SECURITIES AND EXCHANGE COMMISSION

FORM S-1/A

General form of registration statement for all companies including face-amount certificate companies [amend]

Filing Date: **1999-09-10 SEC Accession No.** 0000927016-99-003209

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FILER

SYCAMORE NETWORKS INC

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SIC: 3661 Telephone & telegraph apparatus

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Business Address 10 ELIZABETH DRIVE CHELMSFORD MA 01824 9782502900 ______

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

Amendment No. 1

tο FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

SYCAMORE NETWORKS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State of other jurisdiction of incorporation or organization)

3576 04-3410558 (Primary Standard Industrial (I.R.S. Employer Classification Code Number) Identification Number)

> _____ 10 Elizabeth Drive

Chelmsford, MA 01824 (978) 250-2900

(Address Including Zip Code, and Telephone Number, Including Area Code, of Registrant's Principal Executive Offices)

Daniel E. Smith

President and Chief Executive Officer

Sycamore Networks, Inc.

10 Elizabeth Drive

Chelmsford, MA 01824

(978) 250-2900

(Name, Address Including Zip Code and Telephone Number, Including Area Code, of Agent for Service)

Copies to:

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Approximate date of commencement of proposed sale to the public: As soon as practicable after the effective date hereof.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act, check the following box. [_]

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. [_]

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration number of the earlier effective registration statement for the

If this Form is a post-effective amendmunder the Securities Act, check the follow registration number of the earlier effectisame offering. [_] If delivery of the Prospectus is expect please check the following box. [_]	ring box and list to ve registration state ed to be made purs	the Securities Act tatement for the		
CALCULATION OF REG	ISTRATION FEE			
<pre><table> <caption> Title of Each Class of Securities to be Registered</caption></table></pre>	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share(2)	Aggregate Offering Price(2)	Registration Fee
	<c></c>	<c></c>	<c></c>	<c></c>
 (2) Estimated solely for the purpose of ca registration fee pursuant to Rule 457(as amended. (3) A filing fee of \$31,970 was paid previ The Registrant hereby amends this Regisdates as may be necessary to delay its efficient file a further amendment which special Registration Statement shall thereafter be Section 8(a) of the Securities Act of 1933 shall become effective on such date as the Section 8(a), may determine. 	ously. tration Statement fective date until fically states the come effective in or until the Region Commission, actir	on such date or the Registrant at this accordance with istration Statemen ng pursuant to sai	t	
++++++++++++++++++++++++++++++++++++++	ctration statement ective. This prosper not soliciting of sale is not perm	be changed. We ma filed with the pectus is not an ffers to buy these mitted.	y + + + +	
6,500,000 Sha	res			
COMMON S	STOCK			

Sycamore Networks, Inc. is offering 6,500,000 shares of its common stock. This is our initial public offering and no public market currently exists for our shares. We anticipate that the initial public offering price will be between

We have applied to list our common stock on the Nasdaq National Market under the symbol "SCMR."

Investing in our common stock involves risks. See "Risk Factors" beginning on page 7.

PRICE \$ A SHARE

<TABLE> <CAPTION>

		Underwriting Discounts and Commissions		
<\$>	<c></c>	<c></c>	<c></c>	
Per Share	\$	\$	\$	
Total				

 \$ | \$ | \$ |The Securities and Exchange Commission and state securities regulators have not approved or disapproved these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Sycamore Networks, Inc. has granted the underwriters the right to purchase up to an additional 975,000 shares of common stock to cover over-allotments. Morgan Stanley & Co. Incorporated expects to deliver the shares to purchasers on $\,$, 1999.

MORGAN STANLEY DEAN WITTER

LEHMAN BROTHERS

J.P. MORGAN & CO.

DAIN RAUSCHER WESSELS

a division of Dain Rauscher Incorporated

, 1999

Gate has a center title: The Evolution of The Intelligent Optical Network. A graphic shows the progression of a transmission among various buildings through a system with our products. Below this is a horizontal line with the word "Rings" on the left and "Mesh" on the right. Two bars below that show the words Management on top and Adaptation, Transport and Switching, below. Four ovals come down with the words: Adapt existing infrastructure, Scale networks with wavelengths, Introduce services over wavelengths and Service Flexibility. Below this is the following text: Sycamore Networks is focused on developing the transport, switching and management products that are required to create a flexible, intelligent end-to-end optical network. Addressing current limitations of the public network infrastructure to grow bandwidth and support new services, Sycamore leverages existing fiber-optic resources by bringing intelligence to the optical domain. Sycamore's intelligent optical networking solutions is designed to relieve current network congestion and lay a foundation for the next generation telecommunications infrastructure.

Inside front cover shows the back of a man working at a computer and Sycamore's products in the background. The following text appears over the products: The Art of Intelligent Optical Networking. Sycamore's Intelligent Optical Networking products will enable service providers to transform the existing public network transmission infrastructure into a flexible intelligent optical network, enabling new high speed data services to be provisioned when and where needed, quickly and cost-effectively. With the intelligent optical network infrastructure build can be done efficiently without the long planning and implementation cycles traditionally associated with service provisioning. There is a list of benefits with bullets: Creating an intelligent foundation for new high speed services, Provisioning new services over waves, Simplifying the network infrastructure, Ensuring a graceful evolution to the next generation optical network.

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Until , 1999 (25 days after the date of this prospectus), all dealers that buy, sell or trade the common stock, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to the dealers' obligation to deliver a prospectus when acting as underwriters and with respect to their unsold allotments or subscriptions.

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PROSPECTUS SUMMARY

The following summary is qualified by the more detailed information and financial statements and notes appearing elsewhere in this prospectus.

SYCAMORE NETWORKS, INC.

We develop and market networking products that transport voice and data traffic over wavelengths of light. Our products are designed to enable network service providers to quickly and cost effectively provide usable network capacity, known as bandwidth, and create new high speed data services. Our target customers are new and established local voice and data service providers, long distance carriers, Internet service providers, cable operators, foreign telephone companies and carriers who provide services to other carriers, all of which we refer to as service providers. We believe that the existing public network is unable to meet the demands of high speed data applications that are driving network growth. As data traffic on the public network continues to grow at rates that surpass available network capacity, we believe that service providers will require new solutions to relieve network congestion and create new data services.

We call our products intelligent optical networking products because they are designed to transmit and manage data directly on wavelengths of light, for transmission over fiber optic cable. This will improve the efficiency of the network, because data can be moved across the network and managed entirely in the optical medium. In contrast, the existing public network is based on a transmission technology, known as SONET/SDH, which requires optical signals travelling across the network to be converted into electrical signals at each network transit point, and then re-converted into optical signals for transport to the next transit point. The multiple conversions required in a SONET/SDH network increase network complexity and cost. Our products are based on a common software architecture that we believe has a number of significant benefits, including accelerating our release of new products and enabling our customers to upgrade their networks without significant new capital equipment or retraining.

Our products are designed to address the current and future needs of service providers by offering an end-to-end optical networking solution that provides the following benefits:

- . Improves Network Flexibility and Scalability. Our software-based equipment is designed to allow service providers to improve the flexibility and the ability to expand their networks without the long lead times and large initial capital investment presently required for a network buildout.
- . Enables Rapid Service Delivery. Our products are designed to shorten the time it takes for service providers to increase bandwidth and provide services.
- . Facilitates Introduction of New Data Services and Creation of New Revenue Opportunities for Service Providers. The software-based intelligence of our products allows us to rapidly introduce new features into our products, which can in turn be offered as new services by service providers to their customers.
- . Protects Existing Investments. Our products are designed to enable service providers to increase the functionality and improve the

performance of their networks without sacrificing their existing infrastructure investments in SONET/SDH equipment.

We market our products through a direct sales force and intend to establish relationships with selected original equipment manufacturers and other marketing partners, both domestically and internationally. In addition, we work collaboratively with our customers and prospective customers to help them identify and create new high speed data services that they can offer to their customers. We believe that this assistance is an integral aspect of our sales and marketing efforts.

Prior to May 1999, we were a development stage company principally engaged in research and development. We shipped our first product in May 1999, and all of our revenues to date have been from sales of this product to one customer, Williams Communications.

We are a Delaware corporation. Our principal executive offices are located at 10 Elizabeth Drive, Chelmsford, Massachusetts 01824 and our telephone number is (978) 250-2900. Our World Wide Web site address is www.sycamorenet.com. The information in the Web site is not incorporated by reference into this prospectus. Sycamore Networks, SN 6000, SN 8000, SilvxSource, SilvxManager, SN 16000 and SilvxONMS are our trademarks. This prospectus also contains trademarks of other companies.

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THE OFFERING

<TABLE>

<S> <C>

Common stock offered..... 6,500,000 shares

Common stock to be outstanding

after this offering...... 77,056,337 shares

Use of proceeds...... We intend to use the net proceeds from

this offering for general corporate purposes, including working capital and capital expenditures, and the repayment of certain

indebtedness. See "Use of Proceeds."

Proposed Nasdag National Market

symbol....."SCMR"

</TABLE>

The above information is based upon the number of shares of common stock outstanding as of July 31, 1999 and excludes 1,686,300 shares of common stock issuable upon exercise of outstanding options at an average exercise price of \$1.36 per share and 18,804,900 shares of common stock reserved for future issuance under our stock plan as of July 31, 1999.

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SUMMARY FINANCIAL DATA (in thousands, except per share data)

<TABLE> <CAPTION>

Period from Inception (February 17, 1998) Year Ended through July 31, 1998 July 31, 1999

Statement of Operations Data:

statement of Operations Data.			
<\$>	<c></c>		<c></c>
Revenues	\$		\$ 11 , 330
Total operating expenses		793	22,159
Loss from operations		(793)	(19,315)

Net loss	(693)	(18,756)
Pro forma basic and diluted net loss per		
share (unaudited)	\$ (.04)	\$ (.49)
Weighted average shares used in computing		
pro forma basic and diluted net loss per		
share (unaudited)	18,756	38,145

 | |Weighted average shares used in computing pro forma basic and diluted net loss per share shown above exclude unvested shares of common stock subject to repurchase rights, which totalled 5,256,000 and 12,087,000 for the period from inception (February 17, 1998) through July 31, 1998 and year ended July 31, 1999, respectively. The pro forma as adjusted column in the balance sheet data below gives effect to the conversion of our outstanding preferred stock into common stock upon the closing of this offering, the sale of the 6,500,000 shares of common stock in this offering at an assumed initial public offering price of \$19.00, after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us and the anticipated application of the estimated net proceeds.

<TABLE> <CAPTION>

CAF I TON	As of July 31, 1999		
	Actual	Pro Forma as Adjusted	
<\$>	<c></c>	<c></c>	
Balance Sheet Data:			
Cash, cash equivalents and marketable securities	\$28,989	\$137 , 693	
Working capital	40,450	150,251	
Total assets	57 , 912	166,616	
Long-term obligations, less current portion	4,054		
Redeemable convertible preferred stock	55 , 771		
Total stockholders' equity (deficit)	(13,623)	156,003	

Except as set forth in the financial statements or as otherwise indicated, all information in this prospectus:

- . assumes no exercise of the underwriters' over-allotment option;
- . reflects the conversion of all outstanding shares of our redeemable convertible preferred stock into 47,283,225 shares of common stock upon the closing of the offering;
- . reflects a 3-for-1 stock split of the common stock effected in August 1999; and
- . reflects the filing, as of the closing of the offering, of our amended and restated certificate of incorporation and the adoption of our amended and restated by-laws implementing certain provisions described below under "Description of Capital Stock--Delaware Law and Certain Charter and By-Law Provisions; Anti-Takeover Effects."

You should rely only on the information contained in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. We are offering to sell shares of common stock and seeking offers to buy shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock.

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This offering and an investment in our common stock involve a high degree of risk. You should consider carefully the risks described below before you decide to buy our common stock.

Risks Related to Our Business

We Expect That Substantially All Of Our Revenues Will Be Generated From A Limited Number Of Customers And Our Revenues Will Not Grow If We Do Not Successfully Sell Products To These Customers

We currently have only one customer, Williams Communications. Williams is not contractually committed to purchase any minimum quantities of products from us. We expect that in the foreseeable future substantially all of our revenues will continue to depend on sales of our intelligent optical networking products to Williams and a limited number of potential new customers. Williams is currently using our SN 6000 product in its internal network and plans in the future to introduce commercial services based on this product. We cannot assure you that Williams will introduce commercial services on a timely basis, if at all, and any delay in such introduction or failure to introduce such services would seriously harm our revenues, results of operations and financial condition. The rate at which our current and prospective customers purchase products from us will depend, in part, on their success in selling communications services based on these products to their own customers. Any failure of current or prospective customers to purchase products from us for any reason, including any determination not to install our products in their networks or downturn in their business, would seriously harm our ability to build a successful business.

We Have Been In Business For A Short Period Of Time And Your Basis For Evaluating Us Is Limited

We were founded in February 1998 and shipped our first intelligent optical networking product in May 1999. We have limited meaningful historical financial data upon which to base projected revenues and planned operating expenses and upon which investors may evaluate us and our prospects. In addition, our operating expenses are largely based on anticipated revenue trends and a high percentage of our expenses are and will continue to be fixed. You should consider the risks and difficulties frequently encountered by companies like ours in a new and rapidly evolving market. Our ability to sell products, and the level of success, if any, we achieve, depends, among other things, on the level of demand for intelligent optical networking products, which is a new and rapidly evolving market.

Our Failure To Increase Our Revenues Would Prevent Us From Achieving And Maintaining Profitability

We have incurred significant losses since inception and expect to continue to incur losses in the future. As of July 31, 1999, we had an accumulated deficit of \$19.4 million. We have not achieved profitability on a quarterly or annual basis, and anticipate that we will continue to incur net losses. We cannot be certain that our revenues will grow or that we will generate sufficient revenues to achieve or sustain profitability. We have large fixed expenses and we expect to continue to incur significant and increasing sales and marketing, product development, administrative and other expenses. As a result, we will need to generate significantly higher revenues to achieve and maintain profitability.

We Are Entirely Dependent On Our Line Of Intelligent Optical Networking Products And Our Future Revenue Depends On Their Commercial Success

Our future growth depends on the commercial success of our line of intelligent optical networking products. To date, our SN 6000 Intelligent Optical Transport product is the only product that has been shipped to a customer. We intend to develop and introduce new products and enhancements to existing products in the future. We cannot assure you that we will be successful in completing the development or introduction of these products. Failure of our current or planned products to operate as expected could delay or prevent their adoption. If our target customers do not adopt, purchase and successfully deploy our current and planned products, our revenues will not

Because Our Products Are Complex And Are Deployed In Complex Environments, They May Have Errors Or Defects That We Find Only After Full Deployment, Which Could Seriously Harm Our Business

Our intelligent optical networking products are complex and are designed to be deployed in large and complex networks. Because of the nature of the products, they can only be fully tested when completely deployed in very large networks with high amounts of traffic. To date, the SN 6000 is the only product that has been shipped to a customer, and that customer is currently using our product solely in its internal network. Our customers may discover errors or defects in the hardware or the software, or the product may not operate as expected, after it has been fully deployed. If we are unable to fix errors or other problems that may be identified in full deployment, we could experience:

- . loss of or delay in revenues and loss of market share;
- . loss of customers;
- . failure to attract new customers or achieve market acceptance;
- . diversion of development resources;
- . increased service and warranty costs;
- . legal actions by our customers; and
- . increased insurance costs.

The Long And Variable Sales Cycles For Our Products May Cause Revenues And Operating Results To Vary Significantly From Quarter To Quarter

A customer's decision to purchase our intelligent optical networking products involves a significant commitment of its resources and a lengthy evaluation, testing and product qualification process. As a result, our sales cycle is likely to be lengthy. Throughout the sales cycle, we spend considerable time and expense educating and providing information to prospective customers about the use and features of our products. Even after making a decision to purchase, we believe that our customers will deploy the products slowly and deliberately. Timing of deployment can vary widely and depends on the skills of the customer, the size of the network deployment, the complexity of the customer's network environment and the degree of hardware and software configuration necessary. Customers with significant or complex networks usually expand their networks in large increments on a periodic basis. Accordingly, we may receive purchase orders for significant dollar amounts on an irregular and unpredictable basis. Because of our limited operating history and the nature of our business, we cannot predict these sales and deployment cycles. The long sales cycles, as well as our expectation that customers will tend to sporadically place large orders with short lead times, may cause our revenues and results of operations to vary significantly and unexpectedly from quarter to quarter.

We Will Not Be Successful If We Do Not Grow Our Customer Base Beyond Our Initial One Customer

Our future success will depend on our attracting additional customers beyond our initial one customer. The growth of our customer base could be adversely affected by:

- customer unwillingness to implement our new optical networking architecture;
- . any delays or difficulties that we may incur in completing the development and introduction of our planned products or product

- . new product introductions by our competitors;
- . any failure of our products to perform as expected; or
- . any difficulty we may incur in meeting customers' delivery requirements.

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The Intelligent Optical Networking Market Is New And Our Business Will Suffer If It Does Not Develop As We Expect

The market for intelligent optical networking products is new. We cannot be certain that a viable market for our products will develop or be sustainable. If this market does not develop, or develops more slowly than we expect, our business, results of operations and financial condition would be seriously harmed.

If We Do Not Respond Rapidly To Technological Changes, Our Products Could Become Obsolete

The market for intelligent optical networking products is likely to be characterized by rapid technological change, frequent new product introductions and changes in customer requirements. We may be unable to respond quickly or effectively to these developments. We may experience design, manufacturing, marketing and other difficulties that could delay or prevent our development, introduction or marketing of new products and enhancements. The introduction of new products by competitors, market acceptance of products based on new or alternative technologies or the emergence of new industry standards, could render our existing or future products obsolete.

In developing our products, we have made, and will continue to make, assumptions about the standards that may be adopted by our customers and competitors. If the standards adopted are different from those which we have chosen to support, market acceptance of our products may be significantly reduced or delayed and our business will be seriously harmed. In addition, the introduction of products incorporating new technologies and the emergence of new industry standards could render our existing products obsolete.

In addition, in order to introduce products incorporating new technologies and new industry standards, we must be able to gain access to the latest technologies of our customers, our suppliers and other network vendors. Any failure to gain access to the latest technologies could impair the competitiveness of our products.

Customer Requirements Are Likely To Evolve, And We Will Not Retain Customers or Attract New Customers If We Do Not Anticipate And Meet Specific Customer Requirements

Our current and prospective customers may require product features and capabilities that our current products do not have. To achieve market acceptance for our products, we must effectively and timely anticipate and adapt to customer requirements and offer products and services that meet customer demands. Our failure to develop products or offer services that satisfy customer requirements would seriously harm our ability to increase demand for our products.

We intend to continue to invest in product and technology development. The development of new or enhanced products is a complex and uncertain process that requires the accurate anticipation of technological and market trends. We may experience design, manufacturing, marketing and other difficulties that could delay or prevent the development, introduction or marketing of new products and enhancements. The introduction of new or enhanced products also requires that we manage the transition from older products in order to minimize disruption in customer ordering patterns and ensure that adequate supplies of new products can be delivered to meet anticipated customer demand.

Our inability to effectively manage this transition would cause us to lose current and prospective customers.

Our Market Is Highly Competitive, And Our Failure To Compete Successfully Would Limit Our Ability to Increase Our Market Share

Competition in the public network infrastructure market is intense. This market has historically been dominated by large companies, such as Ciena Corporation, Lucent Technologies and Nortel Networks. We may face competition from other large telecommunications companies who may enter our market. In addition, a number of private companies have announced plans for new products to address the same network problems which our products address. Many of our current and potential competitors have significantly greater selling and

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marketing, technical, manufacturing, financial, and other resources, including vendor-sponsored financing programs. Moreover, our competitors may foresee the course of market developments more accurately than we do and could in the future develop new technologies that compete with our products or even render our products obsolete. Due to the rapidly evolving markets in which we compete, additional competitors with significant market presence and financial resources may enter those markets, thereby further intensifying competition.

In order to compete effectively, we must deliver products that:

- . provide extremely high network reliability;
- . scale easily and efficiently with minimum disruption to the network;
- . interoperate with existing network designs and equipment vendors;
- reduce the complexity of the network by decreasing the need for overlapping equipment;
- . provide effective network management; and
- . provide a cost-effective solution for service providers.

In addition, we believe that a knowledge of the infrastructure requirements applicable to service providers, experience in working with service providers to develop new services for their customers, and an ability to provide vendor-sponsored financing are important competitive factors in our market. We do not currently have the ability to provide vendor-sponsored financing and this may influence the purchasing decision of prospective customers, who may decide to purchase products from one of our competitors who offers such financing.

If we are unable to compete successfully against our current and future competitors, we could experience price reductions, order cancellations and reduced gross margins, any one of which could materially and adversely affect our business, results of operations and financial condition.

