

SECURITIES AND EXCHANGE COMMISSION

Washington, DC 20549

FORM 10-Q

(Mark one)

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

For the quarterly period ended April 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: 0-21969

CIENA CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

23-2725311
(I.R.S. Employer Identification No.)

1201 Winterson Road, Linthicum, MD
(Address of Principal Executive Offices)

21090
(Zip Code)

(410) 865-8500
(Registrant's telephone number, including area code)

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 (X) NO ()

Indicate by check mark whether the registrant is an accelerated filer (as defined in Exchange Act Rule 12b-2). YES (X) NO ()

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date:

Table with 2 columns: Class, Outstanding at May 18, 2004. Row 1: Common stock, \$.01 par value, 567,680,002

CIENA CORPORATION

INDEX

FORM 10-Q

	PAGE NUMBER
PART I - FINANCIAL INFORMATION	
Item 1. Unaudited Consolidated Financial Statements	
Consolidated Statements of Operations Quarters and six months ended April 30, 2003 and April 30, 2004	3
Consolidated Balance Sheets October 31, 2003 and April 30, 2004	4
Consolidated Statements of Cash Flows six months ended April 30, 2003 and April 30, 2004	5
Notes to Consolidated Financial Statements	6
Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations	14
Item 3. Quantitative and Qualitative Disclosures about Market Risk	33
Item 4. Controls and Procedures	33
PART II - OTHER INFORMATION	
Item 1. Legal Proceedings	34
Item 2. Changes in Securities and use of Proceeds	35
Item 3. Defaults Upon Senior Securities	35
Item 4. Submission of Matters to a Vote of Security Holders	35
Item 5. Other Information	35
Item 6. Exhibits and Reports on Form 8-K	35
Signatures	37

Item 1. Financial Statements

CIENA CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS

(in thousands, except per share data)
(unaudited)

	Quarter Ended		Six Months Ended	
	April 30, 2003	April 30, 2004	April 30, 2003	April 30, 2004
Revenues:				
Products	\$ 63,399	\$ 62,422	\$ 124,620	\$ 117,096
Services	10,141	12,277	19,394	24,017
Total revenue	73,540	74,699	144,014	141,113
Costs:				
Products	40,406	56,289	79,983	90,849
Services	14,919	10,188	29,551	21,489
Total cost of goods sold	55,325	66,477	109,534	112,338
Gross profit	18,215	8,222	34,480	28,775
Operating expenses:				
Research and development	52,193	46,479	105,927	93,656
Selling and marketing	25,663	25,075	52,268	50,543
General and administrative	8,066	5,992	22,772	13,083
Deferred stock compensation costs:				
Research and development	3,406	1,408	7,204	3,613
Selling and marketing	676	415	1,435	933
General and administrative	346	79	720	200
Amortization of intangible assets	3,421	3,395	6,975	6,791
Restructuring costs	2,724	5,185	2,724	8,578
Recovery of use tax payments	—	(1,931)	—	(1,931)
Recovery of doubtful accounts, net	—	(2,794)	—	(2,794)
Total operating expenses	96,495	83,303	200,025	172,672
Loss from operations	(78,280)	(75,081)	(165,545)	(143,897)
Interest and other income, net	11,131	5,614	24,432	13,292
Interest expense	(8,061)	(6,473)	(20,264)	(13,857)
Gain (loss) on equity investments, net	—	139	(10)	593
Loss on extinguishment of debt	—	—	(20,606)	(8,216)
Loss before income taxes	(75,210)	(75,801)	(181,993)	(152,085)
Provision for income taxes	251	415	610	839
Net loss	\$ (75,461)	\$ (76,216)	\$ (182,603)	\$ (152,924)
Basic and diluted net loss per common share and dilutive common share	\$ (0.17)	\$ (0.16)	\$ (0.42)	\$ (0.32)
Weighted average basic common and dilutive potential common shares outstanding	433,932	475,189	433,330	474,192

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

CIENA CORPORATION
CONSOLIDATED BALANCE SHEETS

(in thousands, except share data)
(unaudited)

	October 31, 2003	April 30, 2004
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 309,665	\$ 218,145
Short-term investments	796,809	824,929
Accounts receivable, net	43,600	38,593
Inventories, net	44,995	34,457
Prepaid expenses and other	34,334	42,388
Total current assets	1,229,403	1,158,512
Long-term investments	519,744	416,199
Equipment, furniture and fixtures, net	114,930	100,123
Goodwill	336,039	335,974
Other intangible assets, net	108,408	99,681
Other long-term assets	69,641	67,346
Total assets	<u>\$ 2,378,165</u>	<u>\$ 2,177,835</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	\$ 44,402	\$ 38,532
Accrued liabilities	98,926	89,797
Restructuring liabilities	14,378	12,605
Unfavorable lease commitments	9,380	9,467
Income taxes payable	4,640	5,596
Deferred revenue	14,473	16,373
Total current liabilities	186,199	172,370
Long-term deferred revenue	14,547	16,964
Long-term restructuring liabilities	52,164	45,888
Long-term unfavorable lease commitments	61,312	56,362
Other long-term obligations	2,698	2,741
Convertible notes payable	730,428	690,000
Total liabilities	<u>1,047,348</u>	<u>984,325</u>
Commitments and contingencies		
Stockholders' equity:		
Preferred stock – par value \$0.01; 20,000,000 shares authorized; zero shares issued and outstanding	—	—
Common stock – par value \$0.01; 980,000,000 shares authorized; 473,214,856 and 476,940,672 shares issued and outstanding	4,732	4,769
Additional paid-in capital	4,861,182	4,874,950
Deferred stock compensation	(9,664)	(4,572)
Notes receivable from stockholders	(448)	(448)
Accumulated other comprehensive income (loss)	2,447	(833)
Accumulated deficit	(3,527,432)	(3,680,356)
Total liabilities and stockholders' equity	<u>\$ 2,378,165</u>	<u>\$ 2,177,835</u>

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

CIENA CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS

(in thousands)
(unaudited)

	Six Months Ended April 30,	
	2003	2004
Cash flows from operating activities:		
Net loss	\$(182,603)	\$(152,924)
Adjustments to reconcile net loss to net cash provided by operating activities:		
Early extinguishment of debt	20,606	8,216
Amortization of premium (discount) on marketable securities	—	15,868
Non-cash impairment from equity transactions	10	(593)
Non-cash portion of restructuring charges and related asset write-downs	16,040	814
Accretion of notes payable	4,527	599
Effect of accumulated translation adjustment	(2,254)	(76)
Depreciation and amortization of leaseholds improvements	43,041	27,639
Amortization of intangibles, deferred stock compensation and debt issuance costs	19,195	15,085
Provision (benefit) for inventory excess and obsolescence	(4,103)	1,082
Provision for warranty and other contractual obligations	3,405	4,996
Provision for doubtful accounts	—	284
Changes in assets and liabilities:		
Accounts receivable	(3,752)	4,723
Prepaid expenses and other	(2,692)	(6,615)
Inventories	19,191	9,456
Accounts payable and accrued liabilities	(51,114)	(33,009)
Income taxes payable	5,258	956
Deferred revenue and other obligations	1,853	4,317
Net cash used in operating activities	<u>(113,392)</u>	<u>(99,182)</u>
Cash flows from investing activities:		
Additions to equipment, furniture and fixtures	(14,195)	(13,646)
Maturities of available for sale securities	718,521	389,877
Purchases of available for sale securities	(325,483)	(333,524)
Net cash provided by investing activities	<u>378,843</u>	<u>42,707</u>
Cash flows from financing activities:		
Net proceeds from (repayment of) other obligations	(914)	46
Repayment of convertible subordinated notes payable	(139,211)	(49,243)
Proceeds from issuance of common stock	5,326	14,152
Repayment of notes receivable from stockholders	1,566	—
Net cash used in financing activities	<u>(133,233)</u>	<u>(35,045)</u>
Net increase (decrease) in cash and cash equivalents	132,218	(91,520)
Cash and cash equivalents at beginning of period	377,189	309,665
Cash and cash equivalents at end of period	<u>\$ 509,407</u>	<u>\$ 218,145</u>

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

CIENA CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(unaudited)

(1) INTERIM FINANCIAL STATEMENTS

The interim financial statements included herein for CIENA Corporation (the "Company" or "CIENA") have been prepared by the Company, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission. In the opinion of management, financial statements included in this report reflect all normal recurring adjustments which the Company considers necessary for the fair presentation of the results of operations for the interim periods covered and of the financial position of the Company at the date of the interim balance sheet. Certain information and footnote disclosures normally included in the annual financial statements prepared in accordance with generally accepted accounting principles have been condensed or omitted pursuant to such rules and regulations. However, the Company believes that the disclosures are adequate to understand the information presented. The operating results for interim periods are not necessarily indicative of the operating results for the entire year. These financial statements should be read in conjunction with the Company's October 31, 2003 audited consolidated financial statements and notes thereto included in the Company's annual report on Form 10-K for the fiscal year ended October 31, 2003.

(2) SIGNIFICANT ACCOUNTING POLICIES

Segment Reporting

In June 1997, the Financial Accounting Standards Board issued Statement of Financial Accounting Standards No. 131 ("SFAS 131"), "Disclosures about Segments of an Enterprise and Related Information." SFAS 131 establishes annual and interim reporting standards for operating segments of a company. Effective as of the second quarter of fiscal 2004, CIENA reorganized its operations into multiple operating segments for the purpose of making operating decisions and assessing performance. Those operating segments are the following: Core Networking Group (CNG); Metro and Enterprise Solutions Group (MESG); and Data Networking Group (DNG). The Company's operating segments have similar economic characteristics and are similar in each of the following areas: the nature of the products and services; the nature of the production processes; the type or class of customer that purchases their products and services; and the nature of the regulatory environment. Accordingly, CIENA has aggregated information related to CNG, MESG and DNG for reporting purposes into one reportable segment and reports only certain enterprise-wide disclosures

Impairment of Goodwill and Other Long-Lived Assets

Effective November 1, 2001, CIENA adopted Statement of Financial Accounting Standard No. 142, "Goodwill and Other Intangible Assets" ("SFAS 142") and ceased to amortize goodwill. As of April 30, 2004, CIENA's assets include \$336.0 million related to goodwill. SFAS 142 requires that we assign goodwill to the Company's operating segments and to test each segment's goodwill for impairment on an annual basis, and between annual tests if an event occurs or circumstances change that would, more likely than not, reduce the fair value of the segment below its carrying value. Prior to the reorganization of the Company into operating segments the fair value of CIENA's goodwill was tested for impairment on an annual basis, and between annual tests if an event occurs or circumstances change that would, more likely than not, reduce the fair value of CIENA on an entity level, rather than a segment level, below its carrying value.

Pro forma stock-based compensation

The Company has elected to continue to account for its stock-based compensation in accordance with the provisions of APB 25 as interpreted by FASB Interpretation No. 44, "Accounting for Certain Transactions Involving Stock Compensation, an Interpretation of APB Opinion No. 25," ("FIN 44").

Had compensation cost for the Company's stock option plans and employee stock purchase plan been determined based on the Black-Scholes valuation method and the fair value at the grant date for awards in the second quarter and first six months of fiscal 2003 and 2004 been determined consistent with the provisions of Statement of Financial Accounting Standard No. 123 ("SFAS 123"), "Accounting for Stock Based Compensation" as amended by Statement of Financial Accounting Standard No. 148 ("SFAS 148"), "Accounting for Stock Based Compensation-Transition and Disclosure," the Company's net loss and net loss per share for the second quarter of fiscal 2003 and 2004 would have increased to the pro forma amounts indicated below (in thousands, except per share data):

	Quarter ended April 30,		Six Months Ended April 30,	
	2003	2004	2003	2004
Net loss applicable to common stockholders – as reported	\$ (75,461)	\$ (76,216)	\$ (182,603)	\$ (152,924)
Deduct: Total stock-based employee compensation expense determined under fair value based method for all awards, net of related tax effects	(19,958)	(13,576)	(48,752)	(21,786)
Add: Stock-based employee compensation expense included in reported net income, net of related tax effects	4,428	1,902	9,359	4,746
Net loss applicable to common stockholders – pro forma	\$ (90,991)	\$ (87,890)	\$ (221,996)	\$ (169,964)
Basic and diluted net loss per share – as reported	\$ (0.17)	\$ (0.16)	\$ (0.42)	\$ (0.32)
Basic and diluted net loss per share – pro forma	\$ (0.21)	\$ (0.18)	\$ (0.51)	\$ (0.36)

The above pro forma disclosures are not necessarily representative of the effects on reported net income or loss for future years.

(3) RESTRUCTURING COSTS

The Company's actions were taken to align its workforce, facilities and operating costs with business operations. Prior to the adoption of Statement of Financial Accounting Standard No. 146 ("SFAS 146"), "Accounting for Costs Associated with Exit or Disposal Activities," for transactions initiated after December 31, 2002, CIENA followed the guidance of Emerging Issues Task Force Issue No. 9413 ("EITF 94-3"), "Liability Recognition for Certain Employee Termination Benefits and Other Costs to Exit an Activity (including Certain Costs Incurred in a Restructuring)," for restructuring charges. However, given the manner in which CIENA undertook such restructuring activities, there have been no significant differences in financial reporting. The Company historically has committed to a plan and incurred the liability concurrently – meeting the criteria of both EITF 94-3 and SFAS 146 consistently. The following table displays the activity and balances of the restructuring reserve account for the period ended April 30, 2004 (in thousands):

	Workforce reduction	Consolidation of excess facilities	Liabilities recorded in connection with purchase combination	Total
Balance at October 31, 2002	\$ 5,199	\$ 87,845	\$ 121	\$ 93,165
Additional reserve recorded	12,240(a)	19,748(a)	430(b)	32,418
Adjustments to previous estimates	(523) (a)	(310) (a)	—	(833)
Non-cash charges	(1,913)	(28,485) (d)	—	(30,398)
Cash payments	(12,154)	(15,105)	(551)	(27,810)
Balance at October 31, 2003	2,849	63,693	—	66,542
Additional reserve recorded	3,915(c)	1,337(c)	—	5,252
Adjustments to previous estimates	154(c)	3,172(c)	—	3,326
Cash payments	(5,263)	(11,364)	—	(16,627)
Balance at April 30, 2004	1,655	56,838	—	58,493
Current restructuring liabilities	\$ 1,655	\$ 10,950	\$ —	\$ 12,605
Non-current restructuring liabilities	\$ —	\$ 45,888	\$ —	\$ 45,888

(a) During the second quarter of fiscal 2003, CIENA reduced its workforce by approximately 75 employees. CIENA recorded a restructuring charge of \$2.7 million associated with the workforce reduction.

During the third quarter of fiscal 2003, CIENA recorded a restructuring charge of \$15.5 million associated with a workforce reduction of approximately 84 employees, lease terminations, non-cancelable lease costs and the write-down of certain property, equipment and leasehold improvements.

During the fourth quarter of fiscal 2003, CIENA recorded a restructuring charge of \$12.9 million associated with a workforce reduction of approximately 231 employees, lease termination, non-cancelable lease costs and the write-down of certain property, equipment and leasehold improvements.

(b) During the third quarter of fiscal 2003, CIENA and WaveSmith reduced their combined workforce by 8 employees. Approximately \$0.4 million of cost associated with the WaveSmith workforce reduction qualify for treatment under EITF 95-3 "Recognition of Liabilities in Connection with a Purchase Combination" and were recorded as an element of the acquisition.

- (c) During the first quarter of fiscal 2004, CIENA incurred charges of \$3.4 million related to the exit of a warehouse, work force reductions of approximately 52 employees and adjustments to previous estimates.

During the second quarter of fiscal 2004, CIENA recorded a restructuring charge of \$5.9 million related to a workforce reduction of approximately 68 employees and an adjustment to an estimate of previously restructured facilities.

- (d) Non-cash charges during fiscal 2003 include the disposal of previously reserved property and equipment.

On April 20, 2004, the Company announced its intention to close its San Jose, California facility by September 30, 2004. The San Jose facility closing, and related actions will affect approximately 425 employees. The Company expects to incur additional restructuring costs and accelerated amortization of leasehold costs of between \$75.0 million and \$85.0 million associated with this action. The Company expects these costs to include employee severance costs, and asset write-downs. The timing of the restructuring charges will correspond to the specific actions and will likely occur over the next several fiscal quarters.

(4) MARKETABLE DEBT AND EQUITY SECURITIES

Cash, short-term and long-term investments are comprised of the following (in thousands):

April 30, 2004				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate bonds	\$ 479,690	\$198	534	\$ 479,354
Asset backed obligations	237,185	276	—	237,461
Commercial paper	—	—	—	—
US government obligations	524,665	469	821	524,313
Money market funds	218,145	—	—	218,145
	<u>\$1,459,685</u>	<u>\$943</u>	<u>\$1,355</u>	<u>\$1,459,273</u>
Included in cash and cash equivalents	218,145	\$ —	—	218,145
Included in short-term investments	824,015	914	—	824,929
Included in long-term investments	417,525	29	1,355	416,199
	<u>\$1,459,685</u>	<u>\$943</u>	<u>\$1,355</u>	<u>\$1,459,273</u>
October 31, 2003				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Corporate bonds	\$ 617,837	\$ 787	\$163	\$ 618,461
Asset-backed obligations	161,474	322	—	161,796
Municipal bonds	5,024	7	—	5,031
Commercial paper	10,487	2	28	10,461
US government obligations	518,609	2,095	229	520,475
Money market funds	309,994	—	—	309,994
	<u>\$1,623,425</u>	<u>\$3,213</u>	<u>\$420</u>	<u>\$1,626,218</u>
Included in cash and cash equivalents	309,665	—	—	309,665
Included in short-term investments	793,807	3,012	10	796,809
Included in long-term investments	519,953	201	410	519,744
	<u>\$1,623,425</u>	<u>\$3,213</u>	<u>\$420</u>	<u>\$1,626,218</u>

The following table summarizes maturities of debt investments (including restricted investments) at April 30, 2004 (in thousands):

	Amortized Cost	Estimated Fair Value
Less than one year	\$ 824,015	\$ 824,929
Due in 1-2 years	417,525	416,199
Due in 2-5 years	—	—
	<u>\$1,241,540</u>	<u>\$1,241,128</u>

(5) ACCOUNTS RECEIVABLE

As of April 30, 2004, the trade accounts receivable, net of allowance for doubtful accounts, included one customer who accounted for 26.0% of the trade accounts receivable. As of October 31, 2003, the trade accounts receivable, net of allowance for doubtful accounts, included three customers who accounted for 23.6%, 12.5% and 10.1% of the net trade accounts receivable, respectively.

CIENA performs ongoing credit evaluations of its customers and generally has not required collateral or other forms of security from its customers. CIENA maintains an allowance for potential losses on a specific identification basis. During the first six months of fiscal 2004, the Company recovered \$3.1 million from a customer, from which payment was previously deemed doubtful due to the customer's financial condition. The Company also recorded an allowance for doubtful accounts during the first six months of fiscal 2004 of \$0.3 million. CIENA's allowance for doubtful accounts as of April 30, 2004 and October 31, 2003 was \$1.7 and \$1.5 million, respectively.

(6) INVENTORIES

Inventories are comprised of the following (in thousands):

	October 31, 2003	April 30, 2004
Raw materials	\$ 16,121	\$ 14,646
Work-in-process	5,904	3,413
Finished goods	46,063	36,530
Gross inventories	68,088	54,589
Reserve for excess and obsolescence	(23,093)	(20,132)
Net inventories	<u>\$ 44,995</u>	<u>\$ 34,457</u>

The Company writes down its inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated market value based on assumptions about future demand and market conditions. During the six months ended April 30, 2004, CIENA recorded a provision for inventory reserves of \$1.1 million primarily related to excess inventory due to a change in forecasted sales for certain products. The following is a summary of the change in the reserve for excess inventory and obsolete inventory during the six months ended April 30, 2004 (in thousands):

	Inventory Reserve
Reserve balance as of Oct. 31, 2003	\$23,093
Provision for excess inventory, net	1,082
Actual inventory scrapped	(4,043)
Reserve balance as of April 30, 2004	<u>\$20,132</u>

During the six months ended April 30, 2003, CIENA recorded a benefit for inventory reserves of \$4.1 million primarily related to the realization of sales from previously reserved excess inventory. The following is a summary of the change in the reserve for excess inventory and obsolete inventory during the six months ended April 30, 2003 (in thousands):

	Inventory Reserve
Reserve balance as of Oct. 31, 2002	\$ 48,145
Realization of sales from previously reserved excess inventory, net	(4,103)
Actual inventory scrapped	(12,550)
Reserve balance as of April 30, 2003	<u>\$ 31,492</u>

(7) EQUIPMENT, FURNITURE AND FIXTURES

Equipment, furniture and fixtures are comprised of the following (in thousands):

	October 31, 2003	April 30, 2004
Equipment, furniture and fixtures	\$ 332,843	\$ 329,284
Leasehold improvements	70,145	70,065
	402,988	399,349
Accumulated depreciation and amortization	(288,170)	(299,253)
Construction-in-progress	112	27
	<u>\$ 114,930</u>	<u>\$ 100,123</u>

During the second quarter of fiscal 2004 the company recorded \$1.7 million in accelerated amortization expense of leasehold improvements related to the planned exit of its San Jose, California facility.

