ending December 31, 2005, to include in our annual report our assessment of the effectiveness of our internal control over financial reporting as of the end of fiscal year. Furthermore, our independent auditors will be required to attest to whether our assessment of the effectiveness of our internal control over financial reporting is fairly stated in all material respects and separately report on whether it believes we maintained, in all material respects, effective internal control over financial reporting as of December 31, 2005. We have not yet completed our assessment of the effectiveness of our internal controls. If we fail to timely complete this assessment, or if our independent auditors cannot timely attest to our assessment, we could be subject to regulatory sanctions and a loss of public confidence in our internal controls. In addition, failure to implement any new or improved controls deemed necessary as a result of management or our auditors' assessments, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to timely meet our regulatory reporting obligations. Any of these failures could adversely affect the price of our stock.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We sell our products in North America, Asia, Europe, Africa, the Middle East, and Latin America and maintain operations in several different countries. Changes in currency exchange rates affect the valuation in our financial statements of the assets and liabilities of these operations. We also have a small amount of sales denominated in Euros and the Canadian dollar, which are also affected by changes in currency exchange rates. To hedge these risks, we have at certain times used derivative financial instruments. However, as of September 30, 2004, we had no derivative financial instruments or other foreign exchange risk hedging devices. With or without hedges, our financial results could be affected by changes in foreign currency exchange rates, although foreign exchange risks have not been material to our financial position or results of operations in the past.

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 held derivative financial instruments in our investment portfolio. We may invest our excess cash in depository accounts with financial institutions, in debt instruments of United States governmental agencies, and in debt instruments of high-quality corporate issuers, and, by policy, we limit the amount of credit exposure to any one issuer. We seek to protect and preserve our invested funds by limiting default, market, and reinvestment risk through portfolio diversification and review of the financial stability of the institutions with which we deposit funds and from whom we purchase debt instruments.

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 the loss of principal if forced to sell securities that have declined in market value due to changes in interest rates. Because our investment policy restricts us to conservative, interest-bearing investments and because our business strategy does not rely on generating material returns from our investment portfolio, we do not expect our market risk exposure on our investment portfolio to be material.

At September 30, 2004, we owned 3,163,480 shares of the common stock of Top Union Electronics Corp. ("Top Union"), a Taiwan R.O.C. corporation, which we acquired as a strategic investment primarily during the years 1998 through 2000. These securities are considered to be "available-for-sale", as that term is defined in SFAS No. 115, *Accounting for Certain Investments in Debt and Equity Securities*, and accordingly we carry them at their fair value on our balance sheet, with the unrealized gain deferred as a component of stockholders' equity. Because our holding is large relative to the normal trading volume in Top Union stock, we do not consider this to be a liquid investment, and therefore, we classify it as a non-current asset. The carrying amount of this investment on September 30, 2004 was \$1,641,000. This amount may be affected by an adverse movement of equity market prices in Taiwan and internationally and would be affected by adverse movement in exchange rates. As of September 30, 2004, we did not have any hedges to protect our Top Union investment against adverse movements in equity prices or exchange rates.

ITEM 4. CONTROLS AND PROCEDURES

The SEC defines the term "disclosure controls and procedures" to mean a company's controls and other procedures that are designed to ensure that information required to be disclosed in the reports that it files or submits under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized, and reported within the time periods specified in the Commission's rules and forms. Our Chief Executive Officer and our Acting Chief Financial Officer have concluded, based on the evaluation of the effectiveness of our disclosure controls and procedures by our management, with the participation of our Chief Executive Officer and our Acting Chief Financial Officer, as of the end of the period covered by this report, that our disclosure controls and procedures were effective for this purpose.

There was no change in our internal control over financial reporting during the nine months ended September 30, 2004 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

PART II OTHER INFORMATION

ITEM 1. LEGAL PROCEEDINGS

On March 31, 2004, Acterna, LLC ("Acterna") filed a lawsuit against Consultronics, Ltd. and Consultronics, Inc. (the latter two, collectively, "Consultronics") and us in the United States District Court for the District of Maryland. Acterna alleged that our SunSet xDSL and SunSet MTT products infringe its United States Patent Nos. 6,064,721 (the "'721 patent'"), 6,385,300 (the "'300 patent'"), and 6,590,963 (the "'963 patent'") and that our STT product infringes its United States Patent No. 5,511,108 (the "'108 patent'"). Acterna also alleged that the Consultronics CoLT 450 product infringes its '721 patent. Acterna seeks injunctive relief, unspecified damages, and attorneys' fees and costs. In October 2004, we learned that Acterna and Consultronics had reached a settlement with respect to Acterna's claim against Consultronics and that the matter with respect to Consultronics had been dismissed with prejudice.

On April 23, 2004, we filed a lawsuit against Acterna in the United States District Court for the Northern District of California. The lawsuit alleged that Acterna's ANT-5 SDH Access Tester and ANT-20 Advanced Network Tester infringe our United States Patent No. 5,619,489 (the "'489 patent'"). We seek injunctive relief, unspecified damages, and attorneys' fees and costs.