We Are Likely To Face Difficulties In Obtaining And Retaining Customers If We Do Not Expand Our Sales Organization And Our Customer Service And Support Operations

Our products and services require a sophisticated sales effort targeted at a limited number of key individuals within our prospective customers' organizations. This effort requires specialized sales personnel and consulting engineers. We are in the process of building our direct sales force and plan to hire additional qualified sales personnel and consulting engineers. Competition for these individuals is intense, and we might not be able to hire the kind and number of sales personnel and consulting engineers required for us to be successful. In addition, we believe that our future success is dependent upon our ability to establish successful relationships with a variety of distribution partners. If we are unable to expand our direct sales operations, or establish and expand an indirect sales channel, we may not be able to increase market awareness or sales of our products, which may prevent

us from achieving and maintaining profitability.

We currently have a small customer service and support organization and will need to increase our staff to support new customers. The support of our products requires highly trained customer service and support personnel. Hiring customer service and support personnel is very competitive in our industry because there are a limited number of people available with the necessary technical skills and understanding of our market. Once we hire them, they may require extensive training in our intelligent optical networking products. If we are unable to expand our customer service and support organization and train them rapidly, we may not be able to increase sales of our products.

We Depend Upon Contract Manufacturers And Any Disruption In These Relationships May Cause Us To Fail To Meet The Demands Of Our Customers And Damage Our Customer Relationships

We rely on a small number of contract manufacturers to manufacture our products in accordance with our specifications, and to fill orders on a timely basis. Celestica, Inc. provides comprehensive manufacturing services, including assembly, test, control and shipment to our customers, and procures material on our behalf. We may

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not be able to effectively manage our relationship with Celestica, and it may not meet our future requirements for timely delivery. Each of our contract manufacturers also builds products for other companies, and we cannot be certain that they will always have sufficient quantities of inventory available to fill orders placed by our customers, or that they will allocate their internal resources to fill these orders on a timely basis. We do not have long-term supply contracts with these manufacturers. We do not have internal manufacturing capabilities. Qualifying a new contract manufacturer and commencing volume production is expensive and time consuming and could result in a significant interruption in the supply of our products. If we are required or choose to change contract manufacturers, we may lose revenue and damage our customer relationships.

We Rely On Single Sources For Supply Of Certain Components And Our Business May Be Seriously Harmed If Our Supply Of Any Of These Components Is Disrupted

We currently purchase several key components, including commercial digital signal processors, RISC processors, field programmable gate arrays, SONET transceivers and erbium doped fiber amplifiers, from single or limited sources. We purchase each of these components on a purchase order basis and have no long-term contracts for these components. Although we believe that there are alternative sources for each of these components, in the event of a disruption in supply, we may not be able to develop an alternate source in a timely manner or at favorable prices. Such a failure could hurt our ability to deliver our products to our customers and negatively affect our operating margins. In addition, our reliance on our suppliers exposes us to potential supplier production difficulties or quality variations. Any such disruption in supply would seriously impact present and future sales and revenue.

The Unpredictability Of Our Quarterly Results May Adversely Affect The Trading Price Of Our Common Stock

Our revenues and operating results will vary significantly from quarter to quarter due to a number of factors, many of which are outside of our control and any of which may cause our stock price to fluctuate. The primary factors that may affect us include the following:

- . fluctuation in demand for intelligent optical networking products;
- . the timing and size of sales of our products;
- . the length and variability of the sales cycle for our products;

- . the timing of recognizing revenue and deferred revenue;
- new product introductions and enhancements by our competitors and ourselves;
- changes in our pricing policies or the pricing policies of our competitors;
- . our ability to develop, introduce and ship new products and product enhancements that meet customer requirements in a timely manner;
- our ability to obtain sufficient supplies of sole or limited source components;
- . increases in the prices of the components we purchase;
- our ability to attain and maintain production volumes and quality levels for our products;
- . the timing and level of prototype expenses;
- . costs related to acquisitions of technology or businesses; and
- . general economic conditions as well as those specific to the telecommunications, Internet and related industries.

We plan to increase significantly our operating expenses to fund greater levels of research and development, expand our sales and marketing operations, broaden our customer support capabilities and develop new distribution channels. We also plan to expand our general and administrative capabilities to address the increased

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reporting and other administrative demands which will result from this offering and the increasing size of our business. Our operating expenses are largely based on anticipated organizational growth and revenue trends and a high percentage of our expenses are, and will continue to be, fixed. As a result, a delay in generating or recognizing revenue for the reasons set forth above, or for any other reason, could cause significant variations in our operating results from quarter to quarter and could result in substantial operating losses.

Due to the foregoing factors, we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance. You should not rely on our results or growth for one quarter as any indication of our future performance. It is likely that in some future quarters, our operating results may be below the expectations of public market analysts and investors. In this event, the price of our common stock will probably decrease.

If Our Products Do Not Interoperate With Our Customers' Networks, Installations Will Be Delayed Or Cancelled And Could Result In Substantial Product Returns, Which Could Seriously Harm Our Business

Many of our customers will require that our products be designed to interface with their existing networks, each of which may have different specifications and utilize multiple protocol standards. Our customers' networks contain multiple generations of products that have been added over time as these networks have grown and evolved. Our products must interoperate with all of the products within these networks as well as future products in order to meet our customers' requirements. The requirement that we modify product design in order to achieve a sale may result in a longer sales cycle, increased research and development expense, and reduced margins on our products. If we find errors in the existing software used in our customers' networks, we must modify our products to fix or overcome these errors so that our products will interoperate and scale with the existing software and hardware. If our products do not interoperate with those of our customers'

networks, installations could be delayed, orders for our products could be cancelled or our products could be returned. This would also seriously harm our reputation, all of which could seriously harm our business and prospects.

Undetected Software Or Hardware Errors And Problems Arising From Use Of Our Products In Conjunction With Other Vendors' Products Could Result In Delays or Loss of Market Acceptance of Our Products

Networking products frequently contain undetected software or hardware errors when first introduced or as new versions are released. We expect that errors will be found from time to time in new or enhanced products after we begin commercial shipments. In addition, service providers typically use our products in conjunction with products from other vendors. As a result, when problems occur, it may be difficult to identify the source of the problem. These problems may cause us to incur significant warranty, support and repair costs, divert the attention of our engineering personnel from our product development efforts and cause significant customer relations problems. The occurrence of these problems could result in the delay or loss of market acceptance of our products and would likely have a material adverse effect on our business, results of operations and financial condition. Defects, integration issues or other performance problems in our products could result in financial or other damages to our customers or could damage market acceptance for our products. Our customers could also seek damages for losses from us. A product liability claim brought against us, even if unsuccessful, would likely be time consuming and costly.

Our Failure To Establish And Maintain Key Customer Relationships May Result In Delays In Introducing New Products Or Cause Customers To Forego Purchasing Our Products

Our future success will also depend upon our ability to develop and manage key customer relationships in order to introduce a variety of new products and product enhancements that address the increasingly sophisticated needs of our customers. Our failure to establish and maintain these customer relationships may adversely affect our ability to develop new products and product enhancements. In addition, we may experience delays in releasing new products and product enhancements in the future. Material delays in introducing new products and enhancements or our inability to introduce competitive new products may cause customers to forego purchases of our products and purchase those of our competitors, which could seriously harm our business.

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Our Failure To Improve Our Internal Controls And Systems, And Hire Needed Personnel, Could Impair Our Future Growth

We have expanded our operations rapidly since our inception. We continue to increase the scope of our operations and have grown our headcount substantially. For example, at January 31, 1999, we had a total of 48 employees and at September 1, 1999, we had a total of 173 employees. In addition, we plan to continue to hire a significant number of employees this year. Our growth has placed, and our anticipated growth will continue to place, a significant strain on our management systems and resources. Our ability to successfully offer our products and implement our business plan in a rapidly evolving market requires an effective planning and management process. We expect that we will need to continue to improve our financial, managerial and manufacturing controls and reporting systems, and will need to continue to expand, train and manage our work force worldwide. We may not be able to implement adequate control systems in an efficient and timely manner. Competition for highly skilled personnel is intense, especially in the New England area. Any failure to attract, assimilate or retain qualified personnel to fulfill our current or future needs could impair our growth.

We Depend On Our Key Personnel To Manage Our Business Effectively In A Rapidly Changing Market And If We Are Unable To Retain Our Key Employees, Our Ability To Compete Could Be Harmed

Our future success depends upon the continued services of our executive officers and other key engineering, sales, marketing and support personnel, who have critical industry experience and relationships that we rely on to implement our business plan. None of our officers or key employees is bound by an employment agreement for any specific term. We do not have "key person" life insurance policies covering any of our employees. The loss of the services of any of our key employees could delay the development and introduction of, and negatively impact our ability to sell, our products.

If We Become Subject To Unfair Hiring Claims We Could Incur Substantial Costs In Defending Ourselves

Companies in our industry whose employees accept positions with competitors frequently claim that their competitors have engaged in unfair hiring practices. We cannot assure you that we will not receive claims of this kind in the future as we seek to hire qualified personnel or that those claims will not result in material litigation. We could incur substantial costs in defending ourselves or our employees against such claims, regardless of their merits. In addition, defending ourselves from such claims could divert the attention of our management away from our operations. One of our non-officer sales employees has been sued by a former employer which has alleged, among other things, that the employee improperly disclosed confidential information of the former employer regarding its business dealings with our customer. Although we are not a party to the lawsuit, we have chosen to assume the costs of defending this lawsuit.

Our Ability To Compete Could Be Jeopardized If We Are Unable To Protect Our Intellectual Property Rights From Third-Party Challenges

We rely on a combination of patent, copyright, trademark and trade secret laws and restrictions on disclosure to protect our intellectual property rights. We also enter into confidentiality or license agreements with our employees, consultants and corporate partners, and control access to and distribution of our software, 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. Monitoring unauthorized use of our products is difficult and we cannot be certain that the steps we have taken will prevent unauthorized use of our technology, particularly in foreign countries where the laws may not protect our proprietary rights as fully as in the United States. If competitors are able to use our technology, our ability to compete effectively could be harmed.

If Necessary Licenses Of Third-Party Technology Are Not Available To Us Or Are Very Expensive, Our Products Could Become Obsolete

From time to time we may be required to license technology from third parties to develop new products or product enhancements. We cannot assure you that third party licenses will be available to us on commercially

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reasonable terms, if at all. The inability to obtain any third-party license required to develop new products and product enhancements could require us to obtain substitute technology of lower quality or performance standards or at greater cost, either of which could seriously harm the competitiveness of our products.

We Could Become Subject To Litigation Regarding Intellectual Property Rights, Which Could Seriously Harm Our Business And Require Us To Incur Significant Costs

In recent years, there has been significant litigation in the United States involving patents and other intellectual property rights. Although we have not been involved in any intellectual property litigation, we may be a party to litigation in the future to protect our intellectual property or as a result

of an allegation that we infringe others' intellectual property. Any parties asserting that our products infringe upon their proprietary rights would force us to defend ourselves and possibly our customers or manufacturers against the alleged infringement. These claims and any resulting lawsuit, if successful, could subject us to significant liability for damages and invalidation of our proprietary rights. These lawsuits, regardless of their success, would likely be time-consuming and expensive to resolve and would divert management time and attention. Any potential intellectual property litigation also could force us to do one or more of the following:

- stop selling, incorporating or using our products that use the challenged intellectual property;
- . obtain from the owner of the infringed intellectual property right a license to sell or use the relevant technology, which license may not be available on reasonable terms, or at all; or
- . redesign those products that use such technology.

If we are forced to take any of the foregoing actions, our business may be seriously harmed.

We May Face Risks Associated With Our International Expansion That Could Impair Our Ability To Grow Our Revenues Abroad

We intend to expand into international markets. This expansion will require significant management attention and financial resources to develop successfully direct and indirect international sales and support channels. We may not be able to develop international market demand for our products.

We have limited experience in marketing and distributing our products internationally and to do so, we expect that we will need to develop versions of our products that comply with local standards. In addition, international operations are subject to other inherent risks, including:

- greater difficulty in accounts receivable collection 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;
- . currency fluctuations;
- . reduced protection for intellectual property rights in some countries;
- . potentially adverse tax consequences; and
- . political and economic instability.

We Face A Number Of Unknown Risks Associated With Year 2000 Problems That Could Result In Claims Against Us Or Impair The Use Of Our Products By Our Customers

The year 2000 computer issue creates a variety of risks for us. The year 2000 computer problem refers to the potential for system and processing failures of date-related data as a result of computer-controlled systems using two digits rather than four to define the applicable year. For example, computer programs that have time-sensitive software may recognize a date represented as "00" as the year 1900 rather than the year 2000. This

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could result in a system failure or miscalculations causing disruptions of

operations, including among other things, a temporary inability to process transactions, send invoices or engage in similar normal business activities. The risks involve:

- . potential warranty or other claims by our customers;
- . errors in systems we use to run our business;
- . errors in systems used by our suppliers;
- . errors in systems used by our customers; and
- potential reduced spending by other companies on intelligent optical network products as a result of significant spending on year 2000 remediation.

We have designed our products for use in the year 2000 and beyond and believe they are year 2000 compliant. However, our products are generally integrated into larger networks involving sophisticated hardware and software products supplied by other vendors. Each of our customers' networks involves different combinations of third party products. We cannot evaluate whether all of their products are year 2000 compliant. We may face claims based on year 2000 problems in other companies' products or based on issues arising from the integration of multiple products within the overall network. Although no year 2000 claims have been made against us, we may in the future be required to defend our products in legal proceedings which could be expensive regardless of the merits of these claims.

If our suppliers, vendors, major distributors, partners, customers and service providers fail to correct their year 2000 problems, these failures could result in an interruption in, or a failure of, our normal business activities or operations. If a year 2000 problem occurs, it may be difficult to determine which party's products have caused the problem. These failures could interrupt our operations and damage our relationships with our customers. Due to the general uncertainty inherent in the year 2000 problem resulting from the readiness of third-party suppliers and vendors, we are unable to determine at this time whether third party year 2000 failures could harm our business and our financial results.

Our current and prospective customers' purchasing plans could be affected by year 2000 issues if they need to expend significant resources to fix their existing systems to become year 2000 compliant. This situation may reduce funds available to purchase our products. In addition, customers may wait to purchase our products until after the year 2000, which may reduce our revenue.

Any Acquisitions We Make Could Disrupt Our Business And Seriously Harm Our Financial Condition

We intend to consider investments in complementary companies, products or technologies. While we have no current agreements to do so, we may buy businesses, products or technologies in the future. In the event of any future purchases, we could:

- issue stock that would dilute our current stockholders' percentage ownership;
- . incur debt;
- assume liabilities;
- incur amortization expenses related to goodwill and other intangible assets; or
- . incur large and immediate write-offs.

Our operation of any acquired business will also involve numerous risks, including:

. problems combining the purchased operations, technologies or products;

- . unanticipated costs;
- . diversion of management's attention from our core business;

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- adverse effects on existing business relationships with suppliers and customers;
- . risks associated with entering markets in which we have no or limited prior experience; and
- . potential loss of key employees, particularly those of the purchased organizations.

We cannot assure you that we will be able to successfully integrate any businesses, products, technologies or personnel that we might acquire in the future and any failure to do so could disrupt our business and seriously harm our financial condition.

Risks Related To The Securities Markets And This Offering

Our Stock Price May Be Volatile

Prior to this offering, you could not buy or sell our common stock publicly. An active public market for our common stock may not develop or be sustained after this offering. The market for technology stocks has been extremely volatile. The following factors could cause the market price of our common stock to fluctuate significantly from the price paid by investors in this offering:

- . our loss of a major customer;
- . the addition or departure of key personnel;
- . variations in our quarterly operating results;
- announcements by us or our competitors of significant contracts, new products or product enhancements, acquisitions, distribution partnerships, joint ventures or capital commitments;
- . changes in financial estimates by securities analysts;
- . our sales of common stock or other securities in the future;
- . changes in market valuations of broadband access technology companies;
- changes in market valuations of networking and telecommunications companies; and
- . fluctuations in stock market prices and volumes.

In addition, the stock market in general, and the Nasdaq National Market and technology companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of such companies. The trading prices of many technology companies' stocks are at or near historical highs and these trading prices and multiples are substantially above historical levels. These trading prices and multiples may not be sustained. These broad market and industry factors may materially adversely affect the market price of our common stock, regardless of our actual operating performance. In the past, following periods of volatility in the market price of a company's securities, securities classaction litigation has often been instituted against such companies. Such litigation, if instituted, could result in substantial costs and a diversion of management's attention and resources.

Management May Apply The Proceeds Of This Offering To Uses That Do Not

Our management will have considerable discretion in the application of the net proceeds of this offering, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds may be used for corporate purposes that do not increase our profitability or our market value. Pending application of the proceeds, they may be placed in investments that do not produce income or that lose value.

Insiders Will Continue To Have Substantial Control Over Sycamore After This Offering And Could Limit Your Ability To Influence The Outcome Of Key Transactions, Including Changes of Control

We anticipate that the executive officers, directors and entities affiliated with them will, in the aggregate, beneficially own approximately 65% of our outstanding common stock following the completion of this

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offering. These stockholders, if acting together, would be able to influence significantly all matters requiring approval by our stockholders, including the election of directors and the approval of mergers or other business combination transactions.

Provisions Of Our Charter Documents And Delaware Law May Have Anti-Takeover Effects That Could Prevent A Change Of Control

Provisions of our amended and restated certificate of incorporation, bylaws, and Delaware law could make it more difficult for a third party to acquire us, even if doing so would be beneficial to our stockholders.

There May Be Sales Of A Substantial Amount Of Our Common Stock After This Offering That Could Cause Our Stock Price To Fall

Our current stockholders hold a substantial number of shares, which they will be able to sell in the public market in the near future. Sales of a substantial number of shares of our common stock within a short period of time after this offering could cause our stock price to fall. In addition, the sale of these shares could impair our ability to raise capital through the sale of additional stock.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. You can identify these statements by forward-looking words such as "anticipate," "believe," "could," "estimate," "expect," "intend," "may," "should," "will" and "would" or similar words. You should read statements that contain these words carefully because they discuss our future expectations, contain projections of our future results of operations or of our financial position or state other "forward-looking" information. We believe that it is important to communicate our future expectations to our investors. However, there may be events in the future that we are not able to accurately predict or control. The factors listed above in the section captioned "Risk Factors," as well as any cautionary language in this prospectus, provide examples of risks, uncertainties and events that may cause our actual results to differ materially from the expectations we describe in our forward-looking statements. Before you invest in our common stock, you should be aware that the occurrence of the events described in these risk factors and elsewhere in this prospectus could have a material adverse effect on our business, results of operations and financial position.

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USE OF PROCEEDS

We estimate that our net proceeds from the sale of the 6,500,000 shares of

common stock will be approximately \$113,855,000 assuming an initial public offering price of \$19.00 per share and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. If the over-allotment option is exercised in full, we estimate that such net proceeds will be approximately \$131,083,250.

The principal purposes of this offering are to establish a public market for our common stock, to increase our visibility in the marketplace, to facilitate future access to public capital markets, to provide liquidity to existing stockholders and to obtain additional working capital.

We expect to use the net proceeds for general corporate purposes, including working capital and capital expenditures, and the repayment of outstanding amounts under our equipment lines of credit. These lines of credit consist of:

- . a \$1.0 million equipment line of credit which was converted into a term loan as of June 30, 1999 and is required to be repaid in 30 equal monthly installments commencing July 1, 1999. This line of credit bears interest at the bank's prime rate plus .5% (8.5% at July 31, 1999) per annum and is collateralized by all of our assets. At July 31, 1999, an aggregate of \$967,000 was outstanding under this line of credit; and
- . a \$5.0 million equipment line of credit which will be converted into a term loan on January 31, 2000 and which will be required to be repaid in 36 equal monthly installments commencing February 1, 2000. This line of credit bears interest at the bank's prime rate plus .5% (8.5% at July 31, 1999) per annum and is collateralized by all of our assets. At July 31, 1999, an aggregate of \$4.2 million was outstanding under this line of credit.

Although we may use a portion of the net proceeds to acquire businesses, products or technologies that are complementary to our business, we have no specific acquisitions planned. Pending such uses, we plan to invest the net proceeds in investment grade, interest-bearing securities.

DIVIDEND POLICY

We have never paid or declared any cash dividends on our common stock or other securities and do not anticipate paying cash dividends in the foreseeable future. Our credit agreement with a commercial bank prohibits the payment of dividends. Any future determination to pay cash dividends will be at the discretion of the board of directors and will be dependent upon our financial condition, results of operations, capital requirements, general business condition and such other factors as the board of directors may deem relevant.

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CAPITALIZATION

The following table sets forth our capitalization as of July 31, 1999. The pro forma information gives effect to the conversion of all of our outstanding redeemable convertible preferred stock. The pro forma as adjusted information reflects the issuance and sale of the 6,500,000 shares of common stock offered by us in this offering at an assumed initial public offering price of \$19.00 per share and the application of the estimated net proceeds we expect to receive from this offering. The outstanding share information excludes: (1) 1,686,300 shares of common stock issuable upon exercise of outstanding options as of July 31, 1999, and (2) 18,804,900 shares of common stock reserved for future issuance under our 1998 Stock Incentive Plan as of July 31, 1999. This table should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and other financial data included elsewhere in this prospectus.