(8) OTHER INTANGIBLE ASSETS

Other intangible assets are comprised of the following (in thousands):

	October 31, 2003			April 30, 2004		
	Gross Intangible	Accumulated Amortization	Net Intangible	Gross Intangible	Accumulated Amortization	Net Intangible
Developed technology	\$ 94,704	\$(22,975)	\$ 71,729	\$ 94,704	\$(28,769)	\$65,935
Patents and licenses	36,655	(8,984)	27,671	36,655	(10,919)	25,736
Covenants not to compete, outstanding purchase orders and contracts	12,700	(3,692)	9,008	12,700	(4,690)	8,010
	<u>\$144,059</u>		<u>\$108,408</u>	<u>\$144,059</u>		<u>\$99,681</u>

The aggregate amortization expense of other intangible assets was \$4.4 million and \$4.4 million for the quarters ended April 30, 2003 and 2004, respectively. The following table represents the expected future amortization of other intangible assets as follows (in thousands):

2004 (remaining six months)	\$ 8,726
2005	17,453
2006	17,452
2007	17,453
2008	16,107
Thereafter	22,490
	<u>\$99,681</u>

(9) OTHER BALANCE SHEET DETAILS

Other long-term assets (in thousands):

	October 31, 2003	April 30, 2004
Maintenance spares inventory, net	\$26,206	\$22,125
Deferred debt issuance costs	12,869	11,355
Investments in privately held companies	21,292	21,292
Other	9,274	12,574
	<u>\$69,641</u>	<u>\$67,346</u>

Accrued liabilities (in thousands):

	October 31, 2003	April 30, 2004
Warranty and other contractual obligations	\$37,380	\$33,951
Accrued compensation, payroll related tax and benefits	33,206	28,753
Accrued excess inventory purchase commitments	1,405	1,009
Accrued interest payable	6,583	6,469
Other	20,352	19,615
	<u>\$98,926</u>	<u>\$89,797</u>

The following table summarizes the activity in the Company's accrued warranty and other contractual obligations for the six months ended April 30, 2003 and 2004 (in thousands):

Six Months ended April 30	Balance at beginning of period	Provisions	Settlements	Balance at end of period
2003	\$45,498	3,405	(8,131)	\$40,772
2004	\$37,380	4,996	(8,425)	\$33,951

Deferred revenue (in thousands):

	October 31, 2003	April 30, 2004
Products	\$ 4,772	\$ 6,709
Services	24,248	26,628
Total deferred revenue	29,020	33,337
Less current portion	(14,473)	(16,373)
Long-term deferred revenue	<u>\$ 14,547</u>	<u>\$ 16,964</u>

(10) CONVERTIBLE NOTES PAYABLE

On December 19, 2003, CIENA purchased the remaining \$48.2 million outstanding ONI Systems Corp. convertible subordinated notes. The Company paid \$49.2 million for notes with a cumulative accreted book value of \$41.0 million, which resulted in a loss on early extinguishment of debt of \$8.2 million.

(11) EARNINGS (LOSS) PER SHARE CALCULATION

Basic EPS is computed using the weighted average number of common shares outstanding. Diluted EPS is computed using the weighted average number of common shares outstanding, stock options and warrants using the treasury stock method. Approximately 40.1 million and 34.2 million options and unvested restricted stock were outstanding during the second quarters of fiscal 2003 and 2004 respectively, but were not included in the computation of diluted EPS as the effect would be anti-dilutive.

Approximately 35.9 million and 33.4 million options and unvested restricted stock were outstanding during the first six months of fiscal 2003 and 2004 respectively, but were not included in the computation of diluted EPS as the effect would be anti-dilutive.

(12) COMPREHENSIVE INCOME

The components of comprehensive loss are as follows (in thousands):

	Quarter ended April 30,		Six months ended April 30,	
	2003	2004	2003	2004
Net loss	\$ (75,461)	\$ (76,216)	\$ (182,603)	\$ (152,924)
Change in unrealized loss on available-for-sale securities, net of tax	(1,641)	(3,257)	(1,331)	(3,204)
Change in accumulated translation adjustments	129	(48)	202	(76)
Total comprehensive loss	<u>\$ (76,973)</u>	<u>\$ (79,521)</u>	<u>\$ (183,732)</u>	<u>\$ (156,204)</u>

(13) SEGMENT REPORTING

Effective as of the second quarter of fiscal 2004, CIENA reorganized its operations into multiple operating segments for the purpose of making operating decisions and assessing performance. Those operating segments are the following: Core Networking Group (CNG); Metro and Enterprise Solutions Group (MESG); and Data Networking Group (DNG). Each operating group includes products for sale to external customers, the related research and development and product line management. CNG incorporates CIENA's core transport and core switching product lines. MESG incorporates CIENA's metropolitan transport, metropolitan switching, storage extension, and LightWorks ON-Center management suite product lines. DNG incorporates CIENA's multiservice networking product lines and Laurel Networks, Inc. and Luminous Networks, Inc. products that CIENA resells.

On May 3, 2004, CIENA completed the acquisitions of Catena Networks, Inc. and Internet Photonics, Inc. Internet Photonics' product lines will be incorporated into MESG, and Catena's product lines will form a new operating segment, the Broadband Access Group (BBG). The CNG, MESG and DNG operating segments have similar economic characteristics and are similar in each of the following areas: the nature of the products and services; the nature of the production processes; the type or class of customer that purchases their products and services; and the nature of the regulatory environment. Accordingly, CIENA has aggregated information related to CNG, MESG and DNG for reporting purposes into one reportable segment and reports only certain enterprise-wide disclosures.

CIENA's geographic distribution of revenue for the quarter and six months ended April 30, 2003 and 2004 are as follows (in thousands):

	Quarter Ended April 30,				Six Months Ended April 30,			
	2003	%	2004	%	2003	%	2004	%
Domestic	\$50,371	68.5	\$58,033	77.7	\$ 95,073	66.0	\$ 95,316	67.5
International	23,169	31.5	16,666	22.3	48,941	34.0	45,797	32.5
Total	<u>\$73,540</u>	100.0	<u>\$74,699</u>	100.0	<u>\$144,014</u>	100.0	<u>\$141,113</u>	100.0

CIENA's revenue derived from products and services for the quarter and six months ended April 30, 2003 and 2004 are as follows (in thousands):

	Quarter Ended April 30,				Six Months Ended April 30,			
	2003	%	2004	%	2003	%	2004	%
Products	\$63,399	86.2	\$62,422	83.6	\$124,620	86.5	\$117,096	83.0
Services	10,141	13.8	12,277	16.4	19,394	13.5	24,017	17.0
Total	<u>\$73,540</u>	100.0	<u>\$74,699</u>	100.0	<u>\$144,014</u>	100.0	<u>\$141,113</u>	100.0

During the quarter and six months ended April 30, 2003 and 2004, customers who each accounted for at least 10% of CIENA's revenue during the respective periods are as follows (in thousands):

	Quarter Ended April 30,				Six Months Ended April 30,			
	2003	%**	2004	%**	2003	%**	2004	%**
Company A	\$ *	—	\$24,023	32.2	\$ *	—	\$27,826	19.7
Company B	*	—	*	—	*	—	14,805	10.5
Company C	12,540	17.1	*	—	26,811	18.6	*	—
Company D	11,001	15.0	*	—	19,346	13.4	*	—
Company E	*	—	*	—	17,948	12.5	*	—
Company F	8,336	11.3	*	—	*	—	*	—
Total	<u>\$31,877</u>	43.4	<u>\$24,023</u>	32.2	<u>\$64,105</u>	44.5	<u>\$42,631</u>	30.2

* – denotes revenue recognized less than 10% of total revenue for the period.

** – denotes % of total revenue

(14) CONTINGENCIES

Litigation

On October 3, 2000, Stanford University and Litton Systems filed a complaint in the United States District Court for the Central District of California alleging that optical fiber amplifiers incorporated into CIENA's products infringe U.S. Patent No. 4,859,016 (the "'016 Patent"). The complaint seeks injunctive relief, royalties and damages. We believe that we have valid defenses to the lawsuit and intend to defend it vigorously. On October 10, 2003, the court stayed the case pending final resolution of matters before the U.S. Patent and Trademark Office (the "PTO"), including a request for and disposition of a reexamination of the '016 Patent. On October 16, 2003, the PTO granted reexamination of the '016 Patent, thus resulting in a continuation of the stay of the case.

On July 19, 2000, CIENA and CIENA Properties, Inc., a wholly owned subsidiary of CIENA, filed a complaint in the United States District Court for the District of Delaware requesting damages and injunctive relief against Corvis Corporation ("Corvis"). The suit charged Corvis with infringing four patents relating to CIENA's optical networking communication systems and technology. A jury trial to determine whether Corvis is infringing these patents commenced on February 10, 2003. On February 24, 2003, the jury decided that Corvis was infringing one of the patents and not infringing two others. The jury was deadlocked with respect to infringement on the fourth patent. This trial was immediately followed by a trial on Corvis' affirmative defenses based on the validity of two of the patents. On February 28, 2003, the jury in this trial determined that the patents were valid. In April 2003, following a third trial, another jury decided that Corvis had infringed the fourth patent on which the previous jury had deadlocked. Based on these favorable verdicts collectively holding that Corvis is infringing two valid CIENA patents, CIENA has moved for an injunction to prohibit the sale, manufacture, or use by Corvis of the infringing products. The court has not yet ruled on this motion.

As a result of the merger with ONI, we became a defendant in a securities class action lawsuit. Beginning in August 2001, a number of substantially identical class action complaints alleging violations of the federal securities laws were filed in the United States District Court for the Southern District of New York. These complaints name ONI, Hugh C. Martin, ONI's former chairman, president and chief executive officer; Chris A. Davis, ONI's former executive vice president, chief financial officer and administrative officer; and certain underwriters of ONI's initial public offering as defendants. The complaints were consolidated into a single action, and a consolidated amended complaint was filed on April 24, 2002. The amended complaint alleges, among other things, that the underwriter defendants violated the securities laws by failing to disclose alleged compensation arrangements (such as undisclosed commissions or stock stabilization practices) in the initial public offering's registration statement and by engaging in manipulative practices to artificially inflate the price of ONI's common stock after the initial public offering. The amended complaint also alleges that ONI and the named former officers violated the securities laws on the basis of an alleged failure to disclose the underwriters' alleged compensation arrangements and manipulative practices. No specific amount of damages has been claimed. Similar complaints have been filed against more than 300 other issuers that have had initial public offerings since 1998, and all of these actions have been included in a single coordinated proceeding. Mr. Martin and Ms. Davis have been dismissed from the action without prejudice pursuant to a tolling agreement. In July 2002, ONI and other issuers in the consolidated cases filed motions to dismiss the amended complaint for failure to state a claim, which was denied as to ONI on February 19, 2003. CIENA has participated, together with the other issuer defendants in these cases, in mediated settlement negotiations that have led to a preliminary agreement among the plaintiffs, the issuer defendants and their insurers. The settlement, which is subject to court approval, would result in the dismissal of the plaintiffs' cases against the issuers. CIENA has agreed in principle to the terms of this settlement. Draft settlement documents were circulated for final review in March 2004.

As a result of the merger with ONI, we also became a defendant in two substantially identical purported class actions on behalf of ONI security holders originally brought against ONI and members of its board of directors. The complaints allege that the director defendants breached their fiduciary duties to ONI in approving the merger with CIENA and seek declaratory, injunctive and other relief permitted by equity. The plaintiffs failed to obtain an injunction against completion of the merger. The first of these cases was filed on February 20, 2002, in the Superior

Court of the State of California, County of San Mateo, and is captioned *K.W. Sams, On Behalf of Himself and All Others Similarly Situated v. ONI Systems Corporation, et al.* The second case was brought on March 19, 2002, in the Superior Court of the State of California, County of Santa Clara, and is captioned *Steven Myeary, On Behalf of Himself and All Others Similarly Situated v. ONI Systems Corporation.* On April 14, 2003, the plaintiffs in these cases filed a consolidated amended complaint and named four additional defendants: CIENA Corporation, James F. Jordan, Kleiner Perkins Caufield & Byers and Mohr Davidow Ventures. CIENA and the other defendants subsequently filed a demurrer and served a motion for sanctions on plaintiffs based on factual inaccuracies in the consolidated amended complaint. In response, the plaintiffs filed a corrected consolidated amended complaint, the demurrer to which was sustained by the court in April 2004 with leave to amend. We believe that these lawsuits are without merit and will continue to defend them vigorously.

(15) SUBSEQUENT EVENTS

On May 3, 2004, the Company acquired Catena Networks and Internet Photonics. As a result of these acquisitions the Company expects to record charges for in-process research and development and record intangible assets related existing technology, customer relationships, customer contracts and customer order backlog. The Company expects to complete its tangible and intangible asset and liability assessments, with the help of third party valuation findings, associated with the acquisitions during the third quarter of fiscal 2004.

Under the terms of the agreement to acquire Catena, all the outstanding shares of Catena common stock, preferred stock and outstanding stock options and warrants were exchanged for 75.9 million shares of CIENA common stock. The Company expects to record an aggregate purchase price of approximately \$466.1 million for Catena. The purchase price for this acquisition was based on the average closing price of CIENA's common stock for two trading days prior to, the date of, and the two trading days after the February 19, 2004 announcement.

Under the terms of the agreement to acquire Internet Photonics, all the outstanding shares of Internet Photonics common stock, preferred stock and outstanding stock options and warrants were exchanged for 24.1 million shares of CIENA common stock. The Company expects to record an aggregate purchase price of approximately \$148.2 million for Internet Photonics. The purchase price for this acquisition was based on the average closing price of CIENA's common stock for two trading days prior to, the date of, and the two trading days after the February 19, 2004 announcement.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

This Management's Discussion and Analysis of Financial Condition and Results of Operations contains, forward-looking statements that involve risks and uncertainties. Under the heading "Risk Factors," we have described what we believe to be some of the major risks related to these forward-looking statements, as well as the general outlook for our business. Investors should review these risk factors and the rest of this quarterly report in combination with the more detailed description of our business in our annual report on Form 10-K, which we filed with the Securities and Exchange Commission on December 11, 2003, for a more complete understanding of the risks associated with an investment in the Company's Common Stock.

Overview

CIENA is a leading global provider of innovative network solutions. Our existing and potential customers include:

- communications carriers including regional bell operating companies (RBOCs), independent operating companies (IOCs), competitive local exchange carriers (CLECs), long-distance carriers, wireless carriers and wholesale carriers;
- other communications service providers including cable operators and Internet service providers;
- enterprises including large businesses, educational and non-profit institutions;
- federal, state and local governments; and
- integrators and resellers.

In early 2001, the telecommunications industry began a severe decline, and our dominant customer base, communications carriers, responded by curtailing network build-outs and reducing their overall capital expenses. As a result, the market for our core networking products declined sharply. After several years of significantly lower capital spending, most carriers' operating costs remain high while their revenue is growing slowly, if at all.

In this environment, we expect that most major carriers will hold their aggregate capital spending flat for the next several years and will not invest substantially in building new core networks or upgrading existing ones. Instead, we believe that carriers, other communications service providers, enterprises and governments will make significant investments in next-generation equipment, particularly equipment that resides at the edge of communications networks and enables the creation and delivery of new high-bandwidth data services. As a result, we have undertaken a number of efforts to expand our addressable market including making acquisitions, establishing partnerships with other equipment suppliers and investing internal resources towards developing, marketing and selling products that address this broader market.

As part of our strategy to increase our addressable market, we completed the acquisitions of Catena Networks and Internet Photonics on May 3, 2004. Catena's broadband access solutions enable the delivery of traditional "plain old telephone service" (POTS), digital subscriber line service (DSL), and voice-over-IP (VoIP) from a single, integrated platform. Prior to the acquisition, Catena's customers included RBOCs, major IOCs and CLECs. Internet Photonics has sold its carrier-grade optical Ethernet transport and switching solutions to several large cable providers and carriers who use Internet Photonics' solutions to deploy Ethernet private-line services. The broadband access markets served by both Catena and Internet Photonics' products are expected to benefit as service providers shift spending to target the access portions of their networks to enable increased residential access to high-bandwidth services such as DSL, video-on-demand and high definition television (HDTV).

As a result of the Catena and Internet Photonics acquisitions, we expect to incur additional ongoing costs related to product development, selling, and marketing activities. In addition, we expect to incur costs associated with these acquisitions related to amortization of purchased intangible assets, in-process research and development and deferred stock compensation.

Also in pursuit of our strategy, we expect to continue our efforts to reduce our ongoing operating costs in order to better align them with our market opportunities and changing product mix. On April 20, 2004, we announced our intention to close our San Jose, California facility by September 30, 2004. Over the next two fiscal quarters we expect to incur additional restructuring costs and accelerated amortization of leasehold cost of between \$75.0 million and \$85.0 million associated with this action.

We reported revenue of \$74.7 million for the second quarter of fiscal 2004. This was an increase of 12.5% from the first quarter of fiscal 2004 and 1.6% from second quarter of fiscal 2003. We expect revenue for the third quarter of fiscal 2004 will increase by as much as 30 percent from the second quarter of fiscal 2004 primarily as a result of the inclusion of revenue from Catena and Internet Photonics products for the first time.

Our margins can fluctuate substantially from quarter to quarter based on a number of factors, including the mix of products and services we sell and the customers to which we sell them; the volume of products and services we sell; and the amount of provisions or benefits we may incur related to excess inventory costs. Our gross margin for the second quarter of fiscal 2004 was 11% compared to 30.9% for the first quarter of fiscal 2004 and 23.1% for the second quarter of fiscal 2003. The decline in gross margin for the second quarter of fiscal 2004 compared to the first quarter was due primarily to the increased percentage of revenue from core transport systems in the second quarter. The decline in gross margin from the same period a year ago was due to a combination of the increased percentage of revenue from core transport systems and a lower percentage of revenue from core switching systems than in the second quarter of fiscal 2003. Gross margin in the second quarter of fiscal 2004 was also adversely affected by revenues associated with initial deployments of long-haul transport equipment for two significant customers. This equipment, which includes "common equipment" such as chassis and amplifiers, tends to have lower margins than channel cards and other equipment deployed later in the network build. We expect, therefore, that the margins on sales associated with these two projects will improve over time.

As of April 30, 2004, CIENA had 1,702 employees, which was a net reduction of 76 employees from the 1,778 employees on January 31, 2004. We expect to reduce our headcount by approximately 425 employees related to the exiting of the San Jose, California facility. Catena and Internet Photonics will add an aggregate of approximately 380 employees to CIENA in the third quarter of fiscal 2004.

Results of Operations

Three months ended April 30, 2003 compared to three months ended April 30, 2004

Revenue, cost of goods sold and gross profit

The table below (in thousands, except percentage data) sets forth the changes in revenue, cost of goods sold and gross profit from the second quarter of fiscal 2003 to the second quarter of fiscal 2004.

	Second Quarter					
	2003	%*	2004	%*	Increase (decrease)	%**
Revenue:						
Products	\$63,399	86.2	\$62,422	83.6	\$ (977)	(1.5)
Services	10,141	13.8	12,277	16.4	2,136	21.1
Total Revenue:	73,540	100.0	74,699	100.0	1,159	1.6
Costs:						
Products	40,406	54.9	56,289	75.4	15,883	39.3
Services	14,919	20.3	10,188	13.6	(4,731)	(31.7)
Total cost of goods sold	55,325	75.2	66,477	89.0	11,152	20.2
Gross Profit	\$18,215	24.8	\$ 8,222	11.0	\$ (9,993)	54.9

* - Denotes % of total revenue

** - Denotes % change from 2003 to 2004

The table below (in thousands, except percentage data) sets forth the changes in product revenue, product cost of goods sold and product gross profit from the second quarter of fiscal 2003 to the second quarter of fiscal 2004.