On September 7, 2004, Acterna filed an answer in the United States District Court for the Northern District of California, seeking declaratory judgment that its ANT-5 SDH Access Tester and ANT-20 Advanced Network Tester do not infringe the '489 patent, that the '489 patent is invalid, and that the '489 patent is unenforceable. At the same time, Acterna also filed a counterclaim against us alleging that certain of our products, namely the CM 1000, CM 500, CM 250, N1776A, AT 2000 and AT 2500, all of which are manufactured and sold by our subsidiaries, infringe its United States Patent No. 5,751,766 (the "'766 patent'"). Acterna seeks injunctive relief, unspecified damages and attorneys fees and costs.

We believe that the lawsuits against us are without merit, and we intend to defend ourselves vigorously against the allegations that Acterna is making against us. Specifically, we are defending ourselves against Acterna's allegations and are seeking declaratory judgment that our products do not infringe any of the '721 patent, the '300 patent, the '963 patent, the '108 patent, or the '766 patent; that the '721 patent, the '300 patent, the '963 patent, the '108 patent, and the '766 patent are invalid; and that the '721 patent, the '300 patent, the '963 patent, the '108 patent, and the '766 patent are unenforceable. In addition, we are seeking declaratory judgment that our products do not infringe a sixth, recently issued Acterna patent, United States Patent No. 6,738,454 (the "'454 patent'"). The '454 patent is a continuation patent related to the '721 patent, the '300 patent, and the '963 patent. We also seek declaratory judgment that the '454 patent is invalid and unenforceable.

We are presently unable to estimate the likely costs of the litigation and/or any settlement with Acterna.

From time to time, we may be involved in litigation or other legal proceedings, including those noted above, relating to claims arising out of our day-to-day operations or otherwise. Litigation is inherently uncertain, and we could experience unfavorable rulings. Should we experience an unfavorable ruling, there exists the possibility of a material adverse impact on our financial condition, results of operations, or cash flows or on our business for the period in which the ruling occurs and/or future periods.

ITEM 2. UNREGISTERED SALES OF EQUITY SECURITIES AND USE OF PROCEEDS

None.

ITEM 3. DEFAULTS UPON SENIOR SECURITIES

None.

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

None.

ITEM 5. OTHER INFORMATION

None.

ITEM 6. EXHIBITS

Exhibit 31.1—Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

Exhibit 31.2—Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.

Exhibit 32—Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, as amended, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

**SUNRISE TELECOM
INCORPORATED
(Registrant)**

Date: November 15, 2004

By: /s/ PAUL KER-CHIN CHANG
Paul Ker-Chin Chang
President and Chief Executive Officer
(Principal Executive Officer)

By: /s/ PAUL A. MARSHALL
Paul A. Marshall
Acting Chief Financial Officer
(Principal Financial Officer)

EXHIBIT INDEX

<u>Exhibit Number</u>	<u>Description</u>
31.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32	Certification of Principal Executive Officer and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350.

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO SECTION 302**

I, Paul Ker-Chin Chang, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Sunrise Telecom Incorporated.
2. Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this quarterly report.
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 (e) and 15d-15 (e)) for the registrant and we have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 15, 2004

By: /s/ PAUL KER-CHIN CHANG

Paul Ker-Chin Chang
President and Chief Executive Officer
(Principal Executive Officer)

**CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO SECTION 302**

I, Paul A. Marshall, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Sunrise Telecom Incorporated.
2. Based on my knowledge, this quarterly report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report.
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this quarterly report.
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15 (e) and 15d-15 (e)) for the registrant and we have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this quarterly report based on such evaluation; and
 - c) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 15, 2004

By: /s/ PAUL A. MARSHALL

Paul A. Marshall
Acting Chief Financial Officer
(Principal Financial Officer)

**CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
AND PRINCIPAL FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350**

In connection with the accompanying Form 10-Q of Sunrise Telecom Incorporated for the three-month period ended September 30, 2004, we, Paul Ker-Chin Chang, President and Chief Executive Officer, and Paul A. Marshall, Acting Chief Financial Officer, respectively, of Sunrise Telecom Incorporated, hereby certify to the best of our knowledge, that:

- (1) Such Form 10-Q for the three-month period ended September 30, 2004 fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in such Form 10-Q for the three-month period ended September 30, 2004 fairly presents, in all material respects, the financial condition and results of operations of Sunrise Telecom Incorporated.

Date: November 15, 2004

By: /s/ PAUL KER-CHIN CHANG

Paul Ker-Chin Chang
President and Chief Executive Officer
(Principal Executive Officer)

Date: November 15, 2004

By: /s/ PAUL A. MARSHALL

Paul A. Marshall
Acting Chief Financial Officer
(Principal Financial Officer)