<TABLE> <CAPTION>

As of July 31, 1999

			Pro Forma as Adjusted
	(in thou	ept share	
<\$>	<c></c>	<c></c>	<c></c>
Long-term debt, less current portion		\$ 4,054 	
Redeemable convertible preferred stock, \$.01 par value; 15,792,201 authorized, 15,761,075 issued and outstanding, actual; no shares authorized, issued and outstanding, pro forma and pro forma as adjusted			
Stockholders' equity (deficit): Preferred Stock, \$.01 par value, 5,000,000 shares authorized, 0 shares issued and outstanding on a pro forma basis Common stock, \$.001 par value; 91,000,000 shares authorized, 23,273,112 shares issued and outstanding, actual; 70,556,337 shares issued and outstanding, on a pro forma basis; 250,000,000 shares authorized, 77,056,337 shares issued and outstanding, on a pro forma			
as adjusted basis	23 28 , 911	71 84 , 634	198,483
Accumulated deficit			(19,449)
Notes receivable		(360)	
Deferred compensation	(22,748)	(22,748)	(22,748)
Total stockholders' equity (deficit)	(13,623)	42,148	
Total capitalization		\$ 46,202 ======	

 ====== | ====== | ====== |19

DILUTION

Sycamore's pro forma net tangible book value as of July 31, 1999, giving effect to the conversion of all outstanding shares of redeemable convertible preferred stock into common stock on the closing of this offering, was approximately \$42.1 million, or \$.60 per share of common stock. Pro forma net tangible book value per share represents our tangible net worth (tangible assets less total liabilities) divided by the 70,556,337 shares of common stock outstanding after giving effect to the conversion of all shares of redeemable convertible preferred stock into common stock. After giving effect to the issuance and sale of the shares of common stock offered by Sycamore in this offering (at an assumed initial public offering price of \$19.00 per share) and the receipt and application of the net proceeds from the sale of these shares, Sycamore's pro forma net tangible book value at July 31, 1999 would have been \$156.0 million, or \$2.02 per share. This represents an immediate increase in pro forma net tangible book value to existing stockholders of \$1.42 per share and an immediate dilution to new investors of \$16.98 per share. The following table illustrates this per share dilution:

<TABLE> <S>

<C> <C> \$19.00 Assumed initial public offering price per share Pro forma net tangible book value per share before this offering.....\$.60 Increase in pro forma net tangible book value per share Pro forma net tangible book value per share after this offering... 2.02 _____

Dilution per share to new investors.....

\$16.98

</TABLE>

The following table summarizes on a pro forma basis, giving effect to the conversion of all outstanding shares of redeemable convertible preferred stock into common stock on the closing of this offering, as of July 31, 1999, the difference between the number of shares of common stock purchased from Sycamore, the total consideration paid to Sycamore, and the average price per share paid by existing stockholders and by new investors (at an assumed initial public offering price of \$19.00 per share before deduction of estimated underwriting discounts and commissions and estimated offering expenses payable by Sycamore):

<TABLE>

	Shares Pu	rchased	Total Conside	Average Price Per	
	Number	Percent	Amount	Percent	Share
<pre><s> Existing stockholders New investors</s></pre>	70,556,337	91.6%			
Total	77,056,337	100.0%	\$182,233,000	100.0%	

</TABLE>

The table above assumes no exercise of stock options outstanding at July 31, 1999. As of July 31, 1999, there were options outstanding to purchase 1,686,300 shares of common stock at a weighted average exercise price of \$1.36 per share and 18,804,900 shares reserved for future grant or award under our 1998 Stock Incentive Plan. To the extent any of these options are exercised, there will be further dilution to new investors. To the extent all of such outstanding options had been exercised as of July 31, 1999, net tangible book value per share after this offering would be \$2.01 and total dilution per share to new investors would be \$16.99. If the underwriters' over-allotment option is exercised in full, the number of shares held by new investors will increase to 7,475,000 shares, or 9.6% of the total number of shares of common stock outstanding after this offering.

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SELECTED FINANCIAL DATA

The following selected financial data should be read in conjunction with the financial statements and notes thereto and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and other financial data included elsewhere in this prospectus. The statement of operations data for the period from inception (February 17, 1998) through July 31, 1998 and the year ended July 31, 1999 and the balance sheet data as of July 31, 1998 and 1999 are derived from the financial statements of Sycamore audited by PricewaterhouseCoopers LLP, independent accountants, which are included elsewhere in this prospectus.

<TABLE> <CAPTION>

Period from
inception
(February 17, Year
1998) through ended
July 31, 1998 July 31, 1999
----(in thousands, except per
share data)
<C> <C>

<S>

Statement of Operations Data:

Revenues	\$	\$ 11,330
Cost of revenues		8,486
Gross profit Operating expenses:		2,844
Research and development	497 92	13,955 4,064
General and administrative	199 5	1,405 2,735
Total operating expenses	793	22,159
Loss from operations	(793) 100	(19,315) 559
Net loss	\$ (693) =====	\$ (18,756) ======
Basic and diluted net loss per share Weighted average shares used in computing basic	\$ (.55)	\$ (6.03)
and diluted net loss per share Pro forma basic and diluted net loss per share	1,251	3,108
(unaudited) Weighted average shares used in computing pro forma basic and diluted	\$ (.04)	\$ (.49)
net loss per share (unaudited)	18,756	38,145
<caption></caption>	7	7
	As of July 31, 1998	As of July 31, 1999
	(in tho	
<\$>	(III CIIO	<c></c>
Balance Sheet Data:		
Cash, cash equivalents and marketable securities	\$4,279	\$ 28,989
Working capital	4,341	40,450
Long term debt, less current portion	 5,621	4,054 55,771
Total stockholders' deficit	(678)	(13, 623)

See note 2 to the notes to the financial statements for a description of the computation of basic and diluted net loss per share and the number of shares used to compute basic and diluted net loss per share.

Pro forma per share calculations reflect the conversion upon the closing of the offering of all outstanding shares of redeemable convertible preferred stock into shares of common stock.

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MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Overview

We develop and market networking products that allow service providers to address customer requirements for high-speed data services and bandwidth. From our inception on February 17, 1998 through July 31, 1999, our operating activities consisted primarily of research and development, product design, development and testing. We also staffed and trained our administrative, marketing and sales organizations and began sales and marketing activities. In May 1999, we began shipping our SN 6000 product and recognized revenues of \$11.3 million from shipments of our SN 6000 product in the fourth quarter of 1999. We expect that a significant portion of our future revenue will continue to come from sales of the SN 6000. While we are developing and plan to introduce new products and enhancements, we cannot assure you that we will be

Since our inception, we have incurred significant losses, and as of July 31, 1999, we had an accumulated deficit of \$19.4 million. We have not achieved profitability on a quarterly or an annual basis, and anticipate that we will continue to incur net losses. We have a lengthy sales cycle for our products and accordingly we expect to incur sales and other expenses before we realize the related revenue. We expect to incur significant sales and marketing, research and development and general and administrative expenses and, as a result, we will need to generate significant revenues to achieve and maintain profitability. Our policy is to recognize revenue from product sales upon shipment provided that a purchase order has been received or a contract has been executed, there are no uncertainties regarding customer acceptance, the fee is fixed and determinable and collectibility is deemed probable. If uncertainties regarding customer acceptance exist, revenue is recognized when uncertainties are resolved. Revenue from technical support and maintenance contracts is deferred and recognized ratably over the period of the related agreements. The Company records a warranty liability for parts and labor on its products. Warranty periods are generally three years from installation date. Estimated warranty costs are recorded at the time of revenue recognition.

Our manufacturing expenses consist of amounts paid to third party manufacturers, manufacturing start-up expenses, manufacturing personnel and related costs and our customer support group. We outsource our manufacturing and assembly requirements. Accordingly, a significant portion of our manufacturing expenses consists of payments to a third-party contract manufacturer. Manufacturing, engineering and documentation controls are performed at our facility in Chelmsford, Massachusetts. We believe that our gross margins will be affected primarily by the following factors:

- . demand for our products;
- . new product introductions both by us and by our competitors;
- . changes in our pricing policies and those of our competitors;
- . the mix of product configurations sold; and
- . the volume of manufacturing and the effect on manufacturing and component costs.

Research and development expenses consist primarily of salaries and related personnel costs, prototype costs and other costs related to the design, development, testing and enhancement of our products. To date, we have expensed our research and development costs as they were incurred. Several components of our research and development effort require significant expenditures, the timing of which can cause significant quarterly variability in our expenses. We incur significant expenses in connection with the purchase of testing equipment for our products. We believe that research and development is critical to our strategic product development objectives and intend to enhance our technology to meet the changing requirements of our customers. As a result, we expect our research and development expenses to increase in absolute dollars in the future.

Sales and marketing expenses consist primarily of salaries and the related personnel costs of sales and marketing personnel, commissions, promotional, travel and other marketing expenses and recruiting expenses.

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We expect that sales and marketing expenses will increase in absolute dollars in the future as we increase our direct sales efforts, expand our operations internationally, hire additional sales and marketing personnel, initiate additional marketing programs and establish sales offices in new locations.

General and administrative expenses consist primarily of salaries and

related expenses for executive, finance, legal, facilities, human resources and information technology personnel, recruiting expenses and professional fees. We expect that general and administrative expenses will increase in absolute dollars as we add personnel and incur additional costs related to the growth of our business and our operation as a public company.

In connection with the granting of certain stock options and the issuance of certain restricted shares during the period from inception through July 31, 1998 and the year ended July 31, 1999, we recorded deferred stock compensation expense of approximately \$184,000 and \$23.7 million, respectively. Deferred stock compensation expense consists of charges resulting from the granting of stock options and restricted shares with exercise or sales prices deemed to be below the fair value of our common stock on the date of grant. These amounts are being amortized ratably over the vesting periods of the applicable options or restricted stock, which are typically five years, with 20% vesting on the first anniversary of the date of grant and 5% vesting quarterly thereafter.

The Company expects to record an additional deferred compensation expense of approximately \$18.6 million for 1,673,433 stock options granted at an exercise price deemed to be below fair market value from August 1, 1999 through September 10, 1999.

Results of Operations

Period from inception (February 17, 1998) through July 31, 1998 (fiscal 1998) and the year ended July 31, 1999.

Revenues

We began shipping the SN 6000 in May 1999 and recognized \$11.3 million of revenue in the three-month period ended July 31, 1999. All revenue was derived from the shipments of the SN 6000 product. For the year ended July 31, 1999, one customer accounted for all of our revenue.

Costs of Revenues

Costs of revenues were \$8.5 million, or 75% of revenue, for the year ended July 31, 1999. We began shipping the SN 6000 in May 1999. Costs of revenues as a percentage of revenue in 1999 were higher than they are anticipated to be in the future due to the high cost of initial start-up of production, including the increase in personnel and the low volume of sales.

Research and Development Expenses

Research and development expenses were \$497,000 for fiscal 1998 and \$14.0 million for fiscal 1999 and represented 63% of total operating expenses for fiscal 1998 and 1999. The increase in expenses was primarily due to increased costs associated with a significant increase in personnel and personnel-related expenses, an increase in non-recurring engineering costs and an increase in prototype expenses for the design and development of the SN 6000, SN 8000 and SN 16000 products. Research and development is essential to our future success and we expect that research and development expenses will increase in absolute dollars in future periods.

Sales and Marketing Expenses

Sales and marketing expenses were \$92,000 for fiscal 1998 and \$4.1 million for fiscal 1999 and represented 12% and 18% of total operating expenses in fiscal 1998 and 1999, respectively. The increase in expenses reflects the hiring of additional sales and marketing personnel, sales based commissions and marketing program costs,

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including web development, trade shows and product launch activities. We intend to continue to expand our domestic and international sales force and marketing efforts and as a result expect sales and marketing expenses will

increase in absolute dollars in future periods.

General and Administrative Expenses

General and administrative expenses were \$199,000 for fiscal 1998 and \$1.4 million for fiscal 1999 and represented 25% and 6% of total operating expenses in fiscal 1998 and 1999, respectively. The increase in expenses reflects the hiring of additional general and administrative personnel and expenses necessary to support and scale our operations.

Amortization of Stock Compensation

Amortization of stock compensation expense was \$5,000 and \$1.1 million for fiscal 1998 and fiscal 1999, respectively. Amortization of stock compensation expense in fiscal 1998 resulted from the granting of stock options and restricted shares with the exercise or sales prices below the deemed fair value of our common stock on the date of grant. Additionally, in 1999, we incurred \$1.6 million of compensation expense associated with the grant of options to non-employees and members of our advisory boards.

Interest Income, Net

Interest income, net was \$100,000 and \$559,000 for fiscal 1998 and fiscal 1999, respectively. Interest income consists of interest earned on our cash balances and marketable securities and interest expense associated with our equipment note payable. The increase in interest income reflects higher invested balances in 1999, offset by interest payments on our equipment note payable in 1999.

Net Operating Losses and Tax Credit Carryforwards

As of July 31, 1999, we had approximately \$16.6 million of state and federal net operating loss carryforwards for tax reporting purposes available to offset future taxable income. Such net operating loss carryforwards begin to expire in 2004 and 2019, respectively, to the extent that they are not utilized. We have not recognized any benefit from the future use of loss carryforwards for these periods, or for any other periods, since inception. Management's evaluation of all the available evidence in assessing realizability of the tax benefits of such loss carryforwards indicates that the underlying assumptions of future profitable operations contain risks that do not provide sufficient assurance to recognize the tax benefits currently. The net operating loss carryforwards could be limited in future years if there is a significant change in our ownership.

2.4

Quarterly Results of Operations

The following table presents our operating results for the quarters ended October 31, 1998, January 30, 1999, May 1, 1999 and July 31, 1999. In May 1999, we began shipping the SN 6000. The information for each of these quarters is unaudited and has been prepared on the same basis as the audited financial statements appearing elsewhere in this prospectus. In the opinion of management, all necessary adjustments consisting only of normal recurring adjustments, have been included to present fairly the unaudited quarterly results when read in conjunction with our audited financial statements and the related notes appearing elsewhere in this prospectus. These operating results are not necessarily indicative of the results of any future period.

<TABLE>

Quarter Ended

						July
October	31,	January	30,	May	1,	31,
1998		1999		199	99	1999

	(in thou (unaud					·		
<\$>	<c></c>		<c></c>	>	<c></c>		<c></c>	
Consolidated Statement of Operations Data:								
Revenues	\$		Ş		\$		\$11,330	
Costs of revenues		24	_	215		934	7,313	
Gross profit (loss)		(24)	_	(215)	(934)	4,017	
Operating expenses:								
Research and development		873		2,365	3,	334	7,383	
Sales and marketing		179		243	1,	176	2,466	
General and administrative		93		280		379	653	
Amortization of stock compensation		39		96		361	2,239	
Total operating expenses		1,184	_	2,984	5, 		12,741	
Loss from operations		(1,208)		(3,199)	(6,	184)	(8,724)	
Interest income, net		60		133		295	71	
Net loss	\$	(1 , 148)	Ş		\$(5,		\$(8,653)	

</TABLE>

Our revenues and operating results will vary significantly from quarter to quarter due to a number of factors, many of which are outside of our control and any of which may cause our stock price to fluctuate. The primary factors that may affect us include the following:

- . fluctuation in demand for intelligent optical networking products;
- . the timing and size of sales of our products;
- . the length and variability of the sales cycle for our products;
- . the timing of recognizing revenue and deferred revenue;
- new product introductions and enhancements by our competitors and ourselves;
- changes in our pricing policies or the pricing policies of our competitors;
- our ability to develop, introduce and ship new products and product enhancements that meet customer requirements in a timely manner;
- our ability to obtain sufficient supplies of sole or limited source components;
- . increases in the prices of the components we purchase;
- our ability to attain and maintain production volumes and quality levels for our products;
- . the timing and level of prototype expenses;
- . costs related to acquisitions of technology or businesses; and

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 general economic conditions as well as those specific to the telecommunications, Internet and related industries.

We plan to increase significantly our operating expenses to fund greater levels of research and development, expand our sales and marketing operations, broaden our customer support capabilities and develop new distribution

channels. We also plan to expand our general and administrative capabilities to address the increased reporting and other administrative demands which will result from this offering and the increasing size of our business. Our operating expenses are largely based on anticipated organizational growth and revenue trends and a high percentage of our expenses are, and will continue to be, fixed. As a result, a delay in generating or recognizing revenue for the reasons set forth above, or for any other reason, could cause significant variations in our operating results from quarter to quarter and could result in substantial operating losses.

Due to the foregoing factors, we believe that quarter-to-quarter comparisons of our operating results are not a good indication of our future performance. You should not rely on our results or growth for one quarter as any indication of our future performance. It is likely that in some future quarters, our operating results may be below the expectations of public market analysts and investors. In this event, the price of our common stock will probably decrease.

Liquidity and Capital Resources

Since inception, we have financed our operations primarily through private sales of our capital stock totaling approximately \$58.7 million in net proceeds through July 31, 1999. We have also financed our operations through borrowings on long-term debt agreements for the purchase of capital equipment. At July 31, 1999, cash, cash equivalents and marketable securities totaled \$29.0 million.

Cash used in operating activities was \$598,000 for fiscal 1998 and \$27.6 million for the year ended July 31, 1999. The increase in cash used for operating activities reflects increases in net losses, accounts receivables, inventory purchases and irrevocable standby letters of credit, offset by non cash charges for amortization of stock compensation and depreciation and increased accounts payable and accrued expenses, reflecting the growth in business activity.

Cash used in investing activities was \$3.7 million for fiscal 1998 and \$4.9 million for the year ended July 31, 1999. The increase in net cash used for investing activities reflects increased purchases of property and equipment, primarily for computers and test equipment for our development and manufacturing activities. The increases in cash used for investing activities also reflect increased purchases of marketable securities.

Cash provided by financing activities was \$5.5 million for fiscal 1998 and \$53.2 million for the year ended July 31, 1999. The increase in cash provided by financing activities reflects the private sales of redeemable convertible preferred stock and the issuance of common stock from the exercise of stock options and the sale and issuance of restricted common stock.

In December 1998, as collateral for an office facility lease, the Company has issued an irrevocable stand-by letter of credit for \$92,000 which is collateralized by a U.S. Treasury Bill. The letter of credit is irrevocable and expires in January 2002. In July 1999, as collateral for inventory purchases made by a third party manufacturer on behalf of the Company, the Company has issued a guaranteed stand-by letter of credit for \$4,000,000 which is collateralized by a U.S. Government security. The letter of credit is irrevocable and expires in October 1999.

We believe that the net proceeds from this offering, together with our current cash, cash equivalents and marketable securities and lines of credit will be sufficient to meet our anticipated cash needs for working capital and capital expenditures for at least the next 12 months.

If cash generated from operations is insufficient to satisfy our liquidity requirements, we may seek to sell additional equity or debt securities. If additional funds are raised through the issuance of debt securities, these

securities could have rights, preferences and privileges senior to holders of common stock, and the term of this

debt could impose restrictions on our operations. The sale of additional equity or convertible debt securities could result in additional dilution to our stockholders, and we cannot be certain that additional financing will be available in amounts or on terms acceptable to us, if at all. If we are unable to obtain this additional financing, we may be required to reduce the scope of our planned product development and sales and marketing efforts, which could harm our business, financial condition and operating results.

Year 2000 Compliance

Impact of the Year 2000 Computer Problem. The year 2000 computer problem refers to the potential for system and processing failures of date-related data as a result of computer-controlled systems using two digits rather than four to define the applicable year. For example, computer programs that have time-sensitive software may recognize a date represented as "00" as the year 1900 rather than the year 2000. This could result in a system failure or miscalculations causing disruptions of operations, including among other things, a temporary inability to process transactions, send invoices, or engage in similar normal business activities.

State of Readiness of our Products. We have designed our products, including the SN 6000, for use in the year 2000 and beyond and believe our products are year 2000 complaint. However, our products are generally integrated into larger networks involving sophisticated hardware and software products supplied by other vendors. Each of our customers' networks involves different combinations of third party products. We cannot evaluate whether all of their products are year 2000 compliant. We may face claims based on year 2000 problems in other companies' products or based on issues arising from the integration of multiple products within the overall network. Although no such claims have been made against us, we may in the future be required to defend our products in legal proceedings which could be expensive regardless of the merits of such claims.

State of Readiness of our Internal Systems. Our business may be affected by year 2000 issues related to non-complaint internal systems developed by us or by third-party vendors. Our material third-party vendors have stated that they are, or expect to be, year 2000 complaint in a timely manner. We are not currently aware of any year 2000 problem relating to any of our material internal systems. We are in the process of testing all such systems for year 2000 compliance and plan to complete such testing before September 30, 1999. We do not believe that we have any significant systems that contain embedded chips that are not year 2000 compliant. Our internal operations and business are also dependent upon the computer-controlled systems of third parties such as our manufacturers, suppliers, customers and other service providers. We believe that absent a systemic failure outside our control, such as a prolonged loss of electrical or telephone service, year 2000 problems at third parties such as manufacturers, suppliers, customers and service providers will not have a material impact on our operations. If our manufacturers, suppliers, vendors, partners, customers and service providers fail to correct their year 2000 problems, these failures could result in an interruption in, or a failure of, our normal business activities or operations. If a year 2000 problem occurs, it may be difficult to determine which party's products have caused the problem. These failures could interrupt our operations and damage our relationships with our customers. Due to the general uncertainty inherent in the year 2000 problem resulting from the readiness of third-party manufacturers, suppliers and vendors, we are unable to determine at this time whether year 2000 failures could harm our business and our financial results. Our customers' purchasing plans could be affected by year 2000 issues if they need to expend significant resources to fix their existing systems to become year 2000 compliant. This situation may reduce funds available to purchase our products. In addition, some customers may wait to purchase our products until after the year 2000, which may negatively impact our revenue.