	Second Quarter					
	2003	%*	2004	%*	Increase (decrease)	%**
Product revenue	\$63,399	100.0	\$62,422	100.0	\$ (977)	(1.5)
Product cost of goods sold	40,406	63.7	56,289	90.2	15,883	39.3
Product gross profit	\$22,993	36.3	\$ 6,133	9.8	\$(16,860)	(73.3)

* - Denotes % of product revenue

** - Denotes % change from 2003 to 2004

The table below (in thousands, except percentage data) sets forth the changes in service revenue, service cost of goods sold and service gross profit (loss) from the second quarter of fiscal 2003 to the second quarter of fiscal 2004.

	Second Quarter					
	2003	%*	2004	%*	Increase (decrease)	%**
Service revenue	\$10,141	100.0	\$12,277	100.0	\$ 2,136	21.1
Service cost of goods sold	14,919	147.1	10,188	83.0	(4,731)	(31.7)
Service gross profit (loss)	\$ (4,778)	(47.1)	\$ 2,089	17.0	\$ 6,867	143.7

* - Denotes % of service revenue

** - Denotes % change from 2003 to 2004

The table below (in thousands, except percentage data) sets forth the changes in geographic distribution of revenues from the second quarter of fiscal 2003 to the second quarter of fiscal 2004.

	Second Quarter					
	2003	%*	2004	%*	Increase (decrease)	%**
Domestic	\$50,371	68.5	\$58,033	77.7	\$ 7,662	15.2
International	23,169	31.5	16,666	22.3	(6,503)	(28.1)
Total	<u>\$73,540</u>	100.0	<u>\$74,699</u>	100.0	<u>\$ 1,159</u>	1.6

* - Denotes % of total revenue

** - Denotes % change from 2003 to 2004

Historically, we have relied on a limited number of customers for a substantial portion of our revenue. During the second quarter of fiscal 2003 and second quarter of fiscal 2004, certain customers each accounted for at least 10% of our revenues during the respective periods as follows (in thousands, except percentage data):

	Second Quarter			
	2003	%**	2004	%**
Company A	\$ *	—	\$24,023	32.2
Company C	12,540	17.1	*	—
Company D	11,001	15.0	*	—
Company F	8,336	11.3	*	—
Total	<u>\$31,877</u>	<u>43.4</u>	<u>\$24,023</u>	<u>32.2</u>

** - Denotes % of total revenue

* - Denotes revenues recognized less than 10% for the period.

Revenue

- **Product revenue** decreased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 primarily due to decreased sales of our metropolitan networking products, partially offset by increased sales from our multiservice networking products, core networking products and LightWorks ON-Center software.
- **Service revenue** increased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 due to increased sales of maintenance contracts.
- **Domestic revenue** increased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 primarily due to increased sales of our core networking products and multiservice networking products, partially offset by decreased sales from our metropolitan networking products.
- **International revenue** decreased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 primarily due to decreased sales of our metropolitan and core networking products, partially offset by increased sales of installation and maintenance revenue.

Gross profit

Cost of goods sold consists of component costs, direct compensation costs, warranty and other contractual obligations, royalties, license fees, direct technical support costs, cost of excess and obsolete inventory and overhead related to manufacturing, technical support and engineering, furnishing and installation ("EF&I") operations.

- **Gross profit as a percentage of revenue** decreased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 largely due to the sale of lower margin product and less benefit from the sale of previously reserved excess and obsolete inventory. This is partially offset by an increase in margin on our services.
- **Gross profit on products as a percentage of product revenue** decreased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 largely due to a higher percentage of revenue from core transport systems and a lower percentage of revenue from core switching systems combined with less revenue from the sale of previously reserved excess and obsolete inventory.

- **Gross profit on services as a percentage of services revenue** increased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 largely due to increased sales of maintenance services and reduced service overhead costs.

Operating expenses

The table below (in thousands, except percentage data) sets forth the changes in operating expenses from the second quarter of fiscal 2003 to the second quarter of fiscal 2004.

	Second Quarter					
	2003	%*	2004	%*	Increase (decrease)	%**
Research and development	\$52,193	71.0	\$46,479	62.2	\$ (5,714)	(10.9)
Selling and marketing	25,663	34.9	25,075	33.6	(588)	(2.3)
General and administrative	8,066	11.0	5,992	8.0	(2,074)	(25.7)
Deferred stock compensation costs:						
Research and development	3,406	4.6	1,408	1.9	(1,998)	(58.7)
Sales and marketing	676	0.9	415	0.6	(261)	(38.6)
General and administrative	346	0.5	79	0.1	(267)	(77.2)
Amortization of intangible assets	3,421	4.6	3,395	4.5	(26)	(0.8)
Restructuring costs	2,724	3.7	5,185	6.9	2,461	90.3
Recovery of use tax payments	—	—	(1,931)	(2.6)	(1,931)	—
Recovery of doubtful accounts, net	—	—	(2,794)	(3.7)	(2,794)	—
Total operating expenses	\$96,495	131.2	\$83,303	111.5	\$ (13,192)	(13.7)

* - Denotes % of total revenue

** - Denotes % change from 2003 to 2004

- **Research and development** expense decreased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 due to reductions in depreciation expense, prototype parts, facility-related costs and employee-related costs partially offset by the \$1.7 million accelerated amortization of leasehold improvements related to the planned closing of our San Jose, California facility.
- **Selling and marketing** expense decreased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 due to reductions in depreciation expense partially offset by higher costs related to an increase in the number of sales and marketing employees.
- **General and administrative** expense decreased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 primarily due to decreases in legal costs, consulting and outside service expense, and employee-related costs.
- **Deferred stock compensation** costs decreased from the second quarter of fiscal 2003 to the second quarter of fiscal 2004 due to the reduced level of unvested stock options and restricted stock, assumed as part of our acquisitions of Cyras Systems, Inc., ONI Systems Corp. and WaveSmith Networks, Inc. As of April 30, 2004, the balance of deferred stock compensation presented as a reduction of stockholder's equity was \$4.6 million.
- **Restructuring costs** incurred during the second quarter of 2004 were related to work force reductions of approximately 68 employees and a change in estimated timing of sublease payments from our unused facilities. These actions were taken as part of our efforts to reduce our costs. We expect to incur additional restructuring costs in future periods during fiscal 2004.
- **Recovery of use tax payments** during the second quarter of fiscal 2004 was due to the resolution of a use tax audit related to the assets acquired from ONI
- **Recovery of doubtful accounts, net** during the second quarter of fiscal 2004 was related primarily to the payment of an amount due from a customer, from which payment was previously deemed doubtful due to the customer's financial condition.

Other items

The table below (in thousands, except percentage data) sets forth the changes in other items from the second quarter of fiscal 2003 to the second quarter of fiscal 2004.

	Second Quarter					
	2003	%*	2004	%*	Increase (decrease)	%**
Interest and other income, net	\$ 11,131	15.1	\$ 5,614	7.5	\$(5,517)	(49.6)
Interest expense	\$ 8,061	11.0	\$ 6,473	8.7	\$(1,588)	(19.7)
Gain (loss) on equity investments	—	—	\$ 139	0.2	\$ 139	—
Provision for income taxes	\$ 251	0.3	\$ 415	0.6	\$ 164	65.3

* - Denotes % of total revenue

** - Denotes % change from 2003 to 2004

- **Interest and other income, net** decreased from the second quarter of 2003 to the second quarter of 2004 primarily because of the impact of lower average interest rates and lower cash and invested balances.
- **Interest expense** decreased from the second quarter of 2003 to the second quarter of 2004 due to the decrease in our debt obligations between the two periods.
- **Provision for income taxes** for the second quarter of 2003 and the second quarter of 2004 was primarily attributable to foreign tax related to CIENA's foreign operations. We did not record a tax benefit for CIENA's domestic losses during either period. CIENA will continue to maintain a valuation allowance against certain deferred tax assets until sufficient evidence exists to support its reversal.

Six months ended April 30, 2003 compared to six months ended April 30, 2004

Revenue, cost of goods sold and gross profit

The table below (in thousands, except percentage data) sets forth the changes in revenue, cost of goods sold and gross profit from the first six months of fiscal 2003 to the first six months of fiscal 2004.

	Six Months Ended April 30,					
	2003	%*	2004	%*	Increase (decrease)	%**
Revenue:						
Products	\$124,620	86.5	\$117,096	83.0	\$(7,524)	(6.0)
Services	19,394	13.5	24,017	17.0	4,623	23.8
Total Revenue:	144,014	100.0	141,113	100.0	(2,901)	(2.0)
Costs:						
Products	79,983	55.6	90,849	64.4	10,866	13.6
Services	29,551	20.5	21,489	15.2	(8,062)	(27.3)
Total cost of goods sold	109,534	76.1	112,338	79.6	2,804	2.6
Gross Profit	\$ 34,480	23.9	\$ 28,775	20.4	\$(5,705)	(16.5)

* - Denotes % of total revenue

** - Denotes % change from 2003 to 2004

The table below (in thousands, except percentage data) sets forth the changes in product revenue, product cost of goods sold and product gross profit from the first six months of fiscal 2003 to the first six months of fiscal 2004.

	Six Months Ended April 30,					
	2003	%*	2004	%*	Increase (decrease)	%**
Product revenue	\$124,620	100.0	\$117,096	100.0	\$ (7,524)	(6.0)
Product cost of goods sold	79,983	64.2	90,849	77.6	10,866	13.6
Product gross profit	\$ 44,637	35.8	\$ 26,247	22.4	\$ (18,390)	(41.2)

* - Denotes % of product revenue

** - Denotes % change from 2003 to 2004

The table below (in thousands, except percentage data) sets forth the changes in service revenue, service cost of goods sold and service gross profit (loss) from the first six months of fiscal 2003 to the first six months of fiscal 2004.

	Six Months Ended April 30,					
	2003	%*	2004	%*	Increase (decrease)	%**
Service revenue	\$ 19,394	100.0	\$24,017	100.0	\$ 4,623	23.8
Service cost of goods sold	29,551	152.4	21,489	89.5	(8,062)	(27.3)
Service gross profit (loss)	\$ (10,157)	(52.4)	\$ 2,528	10.5	\$12,685	124.9

* - Denotes % of service revenue

** - Denotes % change from 2003 to 2004

The table below (in thousands, except percentage data) sets forth the changes in geographic distribution of revenues from the first six months of fiscal 2003 to the first six months of fiscal 2004.

	Six Months Ended April 30,					
	2003	%*	2004	%*	Increase (decrease)	%**
Domestic	\$ 95,073	66.0	\$ 95,316	67.5	\$ 243	0.3
International	48,941	34.0	45,797	32.5	(3,144)	(6.4)
Total	\$144,014	100.0	\$141,113	100.0	\$ (2,901)	(2.0)

* - Denotes % of total revenue

** - Denotes % change from 2003 to 2004

Historically, we have relied on a limited number of customers for a substantial portion of our revenue. During the first six months of fiscal 2003 and first six months of fiscal 2004, certain customers each accounted for at least 10% of our revenues during the respective periods as follows (in thousands, except percentage data):

	Six Months Ended April 30,			
	2003	%**	2004	%**
Company A	\$ *	—	\$27,826	19.7
Company B	*	—	14,805	10.5
Company C	26,811	18.6	*	—
Company D	19,346	13.4	*	—
Company E	17,948	12.5	*	—
Total	\$64,105	44.5	\$42,631	30.2

** - Denotes % of total revenue

* - Denotes revenues recognized less than 10% for the period.

Revenue

- **Product revenue** decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 primarily due to decreased sales of our metropolitan networking products, partially offset by increased sales from our core networking products and multiservice networking products.
- **Service revenue** increased from the first six months of fiscal 2003 to the first six months of fiscal 2004 due to increased sales of maintenance contracts.

- **International revenue** decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 primarily due to decreased sales of our metropolitan networking products partially offset by increased sales from our core networking products and sales of maintenance contracts.

Gross profit

Cost of goods sold consists of component costs, direct compensation costs, warranty and other contractual obligations, royalties, license fees, direct technical support costs, cost of excess and obsolete inventory and overhead related to manufacturing, technical support and engineering, furnishing and installation ("EF&I") operations.

- **Gross profit as a percentage of revenue** decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 largely due to the sale of lower margin products and less benefit from the sale of previously reserved excess and obsolete inventory. This was partially offset by an increase in margin on our services.
- **Gross profit on products as a percentage of product revenue** decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 largely due to lower margin product mix and less revenue from the sale of previously reserved excess and obsolete inventory.
- **Gross profit on services as a percentage of services revenue** increased from the first six months of fiscal 2003 to the first six months of fiscal 2004 largely due to increased sales of maintenance services and reduced service overhead costs.

Operating expenses

The table below (in thousands, except percentage data) sets forth the changes in operating expenses from the first six months of fiscal 2003 to the first six months of fiscal 2004.

	Six Months Ended April 30,					
	2003	%*	2004	%*	Increase (decrease)	%**
Research and development	\$105,927	73.6	\$ 93,656	66.4	\$(12,271)	(11.6)
Selling and marketing	52,268	36.3	50,543	35.8	(1,725)	(3.3)
General and administrative	22,772	15.8	13,083	9.3	(9,689)	(42.5)
Deferred stock compensation costs:						
Research and development	7,204	5.0	3,613	2.6	(3,591)	(49.8)
Sales and marketing	1,435	1.0	933	0.7	(502)	(35.0)
General and administrative	720	0.5	200	0.1	(520)	(72.2)
Amortization of intangible assets	6,975	4.8	6,791	4.8	(184)	(2.6)
Restructuring costs	2,724	1.9	8,578	6.1	5,854	214.9
Recovery of use tax payments	—	—	(1,931)	(1.4)	(1,931)	—
Recovery of doubtful accounts, net	—	—	(2,794)	(2.0)	(2,794)	—
Total operating expenses	<u>\$200,025</u>	<u>138.9</u>	<u>\$172,672</u>	<u>122.4</u>	<u>\$(27,353)</u>	<u>(13.7)</u>

* - Denotes % of total revenue

** - Denotes % change from 2003 to 2004

- **Research and development** expense decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 due to reductions in depreciation expense, facility-related costs and employee-related costs partially offset by increases in outside services, prototype parts and the \$1.7 million accelerated amortization of leasehold improvements related to the planned closing of our San Jose, California facility.
- **Selling and marketing** expense decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 due to reductions in depreciation expense and facility-related costs, partially offset by higher costs related to an increase in the number of sales and marketing employees.

- **General and administrative** expense decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 primarily due to decreases in legal costs, consulting and outside service expense, and employee-related costs.
- **Deferred stock compensation** costs decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 due to the reduced level of unvested stock options and restricted stock, assumed as part of our acquisitions of Cyras Systems, Inc., ONI Systems Corp. and WaveSmith Networks, Inc. As of April 30, 2004, the balance of deferred stock compensation presented as a reduction of stockholder's equity was \$4.6 million.
- **Restructuring costs** increased from the first six months of fiscal 2003 to the first six months of fiscal 2004 related to exiting a warehouse, work force reductions of approximately 121 employees and a change in estimated timing of sublease payments from our unused facilities. These actions were taken as part of our efforts to reduce our costs. We expect to incur additional restructuring costs in future periods during fiscal 2004.
- **Recovery of use tax payments** during the first six months of fiscal 2004 was due to the resolution of a use tax audit related to the assets acquired from ONI
- **Recovery of doubtful accounts, net** incurred during the first six months of fiscal 2004 was related primarily to the payment of an amount due from a customer, from which payment was previously deemed doubtful due to the customer's financial condition.

Other items

The table below (in thousands, except percentage data) sets forth the changes in other items from the first six months of fiscal 2003 to the first six months of fiscal 2004.

	Six Months Ended April 30,					
	2003	%*	2004	%*	Increase (decrease)	%**
Interest and other income, net	\$24,432	17.0	\$13,292	9.4	\$(11,140)	(45.6)
Interest expense	\$20,264	14.1	\$13,857	9.8	\$ (6,407)	(31.6)
Gain (loss) on equity investments	\$ (10)	(0.0)	\$ 593	0.4	\$ 603	6,030.0
Loss on extinguishment of debt	\$20,606	14.3	\$ 8,216	5.8	\$ 12,390	(60.1)
Provision for income taxes	\$ 610	0.4	\$ 839	0.6	\$ 229	37.5

* - Denotes % of total revenue

** - Denotes % change from 2003 to 2004

- **Interest and other income, net** decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 primarily because of the impact of lower average interest rates and lower cash and invested.
- **Interest expense** decreased from the first six months of fiscal 2003 to the first six months of fiscal 2004 due to the decrease in our debt obligations between the two periods.
- **Gain on equity investments, net** increased during the first six months of fiscal 2003 to the first six months of fiscal 2004 related to a cash payment of \$1.6 million received for an investment in a private company that had been previously written down to a value of \$1.0 million. The excess of \$0.6 million was recorded as a gain on equity investments.
- **Loss on extinguishment of debt** during the first six months of fiscal 2003 to the first six months of fiscal 2004 is related to the repurchase of ONI 5.00% convertible subordinated notes.
- **Provision for income taxes** for the first six months of fiscal 2003 to the first six months of fiscal 2004 was primarily attributable to foreign tax related to CIENA's foreign operations. We did not record a tax benefit for CIENA's domestic losses during either period. CIENA will continue to maintain a valuation allowance against certain deferred tax assets until sufficient evidence exists to support its reversal.

Liquidity and Capital Resources

At April 30, 2004, CIENA's principal source of liquidity was its cash and cash equivalents, and short-term and long-term investments. We had \$218.1 million in cash and cash equivalents, and \$1.2 billion in short-term and long-

term investments. Our investment portfolio consists primarily of fixed-income securities, with maturities of two years or less, diversified among industries and individual issuers. Our investments are generally liquid, investment grade securities.

CIENA's operating activities consumed \$113.4 million and \$99.2 million net cash during the first six months of fiscal 2003 and 2004, respectively. The primary reason for operating cash consumption was the net losses incurred during the periods.

Our investing activities provided net cash of \$378.8 and \$42.7 million during the first six months of fiscal 2003 and 2004, respectively. Investment activities included the net redemption of \$393.0 and \$56.4 million of short and long-term investments during the first quarters of fiscal 2003 and fiscal 2004, respectively. We expect to make additional combined capital equipment and leasehold improvement expenditures of approximately \$26.0 million during the remainder of fiscal 2004. These capital expenditures will be used to support selling and marketing, manufacturing and product development activities. We will use our cash and cash equivalents and investments to fund these purchases.

Cash used in financing activities was \$133.2 and \$35.0 million during the first six months of fiscal 2003 and 2004, respectively. The primary use of cash in financing activities during the first six months of fiscal 2003 was related to the purchase of \$154.7 million of the remaining \$202.9 million outstanding ONI convertible subordinated notes. We paid \$139.2 million for the notes and accrued fees of \$1.1 million related to the purchase. Also during the first six months of fiscal 2003, we received \$5.3 million from the exercise of stock options and \$1.6 million from the repayment of notes receivable from stockholders. During the first six months of fiscal 2004, CIENA purchased the remaining \$48.2 million of the outstanding ONI convertible subordinated notes. CIENA paid \$49.2 million for notes with a cumulative accreted book value of \$41.0 million, which resulted in a loss on early extinguishment of debt of \$8.2 million. Also during the first six months of fiscal 2004, we received \$14.2 million related to the exercise of employee options.

The following is a summary of our future minimum payments under contractual obligations as of April 30, 2004 (in thousands):

	Total	Less than one year	One to three years	Four to five years	Thereafter
Convertible notes (1)	\$ 793,500	\$25,875	\$ 51,750	\$715,875	\$ —
Operating leases	227,945	36,768	67,754	53,384	70,039
Purchase obligations (2)	26,985	26,985	—	—	—
Total	<u>\$1,048,430</u>	<u>\$89,628</u>	<u>\$119,504</u>	<u>\$769,259</u>	<u>\$70,039</u>

(1) The terms of our convertible notes with a principal value of \$690.0 million include interest at 3.75% payable on a semi-annual basis on February 1 and August 1 of each year; the notes are due February 1, 2008.

(2) Purchase commitments related to amounts we are obligated to pay to our contract manufacturers and component suppliers for inventory.

Some of our commercial commitments, including some of the future minimum payments set forth above, are secured by standby letters of credit. The following is a summary of our commercial commitments secured by standby letters of credit by commitment expiration date as of April 30, 2004 (in thousands):

	Total	Less than one year	One to three years	Four to five years	Thereafter
Standby letters of credit	<u>\$13,425</u>	<u>\$8,039</u>	<u>\$5,136</u>	<u>\$250</u>	<u>\$ —</u>

CIENA does not engage in any off-balance sheet financing arrangements. In particular, we do not have any interest in so-called limited purpose entities, which include special purpose entities (SPEs) and structured finance entities.

Based on past performance and current expectations, we believe that our cash and cash equivalents, short-term investments, and cash generated from operations will satisfy our working capital needs, capital expenditures, investment requirements, commitments, and other liquidity requirements associated with our existing operations through at least the next 12 months.

Critical Accounting Policies and Estimates

The preparation of consolidated financial statements requires CIENA to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. Those policies are described in our annual report on Form 10-K. On an on-going basis, we re-evaluate our estimates, including those related to bad debts, inventories, investments, intangible assets, goodwill, income taxes, warranty obligations, restructuring, and contingencies and litigation. CIENA bases its estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Among other things, these estimates form the basis for judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. During the first six months of fiscal 2004, re-evaluation of certain estimates led to the effects described below.

Reserve for Inventory Obsolescence

CIENA writes down its inventory for estimated obsolescence or unmarketable inventory equal to the difference between the cost of inventory and the estimated market value based on assumptions about future demand and market conditions. During the first six months of fiscal 2003, we recorded a benefit for inventory reserves of \$4.1 million primarily related to the realization of sales from previously reserved excess inventory. During the first six months of fiscal 2004, we recorded a charge of \$1.1 million primarily related to excess inventory due to a change in forecasted sales for certain products. If actual market conditions differ from those we have projected, we may be required to take additional inventory write-downs or benefits.

Restructuring

As part of its restructuring costs, CIENA provides for the estimated cost of the net lease expense for facilities that are no longer being used. The provision is equal to the minimum future lease payments offset by estimated sublease payments. Due to the continued excess supply of commercial properties in certain markets where our unused facilities are located we have reduced our estimate of the total future sublease payments we will receive. As a result, we recorded an additional restructuring cost of \$3.2 million in the first six months of fiscal 2004. As of the end of the second quarter of fiscal 2004, CIENA's accrued restructuring liability related to net lease expense and other related charges was \$56.8 million. The total minimum lease payments for these restructured facilities are \$91.0 million. These lease payments will be made over the lives of our leases, which range from seven months to fifteen years. If actual market conditions are less favorable than those we have projected, we may be required to recognize additional restructuring costs associated with these facilities.

Risk Factors

Investing in our securities involves a high degree of risk. In addition to the other information contained in this quarterly report, including the reports we incorporate by reference, you should consider the following factors before investing in our securities.

Our business could continue to be adversely affected by unfavorable and uncertain conditions in the communications industry

The last three years have seen substantial changes in the communications industry. Most of our customers and potential customers have confronted static or declining revenue. Many have experienced significant financial distress, and some have gone out of business. This has resulted in a significant change in the structure of the equipment industry, with greater concentration of purchasing power in a small number of large services providers, combined with a substantial reduction in overall demand. Together these factors have adversely affected our revenue and operating results. In addition, most of our customers have become more conservative and uncertain about their future purchases which has made managing our business difficult.

We expect the factors described above to continue to affect our business for an indeterminate period, in several significant ways:

- capital expenditures by many of our customers may be flat or reduced;
- we will continue to have only limited ability to forecast the volume and product mix of our sales;
- managing our expenditures will be difficult in light of the uncertainties surrounding our business;
- increased competition resulting from reduced demand will put substantial downward pressures on the pricing of our products, tending to reduce our profit margins;
- increased competition will enable customers to insist on more favorable terms and conditions for sales, including extended payment terms or other financing assistance, as a condition of procuring their business; and
- the bankruptcies or weakened financial condition of some of our customers may require us to write off amounts due to us from prior sales.

The result of any one or a combination of these factors could lead to further reduced revenue and increased operating losses.

We may not be able to achieve the benefits we anticipate from our recently completed mergers with Catena and Internet Photonics

On May 3, 2004, we completed mergers with Catena and Internet Photonics. The process of integrating Catena and Internet Photonics into CIENA will be complex and exposes us to a variety of risks, including the possible loss of key personnel and failure to integrate their product lines. It is possible, therefore, that we will not achieve all of the benefits we anticipate from these mergers.

In addition to these operational risks, the mergers create additional risks that could have a material adverse effect on our business, results of operations and financial condition. For example, the mergers will result in CIENA succeeding to all known and unknown liabilities of Catena and Internet Photonics. These liabilities may include liabilities to stockholders, customers, suppliers or employees, as well as liabilities related to intellectual property disputes.

Our strategy involves pursuing strategic acquisitions and investments that may not be successful

Our business strategy includes acquiring or making strategic investments in other companies to expand our portfolio of products and services and to acquire or accelerate the development of new or improved products. To do so, we may use cash, issue equity that would dilute our current stockholders' ownership, incur debt or assume indebtedness. In addition, we may incur significant amortization expenses related to intangible assets. Strategic investments and acquisitions involve numerous risks, including:

- potential large cash expenditures;
- difficulties in integrating the operations, technologies and products of the acquired companies;
- diversion of management’s attention;
- potential difficulties in completing projects of the acquired company;
- the potential loss of key employees of the acquired company;
- dependence on unfamiliar or relatively small supply partners; and
- exposure to unanticipated liabilities.

In addition, acquisitions and strategic investments may involve risks of entering markets in which we have little or no prior experience and competitors have stronger market positions.

We face intense competition that could hurt our sales and profitability

The market for networking solutions is extremely competitive. Competition in this market is based on varying combinations of price, functionality, manufacturing capability, installation, services, scalability and the ability of the system solutions to meet customers’ immediate and future network requirements. A small number of very large companies, including Alcatel, Cisco, Fujitsu, Hitachi, Huawei, Lucent, Marconi, NEC, Nortel, Siemens, and Tellabs have historically dominated the telecommunications equipment industry. They all have greater financial, marketing, manufacturing and intellectual property resources than CIENA. They also often have existing relationships with our customers and potential customers. We also compete with a number of smaller companies that provide significant competition.

Because we sell systems that compete directly with product offerings of these companies, and in some cases displace or replace their equipment, we represent a competitive threat. The decline in the market for communications networking products has resulted in even greater competitive pressures. We expect that the aggressive tactics we have confronted on the part of many of these competitors will continue, and perhaps become more severe. These tactics include:

- intense price competition in sales of new equipment, resulting in lower profit margins;
- discounting resulting from sales of used equipment or inventory that a competitor has written down or written off;
- early announcements of competing products and other marketing efforts;
- “one-stop shopping” options;
- customer financing assistance;
- marketing and advertising assistance; and
- intellectual property disputes.

Tactics such as those described above can be particularly effective in a concentrated customer base like ours. Our customers are under increasing competitive pressure to deliver their services at the lowest possible cost. This pressure may result in the pricing of communications networking systems becoming a more important factor in customer decisions. This may favor larger competitors that can spread the effect of price discounts across a larger array of products and services and across a larger customer base than ours. If we are unable to offset any reductions in the average sales price for our products by a reduction in the cost of our products, our gross profit margins will be adversely affected. Our inability to compete successfully against our competitors and maintain our gross profit margins would harm our business, financial condition and results of operations.

New competitors continue to emerge to compete with our products. They often base their products on the latest available technology. They may achieve commercial availability of their products more quickly due to the narrower focus of their efforts. Our inability to compete successfully against these companies would harm our business, financial condition and results of operations.

Our future success will depend on our ability to sell our products to our existing incumbent carrier customers and add additional incumbent carriers as new customers

Historically, a large percentage of our sales were made to emerging carriers, many of which no longer exist or have experienced severe financial difficulties and have reduced their equipment purchases. We expect that our sales to emerging carriers will continue to be at a lower level than they were at one time. Consequently, our future success will depend, to a large extent, on our ability to increase our sales to large domestic and international incumbent carriers.

We have limited experience in selling to incumbent carriers relative to many of our larger competitors. Many of them have long-standing relationships with incumbent carriers, which present additional challenges to the sales process. The sales cycle for these larger customers is often substantially longer than for sales to smaller customers; and they often require extensive testing of products before deciding to purchase them. In addition, even after a product has been selected for an incumbent carrier's network and a contract has been signed, we are typically unable to recognize revenue until final network certification tests are completed satisfactorily, a process that is often lengthy and difficult. Complying with these certification requirements may involve unanticipated delays that could adversely affect our ability to sell to larger carriers or the timing of recognition of revenue. If we do not succeed in increasing our sales to our existing incumbent carrier customers and adding additional incumbent carriers as customers, our business will suffer.

We may not be successful in selling our products into new markets and developing and managing new sales channels.

We believe that, in order to succeed, we must enter new markets and build a larger and more diverse customer base. Therefore, we are beginning to sell some of our products to large enterprises, cable operators, independent operating companies and federal, state and local governments. To succeed in these markets, we believe we must develop and manage new sales channels through resellers, distributors and systems integrators. Since we have only limited experience in developing and managing such channels, it is uncertain to what extent we will be successful.

Sales to federal, state and local governments often require compliance with complex procurement rules and regulations with which we have little experience. We may be unable to increase our sales to government contractors if we determine that we cannot comply with applicable rules and regulations. In addition, failure to comply with rules and regulations for existing contracts could result in civil, criminal or administrative proceedings involving fines and suspension or debarment from federal government contracts.

Failure to succeed in these new markets or developing and managing new sales channels will adversely affect our ability to achieve our planned levels of revenue, which would adversely affect our profitability.

Product performance problems could limit our sales prospects

The development and production of new products with high technology content often involves problems with software, components and manufacturing methods. If significant reliability, quality or network monitoring problems develop, including those due to defects in software or faulty components, a number of negative effects on our business could result, including:

- costs associated with fixing software or hardware defects;
- high service and warranty expenses;
- payment of liquidated damages for performance failures;
- high inventory obsolescence expense;

- high levels of product returns;
- delays in collecting accounts receivable;
- reduced orders from existing customers; and
- declining interest from potential customers.

Although we maintain accruals for product warranties, actual costs could exceed these amounts. From time to time, there will be interruptions or delays in the activation of our products at a customer's site. These interruptions or delays may result from product performance problems or from issues with installation and activation, some of which are outside our control. If we experience significant interruptions or delays that we cannot promptly resolve, confidence in our products could be undermined, which could cause us to lose customers or otherwise harm our business.

The steps that we are taking to restructure and reduce the size of our operations could disrupt our business.

Since November 2001, we have taken several steps, including reductions in force and dispositions of assets to reduce the size of our operations to better match the reduced sales of our products and services. During the next six to twelve months we expect to take steps to reduce our operating expenses even further.

This could cause additional disruption in our business, could result in lost revenue and will require us to incur expenses. For example we have restructured our sales force and other customer facing operations. If we do not manage this program effectively, our relationships with our customers could be harmed. In addition, on April 20, 2004, we announced our intention to close our San Jose, California facility by September 30, 2004. As a result, we will be required to transfer ongoing development work for certain CIENA product lines to other CIENA facilities. If we cannot manage this transition effectively, our development efforts could be disrupted, which could harm our business.

We must continue to make substantial investments in new technology that may not produce anticipated results.

In order to be successful, we must balance our initiatives to reduce our operating costs against the need to keep pace with technological advances. The market for communications networking solutions is characterized by rapid technological change, frequent introductions of new products, and recurring changes in customer requirements. To succeed in this market, we must continue to develop new products and new features for existing products. Doing so is difficult and costly, and there is no assurance that we will be successful. In addition, we must be able to identify and gain access to promising new technologies.

We are investing substantial resources in developing and delivering products that reside toward the edge of large communications networks. As a result, we have undertaken a number of efforts to expand our addressable market and the range of solutions we are able to offer both current and potential customers. We are implementing this strategy through a combination of internal development, acquisitions of smaller companies, and strategic alliances with other vendors. We are continuing to make the necessary investments to maintain our technology leadership in our core networking products. If we do not execute this strategy effectively, we could lose our existing market share for core networking products to our competitors, and fail to succeed in the new markets that we are entering, which would likely have an adverse effect on our financial condition.

Selling our products requires substantial investments of our resources that may not produce anticipated benefits

In order to sell our products to both potential and existing customers, we must invest in financial, engineering, manufacturing and logistics support resources, even though we are unsure of the volume, duration or timing of customer purchases. Our customers are generally technically sophisticated and demanding. Consequently, we may incur substantial expenses and devote resources to potential relationships that never materialize or fulfill our expectations, in which event our investment may largely be lost.

Our results can fluctuate unpredictably

Purchases by many of our potential and existing customers can be unpredictable, sporadic and subject to unanticipated changes. Our results, in turn, can fluctuate unpredictably. A decision to purchase our products requires a significant investment and commitment of resources by our customers. As a result, the sales cycles for many of our products are long, often as much as a year or two between initial contact with a potential customer and the recognition of revenue from sales to the customer. Further, purchases by our existing customers tend to be large and sporadic, depending upon their need to build a customer base, their plans for expanding their networks, the availability of financing, and the effects of regulatory and business conditions in the countries in which they operate. Current economic and market conditions have made it even more difficult to make reliable estimates of future revenue.

Fluctuations in our revenue can lead to even greater fluctuations in our operating results. Our budgeted expense levels depend in part on our expectations of long-term future revenue. Any substantial adjustment to expenses to account for lower levels of revenue is difficult and takes time. Consequently, if our revenue does decline, our levels of inventory, operating expenses and general overhead would be high relative to our revenue, resulting in additional operating losses.

Other factors can also contribute to fluctuations in our revenue and operating results, including:

- variations and the mix between higher and lower margin products and services;
- fluctuations in demand for our products;
- changes in our pricing policies or the pricing policies of our competitors;
- the timing and size of orders from customers;
- changes in customers' requirements, including changes or cancellations to orders from customers;
- the introduction of new products by us or our competitors;
- changes in the price or availability of components for our products;
- readiness of customer sites for installation;
- satisfaction of contractual customer acceptance criteria and related revenue recognition issues;
- manufacturing and shipment delays and deferrals;
- increased service, installation, warranty or repair costs;
- financial effects of future restructurings;
- the timing and amount of employer payroll tax to be paid on employee gains on stock options exercised; and
- changes in general economic conditions as well as those specific to the telecommunications industry.

We may not be successful in enhancing and upgrading our products

Since our products are based on complex technology, we can experience unanticipated delays in developing, improving, manufacturing or deploying them. Modifying our products to enable customers to integrate them into a new type of network architecture entails similar development risks.

Certain enhancements to our products are in the development phase and are not yet ready for commercial manufacturing or deployment. The maturing process from laboratory prototype to customer trials, and subsequently to general availability, involves a number of steps, including:

- completion of product development;
- the qualification and multiple sourcing of critical components;

- validation of manufacturing methods and processes;
- extensive quality assurance and reliability testing, and staffing of testing infrastructure;
- validation of software; and
- establishment of systems integration and systems test validation requirements.

Each of these steps, in turn, presents serious risks of failure, rework or delay, any one of which could decrease the speed and scope of product introduction and marketplace acceptance of the product. Specialized application specific integrated circuits (“ASICs”) and intensive software testing and validation are key to the timely introduction of enhancements to several of our products, and schedule delays are common in the final validation phase, as well as in the manufacture of specialized ASICs. In addition, unexpected intellectual property disputes, failure of critical design elements, and a host of other execution risks may delay or even prevent the introduction of these products. If we do not develop and successfully introduce products in a timely manner, our business, financial condition and results of operations would be harmed.

We depend on a limited number of suppliers, and for some items we do not have a substitute supplier

We depend on a limited number of suppliers for components of our products, as well as for equipment used to manufacture and test our products. Our products include several high-performance components for which reliable, high-volume suppliers are particularly limited. Furthermore, some key optical and electronic components we use in our products are currently available only from sole or limited sources, and in some cases, that source also is a competitor. Any delay in component availability for any of our products could result in delays in deployment of these products and in our ability to recognize revenue. These delays could also harm our customer relationships and our results of operations.

Furthermore, the market for optical components has recently been consolidated resulting in reduced competition, which could lead to higher prices. In addition, the loss of a source of supply of key components could require us to re-engineer products that use those components, which would increase our costs.

On occasion, we have experienced delays in receipt of components and have received components that do not perform according to their specifications. Any future difficulty in obtaining sufficient and timely delivery of components could result in delays or reductions in product shipments, which, in turn, could harm our business.

Any delays in component availability for any of our products or test equipment could result in delays in deployment of these products and in our ability to recognize revenue from them. These delays could also harm our customer relationships and our results of operations.

We rely on contract manufacturers for our products

We rely on a small number of contract manufacturers to perform the majority of the manufacturing operations for our products. The qualification of these manufacturers is an expensive and time-consuming process, and these contract manufacturers build modules for other companies, including our competitors. In addition, we do not have contracts in place with some of these manufacturers. We may not be able to effectively manage our relationships with our manufacturers and we cannot be certain that they will be able to fill our orders in a timely manner. If we underestimate our future product requirements, the contract manufacturers may not have enough product to meet our customer requirements, and this could result in delays in the shipment of our products which could harm our business. If we overestimate product requirements, we may have to write off excess inventory.

We are constantly reviewing our contract manufacturing capability to ensure that our production requirements are met in terms of cost, capacity and quality. Periodically, we may decide to transfer the manufacturing of a product from one contract manufacturer to another, to better meet our production needs. It is possible that we may not effectively manage this transition or the new contract manufacturer may not perform as well as expected and, as a result, we may not be able to fill orders in a timely manner which could harm our business.

We rely on service delivery partners

We rely on a number of service delivery partners, both domestic and international, to complement CIENA's global service and support resources. The certification of these partners incurs costs and is time-consuming, and these partners service products for other companies, including our competitors. We may not be able to effectively manage our relationships with our partners and we cannot be certain that they will be able to deliver our services in the manner or time required. If our service partners are unsuccessful in delivering services:

- we may compromise the relevant services revenue; and
- we may suffer delays in recognizing product revenues in cases where revenue recognition is dependent upon product installation, testing and acceptance.

Our ability to compete could be harmed if we are unable to protect and enforce our intellectual property rights or if we infringe on intellectual property rights of others

We share our proprietary information and intellectual property, including our source code, with other parties as necessary to meet the needs of our business. We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. We enter into non-disclosure and proprietary rights agreements with our employees and consultants, license agreements with our corporate partners, and we control access to and distribution of our products, documentation and other proprietary information. Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy or otherwise obtain and use our products or technology. This is likely to become an increasing issue as we expand our operations and sales into countries that provide a lower level of protection for intellectual property.

Monitoring unauthorized use of our products is difficult, and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology. If competitors are able to use our technology, our ability to compete effectively could be harmed. We have filed a patent infringement lawsuit to enforce our intellectual property right, and may become involved with additional disputes in the future. Such lawsuits can be costly and may significantly divert the time and attention of our personnel.

We have been subject to several claims of patent infringement, which in some cases have required us to pay the patent holders substantial sums or enter into license agreements requiring ongoing royalty payments. The frequency of assertions of patent infringement in the field of telecommunications networking solutions is increasing as patent holders seek alternative sources of revenue. There is a possibility that we may again find ourselves required to take patent licenses or to redesign or stop selling products that allegedly infringe patents belonging to others. If we are sued for infringement and are unsuccessful in defending the suit, we could be subject to significant damages, and our business and customer relationships could be adversely affected.

We face risks associated with our international operations

We market, sell and service our products globally. We have established offices around the world, including in North America, Europe, Latin America and the Asia Pacific region. We will continue to expand our international operations and enter new international markets. This expansion will require significant management attention and financial resources to develop successfully direct and indirect international sales and support channels. In some countries, our success will depend in part on our ability to form relationships with local partners. We cannot be sure that we will be able to identify appropriate partners or reach mutually satisfactory arrangements with them for sales of our products. There is a risk that we may sometimes choose the wrong partner. For these reasons, we may not be able to maintain or increase international market demand for our products.