Risks. The failure of our internal systems to be year 2000 compliant could

temporarily prevent us from processing orders, issuing invoices and developing products and could require us to devote significant resources to correct such problems. Due to the general uncertainty inherent in the year 2000 computer problem, resulting from the uncertainty of the year 2000 readiness of third-party suppliers and vendors, we are unable to determine at this time whether the consequences of year 2000 failures will have a material impact on our business, results of operations or financial condition.

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To date, we have not incurred material expense associated with our efforts to become year 2000 compliant and do not anticipate that any future costs associated with our year 2000 remediation efforts will be material.

Market Risk

Sycamore does not use derivative financial instruments. We generally place our marketable security investments in high credit quality instruments, primarily U.S. Government obligations and corporate obligations with contractual maturities of less than one year. We do not expect any material loss from our marketable security investments and therefore believe that our potential interest rate exposure is not material.

Recent Accounting Pronouncements

In April 1998, the Accounting Standards Executive Committee issued Statement of Position 98-5, "Reporting on the Costs of Start-Up Activities" ("SOP 98-5"). SOP 98-5, which is effective for fiscal years beginning after December 15, 1998, provides guidance on the financial reporting of start-up costs and organization costs. It requires costs of start up activities and organization costs to be expensed as incurred. Adoption of this standard did not have a material impact on our financial condition or result of operations.

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, "Accounting for Derivatives and Hedging Activities," which establishes accounting and reporting standards for derivative instruments, including derivative instruments embedded in other contracts, (collectively referred to as derivatives) and for hedging activities. We will adopt SFAS No. 133 as required by SFAS No. 137, "Deferral of the effective date of the FASB Statement No. 133," in fiscal year 2001. The adoption of SFAS No. 133 is not expected to have an impact on our financial condition or results of operations.

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BUSINESS

Overview

We develop and market software-based intelligent optical networking products that enable network service providers to quickly and cost-effectively provide bandwidth and create new high speed data services. We believe that the existing public network is unable to meet the demands of high speed data applications that are driving network growth. As data traffic on the public network continues to grow at rates that surpass available network capacity, we believe that service providers require new solutions to relieve network congestion and create new data services. Our intelligent optical networking products are designed to allow service providers to deploy, manage and optimize the performance of their fiber optic networks. Our products are based on a common software architecture that we believe will accelerate our release of new products and enable our customers to upgrade with minimal network impact and operator training. We have designed our products to protect service providers' existing investment in fiber optic and transmission equipment and provide a migration path to the next generation optical public network infrastructure.

Industry Background

Over the past decade, the volume of high speed data traffic across the public network has grown significantly, reflecting the increasing use of the network for Internet access, electronic mail communications, electronic commerce, remote access by telecommuters and other network data transmission services. According to Ryan, Hankin & Kent, a leading market research and consulting firm, public network bandwidth will have to increase by over 2000% between 1998 and 2002 to satisfy expected Internet and other data traffic requirements.

To meet the growth in the demand for high speed data services, service providers are investing significantly to upgrade the public network infrastructure, which was originally built for voice traffic. Service providers are laying fiber optic cable and installing transmission equipment which transforms the fiber from available capacity to usable bandwidth by lighting the fiber. According to Ryan, Hankin & Kent, more than \$6.9 billion was invested in the United States alone in 1998 in building and enhancing the transmission capability of the public network. This investment was spread across fiber deployment, SONET equipment and dense wave division multiplexing equipment, known as DWDM.

Existing Public Network Transmission Infrastructure

Despite these investments, service providers are still unable to quickly respond to the bandwidth demands of their customers. We believe that this inability is due in large part to the transmission architecture of the existing public network. This architecture is based upon telecommunications standards, referred to as SONET in North America and SDH elsewhere in the world, which set the hierarchical characteristics for transmitting optical signals. A SONET/SDH network typically consists of three primary components:

- . fiber optic cable that serves as the physical transmission medium and provides the available capacity;
- . DWDM equipment, which multiplies the transmission capacity of a specific fiber by dividing a single strand into multiple lightpaths, or wavelengths; and
- . SONET/SDH transmission equipment, which converts data traffic from an electrical signal to an optical signal for transport over the fiber network.

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In the current public network transmission infrastructure, the ability to manage data resides in the SONET/SDH equipment which converts the data traffic from an electrical signal to an optical signal which is transmitted over the fiber. The optical fiber itself is only a physical transmission medium with no imbedded intelligence. As a result, moving data through the network involves the following complex processes that add cost and make scaling difficult:

- . Traffic enters the network as an electrical signal and is converted by the SONET/SDH equipment into an optical signal for transmission across the network;
- . At each network transit point, the optical data traveling across the network is terminated at a SONET/SDH network terminal;
- . The optical data is then converted into an electrical signal and examined to see which portions of the data are to be extracted from the network at that transit point; and
- . The data is then converted back to an optical signal by the SONET/SDH equipment for transport to the next network transit point, where the process is repeated.

The technology of a SONET/SDH architecture typically requires a linear or ring-based network topology. The following diagram illustrates the process of transmitting data across a typical SONET/SDH architecture:

[Illustration showing a linear SONET/SDH network. The drawing of the network contains a fiber optic cable with SONET/SDH transmission equipment and DWDM equipment attached. The network shows the conversion of traffic from the optical domain to the electrical domain and back to the optical domain as data travels across the network.]

Limitations of the Existing Public Network Transmission Infrastructure

The SONET/SDH network architecture was originally designed to transport voice traffic rather than for today's high speed data services. Unlike voice traffic, which is generally characterized by slow growth and stable demand, data traffic is characterized by rapid growth and unpredictable demand. Data networks must be capable of being deployed cost-effectively and expanded quickly.

The SONET/SDH network architecture, however, is not sufficiently flexible to meet these requirements. Generally, the process of expanding the capacity of a SONET/SDH network is time-consuming and requires significant capital investment by the service provider. There are currently only two methods to expand a SONET/SDH network. The first option is to increase the speed at which the network operates. Because SONET/SDH equipment is designed to operate at a specific speed and all devices on a ring must operate at the same speed, this option requires that all equipment on the SONET/SDH ring be replaced with higher speed devices on a concurrent basis. In addition, because the rings at the core of the network must carry the aggregate traffic of all of the rings feeding them, the upgrading of one SONET/SDH ring frequently requires the upgrading of some or all of the interconnected SONET/SDH rings. Accordingly, adding capacity to a SONET/SDH ring network is a complex and time consuming process. The second option to expand a SONET/SDH ring network is to construct new rings with new fiber or increase the capacity of each individual fiber on a ring through the utilization of DWDM technology, which can transform each fiber strand into as many as 100 parallel optical wavelengths. Under either approach, network complexity increases since each optical wavelength must be terminated by SONET/SDH equipment and the interconnection of multiple SONET/SDH rings will absorb some available network capacity.

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Data traffic will typically transit through multiple SONET/SDH rings when traversing the public network. In addition, in SONET/SDH networks, up to 50% of network capacity must be reserved to provide alternative routing for traffic in the event of a network outage. This redundancy, and the numerous optical-to-electrical-to-optical conversions within each ring and between rings, create a costly and complex network architecture.

As a result of these limitations, the buildout of a SONET/SDH network generally requires lengthy time commitments and significant initial equipment investment by service providers. In today's competitive environment, long lead times for service provisioning and significant purchase commitments are often not compatible with the need of service providers to rapidly and costeffectively deploy new services and be responsive to their customer demand. To manage the frequently unpredictable demand of data traffic, service providers need to move toward a "just-in-time" investment and service delivery model allowing them to introduce and expand services when and where needed in response to demand. The migration to a "just-in-time" model will require a public network architecture that is scalable, flexible and cost-effective and that is capable of supporting the anticipated growth in high speed data communications services.

The Sycamore Solution

We develop and market software-based intelligent optical networking products that enable service providers to quickly and cost-effectively provide

bandwidth and create new high speed data services. Our products are designed to move data directly onto the fiber without a requirement for intermediary SONET/SDH equipment. Once on the optical network, data moves through the network without the need to convert the optical signals to electrical signals at each network transit point. We believe that adding intelligence to the optical network enhances the functionality of the network and preserves the management and restoration benefits of SONET/SDH, while providing the capacity benefits of DWDM. Our products will provide the tools to enable service providers to utilize, restore, provision and maintain intelligent optical networks and optimize the performance of these networks, while providing a migration path to the next generation optical network.

Key benefits of our solution include the following:

Improves Network Flexibility and Scalability. Our software-based products are designed to allow service providers to improve the flexibility and scalability of their networks without the long lead times and large, upfront capital investment presently required for a network buildout. The software-based capabilities of our products will permit service providers to change and upgrade their network infrastructure and services without significant hardware changes or additions. This improved flexibility and scalability will enable service providers to more easily expand their network architecture, support new high speed data applications and introduce value-added services for the benefit of their customers.

Enables Rapid Service Delivery. The competitive marketplace facing service providers and the pace of technological change require that the public network infrastructure be adaptable to accommodate rapid changes in the demand for service. Our products are designed to shorten the time it takes for service providers to increase bandwidth and provide services, thereby enabling our customers to introduce network services on a rapid basis in response to their customers' demand. We believe that this flexibility will be cost-effective for service providers because it will enable them to increase capacity based on current, rather than forecasted, market demand for their services.

Facilitates Introduction of New Data Services and Creation of New Revenue Opportunities for Service Providers. Because our products are software-based, we are able to rapidly introduce new features into our products, which can in turn be offered by service providers to their customers as new services or service enhancements. We believe that these added features will provide revenue opportunities for our customers and will enable them to differentiate their network services from those of their competitors. We have designed a comprehensive network management solution, which will enable service providers to monitor the performance of their network, isolate and manage network faults, and otherwise manage their network on a real-time basis.

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With our network management system, service providers will be able to offer value-added services such as customer network management (CNM) to their customers.

Protects Existing Investments. Our products are designed to enable our customers to increase the functionality and improve the performance of their networks without sacrificing their infrastructure investments in SONET/SDH equipment. Our products are designed to facilitate a gradual migration from existing electro-optical SONET/SDH networks to all-optical networks. Service providers will be able to introduce our products into an existing optical network environment, when and where needed, without replacing the current architecture. For example, over a common fiber infrastructure, a service provider's existing SONET/SDH network could be used to continue to support low speed voice and data services, while new higher speed data services could be supported by our intelligent optical network products. Furthermore, the common software architecture, which will serve as the basis for our future products, is intended to ensure the continued interoperability and manageability of our products as our product line evolves.

Strategy

Our objective is to be the leading provider of intelligent optical networking products. Key elements of our strategy include the following:

Offer End-to-End Optical Network Solutions To Customers. We intend to develop and offer a full range of intelligent optical networking products to our customers. Our current products help service providers improve the utilization of fiber optic capacity that has already been deployed in the network. We expect that our future products, which will be based on the same software architecture, will include an optical switch, which is necessary for the creation of meshed network environments. A meshed-based network provides greater flexibility than a ring-based network and provides for more direct routes between network points, enabling more efficient network restoral or redundancy schemes. In addition, we intend to differentiate ourselves from our competition by offering other products that will enable customers to utilize, restore and provide data services over wavelengths and monitor and improve the performance level of network traffic.

Collaborate With Customers To Generate Demand For High Speed Data Services. We work collaboratively with our customers to help them identify and create new high speed data services. Our professional services team provides assistance in such areas as network planning, design, implementation and service launch to facilitate the introduction of these services. By helping our customers to create new services, we help generate additional revenue opportunities for our customers and drive additional demand for our products.

Utilize Software-Based Product Architecture. Our products utilize a common software-based architecture that permits improved flexibility and interoperability and expanded network management capabilities. The common architecture is designed to reduce the complexity of introducing new software revisions across the network. We believe that this architecture will accelerate the release of new products and enable our customers to upgrade with minimal network impact and operator training.

Incorporate Commercially Available Optical Hardware Components. We use commercially available optical hardware components in our products wherever feasible. We believe that by using these third-party components, we benefit from the research and development of the vendors of these products, as well as from the efficiencies of scale that these vendors generate by producing the components in higher volumes. As a result of our use of these components, we believe that we can more quickly bring to market a broad-based product line at a lower cost than if we had utilized proprietary components.

Outsource Manufacturing. We outsource the manufacturing of our products to reduce our cost structure and to maintain our focus on the development of value-added software. We believe that most optical networking companies have manufactured their own products in order to implement specialized manufacturing techniques historically required for optical componentry. However, we believe that the quality and consistency of optical

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manufacturing techniques have advanced significantly and that, as a result, it is now possible to engage third party manufacturers to build our products without sacrificing quality or performance.

Focus On Just-In-Time Implementation. Our product architecture strategy is to develop products that will enable service providers to expand and upgrade their networks in response to demand on a "just-in-time" basis. Our software-based product architecture is designed to help us achieve this goal. Our software capabilities support a modular "plug and play" hardware architecture which is designed to allow new and enhanced modules to be easily and nondisruptively inserted into the network as optical component technology advances.

Capitalize On Extensive Industry Experience. We have significant management, engineering and sales experience in the networking and optics industries and long-standing relationships with key personnel in our target

customer base. We believe that our experience and relationships will be important in enabling us to develop products to meet our customers' needs and to penetrate our target market.

Products and Technology

Product Architecture

Our software-based intelligent optical networking products will enable service providers to use their existing optical network infrastructure to deliver high speed end-to-end services to meet the bandwidth intensive needs of data applications. Our products will enable service providers to offer high speed services over wavelengths directly from the optical network.

Our product architecture is designed to provide the following benefits:

- lowered network infrastructure cost by reducing the number of optical-toelectrical-to-optical conversions required to transmit data traffic across the network;
- network simplification by eliminating the need for a separate layer of SONET/SDH equipment for new services;
- . more rapid service delivery by enabling automated end-to-end provisioning of services;
- . non-disruptive network upgrades through advanced software capabilities;
- . a practical migration path from a SONET/SDH architecture to an alloptical network; and
- . provide service providers with new revenue opportunities through advanced features that support value-added service offerings.

We believe that the acceptance and implementation of intelligent optical networking technology by service providers will be a gradual process driven by high speed data service demands and network scaling requirements. Our product strategy will allow service providers to migrate from today's SONET/SDH network architecture to an intelligent optical network while preserving their investment in the existing network. As intelligent optical networking equipment is introduced into an existing SONET/SDH network, the service provider can increasingly deliver high speed services directly from the optical network. As the intelligent optical network continues to grow, switching can be introduced into the optical network to support increased scaling and efficient traffic routing and to complete the transition to a meshed-based network architecture. Throughout all of these stages of network development, we expect to offer the software-based management tools which will allow the service provider to effectively provision and manage services end-to-end.

Sycamore's intelligent optical networking products incorporate the following features:

Intelligent Optical Networking Software. Our entire product line shares a common software base. This software foundation allows us to minimize product development time by leveraging our software architecture across multiple product lines. Our software architecture is designed to provide service providers with tools to

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continue to evolve their network without requiring the replacement of existing infrastructure. In addition, the architecture is designed to enable service providers to rapidly absorb new optical technology and functionality into the network with minimal effort, training and incremental investment. Software-based features such as topology discovery, system self-inventory and dynamic power balancing will allow service providers to quickly respond to customer needs. Additionally, advances in optical components, such as new lasers,

filters, and amplifiers, can be quickly integrated within this software-based environment.

SONET/SDH Functionality. Our products are designed to provide the optical interfaces and management and restoration capabilities traditionally offered on SONET/SDH equipment. By supporting these capabilities within the optical domain, rather than the electrical domain, service providers can directly offer services without the need for separate SONET/SDH products.

DWDM Technology. DWDM technology creates capacity by multiplying the number of wavelengths that a single fiber can support. We integrate commercially available DWDM optical technology into our products, providing a comprehensive solution for our customers' multiplexing needs.

Network Management. Our network management products will provide end-to-end management and control of the intelligent optical network. Network management functions include fault management, configuration management, accounting management, performance management and security management. Comprised of SilvxManager, a network management platform, and SilvxSource, a system-resident management application, our network management products constitute a distributed solution designed to provide end-to-end management of the intelligent optical network. Our network management products are designed to manage Sycamore's intelligent optical networking products, provide for the management of third party products and integrate with other operating support systems when introduced into an existing network environment.

Sycamore's Intelligent Optical Networking Products

The following chart describes our current and planned products:

<table> <caption> Product</caption></table>	Application	Service*	Status
<c> SN 6000</c>	<s> Intelligent Optical Transport Product</s>	<c> OC-48/STM-16 Wave Service (Long Distance)</c>	<c> Commercially available</c>
SN 8000	Intelligent Optical	OC-48/STM-16 Wave Service (Medium Distance)	Commercially available
	Add/Drop Product	OC-48/STM-16 Wave Service (Long Distance)	In test stage
		OC-12/STM-4 Wave Service	In development
		OC-3/STM-1 Wave Service	In development
		OC-192/STM-64 Wave Service	In development
SilvxSource		Provides local management of wave services	Commercially available
SilvxManager	Network Management System (Software)	Provides end-to-end management of wave services	Field test at customer's site
SN 16000	Intelligent Optical Switch	Will provide wave-based switching and routing in meshed network environment	In development

^{*} References to OC services are to data transport services at a speed indicated by the number following the OC designation. For example, OC-48

service designates a transmission speed of 2.5 gigabytes per second. Higher numbers denote faster transmission speeds.

SN 6000. The SN 6000 is an intelligent optical transport product designed specifically to work within an existing SONET/SDH network. The SN 6000 enables high speed services over fiber optic wavelengths and can be overlaid on top of the existing network. The SN 6000 will allow a service provider to begin the migration from a SONET/SDH network to an intelligent optical network.

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SN 8000. The SN 8000 is an intelligent optical add/drop product that will be used to provide high speed services over fiber optic wavelengths for access, interoffice, regional, and backbone networks. The SN 8000 will provide a complete stand-alone optical networking solution and can be configured in point-to-point linear or ring applications. The SN 8000 can be overlaid on top of existing SONET/SDH networks, allowing service providers to implement optical networking technology when and where needed, without replacing an installed infrastructure.

SilvxSource and SilvxManager. The SILVX optical network management system provides end-to-end management of data communications services across a service provider's optical network. SILVX simplifies network configuration, network provisioning and network management by implementing many of today's manual and labor-intensive network management processes within software. Additionally, SILVX allows service providers to offer network management-based services to their customers. SilvxSource software runs on the intelligent optical network elements (SN 6000, SN 8000 and in the future, SN 16000) and the SilvxManager software runs on a centralized management station.

SN 16000. We are developing the SN 16000 optical switch for end-to-end wavelength switching and routing, which is necessary for the creation of a meshed topology network. The SN 16000 will support incremental network growth through a modular architecture and is being designed to coexist with the SN 6000 and the SN 8000, as well as other third-party optical networking products.

Customers

Our target customer base includes new and established local voice and data service providers, long distance carriers, Internet service providers, cable operators, PTTs (foreign telephone companies) and carriers who provide service to other customers. At July 31, 1999, we had shipped product to one customer, Williams Communications, Inc. Williams Communications is a leading US-based carrier, providing communications services to other carriers. Williams is currently using our SN 6000 intelligent optical networking product in its internal data network to provision OC-48 waves between its ATM switches.

Sales and Marketing

We sell our products through a direct sales force. In addition, we intend to establish relationships with selected OEMs and other marketing partners, both domestically and internationally, in order to serve particular markets and provide our customers with opportunities to purchase our products in combination with related services and products. As of July 31, 1999, our sales and marketing organization consisted of 30 employees, of which:

- . 16 are located in our headquarters in Chelmsford, Massachusetts, and
- . 14 are located in a total of 7 sales and support offices around the United States.

Our marketing objectives include building market awareness and acceptance of Sycamore and our products as well as generating qualified customer leads. We send out direct mail and attend trade shows, and provide information about our company and our products on our Web site. We also conduct public relations activities, including interviews and demonstrations for industry analysts. In addition, our senior executives have significant industry contacts as a result

of their prior experience.

Our professional services team works collaboratively with our customers and prospective customers to help them identify and create new high speed data services that they can offer to their customers. We believe that this assistance is an integral aspect of our sales and marketing efforts which will help drive additional demand for our products.

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Research and Development

We have assembled a team of highly skilled engineers with significant telecommunications industry experience. Our engineers have expertise in optics, hardware and software. As of July 31, 1999, we had 87 employees responsible for product development, quality assurance and documentation. Our development group's priority includes the release of new products which will facilitate the deployment of optical networks. We are focused on enhancing the scalability, performance and reliability of our intelligent optical network products.