International operations are subject to inherent risks, and our future results could be adversely affected by a variety of uncontrollable and changing factors. These include:

- greater difficulty in collecting accounts receivable and longer collection periods;
- difficulties and costs of staffing and managing foreign operations;
- the impact of recessions in economies outside the United States;

- unexpected changes in regulatory requirements;
- certification requirements;
- reduced protection for intellectual property rights in some countries;
- potentially adverse tax consequences;
- political and economic instability;
- trade protection measures and other regulatory requirements;
- effects of changes in currency exchange rates;
- service provider and government spending patterns; and
- natural disasters and epidemics.

Such factors could have a material adverse impact on our operating results and financial condition.

We face risks in reselling the products of other companies

We have recently entered into agreements that permit us to distribute the products of other companies and may enter into other agreements in the future. To the extent we succeed in reselling the products of these companies, we may be required by customers to assume warranty and service obligations. While these suppliers have agreed to support us with respect to those obligations, they are relatively small companies with limited financial resources. If they should be unable, for any reason, to provide the required support, we may have to expend our own resources on doing so. This risk is amplified by the fact that the equipment has been designed and manufactured by others, and is thus subject to warranty claims whose magnitude we are currently unable to evaluate fully.

If we are unable to retain and attract qualified personnel, we may be unable to effectively manage our business

If we are unable to retain and motivate our existing employees and attract qualified personnel to fill key positions, we may be unable to effectively develop our existing products, make timely product introductions and increase sales. Since we generally do not have employment contracts with our employees, we must rely upon providing competitive compensation packages and a dynamic work environment to retain and motivate employees. In response to the decline in our revenue and weakness in the telecommunications equipment market, we have not increased salaries for most of our employees since the end of fiscal 2001. In addition, we have paid our employees significantly reduced or no bonuses under our bonus program since the end of fiscal 2001. Since our compensation packages include equity-based incentives, pressure on our stock price could affect our ability to continue to offer competitive compensation packages to our employees. In addition to these compensation issues, we must continue to motivate employees to execute our strategies and achieve our goals, which may be difficult due to morale challenges posed by the workforce reductions and uncertainty in our industry.

If we lose members of our management team or other key personnel, it may be difficult to replace them. Competition for highly skilled technical and other personnel can be intense. As a result, we may not be successful in identifying, recruiting and hiring qualified engineers and other key personnel.

We are exposed to the credit risk of our customers

Industry and economic conditions have weakened the financial position of some of our customers. To sell to some of these customers, we may be required to take risks of uncollectible accounts. While we monitor these situations carefully and attempt to take appropriate measures to protect ourselves, it is possible that we may have to write down or write off doubtful accounts. Such write-downs or write-offs, if large, could have a material adverse effect on our operating results and financial condition.

Our stock price is volatile

Our common stock price has experienced substantial volatility in the past, and is likely to remain volatile in the future. Volatility can arise as a result of divergence between our actual or anticipated financial results and published expectations of analysts, and announcements that we, our competitors, or our customers may make.

Divergence between our actual results and our anticipated results, analyst estimates and public announcements by us, our competitors, or by customers will occur from time to time in the future, with resulting stock price volatility, irrespective of our overall year-to-year performance or long-term prospects. As long as we continue to depend on a limited customer base, and particularly when a substantial majority of their purchases consist of newly introduced products, there is substantial chance that our quarterly results will vary widely.

Forward-looking statements

Some of the statements contained, or incorporated by reference, in this quarterly report discuss future expectations, contain projections of results of operations or financial condition or state other “forward-looking” information. Those statements are subject to known and unknown risks, uncertainties and other factors that could cause the actual results to differ materially from those contemplated by the statements. The “forward-looking” information is based on various factors and was derived using numerous assumptions. In some cases, you can identify these so-called “forward-looking statements” by words like “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential” or “continue” or the negative of those words and other comparable words. You should be aware that those statements only reflect our predictions. Actual events or results may differ substantially. Important factors that could cause our actual results to be materially different from the forward-looking statements are disclosed throughout this report, particularly under the heading “Risk Factors” above. We do not undertake a duty to update any of our forward-looking statements.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

The following discussion about the Company’s market risk disclosures involves forward-looking statements. Actual results could differ materially from those projected in the forward-looking statements. The Company is exposed to market risk related to changes in interest rates and foreign currency exchange rates. The Company does not use derivative financial instruments for speculative or trading purposes.

Interest Rate Sensitivity. CIENA maintains a short-term and long-term investment portfolio. These available-for-sale securities are subject to interest rate risk and will fall in value if market interest rates increase. If market interest rates were to increase immediately and uniformly by 10% from levels at April 30, 2004, the fair value of the portfolio would decline by approximately \$89.1 million.

Foreign Currency Exchange Risk. As a global concern, CIENA faces exposure to adverse movements in foreign currency exchange rates. These exposures may change over time as business practices evolve and if our exposure increases, adverse movement in foreign currency exchange rates could have a material adverse impact on CIENA’s financial results. Historically CIENA’s primary exposures have been related to non-dollar denominated operating expenses in Europe and Asia where CIENA sells primarily in U.S. dollars. CIENA is prepared to hedge against fluctuations in foreign currency if this exposure becomes material. As of April 30, 2004, the assets and liabilities of CIENA related to non-dollar denominated currencies were not material. Therefore, we do not expect an increase or decrease of 10% in the foreign exchange rate would have a material impact on CIENA’s financial position.

Item 4. Controls and Procedures

The Chief Executive Officer and Chief Financial Officer of CIENA have evaluated the effectiveness of our disclosure controls and procedures and have concluded that, as of the end of the period covered by this report, they were effective.

There was no change in CIENA’s internal control over financial reporting during CIENA’s last fiscal quarter that materially affected, or is reasonably likely to materially affect, CIENA’s internal control over financial reporting.

PART II. - OTHER INFORMATION

Item 1. Legal Proceedings

On October 3, 2000, Stanford University and Litton Systems filed a complaint in the United States District Court for the Central District of California alleging that optical fiber amplifiers incorporated into CIENA's products infringe U.S. Patent No. 4,859,016 (the "'016 Patent"). The complaint seeks injunctive relief, royalties and damages. We believe that we have valid defenses to the lawsuit and intend to defend it vigorously. On October 10, 2003, the court stayed the case pending final resolution of matters before the U.S. Patent and Trademark Office (the "PTO"), including a request for and disposition of a reexamination of the '016 Patent. On October 16, 2003, the PTO granted reexamination of the '016 Patent, thus resulting in a continuation of the stay of the case.

On July 19, 2000, CIENA and CIENA Properties, Inc., a wholly owned subsidiary of CIENA, filed a complaint in the United States District Court for the District of Delaware requesting damages and injunctive relief against Corvis Corporation ("Corvis"). The suit charged Corvis with infringing four patents relating to CIENA's optical networking communication systems and technology. A jury trial to determine whether Corvis is infringing these patents commenced on February 10, 2003. On February 24, 2003, the jury decided that Corvis was infringing one of the patents and not infringing two others. The jury was deadlocked with respect to infringement on the fourth patent. This trial was immediately followed by a trial on Corvis' affirmative defenses based on the validity of two of the patents. On February 28, 2003, the jury in this trial determined that the patents were valid. In April 2003, following a third trial, another jury decided that Corvis had infringed the fourth patent on which the previous jury had deadlocked. Based on these favorable verdicts collectively holding that Corvis is infringing two valid CIENA patents, CIENA has moved for an injunction to prohibit the sale, manufacture or use by Corvis of the infringing products. The court has not yet ruled on this motion.

As a result of the merger with ONI, we became a defendant in a securities class action lawsuit. Beginning in August 2001, a number of substantially identical class action complaints alleging violations of the federal securities laws were filed in the United States District Court for the Southern District of New York. These complaints name ONI, Hugh C. Martin, ONI's former chairman, president and chief executive officer; Chris A. Davis, ONI's former executive vice president, chief financial officer and administrative officer; and certain underwriters of ONI's initial public offering as defendants. The complaints were consolidated into a single action, and a consolidated amended complaint was filed on April 24, 2002. The amended complaint alleges, among other things, that the underwriter defendants violated the securities laws by failing to disclose alleged compensation arrangements (such as undisclosed commissions or stock stabilization practices) in the initial public offering's registration statement and by engaging in manipulative practices to artificially inflate the price of ONI's common stock after the initial public offering. The amended complaint also alleges that ONI and the named former officers violated the securities laws on the basis of an alleged failure to disclose the underwriters' alleged compensation arrangements and manipulative practices. No specific amount of damages has been claimed. Similar complaints have been filed against more than 300 other issuers that have had initial public offerings since 1998, and all of these actions have been included in a single coordinated proceeding. Mr. Martin and Ms. Davis have been dismissed from the action without prejudice pursuant to a tolling agreement. In July 2002, ONI and other issuers in the consolidated cases filed motions to dismiss the amended complaint for failure to state a claim, which was denied as to ONI on February 19, 2003. CIENA has participated, together with the other issuer defendants in these cases, in mediated settlement negotiations that have led to a preliminary agreement among the plaintiffs, the issuer defendants and their insurers. The settlement, which is subject to court approval, would result in the dismissal of the plaintiffs' cases against the issuers. CIENA has agreed in principle to the terms of this settlement. Draft settlement documents were circulated for final review in March 2004.

As a result of the merger with ONI, we also became a defendant in two substantially identical purported class actions on behalf of ONI security holders originally brought against ONI and members of its board of directors. The complaints allege that the director defendants breached their fiduciary duties to ONI in approving the merger with CIENA and seek declaratory, injunctive and other relief permitted by equity. The plaintiffs failed to obtain an injunction against completion of the merger. The first of these cases was filed on February 20, 2002, in the Superior Court of the State of California, County of San Mateo, and is captioned *K.W. Sams, On Behalf of Himself and All Others Similarly Situated v. ONI Systems Corporation, et al.* The second case was brought on March 19, 2002, in the Superior Court of the State of California, County of Santa Clara, and is captioned *Steven Myeary, On Behalf of Himself and All Others Similarly Situated v. ONI Systems Corporation.* On April 14, 2003, the plaintiffs in these cases filed a consolidated amended complaint and named four additional defendants: CIENA Corporation, James F. Jordan, Kleiner Perkins Caufield & Byers and Mohr Davidow Ventures. CIENA and the other defendants subsequently filed a

demurrer and served a motion for sanctions on plaintiffs based on factual inaccuracies in the consolidated amended complaint. In response, the plaintiffs filed a corrected consolidated amended complaint, the demurrer to which was sustained by the court in April 2004 with leave to amend. We believe that these lawsuits are without merit and will continue to defend them vigorously.

Item 2. Changes in Securities and Use of Proceeds

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Submission of matters to a Vote of Security Holders

The annual meeting of our stockholders was held on March 10, 2004. At the annual meeting, our stockholders voted on the following matters:

	Votes For	Votes Withheld
Election of three Class I Directors		
Patrick H. Nettles, Ph.D.	413,930,763	7,673,935
John R. Dillon	403,777,764	17,826,934
Lawton W. Fitt	406,552,937	15,051,761

In addition, the following directors continue to hold office after that meeting: Stephen P. Bradley, Ph.D., Harvey B. Cash, Don H. Davis, Jr., Judith M. O'Brien, Gerald H. Taylor and Gary B. Smith.

Item 5. Other Information

Nicholas S. Jeffrey has resigned from his position as Senior Vice President, World Wide Sales effective June 11, 2004 and is being replaced by James F. Collier.

Item 6. Exhibits and Reports on Form 8-K

(a)	Exhibit	Description
	10.38	Catena Networks, Inc. 1998 Equity Incentive Plan
	10.39	Internet Photonics, Inc. Amended and Restated 2000 Corporate Stock Option Plan (including Addendums thereto)
	31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934 as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
	31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934 as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
	32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
	32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350 as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

(b) Reports on Form 8-K:

- Form 8-K (Item 5 and Item 7 reported) filed April 20, 2004
- Form 8-K (Item 5 and Item 7 reported) filed May 3, 2004
- Form 8-K (Item 2 and Item 7 reported) filed May 12, 2004
- Form 8-K (Item 12 reported) filed May 20, 2004*

* Information furnished in this Form 8-K is not deemed to be filed herewith or incorporated by reference into any filing.

SIGNATURES

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

CIENA CORPORATION

Date: May 20, 2004

By: /s/ Gary B. Smith
Gary B. Smith
President, Chief Executive Officer
and Director
(Duly Authorized Officer)

Date: May 20, 2004

By: /s/ Joseph R. Chinnici
Joseph R. Chinnici
Senior Vice President, Finance and
Chief Financial Officer
(Principal Financial Officer)

CATENA NETWORKS, INC.

1998 EQUITY INCENTIVE PLAN

Adopted December 16, 1998

Amended November 1, 1999, December 9, 1999, December 5, 2000, December 13, 2001, January 16, 2003
and July 23, 2003Approved By Stockholders February 2, 1999, December 9, 1999, December 5, 2000, January 17, 2002 and
August 7, 2003

Termination Date: December 15, 2008

1. PURPOSES.

- (a) **Eligible Stock Award Recipients.** The persons eligible to receive Stock Awards are the Employees, Directors and Consultants of the Company and its Affiliates.
- (b) **Available Stock Awards.** The purpose of the Plan is to provide a means by which eligible recipients of Stock Awards may be given an opportunity to benefit from increases in value of the Common Stock through the granting of the following Stock Awards: (1) Incentive Stock Options, (2) Nonstatutory Stock Options, (3) stock bonuses and (4) rights to acquire restricted stock.
- (c) **General Purpose.** The Company, by means of the Plan, seeks to retain the services of the group of persons eligible to receive Stock Awards, to secure and retain the services of new members of this group and to provide incentives for such persons to exert maximum efforts for the success of the Company and its Affiliates.

2. Definitions.

- (a) **"Affiliate"** means any parent corporation or subsidiary corporation of the Company, whether now or hereafter existing, as those terms are defined in Sections 424(e) and (f), respectively, of the Code.
 - (b) **"Board"** means the Board of Directors of the Company.
 - (c) **"Code"** means the Internal Revenue Code of 1986, as amended.
 - (d) **"Committee"** means a Committee appointed by the Board in accordance with subsection 3(c).
 - (e) **"Common Stock"** means the common stock of the Company.
 - (f) **"Company"** means Catena Networks, Inc., a Delaware corporation.
 - (g) **"Consultant"** means any person, including an advisor, (1) engaged by the Company or an Affiliate to render consulting or advisory services and who is compensated for such services or (2) who is a member of the Board of Directors of an Affiliate. However, the term "Consultant" shall not include either Directors of the Company who are not compensated by the Company
-

for their services as Directors or Directors of the Company who are merely paid a director's fee by the Company for their services as Directors.

- (h) **“Continuous Service”** means that the Participant's service with the Company or an Affiliate, whether as an Employee, Director or Consultant, is not interrupted or terminated. The Participant's Continuous Service shall not be deemed to have terminated merely because of a change in the capacity in which the Participant renders service to the Company or an Affiliate as an Employee, Consultant or Director or a change in the entity for which the Participant renders such service, provided that there is no interruption or termination of the Participant's Continuous Service. For example, a change in status from an Employee of the Company to a Consultant of an Affiliate or a Director of the Company will not constitute an interruption of Continuous Service. The Board or the chief executive officer of the Company, in that party's sole discretion, may determine whether Continuous Service shall be considered interrupted in the case of any leave of absence approved by that party, including sick leave, military leave or any other personal leave.
- (i) **“Covered Employee”** means the chief executive officer and the four (4) other highest compensated officers of the Company for whom total compensation is required to be reported to stockholders under the Exchange Act, as determined for purposes of Section 162(m) of the Code.
- (j) **“Director”** means a member of the Board of Directors of the Company.
- (k) **“Disability”** means (1) before the Listing Date, the inability of a person, in the opinion of a qualified physician acceptable to the Company, to perform the major duties of that person's position with the Company or an Affiliate of the Company because of the sickness or injury of the person and (2) after the Listing Date, the permanent and total disability of a person within the meaning of Section 22(e)(3) of the Code.
- (l) **“Employee”** means any person employed by the Company or an Affiliate. Mere service as a Director or payment of a director's fee by the Company or an Affiliate shall not be sufficient to constitute “employment” by the Company or an Affiliate.
- (m) **“Exchange Act”** means the Securities Exchange Act of 1934, as amended.
- (n) **“Fair Market Value”** means, as of any date, the value of the Common Stock determined as follows:
 - (i) If the Common Stock is listed on any established stock exchange or traded on the Nasdaq National Market or the Nasdaq SmallCap Market, the Fair Market Value of a share of Common Stock shall be the closing sales price for such stock (or the closing bid, if no sales were reported) as quoted on such exchange or market (or the exchange or market with the greatest volume of trading in the Common Stock) on the last market trading day prior to the day of determination, as reported in *The Wall Street Journal* or such other source as the Board deems reliable.
 - (ii) In the absence of such markets for the Common Stock, the Fair Market Value shall be determined in good faith by the Board.

- (iii) Prior to the Listing Date, the value of the Common Stock shall be determined in a manner consistent with Section 260.140.50 of Title 10 of the California Code of Regulations.
- (o) **“Incentive Stock Option”** means an Option intended to qualify as an incentive stock option within the meaning of Section 422 of the Code and the regulations promulgated thereunder.
- (p) **“Listing Date”** means the first date upon which any security of the Company is listed (or approved for listing) upon notice of issuance on any securities exchange or designated (or approved for designation) upon notice of issuance as a national market security on an interdealer quotation system if such securities exchange or interdealer quotation system has been certified in accordance with the provisions of Section 25100(o) of the California Corporate Securities Law of 1968.
- (q) **“Non-Employee Director”** means a Director of the Company who either (1) is not a current Employee or Officer of the Company or its parent or a subsidiary, does not receive compensation (directly or indirectly) from the Company or its parent or a subsidiary for services rendered as a consultant or in any capacity other than as a Director (except for an amount as to which disclosure would not be required under Item 404(a) of Regulation S-K promulgated pursuant to the Securities Act (“Regulation S-K”)), does not possess an interest in any other transaction as to which disclosure would be required under Item 404(a) of Regulation S-K and is not engaged in a business relationship as to which disclosure would be required under Item 404(b) of Regulation S-K; or (2) is otherwise considered a “non-employee director” for purposes of Rule 16b-3.
- (r) **“Nonstatutory Stock Option”** means an Option not intended to qualify as an Incentive Stock Option.
- (s) **“Officer”** means (1) before the Listing Date, any person designated by the Company as an officer and (2) on and after the Listing Date, a person who is an officer of the Company within the meaning of Section 16 of the Exchange Act and the rules and regulations promulgated thereunder.
- (t) **“Option”** means an Incentive Stock Option or a Nonstatutory Stock Option granted pursuant to the Plan.
- (u) **“Option Agreement”** means a written agreement between the Company and an Optionholder evidencing the terms and conditions of an individual Option grant. Each Option Agreement shall be subject to the terms and conditions of the Plan.
- (v) **“Optionholder”** means a person to whom an Option is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Option.
- (w) **“Outside Director”** means a Director of the Company who either (1) is not a current employee of the Company or an “affiliated corporation” (within the meaning of Treasury Regulations promulgated under Section 162(m) of the Code), is not a former employee of the Company or an “affiliated corporation” receiving compensation for prior services (other than benefits under a tax qualified pension plan), was not an officer of the Company or an “affiliated corporation” at any time and is not currently receiving direct or indirect remuneration from the Company or

an “affiliated corporation” for services in any capacity other than as a Director or (2) is otherwise considered an “outside director” for purposes of Section 162(m) of the Code.

- (x) **“Participant”** means a person to whom a Stock Award is granted pursuant to the Plan or, if applicable, such other person who holds an outstanding Stock Award.
- (y) **“Plan”** means this Catena Networks, Inc. 1998 Equity Incentive Plan.
- (z) **“Rule 16b-3”** means Rule 16b-3 promulgated under the Exchange Act or any successor to Rule 16b-3, as in effect from time to time.
- (aa) **“Securities Act”** means the Securities Act of 1933, as amended.
- (bb) **“Stock Award”** means any right granted under the Plan, including an Option, a stock bonus and a right to acquire restricted stock.
- (cc) **“Stock Award Agreement”** means a written agreement between the Company and a holder of a Stock Award evidencing the terms and conditions of an individual Stock Award grant. Each Stock Award Agreement shall be subject to the terms and conditions of the Plan.
- (dd) **“Ten Percent Stockholder”** means a person who owns (or is deemed to own pursuant to Section 424(d) of the Code) stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or of any of its Affiliates.