We have made, and will continue to make, a substantial investment in research and development. Research and development expenses were \$497,000 for the period from inception through July 31, 1998 and \$14.0 million for the year ended July 31, 1999. All of our software development costs have been expensed as incurred.

While we have developed, and expect to continue to develop, most new products and enhancements to existing products internally, we have licensed certain commercially available software technology from third parties.

Competition

The market for intelligent optical networking products is intensely competitive, subject to rapid technological change and significantly affected by new product introductions and other market activities of industry participants. We expect competition to persist and intensify in the future. Our primary sources of competition include vendors of optical network equipment, such as Ciena Corporation, Lucent Technologies and Nortel Networks, and private companies that have focused on our target market. Many of our competitors have significantly greater financial resources than us and are able to devote greater resources to the development, promotion, sale and support of their products. In addition, many of our competitors have more extensive customer bases and broader customer relationships than us, including relationships with our potential customers.

In order to compete effectively, we must deliver products that:

- . provide extremely high network reliability;
- . scale easily and efficiently with minimum disruption to the network;
- . interoperate with existing network designs and equipment vendors;
- reduce the complexity of the network by decreasing the need for overlapping equipment;
- . provide effective network management; and
- . provide a cost-effective solution for service providers.

In addition, we believe that a knowledge of the infrastructure requirements applicable to service providers, experience in working with service providers to develop new services for their customers, and an ability to provide vendor-sponsored financing are important competitive factors in our market. We do not currently have the ability to provide vendor-sponsored financing and this may influence the purchasing decision of prospective customers, who may decide to purchase products from one of our competitors who offers such financing.

Our success and ability to compete are dependent on our ability to develop and maintain the proprietary aspects of our technology and operate without infringing on the proprietary rights of others. We rely on a combination of patent, trademark, trade secret and copyright law and contractual restrictions to protect the proprietary aspects of our technology. These legal protections afford only limited protection for our technology. We presently have three patent applications pending in the United States and we cannot be certain that patents

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will be granted based on these or any other applications. We seek to protect our source code for our software, documentation and other written materials under trade secret and copyright laws. We license our software pursuant to signed license agreements, which impose certain restrictions on the licensee's ability to utilize the software. Finally, we seek to limit disclosure of our intellectual property by requiring employees and consultants with access to our proprietary information to execute confidentiality agreements with us and by restricting access to our source code. Due to rapid technological change, we believe that factors such as the technological and creative skills of our personnel, new product developments and enhancements to existing products are more important than the various legal protections of our technology to establishing and maintaining a technology leadership position.

Despite our efforts to protect our proprietary rights, unauthorized parties may attempt to copy aspects of our products or to obtain and use information that we regard as proprietary. Policing unauthorized use of our products is difficult and while we are unable to determine the extent to which piracy of our software exists, software piracy can be expected to be a persistent problem. Litigation may be necessary in the future to enforce our intellectual property rights, to protect our trade secrets, to determine the validity and scope of the proprietary rights of others or to defend against claims of infringement or invalidity. However, the laws of many countries do not protect our proprietary rights to as great an extent as do the laws of the United States. Any such resulting litigation could result in substantial costs and diversion of resources and could have a material adverse effect on our business, operating results and financial condition. There can be no assurance that our means of protecting our proprietary rights will be adequate or that our competitors will not independently develop similar technology. Any failure by us to meaningfully protect our property could have a material adverse effect on our business, operating results and financial condition.

There can be no assurance that third parties will not claim infringement with respect to our current or future products. Any such claims, with or without merit, could be time-consuming to defend, result in costly litigation, divert management's attention and resources, cause product shipment delays or require us to enter into royalty or licensing agreements. Such royalty or licensing agreements, if required, may not be available on terms acceptable to us or at all. A successful claim of product infringement against us and our failure or inability to license the infringed technology or develop or license technology with comparable functionality could have a material adverse effect on our business, financial condition and operating results.

We integrate third-party software into our products. This third-party software may not continue to be available on commercially reasonable terms. If we cannot maintain licenses to this third-party software, distribution of our products could be delayed until equivalent software could be developed or licensed and integrated into our products, which could materially adversely affect our business, operating results and financial condition.

Manufacturing

The manufacturing of our products is entirely outsourced. Celestica, Inc. provides comprehensive manufacturing services, including assembly, test, control and shipment to our customers, and procures materials on our behalf.

We design, specify and monitor all of the tests that are required to meet our internal and external quality standards, which are conducted by Celestica with test equipment owned by us. We believe that the outsourcing of our manufacturing will enable us to conserve the working capital that would be required to purchase inventory, will allow us to better adjust manufacturing volumes to meet changes in demand, and will better enable us to more quickly deliver products. At present, we purchase products from Celestica and our other manufacturers on a purchase order basis. We are in the process of negotiating a long-term contract with Celestica. We cannot assure you that we will be able to enter into a long-term contract on terms acceptable to us, if at all.

Employees

As of July 31, 1999, we had a total of 148 employees of which:

. 87 were in research and development,

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- . 30 were in sales and marketing,
- . 7 were in customer service and support,
- . 9 were in manufacturing, and
- . 15 were in finance and administration.

Our future success will depend in part on our ability to attract, retain and motivate highly qualified technical and management personnel, for whom competition is intense. Our employees are not represented by any collective bargaining unit. We believe our relations with our employees are good.

Properties

Our headquarters are currently located in a leased facility in Chelmsford, Massachusetts, consisting of approximately 35,000 square feet under a lease that expires in 2002.

Legal Proceedings

We are not currently a party to any material litigation.

One of our non-officer sales employees has been sued by a former employer which has alleged, among other things, that the employee improperly disclosed confidential information of the former employer regarding its business dealings with our customer. We have chosen to assume the cost of defending this lawsuit.

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MANAGEMENT

Executive Officers, Directors and Key Employees

The executive officers, directors and key employees of Sycamore, and their respective ages and positions as of July 31, 1999, are as follows:

<TABLE> <CAPTION>

Executive Officers and

Directors:

Gururaj Deshpande...... 48 Chairman of the Board of Directors
Daniel E. Smith....... 49 President, Chief Executive Officer and

Director Frances M. Jewels..... 34 Chief Financial Officer, Vice President, Finance and Administration, Treasurer and Secretary Chikong Shue..... 48 Vice President, Engineering 35 Vice President, Sales Ryker Young..... John E. Dowling..... 46 Vice President, Operations Kurt Trampedach..... 55 Vice President, International Sales Jeffrey A. Kiel..... 34 Vice President, Product Marketing Anita Brearton..... 40 Vice President, Corporate Marketing Timothy Barrows (1)(2).. 42 Director Paul J. Ferri (1)(2).... 60 Director John W. Gerdelman..... 46 Director Other Key Employees: Richard A. Barry..... 33 Chief Technical Officer 38 Chief Scientist Eric A. Swanson.....

</TABLE>

- (1) Member of Audit Committee
- (2) Member of Compensation Committee

Set forth below is information regarding the professional experience for each of the above-named persons.

Gururaj Deshpande has served as Chairman of our board of directors since our inception in February 1998. He served as our Treasurer and Secretary from February 1998 to June 1999 and as our President from February 1998 to October 1998. Before founding Sycamore, Mr. Deshpande founded Cascade Communications Corp., a provider of wide area network switches. From October 1990 to April 1992, Mr. Deshpande served as President of Cascade and from April 1992 to June 1997, he served as Cascade's Executive Vice President of Marketing and Customer Service. Mr. Deshpande was a member of the board of directors of Cascade since its inception and was chairman of the board of directors of Cascade from 1996 to 1997.

Daniel E. Smith has served as our President, Chief Executive Officer and as a member of our board of directors since October 1998. From June 1997 to July 1998, Mr. Smith was Executive Vice President and General Manager of the Core Switching Division of Ascend Communications, Inc., a provider of wide area network switches and access data networking equipment. Mr. Smith was also a member of the board of directors of Ascend Communications, Inc. during that time. From April 1992 to July 1997, Mr. Smith served as President and Chief Executive Officer and a member of the board of directors of Cascade Communications Corp.

Frances M. Jewels has served as our Vice President of Finance and Administration, Treasurer and Secretary since June 1999 and Chief Financial Officer since July 1999. From June 1997 to June 1999, Ms. Jewels served as Vice President and General Counsel of Ascend Communications, Inc. From April 1994 to June 1997, Ms. Jewels served as Corporate Counsel of Cascade Communications Corp. Prior to April 1994, Ms. Jewels practiced law in private practice and, prior to that, practiced as a certified public accountant.

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Chikong Shue has served as our Vice President of Engineering since August 1998. From June 1997 to July 1998, Mr. Shue was Vice President of Software and Systems Engineering of the Core Switching Division of Ascend Communications, Inc. Mr. Shue was a co-founder of Cascade Communications Corp. and served as director of software engineering at Cascade from May 1991 to August 1994 and as a corporate fellow and Vice President of Cascade's Remote Access Engineering division from September 1994 until March 1997.

Ryker Young has served as our Vice President of Sales since August 1998. From July 1997 to August 1998, Mr. Young was Central Region Director of Sales for Ascend Communications, Inc. From January 1996 to June 1997, Mr. Young was the South Central Regional District Manager for Cascade Communications Corp.

From October 1994 to December 1995, Mr. Young was Major Account Manager for Cisco Systems, Inc.

John E. Dowling has served as our Vice President of Operations since August 1998. From July 1997 to August 1998, Mr. Dowling served as Vice President of Operations of Aptis Communications, a manufacturer of carrier-class access switches for network service providers. Mr. Dowling served as Vice President of Operations of Cascade Communications Corp. from May 1994 to June 1997.

Kurt Trampedach has served as our Vice President of International Sales since July 1999. From June 1999 to July 1999, Mr. Trampedach was Vice President, Carrier Market Development for Lucent Technologies, Inc. From June 1997 to June 1999 he was Vice President, Carrier Market Development for Ascend Communications, Inc. From September 1996 to June 1997, Mr. Trampedach was Vice President, International Sales for Cascade Communications Corp. Mr. Trampedach was Vice President, European Operations for Alcatel USA, Inc. from April 1994 to September 1996.

Jeffrey A. Kiel has served as our Vice President, Product Marketing since July 1999 and as Director of Marketing from September 1998 to July 1999. Mr. Kiel served as Director of Product Marketing at Ascend Communications, Inc. from June 1997 to September 1998. From August 1996 to June 1997, Mr. Kiel served as Product Marketing Manager of Cascade Communications Corp. From October 1993 to August 1996, Mr. Kiel was Senior Manager, Technical Staff at BellSouth Telecommunications.

Anita Brearton has served as our Vice President, Corporate Marketing since July 1999 and as Director of Marketing Programs from September 1998 to July 1999. From September 1997 to August 1998, Ms. Brearton served as Vice President of Marketing for Artel Video Systems, Inc., a producer of fiber optic video transmission and routing products. From June 1997 to September 1997, Ms. Brearton was director of marketing programs for the core switching division of Ascend Communications, Inc. Ms. Brearton served as Director of Marketing Programs for Cascade Communications Corp. from November 1995 to June 1997. From July 1980 to August 1995, Ms. Brearton held several positions at General DataCom Industries, Inc., most recently as International Marketing Programs Manager.

Timothy Barrows has served as a director since February 1998. Mr. Barrows has been a general partner of Matrix Partners since September 1985. Mr. Barrows also serves on the board of directors of SilverStream Software, Inc.

Paul J. Ferri has served as a director since February 1998. Mr. Ferri has been a general partner of Matrix Partners, a venture capital firm, since February 1982. Mr. Ferri also serves on the board of directors of VideoServer, Inc. and Applix, Inc.

John W. Gerdelman has served as a director since September 1999. Mr. Gerdelman has been President and Chief Executive Officer of USA Net Inc. since April 1999. Mr. Gerdelman was employed by MCI Telecommunications Corporation as President of the Network and Information Technology Division from September 1994 to April 1999 and Senior Vice President of Sales and Service Operations from June 1992 to September 1994.

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Richard A. Barry has served as our Chief Technical Officer since July 1999 and as our Director of Architecture from our inception in February 1998 to July 1999. Prior to co-founding Sycamore, from September 1994 to February 1998, Mr. Barry was Chief Network Architect of the Advanced Networks Group at MIT's Lincoln Laboratory. Mr. Barry was an assistant professor in the Electrical Engineering and Computer Science Department at George Washington University from September 1993 to August 1994.

Eric A. Swanson, a co-founder of Sycamore, has served as Chief Scientist since our inception in February 1998. From 1982 to February 1998, Mr. Swanson was Associate Group Leader of the Advanced Networks Group at MIT's Lincoln Laboratory.

Each executive officer serves at the discretion of the board of directors and holds office until his or her successor is elected and qualified or until his or her earlier resignation or removal. There are no family relationships among any of the directors or executive officers of Sycamore. Each of the directors serves on the board of directors pursuant to the terms of an agreement that will terminate upon the closing of this offering.

Election of Directors

Following this offering, the board of directors will be divided into three classes, each of whose members will serve for a staggered three-year term. Messrs. Barrows and Gerdelman will serve in the class whose term expires at the annual meeting of stockholders in 2000; Messrs. Ferri and Deshpande will serve in the class whose term expires at the annual meeting of stockholders in 2001; and Mr. Smith will serve in the class whose term expires at the annual meeting of stockholders in 2002. Upon the expiration of the term of a class of directors, directors in such class will be elected for three-year terms at the annual meeting of stockholders in the year in which such term expires.

Compensation of Directors

We reimburse directors for reasonable out-of-pocket expenses incurred in attending meetings of the board of directors.

Compensation Committee Interlocks and Insider Participation

Prior to the appointment of the Compensation Committee, Sycamore's full board of directors (which includes Messrs. Deshpande and Smith) was responsible for the functions of a Compensation Committee. No interlocking relationship exists between any member of our board of directors or our Compensation Committee and any member of the board of directors or compensation committee of any other company, and no such interlocking relationship has existed in the past.

Board Committees

The board of directors has established a Compensation Committee and an Audit Committee. The Compensation Committee, which consists of Messrs. Ferri and Barrows, reviews executive salaries, administers bonuses, incentive compensation and stock plans, and approves the salaries and other benefits of our executive officers. In addition, the Compensation Committee consults with our management regarding our benefit plans and compensation policies and practices.

The Audit Committee, which consists of Messrs. Ferri and Barrows, reviews the professional services provided by our independent accountants, the independence of such accountants from our management, our annual financial statements and our system of internal accounting controls. The Audit Committee also reviews such other matters with respect to our accounting, auditing and financial reporting practices and procedures as it may find appropriate or may be brought to its attention.

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Executive Compensation

The table below sets forth, for the fiscal year ended July 31, 1999, the cash compensation earned by:

- . our Chairman of the Board,
- . our Chief Executive Officer and
- . the other most highly compensated executive officer who received annual compensation in excess of \$100,000, collectively referred to below as the Named Executive Officers.

In accordance with the rules of the Securities and Exchange Commission, the compensation set forth in the table below does not include medical, group life or other benefits which are available to all of our salaried employees, and perquisites and other benefits, securities or property which do not exceed the lesser of \$50,000 or 10% of the person's salary and bonus shown in the table. In the table below, columns required by the regulations of the Securities and Exchange Commission have been omitted where no information was required to be disclosed under those columns.

Summary Compensation Table

<TABLE>

	Annual	Compensat	ion	Long-Term Compensation	
				Awards	
	Salary (\$)	Bonus (\$)	Other Annual Compensation (\$)		All Other Compensation (\$)
<s> Gururaj Deshpande</s>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>
Chairman and Founder Daniel E. Smith President and Chief	100,000				
Executive Officer	73,077(1)				
<pre>Ryker Young Vice President, Sales </pre>					

 117,788 | 49,998(2) | | 60,000 | 9,326(3) |

- (1) Represents the total amount of compensation Mr. Smith received in fiscal 1999 for the portion of the year during which he was one of our executive officers. Mr. Smith joined us in October 1998.
- (2) Represents advance commission income.
- (3) Represents reimbursement for relocation expenses.

Stock Options

The following table contains information concerning the grant of options to purchase shares of our common stock to each of the Named Executive Officers during the fiscal year ended July 31, 1999. Percentages are based on an aggregate of 7,760,100 shares granted in fiscal 1999. All options were granted at fair market value as determined by the board of directors on the date of grant.

Option Grants in Last Fiscal Year

<TABLE>

	Number of Securities Underlying	Percent of Total Options Granted To	Exercise		Annual I Sto Appreciat	sumed Rates of ock tion for
	Options Granted	Employees in Fiscal Year	Price (\$/Share)	Expiration Date	5%	10%
<s></s>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>
Gururaj Deshpande						
Daniel E. Smith						
<pre>Ryker Young</pre>	60,000(2)	.78%	\$.33	June 16, 2009	12,578	31,875

Potential

- (1) Amounts reported in these columns represent amounts that may be realized upon exercise of options immediately prior to the expiration of their term assuming the specified compounded rates of appreciation (5% and 10%) on Sycamore's common stock over the term of the options. The potential realizable values set forth above do not take into account applicable tax and expense payments that may be associated with such option exercises. Actual realizable value, if any, will be dependent on the future price of the common stock on the actual date of exercise, which may be earlier than the stated expiration date. The 5% and 10% assumed annualized rates of stock price appreciation over the exercise period of the options used in the table above are mandated by the rules of the Securities and Exchange Commission and do not represent Sycamore's estimate or projection of the future price of the common stock on any date. There is no representation either express or implied that the stock price appreciation rates for the common stock assumed for purposes of this table will actually be achieved.
- (2) These options are exercisable immediately on the grant date, but unvested shares are subject to a repurchase right in favor of Sycamore that generally entitles us to repurchase these shares at their original exercise price upon termination of Mr. Young's services with Sycamore. Approximately one year from the hire date of Mr. Young, the repurchase right lapses as to a portion of the shares subject to the option and thereafter such right lapses as to an additional 5% of the shares subject to the option for each full three months of employment completed by Mr. Young.

Fiscal Year-End Option Values

The following table sets forth information for each of the Named Executive Officers with respect to the value of options outstanding as of July 31, 1999.

Aggregated Year-End Option Table

<TABLE> <CAPTION>

	Shares Acquired on Exercise	Value Realized	Underlying	Securities Unexercised July 31, 1999	In-The-Mone	Unexercised ey Options at , 1999 (\$)
Name	(#)	(\$)	Exercisable	Unexercisable	Exercisable	Unexercisable
<s></s>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>
Gururaj Deshpande						
Daniel E. Smith						
Ryker Young						

 60,000(1) | 40,000(2) | | | | |

- (1) These shares are subject to a repurchase right in favor of Sycamore as described above.
- (2) Calculated on the basis of the fair market value of our common stock as of the date of exercise, of \$1.00 per share, as determined by the board of directors on such date, less the aggregate exercise price.

Benefit Plans

1999 Stock Incentive Plan. Our 1999 Stock Incentive Plan was adopted by our board of directors in August 1999 [and approved by our stockholders in September 1999]. Any shares not yet issued under our predecessor 1998 Stock Incentive Plan on the date of this offering, 18,804,900 shares as of July 31, 1999, will be available under the 1999 Plan. In addition, there will be an annual increase beginning on August 1, 2000 of the lesser of:

- . 3,000,000 shares;
- . 5% of the outstanding shares on the date of the increase; or

. a lesser amount determined by the board.

The 1999 plan provides for the grant of incentive stock options intended to qualify under Section 422 of the Internal Revenue Code, non-qualified stock options, restricted stock awards and other stock-based awards.

Our officers, employees, directors, consultants and advisors and those of our subsidiaries are eligible to receive awards under the 1999 plan. Under present law, however, incentive stock options may only be granted to employees. No participant may receive any award for more than 500,000 shares in any calendar year.

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Optionees receive the right to purchase a specified number of shares of common stock at a specified option price and subject to such other terms and conditions as are specified in connection with the option grant. We may grant options at an exercise price less than, equal to or greater than the fair market value of our common stock on the date of grant. Under present law, incentive stock options and options intended to qualify as performance-based compensation under Section 162(m) of the Internal Revenue Code may not be granted at an exercise price less than the fair market value of the common stock on the date of grant or less than 110% of the fair market value in the case of incentive stock options granted to optionees holding more than 10% of the voting power of the company. The 1999 plan permits our board of directors to determine how optionees may pay the exercise price of their options, including by cash, check or in connection with a "cashless exercise" through a broker, by surrender to us of shares of common stock, by delivery to us of a promissory note, or by any combination of the permitted forms of payment.

Our board of directors administers the 1999 plan. Our board of directors has the authority to adopt, amend and repeal the administrative rules, guidelines and practices relating to the plan and to interpret its provisions. It may delegate authority under the 1999 plan to one or more committees of the board of directors and, subject to certain limitations, to one or more of our executive officers. Our board of directors has authorized the compensation committee or another committee appointed by the board to administer the 1999 plan, including the granting of options to our executive officers. Subject to any applicable limitations contained in the 1999 plan, our board of directors, our compensation committee or any other committee or executive officer to whom our board of directors delegates authority, as the case may be, selects the recipients of awards and determines:

- . the number of shares of common stock covered by options and the dates upon which such options become exercisable;
- . the exercise price of options;
- . the duration of options; and
- . the number of shares of common stock subject to any restricted stock or other stock-based awards and the terms and conditions of such awards, including the conditions for repurchase, issue price and repurchase price.

In the event of a merger, consolidation, asset sale, liquidation or similar transaction resulting in a change of control of Sycamore, each outstanding option will immediately become fully exercisable with respect to the total number of shares subject to the option. However, an option would not so accelerate if the option is assumed or otherwise continued in full force by the successor entity, if the option is replaced with a cash incentive program of the successor corporation which presents the spread at the time of the change of control on the shares which were not otherwise then exercisable, or if the acceleration of the option is subject to other limitations imposed on the date of grant. Notwithstanding the foregoing, the number of vested shares will, immediately prior to a change of control, be increased by the number of shares that would have become vested on the date 12 months following a change

of control (six months for persons employed less than one year prior to the change of control), and if following a change of control the successor corporation terminates the employee without cause, all of his or her options will become vested upon the termination of his or her employment.

No award may be granted under the 1999 plan after the tenth anniversary of the effective date, but the vesting and effectiveness of Awards previously granted may extend beyond that date. Our board of directors may at any time amend, suspend or terminate the 1999 plan, except that no award granted after an amendment of the 1999 plan and designated as subject to Section 162(m) of the Internal Revenue Code by our board of directors shall become exercisable, realizable or vested, to the extent such amendment was required to grant such award, unless and until such amendment is approved by our stockholders.

1999 Employee Stock Purchase Plan. Our 1999 Employee Stock Purchase Plan was adopted by our board of directors in August, 1999 [and received stockholder approval in September, 1999]. The purchase plan authorizes the issuance of up to a total of 750,000 shares of our common stock to participating employees. On August 1 of each year, commencing with August 1, 2000, the aggregate number of shares available for purchase

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during the life of the plan is automatically increased by the number of shares necessary to cause the number of shares then available for purchase to be restored to 750,000.

All of our employees, including directors who are employees, and all employees of any participating subsidiaries:

- . whose customary employment is more than 20 hours per week for more than five months in a calendar year,
- . whose customary employment is at least five months in any calendar year, and
- . who hold less than five percent of the total combined voting power of the $\ensuremath{\mathsf{Company}}$

are eligible to participate in the purchase plan. As of July 31, 1999, approximately 148 of our employees would have been eligible to participate in the purchase plan.

On the first day of an offering period, we will grant to each eligible employee who has elected to participate in the purchase plan an option to purchase shares of common stock as follows: the employee may authorize an amount (up to 10%, or such lesser amount as shall be determined by the Board, of such employee's base pay) to be deducted from such employee's base pay during the offering period. On the last day of the offering period, the employee is deemed to have exercised the option, at the option exercise price, to the extent of accumulated payroll deductions. Under the terms of the purchase plan, the option exercise price is an amount equal to 85% of the closing price per share of the common stock on either the first day or the last day of the offering period, whichever is lower. The first offering period under the purchase plan will commence on the effective date of the registration by Sycamore of its shares under the Exchange Act, with the option price on the first day of such offering period equivalent to the initial public offering price. In no event may an employee purchase in any one offering period a number of shares which exceeds the number of shares determined by dividing the product of (1) \$12,500 by the closing market price of a share of common stock on the first business day of the offering period or such other number as may be determined by the Board prior to the commencement date of the offering period. Each offering period is expected to be of 6 months (other than the first offering period, which will end April 30, 2000); provided that the board of directors may, in its discretion, choose a different offering period of 27 months or less.

An employee who is not a participant on the last day of the offering period, as a result of voluntary withdrawal or termination of employment or for any other reason, is not entitled to exercise any option, and the employee's accumulated payroll deductions will be refunded. However, upon termination of employment because of death, the employee's beneficiary has certain rights to elect to exercise the option to purchase the shares that the accumulated payroll deductions in the participant's account would purchase at the date of death.

Because participation in the purchase plan is voluntary, we cannot now determine the number of shares of our common stock to be purchased by any of our current executive officers, by all of our current executive officers as a group or by our non-executive employees as a group.

1999 Non-Employee Director Option Plan. Our 1999 Non-Employee Director Option Plan was adopted by our board of directors in August 1999 [and received stockholder approval in September 1999]. The option plan authorizes the issuance of up to a total of 500,000 shares of our common stock to participating directors who are not also an employee or officer. On August 1 of each year, commencing with August 1, 2000, the aggregate number of shares available for the grant of options under the plan is automatically increased by the number of shares necessary to cause the total number of shares then available for grant to 500,000.

Each director who is not also an employee or officer shall be automatically granted an option to purchase 30,000 shares of common stock on the latest to occur of:

- . the date the person is first elected to the board or
- . August 17, 1999.

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In addition, each of these directors will be automatically granted an option to purchase 10,000 shares immediately following each annual meeting of stockholders. The option exercise price per share for all options granted under the option plan will be equal to the fair market value of our common stock on the date of grant. Under the plan, options are fully exercisable on the date of grant. Options granted on the later of August 17, 1999 or the date the person is first elected to the board, are subject to repurchase by the Company prior to completion of a three-year vesting period. Options granted immediately following each annual meeting of stockholders are subject to repurchase by the Company prior to completion of a one-year vesting period. The term of each option is 10 years from the date of grant. Our board of directors has discretion to establish the terms of options granted under the Plan. No options to purchase shares have been granted to date under the option plan.

401(k) Plan. On December 9, 1998, we adopted an employee savings and retirement plan qualified under Section 401 of the Internal Revenue Code and covering all of our employees. Pursuant to the 401(k) plan, employees may elect to reduce their current compensation by up to the statutorily prescribed annual limit and have the amount of such reduction contributed to the 401(k) plan. We may make matching or additional contributions to the 401(k) plan in amounts to be determined annually by our board of directors. We have made no contributions to the 401(k) plan to date.

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CERTAIN TRANSACTIONS

Preferred Stock Issuances

Since inception in February 1998, we have issued and sold shares of redeemable convertible preferred stock to the following persons and entities

who are our executive officers, directors or principal stockholders. Upon the closing of this offering, each share of preferred stock will convert into three shares of common stock. For more detail on shares held by these purchasers, see "Principal Stockholders."

<TABLE> <CAPTION>

Investor	Preferred Stock	Stock	Preferred Stock
<pre> <s> Gururaj Deshpande. Daniel E. Smith. Chikong Shue. John E. Dowling. Matrix V Management Co., L.L.C.(1) </s></pre>			

 2,750,000 2,475,000 300,000 | 1,059,976 953,979 115,634 71,429 | 385,647 347,082 42,071 |(1) Composed of Matrix Partners V, L.P. and Matrix V Entrepreneurs Fund, L.P. Matrix V Management Co., L.L.C. is the general partner of each of Matrix Partners V, L.P. and Matrix V Entrepreneurs Fund, L.P. Timothy Barrows and Paul J. Ferri, directors of Sycamore, are general partners of Matrix V Management Co., L.L.C.

Series A Financing. On February 19, 1998, April 2, 1998, July 31, 1998 and October 19, 1998, we issued an aggregate of 8,961,812 shares of Series A preferred stock to 8 investors, including Gururaj Deshpande, Daniel E. Smith, Chikong Shue and Matrix Partners V, L.P. The per share purchase price for our Series A preferred stock was \$.91.

Series B Financing. On December 3, 1998 and February 11, 1999, we issued an aggregate of 3,607,062 shares of Series B preferred stock to 11 investors, including Gururaj Deshpande, Daniel E. Smith, Chikong Shue, John E. Dowling and Matrix Partners V, L.P. The per share purchase price for our Series B preferred stock was \$3.50.

Series C Financing. On March 2, 1999, we issued an aggregate of 2,500,000 shares of Series C preferred stock to 15 investors, including Gururaj Deshpande, Daniel E. Smith, Chikong Shue, Matrix Partners V, L.P. and Matrix V Entrepreneurs Fund, L.P. The per share purchase price for our Series C preferred stock was \$8.00.

Common Stock Issuances

During fiscal 1999, Frances M. Jewels, our Chief Financial Officer, purchased an aggregate of 435,000 shares of common stock for \$.33 per share and Kurt Trampedach, our Vice President of International Sales, purchased an aggregate of 375,000 shares of common stock for \$.33 per share, each pursuant to stock restriction agreements that give us the right to repurchase all or a portion of the shares at their purchase price in the event that the employee ceases to be employed by us. Other executive officers have purchased shares of common stock pursuant to similar stock restriction agreements for aggregate purchase prices which did not exceed \$60,000 for any one executive officer. The repurchase right generally lapses as to 20% of the shares subject to such option approximately one year from the hire date of the executive officer and thereafter lapses as to an additional 5% of the shares for each full three months of employment completed by such person.

All future transactions, including loans between us and our officers, directors, principal stockholders and their affiliates will be approved by a majority of the board of directors, including a majority of the independent and disinterested directors on the board of directors, and will be on terms no less favorable to us than could be obtained from unaffiliated third parties.

The following table sets forth certain information regarding beneficial ownership of our common stock as of July 31, 1999, by:

- . each person who owns beneficially more than 5% of the outstanding shares of our common stock;
- . each of our directors and the Named Executive Officers; and
- . all of our directors and executive officers as a group.

The number of shares of common stock deemed outstanding prior to this offering includes 70,556,337 shares of common stock outstanding as of July 31, 1999, after giving effect to the conversion of all shares of redeemable convertible preferred stock into common stock. The number of shares of common stock deemed outstanding after this offering includes the 6,500,000 shares that are being offered for sale by us in this offering. Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission, and includes voting and investment power with respect to shares. Common stock subject to options exercisable within 60 days of July 31, 1999 are deemed outstanding for purposes of computing the percentage ownership of the person holding such option but are not deemed outstanding for purposes of computing the percentage ownership of any other person. Unless otherwise indicated below, to our knowledge, all persons named in the table have sole voting and investment power with respect to their shares of common stock, except to the extent authority is shared by spouses under applicable law. Unless otherwise indicated, the address of each person owning more than 5% of the outstanding shares of common stock is c/o Sycamore Networks, Inc., 10 Elizabeth Drive, Chelmsford, Massachusetts 01824. <TABLE>

<CAPTION>

	Number of Shares	Percentage of Common Stock Outstanding(%)		
Name and Address of Beneficial Owner	Beneficially Owned	Before Offering	After Offering	
<\$>	<c></c>			
Gururaj Deshpande(1) Daniel E. Smith Matrix V Management Co., L.L.C.(2)	16,336,869 14,703,183			
1000 Winter Street, Suite 4500				
Waltham, MA 02154	12,586,869			
Ryker Young	1,021,812			
Waltham, MA 02154 Paul J. Ferri(2) c/o Matrix V Management Co., L.L.C. 1000 Winter Street, Suite 4500	12,586,869	17.8	16.3	
Waltham, MA 02154	12,586,869	17.8	16.3	
Deshpande Grantor Retained Annuity Trust All executive officers and directors as a group	6,000,000	8.5	7.8	
(10 persons)				

 49,671,135 | 70.4 | 64.5 || | | | |

- * Less than 1% of the outstanding common stock.
- (1) Includes 1,312,500 shares held by the Deshpande Irrevocable Trust and 6,000,000 shares held by Jaishree Deshpande, as Trustee of the Gururaj Deshpande Grantor Retained Annuity Trust. Jaishree Deshpande is Mr. Deshpande's wife. Mr. Deshpande disclaims beneficial ownership of the shares held by the Deshpande Irrevocable Trust.
- (2) Composed of 11,328,180 shares held by Matrix Partners V, L.P. and

1,258,689 shares held by Matrix V Entrepreneurs Fund, L.P. Matrix V Management Co., L.L.C. is the general partner of each of Matrix Partners V, L.P. and Matrix V Entrepreneurs Fund, L.P. Mr. Barrows and Mr. Ferri, directors of Sycamore, are general partners of Matrix V Management Co., L.L.C. Mr. Barrows and Mr. Ferri disclaim beneficial ownership of the shares held by Matrix Partners V, L.P. and Matrix V Entrepreneurs Fund, L.P. except to the extent of their pecuniary interests therein arising from their general partnership interests in Matrix V Management Co., L.L.C.

(3) Mr. Gerdelman was elected to our board of directors in September 1999.

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DESCRIPTION OF CAPITAL STOCK

After this offering, the authorized capital stock of Sycamore will consist of 250,000,000 shares of common stock, \$.001 par value per share, and 5,000,000 shares of preferred stock, \$.01 par value per share. As of July 31, 1999, there were outstanding:

- . 70,556,337 shares of common stock held by 138 stockholders of record, assuming the conversion into common stock of all outstanding shares of redeemable convertible preferred stock, and
 - . options to purchase an aggregate of 1,686,300 shares of common stock.

Based upon the number of shares outstanding as of that date, and giving effect to the issuance of the shares of common stock offered by Sycamore in this offering, there will be 77,056,337 shares of common stock outstanding upon the closing of this offering.

The following summary of provisions of our securities, various provisions of our amended and restated certificate of incorporation and our amended and restated bylaws and provisions of applicable law is not intended to be complete and is qualified by reference to the provisions of applicable law and to our amended and restated certificate of incorporation and amended and restated bylaws included as exhibits to the Registration Statement of which this prospectus is a part. See "Where You Can Find More Information."

Common Stock

Holders of common stock are entitled to one vote for each share held on all matters submitted to a vote of stockholders and do not have cumulative voting rights. Accordingly, holders of a majority of the shares of common stock entitled to vote in any election of directors may elect all of the directors standing for election. Holders of common stock are entitled to receive proportionately any such dividends declared by the board of directors, subject to any preferential dividend rights of outstanding preferred stock. Upon the liquidation, dissolution or winding up of Sycamore, the holders of common stock are entitled to receive ratably the net assets of Sycamore available after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. The rights, preferences and privileges of holders of common stock are subject to the rights of the holders of shares of any series of preferred stock which Sycamore may designate and issue in the future. Certain holders of common stock have the right to require Sycamore to register their shares of common stock under the Securities Act in certain circumstances. See "Shares Eligible for Future Sale."

Preferred Stock

Under the terms of our amended and restated certificate of incorporation to be filed as of the closing of this offering, the board of directors is authorized to issue shares of preferred stock in one or more series without stockholder approval. The board has discretion to determine the rights,

preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences of each series of preferred stock.

The purpose of authorizing the board of directors to issue preferred stock and determine its rights and preferences is to eliminate delays associated with a stockholder vote on specific issuances. The issuance of preferred stock, while providing desirable flexibility in connection with possible acquisitions and other corporate purposes, could make it more difficult for a third party to acquire, or could discourage a third party from acquiring, a majority of the outstanding voting stock of Sycamore. Sycamore has no present plans to issue any shares of preferred stock.

Delaware Law and Certain Charter and By-Law Provisions; Anti-Takeover Effects

Sycamore is subject to the provisions of Section 203 of the General Corporation Law of Delaware. In general, the statute prohibits a publicly held Delaware corporation from engaging in a "business combination" with an "interested stockholder" for a period of three years after the date of the transaction in which the person

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became an interested stockholder, unless the business combination is approved in a prescribed manner. A "business combination" includes mergers, asset sales and other transactions resulting in a financial benefit to the interested stockholder. Subject to certain exceptions, an "interested stockholder" is a person who, together with affiliates and associates, owns, or within three years did own, 15% or more of the corporation's voting stock.

The amended and restated certificate of incorporation and amended and restated by-laws to be effective on the closing of this offering provide:

- . that the board of directors be divided into three classes, as nearly equal in size as possible, with staggered three-year terms;
- . that directors may be removed only for cause by the affirmative vote of the holders of at least $66\ 2/3\%$ of the shares of our capital stock entitled to vote; and
- . that any vacancy on the board of directors, however occurring, including a vacancy resulting from an enlargement of the board, may only be filled by vote of a majority of the directors then in office.

The classification of the board of directors and the limitations on the removal of directors and filling of vacancies could have the effect of making it more difficult for a third party to acquire, or of discouraging a third party from acquiring, Sycamore.

The amended and restated certificate of incorporation and amended and restated by-laws also provide that, after the closing of this offering:

- . any action required or permitted to be taken by the stockholders at an annual meeting or special meeting of stockholders may only be taken if it is properly brought before such meeting and may not be taken by written action in lieu of a meeting; and
- . special meetings of the stockholders may only be called by the Chairman of the board of directors, the President, or by the board of directors.

Our amended and restated by-laws provide that, in order for any matter to be considered "properly brought" before a meeting, a stockholder must comply with requirements regarding advance notice to us. These provisions could delay until the next stockholders' meeting stockholder actions which are favored by the holders of a majority of our outstanding voting securities. These provisions may also discourage another person or entity from making a tender offer for our common stock, because such person or entity, even if it acquired a majority of our outstanding voting securities, would be able to take action

as a stockholder (such as electing new directors or approving a merger) only at a duly called stockholders meeting, and not by written consent.

Delaware's corporation law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or by-laws, unless a corporation's certificate of incorporation or by-laws, as the case may be, requires a greater percentage. Our amended and restated certificate of incorporation requires the affirmative vote of the holders of at least 66 2/3% of the shares of our capital stock entitled to vote to amend or repeal any of the foregoing provisions of our amended and restated certificate of incorporation. Generally our amended and restated by-laws may be amended or repealed by a majority vote of the board of directors or the holders of a majority of the shares of our capital stock issued and outstanding and entitled to vote. To amend our amended and restated by-laws regarding special meetings of stockholders, written actions of stockholders in lieu of a meeting, and the election, removal and classification of members of the board of directors requires the affirmative vote of the holders of at least 66 2/3% of the shares of our capital stock entitled to vote. The stockholder vote would be in addition to any separate class vote that might in the future be required pursuant to the terms of any series preferred stock that might be outstanding at the time any such amendments are submitted to stockholders.

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Limitation of Liability and Indemnification

Our amended and restated certificate of incorporation provides that our directors and officers shall be indemnified by us to the fullest extent authorized by Delaware law. This indemnification would cover all expenses and liabilities reasonably incurred in connection with their services for or on behalf of us. In addition, our amended and restated certificate of incorporation provides that our directors will not be personally liable for monetary damages to us for breaches of their fiduciary duty as directors, unless they violated their duty of loyalty to us or our stockholders, acted in bad faith, knowingly or intentionally violated the law, authorized illegal dividends or redemptions or derived an improper personal benefit from their action as directors.

Transfer Agent and Registrar

The transfer agent and registrar for the common stock is

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SHARES ELIGIBLE FOR FUTURE SALE

Upon completion of this offering, we will have 77,056,337 shares of common stock outstanding (assuming no exercise of outstanding options). Of these shares, the 6,500,000 shares to be sold in this offering will be freely tradable without restriction or further registration under the Securities Act of 1933, as amended, except that any shares purchased by our affiliates, as that term is defined in Rule 144 under the Securities Act, may generally only be sold in compliance with the limitations of Rule 144 described below.

Approximate

Sales of Restricted Shares

<TABLE> <CAPTION>

<S>

On effectiveness......

90 days after effectiveness.....

days after effectiveness.....

Freely tradeable sold in offering Shares salable under Rule 144 Shares salable under Rule 144, 144(k) or 701

</TABLE>

In general, under Rule 144, a person (or persons whose shares are aggregated), including an affiliate, who has beneficially owned shares for at least one year is entitled to sell, within any three-month period, a number of such shares that does not exceed the greater of (1) one percent of the then outstanding shares of common stock (approximately 770,563 shares immediately after this offering) or (2) the average weekly trading volume in the common stock in the over-the-counter market during the four calendar weeks preceding the date on which notice of such sale is filed, provided certain requirements concerning availability of public information, manner of sale and notice of sale are satisfied. In addition, our affiliates must comply with the restrictions and requirements of Rule 144, other than the one-year holding period requirement, in order to sell shares of common stock which are not restricted securities.

Under Rule 144(k), a person who is not an affiliate and has not been an affiliate for at least three months prior to the sale and who has beneficially owned shares for at least two years may resell such shares without compliance with the foregoing requirements. In meeting the one- and two-year holding periods described above, a holder of shares can include the holding periods of a prior owner who was not an affiliate. The one-and two-year holding periods described above do not begin to run until the full purchase price or other consideration is paid by the person acquiring the shares from the issuer or an affiliate. Rule 701 provides that currently outstanding shares of common stock acquired under our employee compensation plans, and shares of common stock acquired upon exercise of presently outstanding options granted under these plans, may be resold beginning 90 days after the date of this prospectus:

- . by persons, other than affiliates, subject only to the manner of sale provisions of Rule 144, and
- . by affiliates under Rule 144 without compliance with its one-year minimum holding period, subject to certain limitations.

Stock Options

At July 31, 1999, approximately 1,686,300 shares of common stock were issuable pursuant to immediately exercisable options or pursuant to other rights granted under our 1998 Stock Incentive Plan of which approximately shares are not subject to lock-up agreements with the Underwriters.

We intend to file a registration statement on Form S-8 under the Securities Act as soon as practicable following the date of this prospectus, to register up to shares of common stock issuable under our stock plans, including the 1,686,300 shares of common stock subject to outstanding options as of July 31, 1999. This registration statement is expected to become effective upon filing.