3. Administration.

- (a) **Administration by Board.** The Board shall administer the Plan unless and until the Board delegates administration to a Committee, as provided in subsection 3(c).
- (b) **Powers of Board.** The Board shall have the power, subject to, and within the limitations of, the express provisions of the Plan:
 - (i) To determine from time to time which of the persons eligible under the Plan shall be granted Stock Awards; when and how each Stock Award shall be granted; what type or combination of types of Stock Award shall be granted; the provisions of each Stock Award granted (which need not be identical), including the time or times when a person shall be permitted to receive stock pursuant to a Stock Award; and the number of shares with respect to which a Stock Award shall be granted to each such person.
 - (ii) To construe and interpret the Plan and Stock Awards granted under it, and to establish, amend and revoke rules and regulations for its administration. The Board, in the exercise of this power, may correct any defect, omission or inconsistency in the Plan or in any Stock Award Agreement, in a manner and to the extent it shall deem necessary or expedient to make the Plan fully effective.
 - (iii) To amend the Plan or a Stock Award as provided in Section 12.
 - (iv) Generally, to exercise such powers and to perform such acts as the Board deems necessary or expedient to promote the best interests of the Company which are not in conflict with the provisions of the Plan.

(c) Delegation to Committee.

- (i) General.** The Board may delegate administration of the Plan to a Committee or Committees of one or more members of the Board, and the term “Committee” shall apply to any person or persons to whom such authority has been delegated. If administration is delegated to a Committee, the Committee shall have, in connection with the administration of the Plan, the powers theretofore possessed by the Board, including the power to delegate to a subcommittee any of the administrative powers the Committee is authorized to exercise (and references in this Plan to the Board shall thereafter be to the Committee or subcommittee), subject, however, to such resolutions, not inconsistent with the provisions of the Plan, as may be adopted from time to time by the Board. The Board may abolish the Committee at any time and revert to the Board the administration of the Plan.
- (ii) Committee Composition when Common Stock is Publicly Traded.** At such time as the Common Stock is publicly traded, in the discretion of the Board, a Committee may consist solely of two or more Outside Directors, in accordance with Section 162(m) of the Code, and/or solely of two or more Non-Employee Directors, in accordance with Rule 16b-3. Within the scope of such authority, the Board or the Committee may (A) delegate to a committee of one or more members of the Board who are not Outside Directors the authority to grant Stock Awards to eligible persons who are either (1) not then Covered Employees and are not expected to be Covered Employees at the time of recognition of income resulting from such Stock Award or (2) not persons with respect to whom the Company wishes to comply with Section 162(m) of the Code and/or (B) delegate to a committee of one or more members of the Board who are not Non-Employee Directors the authority to grant Stock Awards to eligible persons who are not then subject to Section 16 of the Exchange Act.

4. Shares Subject to the Plan.

- (a) Share Reserve.** Subject to the provisions of Section 11 in the case of increases in shares merely reflecting a change in capitalization such as a stock dividend or stock split, the stock that may be issued pursuant to Stock Awards shall not exceed in the aggregate twenty million four hundred seventy-four thousand one hundred sixty-five (20,474,165) shares of Common Stock.
- (b) Reversion of Shares to the Share Reserve.** If any Stock Award shall for any reason expire or otherwise terminate, in whole or in part, without having been exercised in full (or vested in the case of restricted stock), the stock not acquired under such Stock Award shall revert to and again become available for issuance under the Plan. If any Common Stock acquired pursuant to the exercise of an Option shall for any reason be repurchased by the Company under an unvested share repurchase option provided under the Plan, the stock repurchased by the Company under such repurchase option shall not revert to and again become available for issuance under the Plan.
- (c) Source of Shares.** The stock subject to the Plan may be unissued shares or reacquired shares, bought on the market or otherwise.
- (d) Share Reserve Limitation.** Prior to the Listing Date, at no time shall the total number of shares issuable upon exercise of all outstanding Options and the total number of shares provided for under any stock bonus or similar plan of the Company exceed the applicable

percentage as calculated in accordance with the conditions and exclusions of Section 260.140.45 of Title 10 of the California Code of Regulations, based on the shares of the Company which are outstanding at the time the calculation is made.

5. Eligibility.

- (a) **Eligibility for Specific Stock Awards.** Incentive Stock Options may be granted only to Employees. Stock Awards other than Incentive Stock Options may be granted to Employees, Directors and Consultants.
- (b) **Ten Percent Stockholders.** No Ten Percent Stockholder shall be eligible for the grant of an Incentive Stock Option unless the exercise price of such Option is at least one hundred ten percent (110%) of the Fair Market Value of the Common Stock at the date of grant and the Option is not exercisable after the expiration of five (5) years from the date of grant.

Prior to the Listing Date, no Ten Percent Stockholder shall be eligible for the grant of a Nonstatutory Stock Option unless the exercise price of such Option is at least one hundred ten percent (110%) of the Fair Market Value of the Common Stock at the date of grant.

Prior to the Listing Date, no Ten Percent Stockholder shall be eligible for a restricted stock award unless the purchase price of the restricted stock is at least one hundred percent (100%) of the Fair Market Value of the Common Stock at the date of grant.

- (c) **Section 162(m) Limitation.** Subject to the provisions of Section 11 relating to adjustments upon changes in stock, no Employee shall be eligible to be granted Options covering more than seven hundred fifty thousand (750,000) shares of the Common Stock during any calendar year. This subsection 5(c) shall not apply prior to the Listing Date and, following the Listing Date, this subsection 5(c) shall not apply until (1) the earliest of: (A) the first material modification of the Plan (including any increase in the number of shares reserved for issuance under the Plan in accordance with Section 4); (B) the issuance of all of the shares of Common Stock reserved for issuance under the Plan; (C) the expiration of the Plan; or (D) the first meeting of stockholders at which Directors of the Company are to be elected that occurs after the close of the third calendar year following the calendar year in which occurred the first registration of an equity security under Section 12 of the Exchange Act; or (2) such other date required by Section 162(m) of the Code and the rules and regulations promulgated thereunder.

6. Option Provisions.

Each Option shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. All Options shall be separately designated Incentive Stock Options or Nonstatutory Stock Options at the time of grant, and a separate certificate or certificates will be issued for shares purchased on exercise of each type of Option. The provisions of separate Options need not be identical, but each Option shall include (through incorporation of provisions hereof by reference in the Option or otherwise) the substance of each of the following provisions:

- (a) **Term.** Subject to the provisions of subsection 5(b) regarding Ten Percent Stockholders, no Option shall be exercisable after the expiration of ten (10) years from the date it was granted.
- (b) **Exercise Price of an Incentive Stock Option.** Subject to the provisions of subsection 5(b) regarding Ten Percent Stockholders, the exercise price of each Incentive Stock Option shall be not less than one hundred percent (100%) of the Fair Market Value of the stock subject to the Option on the date the Option is granted. Notwithstanding the foregoing, an Incentive Stock

Option may be granted with an exercise price lower than that set forth in the preceding sentence if such Option is granted pursuant to an assumption or substitution for another option in a manner satisfying the provisions of Section 424(a) of the Code.

- (c) **Exercise Price of a Nonstatutory Stock Option.** Subject to the provisions of subsection 5(b) regarding Ten Percent Stockholders, the exercise price of each Nonstatutory Stock Option granted prior to the Listing Date shall be not less than eighty-five percent (85%) of the Fair Market Value of the stock subject to the Option on the date the Option is granted. The exercise price of each Nonstatutory Stock Option granted on or after the Listing Date shall be not less than eighty-five percent (85%) of the Fair Market Value of the stock subject to the Option on the date the Option is granted. Notwithstanding the foregoing, a Nonstatutory Stock Option may be granted with an exercise price lower than that set forth in the preceding sentence if such Option is granted pursuant to an assumption or substitution for another option in a manner satisfying the provisions of Section 424(a) of the Code.
- (d) **Consideration.** The purchase price of stock acquired pursuant to an Option shall be paid, to the extent permitted by applicable statutes and regulations, either (1) in cash at the time the Option is exercised or (2) at the discretion of the Board at the time of the grant of the Option (or subsequently in the case of a Nonstatutory Stock Option) by (A) delivery to the Company of other Common Stock, (B) according to a deferred payment or other arrangement (which may include, without limiting the generality of the foregoing, the use of other Common Stock) with the Participant or (C) in any other form of legal consideration that may be acceptable to the Board; provided, however, that at any time that the Company is incorporated in Delaware, payment of the Common Stock's "par value," as defined in the Delaware General Corporation Law, shall not be made by deferred payment.

In the case of any deferred payment arrangement, interest shall be compounded at least annually and shall be charged at the minimum rate of interest necessary to avoid the treatment as interest, under any applicable provisions of the Code, of any amounts other than amounts stated to be interest under the deferred payment arrangement.

- (e) **Transferability of an Incentive Stock Option.** An Incentive Stock Option shall not be transferable except by will or by the laws of descent and distribution and shall be exercisable during the lifetime of the Optionholder only by the Optionholder. Notwithstanding the foregoing provisions of this subsection 6(e), the Optionholder may, by delivering written notice to the Company, in a form satisfactory to the Company, designate a third party who, in the event of the death of the Optionholder, shall thereafter be entitled to exercise the Option.
- (f) **Transferability of a Nonstatutory Stock Option.** A Nonstatutory Stock Option granted prior to the Listing Date shall not be transferable except by will or by the laws of descent and distribution and shall be exercisable during the lifetime of the Optionholder only by the Optionholder. A Nonstatutory Stock Option granted on or after the Listing Date shall be transferable to the extent provided in the Option Agreement. If the Nonstatutory Stock Option does not provide for transferability, then the Nonstatutory Stock Option shall not be transferable except by will or by the laws of descent and distribution and shall be exercisable during the lifetime of the Optionholder only by the Optionholder. Notwithstanding the foregoing provisions of this subsection 6(f), the Optionholder may, by delivering written notice to the Company, in a form satisfactory to the Company, designate a third party who, in the event of the death of the Optionholder, shall thereafter be entitled to exercise the Option.

- (g) **Vesting Generally.** The total number of shares of Common Stock subject to an Option may, but need not, vest and therefore become exercisable in periodic installments which may, but need not, be equal. The Option may be subject to such other terms and conditions on the time or times when it may be exercised (which may be based on performance or other criteria) as the Board may deem appropriate. The vesting provisions of individual Options may vary. The provisions of this subsection 6(g) are subject to any Option provisions governing the minimum number of shares as to which an Option may be exercised.
- (h) **Minimum Vesting Prior to the Listing Date.** Notwithstanding the foregoing subsection 6(g), Options granted prior to the Listing Date shall provide for vesting of the total number of shares at a rate of at least twenty percent (20%) per year over five (5) years from the date the Option was granted, subject to reasonable conditions such as continued employment. However, in the case of such Options granted to Officers, Directors or Consultants, the Option may become fully exercisable, subject to reasonable conditions such as continued employment, at any time or during any period established by the Company; for example, the vesting provision of the Option may provide for vesting of less than twenty percent (20%) per year of the total number of shares subject to the Option.
- (i) **Termination of Continuous Service.** In the event an Optionholder's Continuous Service terminates (other than upon the Optionholder's death or Disability), the Optionholder may exercise his or her Option (to the extent that the Optionholder was entitled to exercise it as of the date of termination) but only within such period of time ending on the date three months following the termination of the Optionholder's Continuous Service (or such longer or shorter period specified in the Option Agreement, which, for Options granted prior to the Listing Date, shall not be less than 30 days, unless such termination is for cause), or the expiration of the term of the Option as set forth in the Option Agreement. If, after termination, the Optionholder does not exercise his or her Option within the time specified in the Option Agreement, the Option shall terminate.
- (j) **Extension of Termination Date.** An Optionholder's Option Agreement may also provide that if the exercise of the Option following the termination of the Optionholder's Continuous Service (other than upon the Optionholder's death or Disability) would be prohibited at any time solely because the issuance of shares would violate the registration requirements under the Securities Act, then the Option shall terminate on the earlier of (1) the expiration of the term of the Option set forth in subsection 6(a) or (2) the expiration of a period of three months after the termination of the Optionholder's Continuous Service (or such longer or shorter period specified in the Option Agreement, which, for Options granted prior to the Listing Date, shall not be less than 30 days, unless such termination is for cause), during which the exercise of the Option would not be in violation of such registration requirements.
- (k) **Disability of Optionholder.** In the event an Optionholder's Continuous Service terminates as a result of the Optionholder's Disability, the Optionholder may exercise his or her Option (to the extent that the Optionholder was entitled to exercise it as of the date of termination), but only within such period of time ending on the earlier of (1) the date 12 months following such termination (or such longer or shorter period specified in the Option Agreement, which, for Options granted prior to the Listing Date, shall not be less than six months) or (2) the expiration of the term of the Option as set forth in the Option Agreement. If, after termination,

the Optionholder does not exercise his or her Option within the time specified herein, the Option shall terminate.

- (l) Death of Optionholder.** In the event (1) an Optionholder's Continuous Service terminates as a result of the Optionholder's death or (2) the Optionholder dies within the period (if any) specified in the Option Agreement after the termination of the Optionholder's Continuous Service for a reason other than death, then the Option may be exercised (to the extent the Optionholder was entitled to exercise the Option as of the date of death) by the Optionholder's estate, by a person who acquired the right to exercise the Option by bequest or inheritance or by a person designated to exercise the option upon the Optionholder's death pursuant to subsection 6(e) or 6(f), but only within the period ending on the earlier of (A) the date 18 months following the date of death (or such longer or shorter period specified in the Option Agreement, which, for Options granted prior to the Listing Date, shall not be less than six months) or (B) the expiration of the term of such Option as set forth in the Option Agreement. If, after death, the Option is not exercised within the time specified herein, the Option shall terminate.
- (m) Early Exercise.** The Option may, but need not, include a provision whereby the Optionholder may elect at any time before the Optionholder's Continuous Service terminates to exercise the Option as to any part or all of the shares subject to the Option prior to the full vesting of the Option. Subject to the "Repurchase Limitation" in subsection 10(h), any unvested shares so purchased may be subject to an unvested share repurchase option in favor of the Company or to any other restriction the Board determines to be appropriate.
- (n) Right of Repurchase.** Subject to the "Repurchase Limitation" in subsection 10(h), the Option may, but need not, include a provision whereby the Company may elect, prior to the Listing Date, to repurchase all or any part of the vested shares acquired by the Optionholder pursuant to the exercise of the Option.
- (o) Right of First Refusal.** The Option may, but need not, include a provision whereby the Company may elect, prior to the Listing Date, to exercise a right of first refusal pursuant to the Investor Rights Agreement dated December 16, 1998 by and between the Company and certain stockholders and investors therein, following receipt of notice from the Optionholder of the intent to transfer all or any part of the shares exercised pursuant to the Option. Except as expressly provided in this subsection 6(o), such right of first refusal shall otherwise comply with any applicable provisions of the Bylaws of the Company, as amended from time to time.
- (p) Re-Load Options.** Without in any way limiting the authority of the Board to make or not to make grants of Options hereunder, the Board shall have the authority (but not an obligation) to include as part of any Option Agreement a provision entitling the Optionholder to a further Option (a "Re-Load Option") in the event the Optionholder exercises the Option evidenced by the Option Agreement, in whole or in part, by surrendering other shares of Common Stock in accordance with this Plan and the terms and conditions of the Option Agreement. Any such Re-Load Option shall (1) provide for a number of shares equal to the number of shares surrendered as part or all of the exercise price of such Option; (2) have an expiration date which is the same as the expiration date of the Option the exercise of which gave rise to such Re-Load Option; and (3) have an exercise price which is equal to 100% of the Fair Market Value of the Common Stock subject to the Re-Load Option on the date of exercise of the

original Option. Notwithstanding the foregoing, a Re-Load Option shall be subject to the same exercise price and term provisions heretofore described for Options under the Plan.

Any such Re-Load Option may be an Incentive Stock Option or a Nonstatutory Stock Option, as the Board may designate at the time of the grant of the original Option; provided, however, that the designation of any Re-Load Option as an Incentive Stock Option shall be subject to the one hundred thousand dollars (\$100,000) annual limitation on exercisability of Incentive Stock Options described in subsection 10(d) and in Section 422(d) of the Code. There shall be no Re-Load Options on a Re-Load Option. Any such Re-Load Option shall be subject to the availability of sufficient shares under subsection 4(a) and the "Section 162(m) Limitation" on the grants of Options under subsection 5(c) and shall be subject to such other terms and conditions as the Board may determine which are not inconsistent with the express provisions of the Plan regarding the terms of Options.

7. Provisions of Stock Awards other than Options.

- (a) **Stock Bonus Awards.** Each stock bonus agreement shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. The terms and conditions of stock bonus agreements may change from time to time, and the terms and conditions of separate stock bonus agreements need not be identical, but each stock bonus agreement shall include (through incorporation of provisions hereof by reference in the agreement or otherwise) the substance of each of the following provisions:
 - (i) **Consideration.** A stock bonus shall be awarded in consideration for past services actually rendered to the Company for its benefit.
 - (ii) **Vesting.** Subject to the "Repurchase Limitation" in subsection 10(h), shares of Common Stock awarded under the stock bonus agreement may, but need not, be subject to a share repurchase option in favor of the Company in accordance with a vesting schedule to be determined by the Board.
 - (iii) **Termination of Participant's Continuous Service.** Subject to the "Repurchase Limitation" in subsection 10(h), in the event a Participant's Continuous Service terminates, the Company may reacquire any or all of the shares of Common Stock held by the Participant which have not vested as of the date of termination under the terms of the stock bonus agreement.
 - (iv) **Transferability.** For a stock bonus award made before the Listing Date, rights to acquire shares under the stock bonus agreement shall not be transferable except by will or by the laws of descent and distribution and shall be exercisable during the lifetime of the Participant only by the Participant. For a stock bonus award made on or after the Listing Date, rights to acquire shares under the stock bonus agreement shall be transferable by the Participant only upon such terms and conditions as are set forth in the stock bonus agreement, as the Board shall determine in its discretion, so long as stock awarded under the stock bonus agreement remains subject to the terms of the stock bonus agreement.
- (b) **Restricted Stock Awards.** Each restricted stock purchase agreement shall be in such form and shall contain such terms and conditions as the Board shall deem appropriate. The terms and conditions of the restricted stock purchase agreements may change from time to time, and the terms and conditions of separate restricted stock purchase agreements need not be identical, but each restricted stock purchase agreement shall include (through incorporation of provisions

hereof by reference in the agreement or otherwise) the substance of each of the following provisions:

- (i) **Purchase Price.** Subject to the provisions of subsection 5(b) regarding Ten Percent Stockholders, the purchase price under each restricted stock purchase agreement shall be such amount as the Board shall determine and designate in such restricted stock purchase agreement. For restricted stock awards made prior to the Listing Date, the purchase price shall not be less than eighty-five percent (85%) of the stock's Fair Market Value on the date such award is made or at the time the purchase is consummated. For restricted stock awards made on or after the Listing Date, the purchase price shall not be less than eighty-five percent (85%) of the stock's Fair Market Value on the date such award is made or at the time the purchase is consummated.
- (ii) **Consideration.** The purchase price of stock acquired pursuant to the restricted stock purchase agreement shall be paid either: (A) in cash at the time of purchase; (B) at the discretion of the Board, according to a deferred payment or other arrangement with the Participant; or (C) in any other form of legal consideration that may be acceptable to the Board in its discretion; provided, however, that at any time that the Company is incorporated in Delaware, then payment of the Common Stock's "par value," as defined in the Delaware General Corporation Law, shall not be made by deferred payment.
- (iii) **Vesting.** Subject to the "Repurchase Limitation" in subsection 10(h), shares of Common Stock acquired under the restricted stock purchase agreement may, but need not, be subject to a share repurchase option in favor of the Company in accordance with a vesting schedule to be determined by the Board.
- (iv) **Termination of Participant's Continuous Service.** Subject to the "Repurchase Limitation" in subsection 10(h), in the event a Participant's Continuous Service terminates, the Company may repurchase or otherwise reacquire any or all of the shares of Common Stock held by the Participant which have not vested as of the date of termination under the terms of the restricted stock purchase agreement.
- (v) **Transferability.** For a restricted stock award made before the Listing Date, rights to acquire shares under the restricted stock purchase agreement shall not be transferable except by will or by the laws of descent and distribution and shall be exercisable during the lifetime of the Participant only by the Participant. For a restricted stock award made on or after the Listing Date, rights to acquire shares under the restricted stock purchase agreement shall be transferable by the Participant only upon such terms and conditions as are set forth in the restricted stock purchase agreement, as the Board shall determine in its discretion, so long as stock awarded under the restricted stock purchase agreement remains subject to the terms of the restricted stock purchase agreement.

8. Covenants of the Company.

- (a) **Availability of Shares.** During the terms of the Stock Awards, the Company shall keep available at all times the number of shares of Common Stock required to satisfy such Stock Awards.
- (b) **Securities Law Compliance.** The Company shall seek to obtain from each regulatory commission or agency having jurisdiction over the Plan such authority as may be required to

grant Stock Awards and to issue and sell shares of Common Stock upon exercise of the Stock Awards; provided, however, that this undertaking shall not require the Company to register under the Securities Act the Plan, any Stock Award or any stock issued or issuable pursuant to any such Stock Award. If, after reasonable efforts, the Company is unable to obtain from any such regulatory commission or agency the authority which counsel for the Company deems necessary for the lawful issuance and sale of stock under the Plan, the Company shall be relieved from any liability for failure to issue and sell stock upon exercise of such Stock Awards unless and until such authority is obtained.

9. Use of Proceeds from Stock.

Proceeds from the sale of stock pursuant to Stock Awards shall constitute general funds of the Company.

10. Miscellaneous.

- (a) **Acceleration of Exercisability and Vesting.** The Board shall have the power to accelerate the time at which a Stock Award may first be exercised or the time during which a Stock Award or any part thereof will vest in accordance with the Plan, notwithstanding the provisions in the Stock Award stating the time at which it may first be exercised or the time during which it will vest.
- (b) **Stockholder Rights.** No Participant shall be deemed to be the holder of, or to have any of the rights of a holder with respect to, any shares subject to such Stock Award unless and until such Participant has satisfied all requirements for exercise of the Stock Award pursuant to its terms.
- (c) **No Employment or other Service Rights.** Nothing in the Plan or any instrument executed or Stock Award granted pursuant thereto shall confer upon any Participant or other holder of Stock Awards any right to continue to serve the Company or an Affiliate in the capacity in effect at the time the Stock Award was granted or shall affect the right of the Company or an Affiliate to terminate (1) the employment of an Employee with or without notice and with or without cause, (2) the service of a Consultant pursuant to the terms of such Consultant's agreement with the Company or an Affiliate or (3) the service of a Director pursuant to the Bylaws of the Company or an Affiliate, and any applicable provisions of the corporate law of the state in which the Company or the Affiliate is incorporated, as the case may be.
- (d) **Incentive Stock Option \$100,000 Limitation.** To the extent that the aggregate Fair Market Value (determined at the time of grant) of stock with respect to which Incentive Stock Options are exercisable for the first time by any Optionholder during any calendar year (under all plans of the Company and its Affiliates) exceeds one hundred thousand dollars (\$100,000), the Options or portions thereof which exceed such limit (according to the order in which they were granted) shall be treated as Nonstatutory Stock Options.
- (e) **Investment Assurances.** The Company may require a Participant, as a condition of exercising or acquiring stock under any Stock Award, (1) to give written assurances satisfactory to the Company as to the Participant's knowledge and experience in financial and business matters and/or to employ a purchaser representative reasonably satisfactory to the Company who is knowledgeable and experienced in financial and business matters and that he or she is capable of evaluating, alone or together with the purchaser representative, the merits and risks of exercising the Stock Award; and (2) to give written assurances satisfactory to the Company

stating that the Participant is acquiring the stock subject to the Stock Award for the Participant's own account and not with any present intention of selling or otherwise distributing the stock. The foregoing requirements, and any assurances given pursuant to such requirements, shall be inoperative if (iii) the issuance of the shares upon the exercise or acquisition of stock under the Stock Award has been registered under a then currently effective registration statement under the Securities Act or (iv) as to any particular requirement, a determination is made by counsel for the Company that such requirement need not be met in the circumstances under the then applicable securities laws. The Company may, upon advice of counsel to the Company, place legends on stock certificates issued under the Plan as such counsel deems necessary or appropriate in order to comply with applicable securities laws, including, but not limited to, legends restricting the transfer of the stock.

- (f) Withholding Obligations.** To the extent provided by the terms of a Stock Award Agreement, the Participant may satisfy any federal, state or local tax withholding obligation relating to the exercise or acquisition of stock under a Stock Award by any of the following means (in addition to the Company's right to withhold from any compensation paid to the Participant by the Company) or by a combination of such means: (1) tendering a cash payment; (2) authorizing the Company to withhold shares from the shares of the Common Stock otherwise issuable to the participant as a result of the exercise or acquisition of stock under the Stock Award; or (3) delivering to the Company owned and unencumbered shares of the Common Stock.
- (g) Information Obligation.** Prior to the Listing Date, to the extent required by Section 260.140.46 of Title 10 of the California Code of Regulations, the Company shall deliver financial statements to Participants at least annually. This subsection 10(g) shall not apply to key Employees whose duties in connection with the Company assure them access to equivalent information.
- (h) Repurchase Limitation.** The terms of any repurchase option shall be specified in the Stock Award and may be either at Fair Market Value at the time of repurchase or at not less than the original purchase price. To the extent required by Section 260.140.41 and Section 260.140.42 of Title 10 of the California Code of Regulations, any repurchase option contained in a Stock Award granted prior to the Listing Date to a person who is not an Officer, Director or Consultant shall be upon the terms described below:
 - (i) Fair Market Value.** If the repurchase option gives the Company the right to repurchase the shares upon termination of employment at not less than the Fair Market Value of the shares to be purchased on the date of termination of Continuous Service, then (1) the right to repurchase shall be exercised for cash or cancellation of purchase money indebtedness for the shares within 90 days of termination of Continuous Service (or in the case of shares issued upon exercise of Stock Awards after such date of termination, within 90 days after the date of the exercise) or such longer period as may be agreed to by the Company and the Participant (for example, for purposes of satisfying the requirements of Section 1202(c)(3) of the Code regarding "qualified small business stock") and (2) the right terminates when the shares become publicly traded.
 - (ii) Original Purchase Price.** If the repurchase option gives the Company the right to repurchase the shares upon termination of Continuous Service at the original purchase price, then (A) the right to repurchase at the original purchase price shall lapse at the rate of at least 20% of the

shares per year over five years from the date the Stock Award is granted (without respect to the date the Stock Award was exercised or became exercisable) and (B) the right to repurchase shall be exercised for cash or cancellation of purchase money indebtedness for the shares within 90 days of termination of Continuous Service (or in the case of shares issued upon exercise of Options after such date of termination, within 90 days after the date of the exercise) or such longer period as may be agreed to by the Company and the Participant (for example, for purposes of satisfying the requirements of Section 1202(c)(3) of the Code regarding “qualified small business stock”).

11. Adjustments upon Changes in Stock.

- (a) Capitalization Adjustments.** If any change is made in the stock subject to the Plan, or subject to any Stock Award, without the receipt of consideration by the Company (through merger, consolidation, reorganization, recapitalization, reincorporation, stock dividend, dividend in property other than cash, stock split, liquidating dividend, combination of shares, exchange of shares, change in corporate structure or other transaction not involving the receipt of consideration by the Company), the Plan will be appropriately adjusted in the class(es) and maximum number of securities subject to the Plan pursuant to subsection 4(a) and the maximum number of securities subject to award to any person pursuant to subsection 5(c), and the outstanding Stock Awards will be appropriately adjusted in the class(es) and number of securities and price per share of stock subject to such outstanding Stock Awards. The Board, the determination of which shall be final, binding and conclusive, shall make such adjustments. (The conversion of any convertible securities of the Company shall not be treated as a transaction “without receipt of consideration” by the Company.)
- (b) Dissolution or Liquidation.** In the event of a dissolution or liquidation of the Company, then such Stock Awards shall be terminated if not exercised (if applicable) prior to such event.
- (c) Asset Sale, Merger, Consolidation or Reverse Merger.** In the event of (1) a sale of substantially all of the assets of the Company, (2) a merger or consolidation in which the Company is not the surviving corporation or (3) a reverse merger in which the Company is the surviving corporation but the shares of Common Stock outstanding immediately preceding the merger are converted by virtue of the merger into other property, whether in the form of securities, cash or otherwise, then any surviving corporation or acquiring corporation shall assume any Stock Awards outstanding under the Plan or shall substitute similar stock awards (including an award to acquire the same consideration paid to the stockholders in the transaction described in this subsection 11(c)) for those outstanding under the Plan. In the event any surviving corporation or acquiring corporation refuses to assume such Stock Awards or to substitute similar stock awards for those outstanding under the Plan, then with respect to Stock Awards held by Participants whose Continuous Service has not terminated, the vesting of such Stock Awards (and, if applicable, the time during which such Stock Awards may be exercised) shall be accelerated in full, and the Stock Awards shall terminate if not exercised (if applicable) at or prior to such event. With respect to any other Stock Awards outstanding under the Plan, such Stock Awards shall terminate if not exercised (if applicable) prior to such event.

12. Amendment of the Plan and Stock Awards.

- (a) **Amendment of Plan.** The Board at any time, and from time to time, may amend the Plan. However, except as provided in Section 11 relating to adjustments upon changes in stock, no amendment shall be effective unless approved by the stockholders of the Company to the extent stockholder approval is necessary to satisfy the requirements of Section 422 of the Code, Rule 16b-3 or any Nasdaq or securities exchange listing requirements.
- (b) **Stockholder Approval.** The Board may, in its sole discretion, submit any other amendment to the Plan for stockholder approval, including, but not limited to, amendments to the Plan intended to satisfy the requirements of Section 162(m) of the Code and the regulations thereunder regarding the exclusion of performance-based compensation from the limit on corporate deductibility of compensation paid to certain executive officers.
- (c) **Contemplated Amendments.** It is expressly contemplated that the Board may amend the Plan in any respect the Board deems necessary or advisable to provide eligible Employees with the maximum benefits provided or to be provided under the provisions of the Code and the regulations promulgated thereunder relating to Incentive Stock Options and/or to bring the Plan and/or Incentive Stock Options granted under it into compliance therewith.
- (d) **No Impairment of Rights.** Rights under any Stock Award granted before amendment of the Plan shall not be impaired by any amendment of the Plan unless (1) the Company requests the consent of the Participant and (2) the Participant consents in writing.
- (e) **Amendment of Stock Awards.** The Board at any time, and from time to time, may amend the terms of any one or more Stock Awards; provided, however, that the rights under any Stock Award shall not be impaired by any such amendment unless (1) the Company requests the consent of the Participant and (2) the Participant consents in writing.

13. Termination or Suspension of the Plan.

- (a) **Plan Term.** The Board may suspend or terminate the Plan at any time. Unless sooner terminated, the Plan shall terminate on the day before the tenth anniversary of the date the Plan is adopted by the Board or approved by the stockholders of the Company, whichever is earlier. No Stock Awards may be granted under the Plan while the Plan is suspended or after it is terminated.
- (b) **No Impairment of Rights.** Suspension or termination of the Plan shall not impair rights and obligations under any Stock Award granted while the Plan is in effect except with the written consent of the Participant.

14. Effective Date of Plan.

The Plan shall become effective as determined by the Board, but no Stock Award shall be exercised (or, in the case of a stock bonus, shall be granted) unless and until the Plan has been approved by the stockholders of the Company, which approval shall be within twelve months before or after the date the Plan is adopted by the Board.

INTERNET PHOTONICS, INC.
AMENDED AND RESTATED
2000 CORPORATE STOCK OPTION PLAN

1 GENERAL**1.1 Purpose.**

The purposes of this Amended and Restated 2000 Corporate Stock Option Plan (the "Plan") are to: (1) closely associate the interests of the employees of Internet Photonics, Inc., a Delaware corporation (the "Company") and its Subsidiaries and Affiliates with the shareholders by reinforcing the relationship between participants' rewards and shareholder gains; (2) provide employees and other interested persons with an equity ownership in the Company commensurate with Company performance, as reflected in increased shareholder value; (3) maintain competitive compensation levels for employees; (4) provide an incentive to employees for continuous employment with the Company; and (5) offer a means to deliver equity-based rewards to non-employee directors, consultants, advisors and service providers. This Plan amends and restates in its entirety the Internet Photonics, Inc. 2000 Corporate Stock Option Plan adopted on October 1, 2000, as modified on March 6, 2001, May 18, 2001 and September 30, 2001.

1.2 Administration.

1.2.1 *The Plan shall be administered by the Board of Directors of the Company (the "Board") or a committee of individuals appointed by the Board (the "Committee"), as constituted from time to time. The Committee shall consist of at least one member of the Board. Notwithstanding the foregoing, all references in this Plan to the "Committee" shall mean the Board if no Committee has been appointed. At any time after any of the common stock of the Company (the "Common Stock") is registered pursuant to the Securities Act of 1933, as amended, the Committee members will not participate in the Plan and for a period of one year after service on the Committee, Committee members shall not be eligible for selection as persons to whom stock options may be granted under the Plan.*

1.2.2 *The Committee shall have the authority, in its sole discretion and from time to time to:*

1.2.2.1 designate the employees, classes of employees or other persons eligible to participate in the Plan;

1.2.2.2 grant awards provided in the Plan in such form and amount as the Committee shall determine;

1.2.2.3 impose such limitations, restrictions and conditions upon any such award as the Committee shall deem appropriate; and

1.2.2.4 interpret the Plan, adopt, amend and rescind rules and regulations relating to the Plan, and make all other determinations and take all other action necessary or advisable for the implementation and administration of the Plan.

1.2.3 *Decisions and determinations of the Committee on all matters relating to the Plan shall be in its sole discretion and shall be conclusive. No member of the Committee shall be liable for any action taken or decision made in good faith relating to the Plan or any award thereunder.*

1.3 Eligibility for Participation.

Participants in the Plan shall be selected by the Committee and may be any employees, officers, directors (whether or not also employees), consultants, advisors or service providers of, or to, the Company and its Subsidiaries and Affiliates. In making this selection and in determining the form and amount of awards, the Committee shall consider any factors deemed relevant, including the individual's functions, responsibilities, value of services to the Company and past and potential contributions to the Company's profitability, success and sound growth.

1.4 Types of Awards Under Plan.

Awards under the Plan may be in the form of Incentive Stock Options, as described in Article II, or in the form of Nonqualified Stock Options, as described in Article III, provided that Incentive Stock Options may not be granted in tandem with Nonqualified Stock Options. Incentive Stock Options and Nonqualified Stock Options are collectively referred to herein as an "Option" or as "Options." The Committee may take into consideration a recipient's individual circumstances in determining whether to grant an Incentive Stock Option or a Nonqualified Stock Option. The granting of an Option shall not entitle a person to, nor disqualify such person from, participation in any other grant of Options or other awards.

1.5 Aggregate Limitation on Awards.

1.5.1.1.1 *Shares of stock which may be issued under the Plan shall be authorized but unissued or treasury shares, or partly each, of Common Stock. The maximum number of shares of Common Stock which may be issued under the Plan shall be 195,468,897 (including the 430,728 shares of Common Stock issued prior to June 1, 2002 pursuant to the exercise of Options previously granted hereunder), subject to adjustment as provided in Section 4.10.*

From time to time, the Board (with shareholder approval, as and when required by applicable law) may adjust the maximum number of shares of Common Stock which may be issued under the Plan.

1.5.1.1.2 For purposes of calculating the maximum number of shares of Common Stock which may be issued under the Plan, all the shares issued (including the shares, if any, withheld for tax withholding requirements) shall be counted.

1.5.1.1.3 Any shares of Common Stock subject to an Option which for any reason is terminated unexercised, or expires, shall again be available for issuance under the Plan.

1.5.1.1.4 If any Option is exercised by delivering previously owned shares in payment of the option price, the number of shares so delivered to the Company shall not again be available for purposes of the Plan. If any Option is canceled by mutual consent or terminates or expires for any reason without having been exercised in full, the number of shares subject thereto and not issued thereunder shall again be available for purposes of the Plan.

1.6 Effective Date and Term of Plan.

The Plan has been adopted and implemented by the Board with a term to be effective beginning October 1, 2000, the date of Board approval of the Plan. The term of this Plan shall be for ten (10) years from the effective date. No Options or other awards may be granted under this Plan subsequent to September 30, 2010.

2 INCENTIVE STOCK OPTIONS

2.1 Award of Incentive Stock Options.

The Committee may, from time to time and subject to the provisions of the Plan and such other terms and conditions as the Committee may prescribe, grant to any participant in the Plan who is an employee of the Company or its Subsidiaries one or more "incentive stock options" ("Incentive Stock Options") pursuant to Section 422 of the Internal Revenue Code of 1986, as amended (the "Code") to purchase the number of shares of Common Stock allotted by the Committee. The date of grant of an Incentive Stock Option shall be the date selected by the Committee as of which the Committee allots a specific number of shares to a participant pursuant to the Plan.

2.2 Incentive Stock Option Agreements.

The grant of an Incentive Stock Option shall be evidenced by a written Incentive Stock Option agreement, executed by the Company and the optionee, stating the number of shares of Common Stock subject to the Incentive Stock Option evidenced thereby, and such other terms and conditions, in such form as the Committee may from time to time determine. The provisions of such agreements, or amendments thereto, need not be identical.

2.3 Incentive Stock Option Price.

The option price per share of Common Stock deliverable upon the exercise of an Incentive Stock Option shall be not less than 100% of the fair market value of a share of Common Stock on the date the Incentive Stock Option is granted, except that in the case of an Incentive Stock Option granted to an employee who, immediately prior to such grant, owns stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company (a "Ten Percent Employee"), the option price shall not be less than one hundred ten percent (110%) of such fair market value on the date of grant. For purposes of this Section 2.03, an individual (i) shall be considered as owning not only shares of stock owned individually but also all shares of stock that are at the time owned, directly or indirectly, by or for the spouse, ancestors, lineal descendants and brothers and sisters (whether by the whole or half blood) of such individual and (ii) shall be considered as owning proportionately any shares owned, directly or indirectly, by or for any corporation, partnership, estate or trust in which such individual is a shareholder, partner or beneficiary.

2.4 Term and Exercise.

Each Incentive Stock Option shall vest and become exercisable at such time or times and/or upon the occurrence of such event or events as provided by the Committee. Unless otherwise determined by the Committee and reflected in the Incentive Stock Option agreement or an amendment thereto, a stock option shall be vested and exercisable from its date of grant. Unless a shorter period is provided by the Committee or another Section of this Plan, each Incentive Stock Option may be exercised during a period of no more than ten years from the date of grant thereof, or five years in the case of an Incentive Stock Option granted to a Ten Percent Employee. No Incentive Stock Option shall be exercised after the expiration of its option term. An Incentive Stock Option to the extent exercisable at any time may be exercised in whole or in part.

2.5 Maximum Amount of Incentive Stock Option Grant.

Subject to the possible exercise of discretion contemplated in the last sentence of this Section 2.05, the aggregate fair market value (determined on the date the option is granted) of Common Stock subject to an Incentive Stock Option granted to an optionee by the Committee that becomes first exercisable in any calendar year under all plans of the corporation employing such employee, any parent or subsidiary corporation of such corporation and any predecessor corporation of any such corporation shall not exceed \$100,000. If the date on which one or more of such Incentive Stock Options could first be exercised would be accelerated pursuant to any provision of the Plan or any Incentive Stock Option agreement, and the acceleration of such exercise date would result in a violation of the restriction set

forth in the preceding sentence, then, notwithstanding any such provision, but subject to the provisions of the next succeeding sentence, the exercise dates of such Incentive Stock Options shall be accelerated only to the date or dates, if any, that do not result in a violation of such restriction and, in such event, the exercise dates of the Incentive Stock Options with the lowest option prices shall be accelerated to the earliest such dates. The Committee may, in its discretion, authorize the acceleration of the exercise date of one or more Incentive Stock Options even if such acceleration would violate the \$100,000 restriction set forth in the first sentence of this paragraph and even if such Incentive Stock Options are thereby converted in whole or in part to Nonqualified Stock Options.

2.6 Death of Optionee.

2.6.1 Upon the death of the optionee, any Incentive Stock Option exercisable on the date of death may be exercised by the optionee's estate or by a person who acquires the right to exercise such Incentive Stock Option by bequest or inheritance or by reason of the death of the optionee during such exercise period as may be set by the Committee, provided that such exercise occurs prior to the expiration date of the Incentive Stock Option or within one year after the date of the optionee's death, whichever is the shorter period.