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Lock-up Agreements

Subject to certain exceptions, Sycamore and its executive officers, directors and other security holders have agreed that, without the prior written consent of Morgan Stanley & Co. Incorporated, they will not, during the period ending days after the date of this prospectus:

. offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock (regardless of whether such shares or any such securities are then owned by such person or are thereafter acquired), or

enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the common stock, regardless of whether any such transactions described above are to be settled by delivery of such common stock or such other securities, in cash or otherwise. In addition, for a period of days from the date of this prospectus, except as required by law, we have agreed that our board of directors will not consent to any offer for sale, sale or other disposition, or any transaction which is designed or could be expected, to result in, the disposition by any person, directly or indirectly, of any shares of common stock without the prior written consent of Morgan Stanley & Co. Incorporated. See "Underwriters."

Registration Rights

After this offering, the holders of approximately 57,858,000 shares of common stock will be entitled to rights with respect to the registration of such shares under the Securities Act. Under the terms of the agreement between us and the holders of such registrable securities, if we propose to register any of our securities under the Securities Act, either for our own account or for the account of other security holders exercising registration rights, such holders are entitled to notice of such registration and are entitled to include shares of such common stock therein. Additionally, such holders are also entitled to demand registration rights pursuant to which they may require us on up to two occasions to file a registration statement under the Securities Act at our expense with respect to shares of our common stock, and we are required to use our best efforts to effect such registration. Further, holders may require us on up to three occasions to file additional registration statements on Form S-3 at our expense. All of these registration rights are subject to conditions and limitations, among them the right of the underwriters of an offering to limit the number of shares included in such registration.

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UNDERWRITERS

Under the terms and subject to the conditions contained in the underwriting agreement dated the date hereof, the underwriters named below, for whom Morgan Stanley & Co. Incorporated, Lehman Brothers Inc, J. P. Morgan Securities Inc and Dain Rauscher Wessels, a division of Dain Rauscher Incorporated, are acting as representatives, have severally agreed to purchase, and we have agreed to sell to them, an aggregate of 6,500,000 shares of common stock. The number of shares of common stock that each underwriter has agreed to purchase is set forth opposite its name below:

<TABLE> <CAPTION>

Name	Shares
<\$>	<c></c>
Morgan Stanley & Co. Incorporated. Lehman Brothers Inc. J. P. Morgan Securities Inc. Dain Rauscher Wessels.	
Total	6,500,000

</TABLE>

The underwriters are offering the shares subject to their acceptance of the shares from us and subject to prior sale. The underwriting agreement provides that the obligations of the several underwriters to pay for and accept delivery of the shares of common stock offered hereby are subject to the approval of certain legal matters by their counsel and to certain other

Number of

conditions. The underwriters are obligated to take and pay for all of the shares of common stock offered hereby, other than those covered by the overallotment option described below, if any such shares are taken.

The underwriters initially propose to offer part of the shares of common stock directly to the public at the initial public offering price set forth on the cover page hereof and part to certain dealers at a price that represents a concession not in excess of \$ a share under the initial public offering price. Any underwriters may allow, and such dealers may reallow, a concession not in excess of \$ a share to other underwriters or to certain other dealers. After the initial offering of the shares of common stock, the offering price and other selling terms may from time to time be varied by the representatives of the underwriters.

Pursuant to the underwriting agreement, we have granted to the underwriters an option, exercisable for 30 days from the date of this prospectus, to purchase up to an aggregate of 975,000 additional shares of common stock at the initial public offering price set forth on the cover page hereof, less underwriting discounts and commissions. The underwriters may exercise such option solely for the purpose of covering over-allotments, if any, made in connection with the offering of the shares of common stock offered hereby. To the extent such option is exercised, each underwriter will become obligated, subject to certain conditions, to purchase approximately the same percentage of such additional shares of common stock as the number set forth next to such underwriter's name in the preceding table bears to the total number of shares of common stock set forth next to the names of all underwriters in the preceding table. If the underwriter's over-allotment option is exercised in full, the total price to the public would be \$, the total underwriters' discounts and commissions would be \$, and the total proceeds to us would be \$ before deducting estimated offering expenses of \$

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At our request, the underwriters have reserved at the initial public offering price up to approximately 40,000 shares of common stock for sale to Williams Communications. There can be no assurance that any of the reserved shares will be purchased. In addition, at our request, the underwriters have reserved up to shares of common stock to be sold in the offering and offered hereby for sale, at the initial public offering price, to our officers, employees, customers and other business associates. The number of shares of common stock available for sale to the general public will be reduced to the extent these parties purchase such reserved shares. Any reserved shares which are not so purchased will be offered by the underwriters to the general public on the same basis as the other shares offered hereby. There can be no assurance that any of the reserved shares will be purchased.

Sycamore, our directors, officers and certain other of our stockholders have each agreed that, without the prior written consent of Morgan Stanley & Co. Incorporated on behalf of the underwriters, during the period ending days after the date of this prospectus, we will not, directly or indirectly:

- . offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend or otherwise transfer or dispose of, directly or indirectly, any shares of common stock or any securities convertible into or exercisable or exchangeable for common stock (whether such shares or any such securities are then owned by such person or are thereafter acquired directly from us); or
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of common stock,

whether any such transaction described above is to be settled by delivery of common stock or such other securities, in cash or otherwise.

The underwriters have informed us that they do not intend sales to discretionary accounts to exceed five percent of the total number of shares of common stock offered by them.

We have filed an application for our common stock to be quoted on the Nasdaq National Market under the symbol "SCMR."

In order to facilitate the offering of the common stock, the underwriters may engage in transactions that stabilize, maintain or otherwise affect the price of the common stock. Specifically, the underwriters may over-allot in connection with the offering, creating a short position in the common stock for their own account. In addition, to cover over-allotments or to stabilize the price of the common stock, the underwriters may bid for, and purchase, shares of common stock in the open market. Finally, the underwriting syndicate may reclaim selling concessions allowed to an underwriter or a dealer for distributing the common stock in the offering if the syndicate repurchases previously distributed shares of common stock in transactions to cover syndicate short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the common stock above independent market levels. The underwriters are not required to engage in these activities and may end any of these activities at any time.

We and the underwriters have agreed to indemnify each other against certain liabilities, including liabilities under the Securities Act.

Pricing of the Offering

Prior to this offering, there has been no public market for the shares of common stock. Consequently, the public offering price for the shares of common stock will be determined by negotiations between Sycamore and the representatives of the underwriters. Among the factors to be considered in determining the public offering price will be our record of operations, our current financial position and future prospects, the experience of our management, sales, earnings and certain of our other financial and operating information in recent periods, the price-earnings ratios, price-sales ratios, market prices of securities and certain financial and operating information of companies engaged in activities similar to ours. The estimated public offering price range set forth on the cover page of this preliminary prospectus is subject to change as a result of market conditions and other factors.

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LEGAL MATTERS

The validity of the shares of common stock we are offering will be passed upon for us by Hale and Dorr LLP, Boston, Massachusetts. Certain legal matters in connection with this offering will be passed upon for the underwriters by Testa, Hurwitz & Thibeault, LLP, Boston, Massachusetts.

EXPERTS

The financial statements as of July 31, 1998 and 1999 and for the period from inception (February 17, 1998) through July 31, 1998 and for the year ended July 31, 1999 included in this prospectus have been so included in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the Securities and Exchange Commission a registration statement on Form S-1 under the Securities Act with respect to the common stock we propose to sell in this offering. This prospectus, which constitutes part of the registration statement, does not contain all of the information set forth in the registration statement. For further information about us and the common stock we propose to sell in this offering, we refer you to the registration statement and the exhibits and schedules filed as a part of the registration statement. Statements contained in this prospectus as to the

contents of any contract or other document filed as an exhibit to the registration statement are not necessarily complete. If a contract or document has been filed as an exhibit to the registration statement, we refer you to the copy of the contract or document that has been filed. The registration statement may be inspected without charge at the principal office of the Securities and Exchange Commission in Washington, D.C. and copies of all or any part of which may be inspected and copied at the public reference facilities maintained by the Securities and Exchange Commission at 450 Fifth Street, N.W., Judiciary Plaza, Room 1024, Washington, D.C. 20549, and at the Commission's regional offices located at Citicorp Center, 500 West Madison Street, Suite 1400, Chicago, Illinois 60661-2511 and 7 World Trade Center, Suite 1300, New York, New York 10048. Copies of such material can also be obtained at prescribed rates by mail from the Public Reference Section of the Commission at 450 Fifth Street, N.W., Washington, D.C. 20549. In addition, the Securities and Exchange Commission maintains a website (http://www.sec.gov) that contains reports, proxy and information statements and other information regarding registrants that file electronically with the Securities and Exchange Commission.

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SYCAMORE NETWORKS, INC.

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Notes to Financial Statements	F-7

F-1

Report of Independent Accountants

To the Stockholders and the Board of Directors of Sycamore Networks, Inc.:

In our opinion, the accompanying balance sheets and the related statements of operations, stockholders' deficit and cash flows present fairly, in all material respects, the financial position of Sycamore Networks, Inc. at July 31, 1998 and 1999, and the results of its operations and its cash flows for the period from inception (February 17, 1998) to July 31, 1998 and for the year ended July 31, 1999 in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis

for the opinion expressed above.

PricewaterhouseCoopers LLP

Boston, Massachusetts

August 23, 1999

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SYCAMORE NETWORKS, INC.

BALANCE SHEETS

(in thousands, except share data)

<TABLE> <CAPTION>

CAPTION>			
	_	July 31, 1999	_
<\$>	<c></c>	<c></c>	<c></c>
Assets			
Current assets: Cash and cash equivalents Marketable securities Accounts receivable Inventories Prepaids and other current assets	\$1,197 3,082 200	\$ 21,969 7,020 11,410 6,608 5,153	\$ 21,969 7,020 11,410 6,608 5,153
Total current assets Property and equipment, net Other assets	4,479 500 102	52,160 5,288	52,160 5,288 464
Total assets	\$5 , 081	\$ 57,912 ======	\$ 57 , 912
Liabilities, Redeemable Convertible Preferred Stock and Stockholders' Equity (Deficit) Current liabilities: Current portion of notes payable		\$ 1,097 5,750 1,403 1,751 1,709	\$ 1,097 5,750 1,403 1,751 1,709
Total current liabilities	138	11,710 4,054	
1999	5,621	8,146	

Series C Redeemable Convertible Preferred Stock \$.01 par value; 2,500,000 shares authorized, issued and outstanding at July 31, 1999; 0 shares authorized, issued and outstanding on a pro forma basis; liquidation value of \$20,000 at July 31,			
1999		20,000	
1999		15,000	
Stockholders' equity (deficit): Preferred stock, \$.01 par value, 5,000,000 shares authorized, 0 shares issued and			
outstanding on a pro forma basis			
forma basis	7	2.3	71
Additional paid-in capital		28,911	84,634
Accumulated deficit	(693)	(19,449)	(19,449)
Notes receivable		(360)	(360)
Deferred compensation		(22,748)	
Total stockholders' equity (deficit)	(678)	(13,623)	42,148
Total liabilities, redeemable convertible			
preferred stock and stockholders' equity (deficit)	ĊE 001	¢ 57 010	¢ 57 010
(delicit)		\$ 57,912	
		·	

</TABLE>

The accompanying notes are an integral part of the financial statements.

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SYCAMORE NETWORKS, INC.

STATEMENTS OF OPERATIONS

(in thousands, except per share data)

<TABLE> <CAPTION>

<caption></caption>	Period from Inception (February 17, 1998) through July 31, 199	Year Ended 8 July 31, 1999
<s> Revenues</s>	<c> \$</c>	<c> \$ 11,330</c>
Cost of revenues	 	8,486
Gross profit Operating expenses:		2,844
Research and development	497	13,955
Sales and marketing	92	4,064
General and administrative	199	1,405
Amortization of stock compensation	5	2,735
Total operating expenses	793	22,159

Loss from operations	(793) 100	(19,315) 559
Net loss	\$ (693) =====	\$(18,756) ======
Pro forma basic and diluted net loss per share (unaudited)		\$ (.49)
<pre>pro forma basic and diluted net loss per share (unaudited)</pre>		38,145

The accompanying notes are an integral part of the financial statements.

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SYCAMORE NETWORKS, INC.

STATEMENTS OF STOCKHOLDERS' DEFICIT

(in thousands)

<TABLE> <CAPTION>

Common Stock

			Additional paid-in Capital	Accumulated Deficit	Receivable	Deferred Compensation	Total Stockholders' Deficit
<s> Issuance of common</s>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>
stock Deferred compensation expense associated with	7,035	\$ 7	\$ 3	\$	\$	\$	\$ 10
equity awards			184			(184)	
compensation Net loss				(693)	 	5 	5 (693)
Balance, July 31, 1998	7,035	7	187	(693)		(179)	(678)
Exercise of stock options	6,074	6	2,935				2,941
stock Deferred compensation expense associated with	10,164	10	485				495
equity awards Issuance of equity awards in exchange for			23,685			(23,685)	
services			1,619				1,619
compensation						1,116	1,116
receivable				 (18,756)	(360)		(360) (18,756)
Balance, July 31, 1999	23,273	\$23 ===	\$28,911 =====	\$(19,449) ======	\$(360) =====	\$ (22,748) ======	\$ (13,623) ======
< /map. =>							

</TABLE>

The accompanying notes are an integral part of the financial statements.

SYCAMORE NETWORKS, INC.

STATEMENTS OF CASH FLOWS

(in thousands)

<TABLE> <CAPTION>

Period	d fro	om
incer	otio	า
(February	17,	1998)

	(February 17, 1998) through July 31, 1998	Year ended
<s></s>	<c></c>	<c></c>
Cash flows from operating activities:		
Net loss	\$ (693)	\$(18,756)
Depreciation and amortization	27	948
Amortization of stock compensation Changes in operating assets and liabilities:	5	2 , 735
Accounts receivable		(11,410)
Inventories		(6,608)
Prepaids and other current assets	(75)	(4 , 953)
Accounts payable Accrued expenses and other current	42	5 , 708
liabilities	96 	4,767
Net cash used in operating activities	(598) 	(27 , 569)
Cash flows from investing activities:		
Purchases of property and equipment	(528)	(552)
Purchases of marketable securities	(3,082)	(10, 115)
Maturities of marketable securities		6,177
Increase in other assets	(102)	(362)
Net cash used in investing activities	(3,712)	(4,852)
Cash flows from financing activities: Proceeds from issuance of redeemable		
convertible preferred stock, net	5,496	50,150
Proceeds from issuance of common stock	11	3,076
Payments on notes payable		(33)
1 1		
Net cash provided by financing activities	5 , 507	53 , 193
Net increase in cash and cash equivalents Cash and cash equivalents, beginning of	1,197	20,772
period		1,197
Cash and cash equivalents, end of period	\$ 1,197 ======	\$ 21 , 969
Supplemental cash flow information:		
Cash paid for interest	\$	\$ 170
Equipment acquired under notes payable	\$	\$ 5,184
Preferred stock note receivable Issuance of common stock in exchange for	125	
notes receivable		360

The accompanying notes are an integral part of the financial statements.

SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS

1. Nature of the Business:

Sycamore Networks, Inc. (the "Company") was incorporated in Delaware on February 17, 1998. The Company develops and markets networking products that enable service providers to quickly and cost effectively provide bandwidth and create new high-speed data services. To date, the Company has principally marketed its products in the United States. Through May 1, 1999, the Company was considered to be in the development stage and was principally engaged in research and development, raising capital and building its management team. The Company shipped its first product in May 1999.

The Company is subject to risks common to technology-based companies including, but not limited to, the development of new technology, development of markets and distribution channels, dependence on key personnel, and the ability to obtain additional capital as needed to meet its product plans. The Company has a limited operating history and has never achieved profitability. To date the Company has been funded principally by private equity financing. The Company's ultimate success is dependent upon its ability to raise additional capital and to successfully develop and market its products.

2. Significant Accounting Policies:

The accompanying financial statements of the Company reflect the application of certain significant accounting policies as described below:

Cash Equivalents and Marketable Securities

The Company considers all highly liquid investments purchased with an original maturity of three months or less to be cash equivalents, and investments with original maturity dates greater than three months but less than 12 months to be short-term investments. The Company classifies all marketable securities as available-for-sale. The securities are stated at their fair market value. At July 31, 1998 and 1999, the fair value of marketable securities, which were comprised of commercial paper and certificates of deposit, approximated amortized cost and, as such, unrealized holding gains and losses were not material. The fair value of marketable securities was determined based on quoted market prices at the reporting date for those instruments.

Inventory

Inventories are stated at the lower of cost (first-in, first-out basis) or market (net realizable value).

Revenue Recognition

Revenue from product sales is recognized upon shipment provided that a purchase order has been received or a contract has been executed, there are no uncertainties regarding customer acceptance, the fee is fixed and determinable and collectibility is deemed probable. If uncertainties regarding customer acceptance exist, revenue is recognized when such uncertainties are resolved. Revenue from technical support and maintenance contracts is deferred and recognized ratably over the period of the related agreements. The Company records a warranty liability for parts and labor on its products. Warranty periods are generally three years from installation date. Estimated warranty costs are recorded at the time of revenue recognition.

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SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS--(Continued)

Property and Equipment

Property and equipment is stated at cost and depreciated over the estimated useful lives of the assets using the straight-line method, based upon the following asset lives:

The cost of significant additions and improvements is capitalized and depreciated while expenditures for maintenance and repairs are charged to expense as incurred. Upon retirement or sale, the cost and related accumulated depreciation of the assets are removed from the accounts and any resulting gain or loss is reflected in the determination of net income or loss.

Research and Development and Software Development Costs

The Company's products are highly technical in nature and require a large and continuing research and development effort. All research and development costs are expensed as incurred. Software development costs incurred prior to the establishment of technological feasibility are charged to expense. Technological feasibility is demonstrated by the completion of a working model. Software development costs incurred subsequent to the establishment of technological feasibility are capitalized until the product is available for general release to customers. Amortization is based on the greater of (i) the ratio that current gross revenues for a product bear to the total of current and anticipated future gross revenues for that product or (ii) the straightline method over remaining estimated life of the product. To date, the period between achieving technological feasibility and the general availability of the related products has been short and software development costs qualifying for capitalization have not been material. Accordingly, the Company has not capitalized any software development costs.

Income Taxes

Income taxes are accounted for under the liability method. Under this method, deferred tax assets and liabilities are recorded based on temporary differences between the financial statement amounts and the tax bases of assets and liabilities measured using enacted tax rates in effect for the year in which the differences are expected to reverse. The Company periodically evaluates the realizability of its net deferred tax assets and records a valuation allowance if, based on the weight of available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

Use of Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

Concentrations of Credit Risk and Significant Customer Information

Financial instruments which potentially subject the Company to concentrations of credit risk consist principally of cash equivalents, marketable securities and accounts receivable. The Company invests its excess cash primarily in deposits with commercial banks and high-quality corporate

securities. For the year ended July 31, 1999, one customer accounted for all of the Company's revenue. The Company does not require collateral for sales to customers.

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SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS -- (Continued)

Certain components and parts used in the Company's products are procured from a single source. The Company obtains parts from one vendor only, even where multiple sources are available, to maintain quality control and enhance working relationships with suppliers. These purchases are made under existing contracts or purchase orders. The failure of a supplier, including subcontractor, to deliver on schedule could delay or interrupt the Company's delivery of products and thereby adversely affect the Company's revenues and profits.

Other Comprehensive Income

The Company reports comprehensive income (loss) in accordance with Statement of Financial Accounting Standard No. 130, "Reporting Comprehensive Income" (FAS 130). The comprehensive net loss for the period from inception (February 17, 1998) through July 31, 1998 and for the year ended July 31, 1999 does not differ from the reported net loss.

Net Loss Per Share

Basic net loss per share is computed by dividing the net loss for the period by the weighted average number of common shares outstanding during the period. Diluted net loss per share is computed by dividing the net loss for the period by the weighted average number of common and common equivalent shares outstanding during the period, if dilutive. Common equivalent shares are composed of unvested shares of restricted common stock and the incremental common shares issuable upon the exercise of stock options and unvested restricted common shares. There were no dilutive common equivalent shares for the period.

Pro forma net loss per share for the period from inception (February 17, 1998) through July 31, 1998 and the year ended July 31, 1999 is computed using the weighted average number of common shares outstanding, including the pro forma effects of the automatic conversion of the Company's Series A, B, C and D redeemable convertible preferred stock into shares of the Company's common stock effective upon the closing of the Company's initial public offering as if such conversion occurred at the date of original issuance. There were no dilutive common equivalent shares for any of the periods presented.