2.6.2 The provisions of this Section 2.06 shall apply notwithstanding the fact that the optionee's employment may have terminated prior to death, provided that also in such case the Incentive Stock Option may only be exercised to the extent exercisable on the date of death.

2.7 Termination for Retirement or Disability.

Upon the termination of the optionee's employment by reason of permanent disability (as determined under any employment agreement executed and delivered between the optionee and the Company, or, if no such employment agreement exists, then within the meaning of Section 22(e)(3) of the Code) or retirement under any retirement plan of the Company (as each is determined by the Committee), the optionee may, within a period set by the Committee of up to one year from the date of such termination of employment, exercise any Incentive Stock Options to the extent such Incentive Stock Options were exercisable at the date of such termination of employment.

2.8 Termination for Other Reasons.

Except as specifically provided in Sections 2.06 and 2.07, or except as otherwise determined by the Committee, all Incentive Stock Options shall terminate at such time as may be specified in the Incentive Stock Option agreement.

2.9 Manner of Payment.

Each Incentive Stock Option Agreement shall set forth the procedure governing the exercise of the Incentive Stock Option granted thereunder, and shall provide that, upon such exercise in respect of any shares of Common Stock subject thereto, the optionee shall pay to the Company, in full, the option price for such shares with cash or, if the Committee determines upon the grant of an Incentive Stock Option, with the proceeds of a loan from the Company; provided that such loan shall be evidenced by a promissory note containing terms and conditions deemed appropriate by the Committee, except that any loan made with respect to an Incentive Stock Option shall bear interest at a rate such that no portion of the principal amount of the loan shall be treated as unstated or imputed interest or result in original issue discount under Treasury Regulation § 1.421-7(e) and Sections 483 or 1272-1275 of the Code, or under corresponding provisions of any future Internal Revenue laws or regulations; provided further, that upon consummation of an initial public offering of the Common Stock pursuant to a registration statement under the Securities Act of 1933, as amended, if and to the extent permitted by the Committee, payment may be made with previously owned Common Stock. If the option price is paid in cash, the exercise of the Incentive Stock Option shall not be deemed to occur and no shares of Common Stock will be issued until the Company has received full payment in cash (including check, bank draft or money order) for the option price. The date of exercise of an Option shall be determined under procedures established by the Committee.

2.10 Restrictions on Certain Shares.

As soon as practicable after the date of exercise, the Company shall deliver to the optionee a certificate or certificates for such shares of Common Stock. The optionee shall become a shareholder of the Company with respect to Common Stock represented by share certificates so issued and as such shall be fully entitled to receive dividends, to vote and to exercise all other rights of a shareholder. Notwithstanding the foregoing, a number of shares of Common Stock received upon the exercise of the Options shall be subject to certain restrictions. The number of shares subject to the restrictions shall be equal to the total number of shares received in the exercise of the Options minus: (i) the number of unrestricted shares received from the optionee upon exercise which have a fair market value on the date of the Option exercise equal to all, or that portion of the option price paid in shares for shares received; and (ii) the number of shares which have a fair market value on the date of the Option exercise equal to the applicable federal, state and local withholding tax on the total Option exercise and any brokerage commission or interest charges, if applicable, to the exercise. The restrictions on these shares of Common Stock, each of which may be set forth in separate agreements or documents, shall be as follows:

2.10.1 The shares of Common Stock acquired hereunder may be the subject of a buy-back agreement in the form determined by the Committee and the obligation of the Company to issue shares hereunder shall be contingent upon the optionee's execution of such buy-back agreement. In addition, and subject to any restrictions which may arise by any separate

shareholder agreements or other similar obligations, unless otherwise consented or agreed to by the Committee, prior to the consummation of an initial public offering of the Company's Common Stock pursuant to a registration statement under the Securities Act of 1933, as amended, the optionee shall be prohibited from the sale, exchange, transfer, pledge, hypothecation, gift or other disposition of such shares of Common Stock until the earlier of the expiration of the Option term or termination of the optionee's employment for any reason.

- 2.10.2 The restrictions shall apply to any new, additional or different securities the optionee may become entitled to receive with respect to such shares by virtue of a stock split or stock dividend or any other change in the corporate or capital structure of the Company, and to any permitted transferee.
- 2.10.3 Until such time as the restrictions hereunder lapse, the share certificate representing such shares shall contain a restrictive legend evidencing said restrictions. Alternatively, the optionee shall be required to deposit the share certificates with the Company or its agent, endorsed in blank or accompanied by a duly executed irrevocable stock power or other instrument of transfer.
- 2.10.4 By accepting an Incentive Stock Option granted under the Plan, each optionee agrees to notify the Company in writing within five days after such optionee makes a Disqualifying Disposition (as described in Sections 421, 422 and 424 of the Code and regulations thereunder) of any stock acquired pursuant to the exercise of Incentive Stock Option granted under the Plan. A Disqualifying Disposition is generally any disposition occurring on or before the later of (a) the date two (2) years following the date the Incentive Stock Option was granted, or (b) the date one year following the date the Incentive Stock Option was exercised.

3 NONQUALIFIED STOCK OPTIONS

3.1 Award of Nonqualified Stock Options.

The Committee may, from time to time and subject to the provisions of the Plan and such other terms and conditions as the Committee may prescribe, grant to any participant in the Plan one or more "nonqualified stock options" ("Nonqualified Stock Options") (i.e., stock options which do not qualify under Sections 422 or 423 of the Code) to purchase the number of shares of Common Stock allotted by the Committee. Nonqualified Stock Options may be granted to any employee, officer or director (whether or not also an employee), consultant or advisor of, or provider of services to, the Company, its Subsidiaries and affiliates. The date of grant of a Nonqualified Stock Option shall be the date selected by the Committee as of which the Committee allots a specific number of shares to a participant pursuant to the Plan.

3.2 Nonqualified Stock Option Agreements.

The grant of a Nonqualified Stock Option shall be evidenced by a written Nonqualified Stock Option agreement, executed by the Company and the optionee, stating the number of shares of Common Stock subject to the Nonqualified Stock Option evidenced thereby, and in such form as the Committee may from time to time determine. The provisions of such agreements, or amendments thereto, need not be identical.

3.3 Option Price; Term and Exercise; Expiration.

The option price per share of Common Stock deliverable upon the exercise of a Nonqualified Stock Option shall not be less than 100% of the fair market value of a share of Common Stock on the date the Nonqualified Stock Option is granted.

3.4 Term and Exercise.

Each Nonqualified Stock Option shall vest and become exercisable at such time or times, and/or upon the occurrence of such event or events as provided by the Committee. Unless otherwise determined by the Committee and reflected in the Nonqualified Stock Option agreement or an amendment thereto, a stock option shall be vested and exercisable from its date of grant. Unless a shorter period is provided by the Committee or another Section of this Plan, each Nonqualified Stock Option may be exercised during a period of no more than ten years from the date of grant thereof. The Committee, in its discretion, may specify certain events, including but not limited to those set forth in Sections 2.06, 2.07 and 2.08, which may extend or terminate the option term and which may be applicable to Nonqualified Stock Options issued pursuant to this Plan. No Nonqualified Stock Option shall be exercised after the expiration of its option term. A Nonqualified Stock Option to the extent exercisable at any time may be exercised in whole or in part.

3.5 Manner of Payment.

Each Nonqualified Stock Option Agreement shall set forth the procedure governing the exercise of the Nonqualified Stock Option granted thereunder, and shall provide that, upon such exercise in respect of any shares of Common Stock subject thereto, the optionee shall pay to the Company, in full, the option price for such shares with cash or, subject to the prior approval of the Committee, with the proceeds of a loan from the Company; provided that such loan shall be evidenced by a promissory note containing terms and conditions deemed appropriate by the Committee; provided further, that upon consummation of an initial public offering of the Common Stock pursuant to a registration statement under the Securities Act of 1933, as amended, if and to the extent permitted by the Committee, payment may be made with previously owned Common Stock. If the option price is paid in cash, the exercise of the Nonqualified Stock Option shall not be deemed to occur and no shares of Common Stock will be issued until the Company has received full payment in cash (including check, bank draft or money order) for the option price. The date of exercise of an Option shall be determined under procedures established by the Committee.

3.6 Restrictions on Certain Shares.

As soon as practical after the date of exercise, the Company shall deliver to the optionee a certificate or certificates for such shares of Common Stock. The optionee shall become a shareholder of the Company with respect to Common Stock represented by share certificates so issued and as such shall be fully entitled to receive dividends, to vote and to exercise all other rights of a shareholder. Notwithstanding the foregoing, the shares issued shall be subject to certain restrictions and limitations, as may be determined by the Company or the Committee, to the extent provided in and consistent with Section 2.10.

4 MISCELLANEOUS

4.1 General Restriction.

Each award under the Plan shall be subject to the requirement that, if at any time the Committee shall determine that (i) the listing, registration or qualification of the shares of Common Stock subject or related thereto upon any securities exchange or under any state or Federal law, or (ii) the consent or approval of any government regulatory body, or (iii) an agreement by the optionee of an award with respect to the disposition of shares of Common Stock, is necessary or desirable as a condition of, or in connection with, the granting of such award or the issue or purchase of shares of Common Stock thereunder, such award may not be consummated in whole or in part and no shares shall be issued unless such listing, registration, qualification, consent, approval or agreement shall have been effected or obtained free of any conditions not acceptable to the Committee.

4.2 Non-Assignability.

No award under the Plan shall be assignable or transferable by the recipient thereof, except by will or by the laws of descent and distribution. During the life of the recipient, such award shall be exercisable only by such person or, in the case of the disability of the recipient, by such person's guardian or legal representative.

4.3 Withholding Taxes.

Upon the exercise of a Stock Option or transfer of shares of Common Stock under the Plan, the Company shall have the right to require the optionee to remit to the Company an amount sufficient to satisfy any Federal, state, local or foreign income and employment withholding tax requirements prior to the delivery of any certificate or certificates for such shares. Alternatively, the Company may issue or transfer such shares of Common Stock net of the number of shares sufficient to satisfy the withholding tax requirements. For withholding tax purposes, the shares of Common Stock shall be valued on the date the withholding obligation is incurred.

4.4 Right to Terminate Employment.

Nothing in the Plan or in any agreement entered into pursuant to the Plan shall confer upon any participant the right to continue in the employment of or other service relationship with the Company or affect any right which the Company may have to terminate the employment of or other service relationship with such participant, or of the Board or shareholders to elect and remove non-employee directors.

4.5 Non-Uniform Determinations.

The Committee's determinations under the Plan (including without limitation determinations of the persons to receive awards, the form, amount and timing of such awards, the terms and provisions of such awards and the agreements evidencing same) need not be uniform and may be made by it selectively among persons who receive, or are eligible to receive, awards under the Plan, whether or not such persons are similarly situated.

4.6 Rights as a Shareholder.

The recipient of any award under the Plan shall have no rights as a shareholder with respect thereto unless and until certificates for shares of Common Stock are issued to the recipient.

4.7 Definitions.

In this Plan the following definitions shall apply:

4.7.1 "Subsidiary" means any corporation of which, at the time more than 50% of the shares entitled to vote generally in an election of directors are owned directly or indirectly by the Company or any subsidiary thereof.

4.7.2 "Affiliate" means any person or entity which directly, or indirectly through one or more intermediaries, controls, is controlled by, or is under common control with the Company.

4.7.3 "Fair market value" as of any date and in respect of any share of Common Stock means the fair market value of shares of Common Stock as determined by the Committee in such manner as it may in good faith deem appropriate. In no event shall the fair market value of any share of Common Stock be less than its par value; provided further that fair market value may not, in the case of an Incentive Stock Option, be less than the fair market value as required by Section 422 of the Code. Notwithstanding the foregoing ability of the Committee to determine the fair market value of the Common Stock, if the Common Stock is listed on any such stock exchange listed below, the fair market value of the Common Stock shall be the mean between the following prices, as applicable, for the date as of which fair market value is to be determined as quoted in The Wall Street Journal (or in such other reliable publication as the Committee, in its discretion, may determine to rely upon): (a) if the Common Stock is listed on the New York Stock Exchange, the highest and lowest sales prices per share of the Common Stock as quoted in the NYSE-Composite Transactions listing for such

date, (b) if the Common Stock is not listed on such exchange, the highest and lowest sales prices per share of Common Stock for such date on (or on any composite index including) the principal United States securities exchange registered under the Securities Exchange Act of 1934 on which the Common Stock is listed, or (c) if the Common Stock is not listed on any such exchange, the highest and lowest sales prices per share of Common Stock for such date on the National Association of Securities Dealers Automated Quotations System or any successor system then in use ("NASDAQ"). If there are no sale price quotations for any particular date as of which fair market value is to be determined, the Committee shall use such average of sale price quotations available as the Committee shall in good faith determine are applicable to the fair market value of the Common Stock.

4.8 Leaves of Absence.

The Committee shall be entitled to make such rules, regulations and determinations as it deems appropriate under the Plan in respect of any leave of absence taken by the recipient of any award. Without limiting the generality of the foregoing, the Committee shall be entitled to determine (i) whether or not any such leave of absence shall constitute a termination of employment within the meaning of the Plan and (ii) the impact, if any, of any such leave of absence on awards under the Plan theretofore made to any recipient who takes such leave of absence.

4.9 Newly Eligible Employees.

The Committee shall be entitled to make such rules, regulations, determinations and awards as it deems appropriate in respect of any employee who becomes eligible to participate in the Plan or any portion thereof after the commencement of an award or incentive period.

4.10 Adjustments.

If a dividend or other distribution shall be declared upon the Common Stock payable in shares of Common Stock, the number of shares of Common Stock then subject to any outstanding Options and the number of shares of Common Stock which may be issued under the Plan but are not then subject to outstanding Options shall be adjusted by adding thereto the number of shares of Common Stock which would have been distributable thereon if such stock had been outstanding on the date fixed for determining the shareholders entitled to receive such stock dividend or distribution. If the outstanding shares of Common Stock shall be changed into or exchangeable for a different number or kind of shares of stock or other securities of the Company or another corporation, or cash or other property, whether through reorganization, reclassification, recapitalization, stock split-up, combination of shares, merger or consolidation, then there shall be substituted for each share of Common Stock subject to any then outstanding Option and for each share of Common Stock which may be issued under the Plan but which is not then subject to any outstanding Option, the number and kind of shares of stock or other securities (and in the case of outstanding Options, the cash or other property) into which each outstanding share of the Common Stock shall be so changed or for which each such share shall be exchangeable.

In case of any adjustment or substitution as provided for in this Section 4.10, the aggregate option price for all shares subject to each then outstanding Option prior to such adjustment or substitution shall be the aggregate option price for all shares of stock or other securities (including any fraction), cash or other property to which such shares shall have been adjusted or which shall have been substituted for such shares. Any new option price per share or other unit shall be carried to at least three decimal places with the last decimal place rounded upwards to the nearest whole number. No adjustment or substitution provided for in this Section 4.10 shall require the Company to issue or sell a fraction of a share or other security. Accordingly, all fractional shares or other securities which result from any such adjustment or substitution shall be eliminated and not carried forward to any subsequent adjustment or substitution.

If any such adjustment or substitution provided for in this Section 4.10 requires the approval of shareholders in order to enable the Company to grant Incentive Stock Options, then no such adjustment or substitution shall be made without the required shareholder approval. Notwithstanding the foregoing, in the case of Incentive Stock Options, if the effect of any such adjustment or substitution would be to cause the Option to fail to continue to qualify as an Incentive Stock Option or to cause a modification, extension or renewal of such Option within the meaning of Section 424 of the Code, the Committee may elect that such adjustment or substitution not be made but rather shall use reasonable efforts to effect such other adjustment of each then outstanding Option as the Committee, in its discretion, shall deem equitable and which will not result in any disqualification, modification, extension or renewal (within the meaning of Section 424 of the Code) of such Incentive Stock Option.

4.11 Amendment of the Plan.

The right to amend the Plan at any time and from time to time and the right to revoke or terminate the Plan are hereby specifically reserved to the Board; provided that no amendment of the Plan shall be made without shareholder approval (1) if the effect of the amendment is (a) to make any changes in the class of employees eligible to receive Incentive Stock Options under the Plan, (b) to increase the number of shares with respect to which Incentive Stock Options may be granted under the Plan, (c) to extend the term of the Plan or (2) if shareholder approval of the amendment is at the time required by the rules of any stock exchange on which the Common Stock may then be listed or under applicable law. No alteration, amendment, revocation or termination of the Plan shall, without the written consent of the holder of an Option under the Plan, adversely affect the rights of such holder with respect thereto.

CERTIFICATE

The undersigned, Steven M. Waszak, Chief Financial Officer of Internet Photonics, Inc. (the "Company") hereby certifies that the Internet Photonics, Inc. Amended and Restated 2000 Corporate Stock Option Plan was approved by the Board of Directors of the Company on June 30, 2002 and the stockholders of the Company on July 1, 2002.

IN WITNESS WHEREOF, the undersigned has executed this Certificate as of the 1st day of July 2002.

By: /s/ Steven Waszak
Name: Steven Waszak
Title: Chief Financial Officer

ADDENDUM

Effective upon the filing of the Fourth Amended and Restated Certificate of Incorporation of Internet Photonics, Inc. (the "Company") with the Secretary of State of the State of Delaware on August 20, 2002, pursuant to which the Company is effecting a one for twenty reverse stock split, the text in Section 1.05(a) of the Company's Amended and Restated 2000 Corporate Stock Option Plan which reads "195,468,897 (including the 430,728 shares of Common Stock issued prior to June 1, 2002 pursuant to the exercise of Options previously granted hereunder)" shall be properly read as follows "9,773,442 (including 21,534 shares of Common Stock issued prior to June 1, 2002 pursuant to the exercise of Options previously granted hereunder (which number of shares has been adjusted to give effect to the reverse stock split))".

By: /s/ Steven M. Waszak

Steven M. Waszak
Corporate Secretary

SECOND ADDENDUM

Effective upon the filing of the Fifth Amended and Restated Certificate of Incorporation of Internet Photonics, Inc. (the "Company") with the Secretary of State of the State of Delaware on September 26, 2003, the text in Section 1.05(a) of the Company's Amended and Restated 2000 Corporate Stock Option Plan, as amended by the Addendum, which reads "9,773,442 (including 21,534 shares of Common Stock issued prior to June 1, 2002 pursuant to the exercise of Options previously granted hereunder (which number of shares has been adjusted to give effect to the reverse stock split))" shall properly read as follows: "14,189,415 (including the shares of Common Stock issued pursuant to the exercise of Options previously granted hereunder)".

By: /s/ Steven M. Waszak

Steven M. Waszak
Corporate Secretary

CIENA CORPORATION
CERTIFICATION OF CHIEF EXECUTIVE OFFICER

I, Gary B. Smith, certify that:

1. I have reviewed this quarterly report of CIENA Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) [Paragraph reserved pursuant to SEC Release 33-8238];
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 20, 2004

/s/ Gary B. Smith
Gary B. Smith
President and Chief Executive Officer

CIENA CORPORATION

CERTIFICATION OF CHIEF FINANCIAL OFFICER

I, Joseph R. Chinnici, certify that:

1. I have reviewed this quarterly report of CIENA Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) [Paragraph reserved pursuant to SEC Release 33-8238];
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 20, 2004

/s/ Joseph R. Chinnici
Joseph R. Chinnici
Senior Vice President and Chief Financial Officer

CIENA CORPORATION

**Written Statement of Chief Executive Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

The undersigned, the Chief Executive Officer of CIENA Corporation (the "Company"), hereby certifies that, to his knowledge, on the date hereof:

- (a) the Report on Form 10-Q of the Company for the three months ended April 30, 2004 filed on the date hereof with the Securities and Exchange Commission (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (b) information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Gary B. Smith

Gary B. Smith
President and Chief Executive Officer
May 20, 2004

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to CIENA Corporation and will be retained by CIENA Corporation and furnished to the Securities and Exchange Commission or its staff upon request.

CIENA CORPORATION

**Written Statement of Chief Financial Officer
Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002**

The undersigned, the Chief Financial Officer of CIENA Corporation (the "Company"), hereby certifies that, to his knowledge, on the date hereof:

- (a) the Report on Form 10-Q of the Company for the three months ended April 30, 2004 filed on the date hereof with the Securities and Exchange Commission (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (b) information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Joseph R. Chinnici

Joseph R. Chinnici

Senior Vice President and Chief Financial Officer

May 20, 2004

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to CIENA Corporation and will be retained by CIENA Corporation and furnished to the Securities and Exchange Commission or its staff upon request.