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SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS -- (Continued)

The following table sets forth the computation of basic and diluted net loss per share:

<TABLE> <CAPTION>

Period from inception
(February 17, 1998) Year ended
through July 31, 1998 July 31, 1999

(in thousands, except per share data)

<C> <C>

Numerator:

<S>

Net loss Denominator	\$ (693)	\$(18,756)
Historical: Weighted average common shares		
outstanding Weighted average common shares outstanding	6,507	15 , 195
subject to repurchase	(5,256) 	(12,087)
Denominator for basic and diluted		
calculation	1,251	3,108
Basic and diluted net loss per share	\$ (.55) ======	\$ (6.03) =====
Pro Forma:		
Historical weighted average common shares outstanding	1,251	3,108
upon conversion of redeemable convertible common stock	17,505	35,037
Common Scock		
Shares used in computing pro forma basic and diluted net loss per share		
(unaudited)	18,756 =====	38 , 145
Pro forma basic and diluted net loss per		
share (unaudited)	\$ (.04)	\$ (.49)
	======	======

</TABLE>

Options to purchase 1,686,300 shares of common stock at an average exercise price of \$1.36 per share has not been included in the computation of diluted net loss per share for the year ended July 31, 1999 as their effect would have been anti-dilutive.

Pro Forma Balance Sheet (Unaudited)

Upon the closing of the Company's initial public offering, all of the outstanding shares of Series A, B, C and D redeemable convertible preferred stock will automatically convert into 47,283,225 shares of the Company's common stock. The unaudited pro forma presentation of the balance sheet has been prepared assuming the conversion of the preferred stock into common stock as of July 31, 1999.

Stock Based Compensation

The Company accounts for stock-based employee compensation arrangements in accordance with provisions of Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees," ("APB No. 25") and complies with the disclosure provisions of Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation," ("SFAS No. 123").

Segment Information

The Company has adopted Statement of Financial Accounting Standards No. 131, "Disclosure about Segments of an Enterprise and Related Information," which requires companies to report selected information about operating segments, as well as enterprise-wide disclosures about products, services, geographic areas, and major customers. Operating segments are determined based on the way management organizes its business for making operating decisions and assessing performance. The Company has determined that it conducts its operations in one business segment.

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SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS--(Continued)

In April 1998, the Accounting Standards Executive Committee issued Statement of Position 98-5, "Reporting on the Costs of Start-Up Activities" ("SOP 98-5"). SOP 98-5, which is effective for fiscal years beginning after December 15, 1998, provides guidance on the financial reporting of start-up costs and organization costs. It requires costs of start up activities and organization costs to be expensed as incurred. Adoption of this standard did not have a material impact on our financial condition or results of operations.

In June 1998, the Financial Accounting Standards Board issued SFAS No. 133, "Accounting for Derivatives and Hedging Activities," which establishes accounting and reporting standards for derivative instruments, including derivative instruments embedded in other contracts, (collectively referred to as derivatives) and for hedging activities. The Company will adopt SFAS No. 133 as required by SFAS No. 137, "Deferral of the effective date of the FASB Statement No. 133," in fiscal year 2001. The adoption of SFAS No. 133 is not currently expected to have an impact on our financial condition or results of operations.

3. Inventory

Inventory consisted of the following at July 31, 1999 (in thousands):

<TABLE> <CAPTION>

	1999
<\$>	<c></c>
Raw materials	\$2,164
Work in process	3,026
Finished goods	1,418
	\$6,608
	=====

</TABLE>

4. Property and Equipment

Property and equipment consisted of the following at July 31, 1998 and 1999 (in thousands):

<TABLE> <CAPTION>

	1998	1999
<\$>	<c></c>	<c></c>
Computer software and equipment	\$500	\$5,433
Furniture and office equipment	27	221
Leasehold improvements		609
	527	6,263
Less accumulated depreciation and amortization		- ,
Less accumulated depreciation and amortization	(27)	(975)
Less accumulated depreciation and amortization	(27)	- ,

</TABLE>

Depreciation and amortization expense was \$27,000 for the period from inception (February 17, 1998) through July 31, 1998 and \$948,000 for the year ended July 31, 1999.

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SYCAMORE NETWORKS, INC.

5. Commitments and Contingencies:

Capital and Operating Leases

The Company's office facility is leased under a noncancelable lease that expires in 2002. The lease is collateralized by an irrevocable standby letter of credit in the amount of \$92,000, which is collateralized by a U.S. Treasury Bill. Rent expense under operating leases was \$27,500 and \$266,000 for the period from inception (February 17, 1998) through July 31, 1998 and the year ended July 31, 1999, respectively. At July 31, 1999 future minimum lease payments under all non-cancelable operating leases are as follows, in thousands:

<table></table>	
<\$>	
2000	. \$272
2001	. 319
2002	. 159
Total future minimum lease payments	. \$750
	====

</TABLE>

Letter of Credit

Included in prepaid expenses and other current assets is a \$4 million U.S. Government security which collateralizes a stand-by letter of credit used for inventory purchases made by a third party manufacturer on behalf of the Company. The letter of credit is irrevocable and expires in October 1999.

Notes Payable

In August 1998, the Company entered into an equipment loan agreement with a bank. Under this loan agreement, the Company may borrow up to \$1 million, for the purpose of acquisition of equipment, for a period of ten months. On July 1, 1999 the Company commenced payments to be repaid in thirty equal monthly installments. At July 31, 1999, \$967,000 was outstanding under this loan agreement.

In April 1999, the Company entered into an additional equipment loan agreement with the same bank. Under this loan agreement, the Company may borrow up to \$5 million, for the purpose of acquisition of equipment, for a period of six months. At January 31, 2000, the outstanding balance will be converted into a term loan, to be repaid in thirty-six equal monthly installments commencing February 1, 2000. At July 31, 1999, \$4,184,000 was outstanding under this loan agreement.

The interest on the outstanding loan balances is calculated daily at the bank's prime rate, plus .5% (8.5% at July 31, 1999). The loans are collateralized by all the Company's assets, including accounts receivable, inventory and fixed assets. The Company is required to maintain certain financial covenants and tangible net worth calculations. Principal payments under notes payable for the years ended July 31, are as follows: \$1,097,000 in 2000; \$1,795,000 in 2001; \$1,562,000 in 2002 and \$697,000 in 2003.

6. Stockholders' Equity

Common Stock

The Company has authorized 91,000,000 shares of common stock, \$.001 par value. The voting, dividend and liquidation rights of the holders of the common stock are subject to, and qualified by, the rights of the holders of preferred stock. The holders of the common stock are entitled to one vote for each share held. The Board of

Directors (the "Board") may declare dividends from lawfully available funds, subject to any preferential dividend rights of any outstanding preferred stock

and restrictions under the Company's loan agreements. Holders of the common stock are entitled to receive all assets available for distribution on the dissolution or liquidation of the Company, subject to any preferential rights of any outstanding preferred stock.

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SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS -- (Continued)

1998 Stock Incentive Plan

In August 1998, the 1998 Stock Incentive Plan (the "Plan") was adopted by the Board and received stockholder approval on October 19, 1998. A total of 26,565,000 shares of common stock have been reserved for issuance under the Plan. The Plan provides for the grant of incentive stock options, nonstatutory stock options, restricted stock awards and other stock-based awards to officers, employees, directors, consultants and advisors of the Company. No participant may receive any award for more than 500,000 shares in any calendar year. Options may be granted at an exercise price less than, equal to or greater than the fair market value on the date of grant. The Board determines the term of each option, the option exercise price, and the vesting terms. Stock options generally expire ten years from the date of grant and vest over five years.

All employees who have been granted options by the Company under the 1998 Stock Incentive Plan are eligible to elect immediate exercise of all such options. However, shares obtained by employees who elect immediate exercise prior to the original option vesting schedule are subject to the Company's right of repurchase, at the option exercise price, in the event of termination. The Company's repurchase rights lapse at the same rate as the shares would have become exercisable under the original vesting schedule. As of July 31, 1999, 5,978,700 shares related to immediate option exercises are subject to repurchase by the Company at per share prices ranging from \$.02 to \$3.00 and 18,804,900 were reserved for future issuance.

Restricted Stock

Restricted stock may be issued to employees, officers, directors, consultants, and other advisors. The Company has the right to repurchase the common stock at the issuance price (which shall be at least equal to the par value per share for each share of common stock subject to such award) or other stated or formula price in the event that conditions specified by the Board in the award agreement are not satisfied prior to the end of the applicable restriction period or periods established for such award. The vesting period is generally five years. The Company issued 7,035,000 and 10,164,312 shares of restricted stock for the period from inception (February 17, 1998) through July 31, 1998 and the year ended July 31, 1999, respectively. The number of shares of restricted stock outstanding at July 31, 1999 was 17,199,312 of which 14,038,812 were subject to repurchase at their original issuance prices ranging from \$.001 to \$.33.

Deferred Stock Compensation

In connection with the grant of certain stock options and restricted shares to employees during the period from inception (February 17, 1998) to July 31, 1998 and the year ended July 31, 1999, the Company recorded deferred stock compensation of \$184,000 and \$23,700,000, respectively, representing the difference between the estimated fair market value of the common stock on the date of grant and the exercise price. Compensation related to options and restricted shares which vest over time was recorded as a component of stockholders' deficit and is being amortized over the vesting periods of the related options. During the period from inception (February 17, 1998) to July 31, 1998 and the year ended July 31, 1999, the Company recorded compensation expense relating to these options and restricted shares totaling \$5,000 and \$1,116,000, respectively.

SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS -- (Continued)

Non-Employee Stock Compensation

During the year ended July 31, 1999, the Company granted 410,100 shares of common stock awards which were fully vested by July 31, 1999 to non-employees and recognized compensation expense of \$1,619,000. The fair value of each stock option was estimated using the Black-Scholes option pricing model with the following weighted-average assumptions: a weighted-average risk free interest rates of 5.2%, a weighted-average expected option life of 4 years, no dividend yield and a 60% volatility.

Valuation of Stock Awards

Had compensation cost of our stock awards been determined in accordance with the provisions of SFAS No. 123, the historical net loss and net loss per share would have been increased to the pro forma amounts indicated below (in thousands, except per share amounts):

<TABLE>

	Period from Inception (February 17,1998) to July 31, 1998	Year Ended
<\$>	<c></c>	<c></c>
As Reported		
Net loss	\$ (693)	\$(18,756)
Basic and diluted net loss per share	\$(.55)	\$ (6.03)
Pro forma		
Net loss	\$ (807)	\$(22,840)
Basic and diluted net loss per share	\$(.65)	\$ (7.35)

 | |The fair value of these stock awards at the date of grant was estimated using the Black-Scholes model with the following assumptions:

<TABLE>

	Period from Inception (February 17, 1998) to July 31, 1998	Year Ended
<\$>	<c></c>	<c></c>
Risk free interest rate	5.4%	4.5%
Dividend yield	0%	0%
Expected volatility	0%	0%
<pre>Expected life</pre>	4 years	5 years

The weighted average grant date fair value of the stock award granted during the period from inception (February 17, 1998) to July 31, 1998 and the year ended July 31, 1999 was \$.16 and \$1.06 per share, respectively. The proforma effect of applying SFAS No. 123 for prior years is not necessarily representative of pro forma effect to be expected in future years.

All stock option transactions issued under the 1998 stock incentive plan are summarized as follows:

<TABLE> <CAPTION>

Number of Weighted Average Shares Exercise Price

<\$>	<c></c>	<c></c>
Outstanding at July 31, 1998		
Options granted	7,760,100	\$.48
Options exercised	(6,073,800)	.67
Options cancelled		
Outstanding at July 31, 1999	1,686,300	\$1.36
		=====

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SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS -- (Continued)

The following table summarizes information about stock options outstanding at July 31, 1999:

Vested Options

<TABLE>

	Ol	otions Outstan	nding Exercisable		cisable
Range of Exercise Prices	Shares	Weighted Avg. Remaining Contract Life	Exercise	Number Exercisable	Weighted Avg. Exercise Price
<s></s>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>
\$.12	40,800	9.55	\$.12	30,000	\$.12
.33	584,700	9.82	.33	30,000	.33
1.00	436,899	9.94	1.00	90,000	1.00
2.00	213,501	9.98	2.00		
3.00	410,400	10.00	3.00		
\$.12 -					
\$3.00	1,686,300	9.91	\$1.36	150,000	\$.69

 | | | | |Stockholder Notes Receivable

At July 31, 1999, the Company held notes receivable in the amount of \$360,000 from stockholders in consideration for the purchase of common stock. The notes are due five years from the date of issuance and are collateralized by the underlying common stock and, consequently, are reflected as a component of stockholders' deficit.

Common Stock Purchase Option

In March 1999, the Company signed a definitive Purchase and License Agreement (the "Agreement') with a customer to provide certain Company products. Under the terms of the Agreement, the customer also has the right to purchase shares of the Company in the Company's initial public offering ("IPO") of shares on a national exchange at the IPO price to an upper limit equal to the number of shares, which when multiplied by the initial public offering price, equals 5% of the dollar value of the customer's accumulated purchases of the Company's products and services as of the date of the initial public offering, but in no event more than 5% of the shares offered in the IPO.

7. Redeemable Convertible Preferred Stock

The Company's Board has authorized 15,792,201 shares of Series A, Series B, Series C and Series D redeemable convertible preferred stock ("Series A, Series B, Series C, Series D") at \$.01 par value of which 15,761,075 are issued and outstanding at July 31, 1999. Issuances are as follows:

In February 1998 and April 1998, the Company sold 5,500,000 and 549,450 shares, respectively of Series A at a price of \$.91 per share and received proceeds of approximately \$5,505,000. In July 1998, the Company issued 137,362 shares of Series A and received proceeds of approximately \$125,000 in October 1998.

In October 1998, the Company sold 2,775,000 shares of Series A at a price of \$.91 per share and received proceeds of approximately \$2,525,250.

In December 1998, the Company authorized 3,625,000 shares of Series B \$.01 par value. In December 1998 and February 1999, the Company sold 3,607,062 shares of Series B at a price of \$3.50 per share and received proceeds of approximately \$12,625,000.

In February 1999, the Company authorized 2,500,000 shares of Series C \$.01 par value. In March 1999, the Company sold 2,500,000 shares of Series C at a price of \$8.00 per share and received proceeds of approximately \$20,000,000.

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SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS -- (Continued)

In July 1999, the Company authorized 692,201 shares of Series D \$.01 par value. In July 1999, the Company sold 692,201 shares of Series D at a price of \$21.67 per share and received proceeds of approximately \$15,000,000.

The terms of Series A, Series B, Series C and Series D redeemable convertible preferred stock are as follows:

Conversion

Each share of Series A, Series B, Series C and Series D may be converted into three shares of common stock at any time at the option of the holder, subject to adjustment for certain events such as a stock split, stock dividend, or stock issuance. At July 31, 1999, Series A, Series B, Series C and Series D are convertible into 47,283,225 shares of common stock. Upon the earlier of the closing of an initial public offering of the Company's common stock at a price which equals or exceeds \$9.67 per share and results in proceeds of a least \$10,000,000, or the date on which at least 10,000,000 shares of preferred stock have been converted to common stock, all outstanding shares of preferred stock automatically convert into shares of common stock.

Dividend and Voting Rights

When and if declared by the Company's Board, dividends on Series A, Series B, Series C and Series D are payable in cash in preference and prior to any payment of any dividend on common shares. The holders are entitled to the per share amount of dividends or distributions declared for common stock, multiplied by the number of shares of common stock into which the preferred stock is convertible. The holders are entitled to vote on all matters and are entitled to the number of votes equal to the number of common shares into which the Series A, Series B, Series C and Series D, are convertible as of the date of record.

Liquidation Preference

In the event of any liquidation, dissolution, or winding up of the Company, the holders of Series A, Series B, Series C and Series D are entitled to receive, prior and in preference to any payment or distribution of any assets or surplus funds of the Company to holders of the common shares, an amount for each share of Series A, Series B, Series C and Series D held, equal to \$.91, \$3.50, \$8.00 and \$21.67, respectively, plus any declared and unpaid dividends. The liquidation preferences are subject to adjustment in the event of any stock dividend, stock split, combination or other similar recapitalization.

Redemption

If the holders of at least a majority of Series A, Series B, Series C and Series D preferred stock, at any time after February 26, 2004, so demand, the Company will be required to redeem 33% of the shares outstanding, an additional 50% on February 26, 2005 and all shares remaining on February 26, 2006. The redemption prices of each share of Series A, Series B, Series C and Series D are \$.91, \$3.50, \$8.00 and \$21.67, respectively plus all declared and unpaid dividends, if any.

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SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS -- (Continued)

The following table sets forth the redeemable convertible preferred stock activity (in thousands):

<TABLE> <CAPTION>

	Series A		Ser	ies B	Ser	ies C	Ser	ies D	Total		
	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	Shares	Amount	
<s> Issuance</s>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	<c></c>	
February 1998 Issuance April	5,500	\$5,005							5,500	\$ 5,005	
1998	550	500							550	500	
Issuance July 1998	137	116							137	116	
Balance July 31, 1998	6,187	5,621							6 , 187	5 , 621	
Issuance October 1998 Issuance December	2,775	2,525							2,775	2 , 525	
1998 Issuance February			3,506	\$12,270					3,506	12,270	
1999 Issuance			101	355					101	355	
1999					2,500	\$20,000			2,500	20,000	
Issuance July 1999							692 	\$15,000	692	15,000	
Balance July 31, 1999	8 , 962	\$8,146	3,607	\$12,625 	2,500	\$20,000	692 	\$15,000 	15,761	\$55 , 771	

 | | | | | | | | | |

8. Income Tax

No provision for taxes has been recorded since the Company has incurred losses since inception.

The components of the net deferred tax asset as of July 31, 1998 and 1999 are as follows (in thousands):

<TABLE>

	1999	1998
<\$>	<c></c>	<c></c>
Deferred tax assets: Net operating loss carryforwards	124	\$ 6,163
Research and development credits Other		515 63
	267	6,839
Deferred tax liabilities: Depreciation		196
Net deferred tax asset	267 (267)	6,643 (6,643)
Net deferred tax asset	\$ =====	\$ ======

</TABLE>

At July 31, 1999, the Company has available net operating loss carryforwards for federal and state tax income purposes of approximately \$16.6 million available to offset future taxable income which expire in varying amounts beginning in 2019 and 2004, respectively. As required by statement of Financial Accounting Standards No. 109, "Accounting for Income Taxes," the management of the Company has evaluated the positive and negative evidence bearing upon the realizability of its deferred tax assets and has established a full valuation allowance for such assets. which are comprised principally of net operating loss carryforwards. Management reevaluates the positive and negative evidence periodically. The net operating loss carryforwards could be limited in future years if there is a significant change in the Company's ownership.

9. Employee Benefit Plan:

The Company sponsors a defined contribution plan covering substantially all of its employees which is designed to be qualified under Section 401(k) of the Internal Revenue Code. Eligible employees are permitted to contribute to the 401(k) plan through payroll deductions within statutory and plan limits. The Company has made no contributions to the plan to date.

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SYCAMORE NETWORKS, INC.

NOTES TO FINANCIAL STATEMENTS -- (Continued)

10. Subsequent Events

Proposed Public Offering of Common Stock

In August 1999, the Board authorized the Company to proceed with an initial public offering of its common stock. If the offering is consummated as presently anticipated, all of the outstanding redeemable convertible preferred stock will automatically convert into 47,283,225 shares of common stock.

In August 1999, the Board authorized, subject to stockholder approval, an increase in the authorized shares of the Company's common stock from 91,000,000 to 250,000,000 shares and authorized and approved 5,000,000 shares of \$.01 par value undesignated preferred stock that may be issued by the Board from time to time in one or more series. This amendment is to be effective upon the closing of the Company's IPO.

In August 1999, the Company approved a 3-for-1 stock split in the form of a 200% stock dividend of the Company's issued and outstanding common stock and stock options payable to stockholders of record on August 27, 1999. The redeemable convertible preferred stock conversion ratio is automatically

adjusted to reflect the split. Additionally, the authorized common stock of the Company was increased from 32,000,000 to 91,000,000. All common shares, common options and per share amounts in the accompanying financial statements have been adjusted to reflect the stock split.

1999 Stock Incentive Plan.

In August 1999, the Board approved, subject to stockholder approval, the 1999 Stock Incentive Plan. The 1999 plan provides for the grant of incentive stock options, nonstatutory stock options, restricted stock awards and other stock-based awards to officers, employees, directors, consultants and advisors of the Company. Shares not yet issued under the 1998 Stock Incentive Plan will now be available under the 1999 plan. The total amount of shares that may be issued under the 1999 plan is the remaining shares to be issued under the 1998 Stock Incentive Plan plus an annual increase beginning August 1, 2000 of the lesser of 3,000,000 or 5% of the outstanding shares on that date.

1999 Employee Stock Purchase Plan.

In August 1999, the Board approved, subject to stockholder approval, the Employee Stock Purchase Plan. A total of 750,000 shares of common stock have been reserved for issuance under this plan. Eligible employees may purchase common stock at a price equal to 85% of the lower of the fair market value of the common stock at the beginning or end of each six-month offering period. Participation is limited to 10% of an employee's eligible compensation not to exceed amounts allowed by the Internal Revenue Code.

1999 Non-Employee Director Option Plan.

In August 1999, the Board approved, subject to stockholder approval, the 1999 Non-Employee Director Option Plan. A total of 500,000 shares of common stock have been reserved for issuance under this plan.

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Inside back cover shows Sycamore logo.

Back cover shows drawing of tree with written script: One Sycamore stands alone.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the costs and expenses, other than the underwriting discount, payable by the Registrant in connection with the sale of common stock being registered. All amounts are estimates except the SEC registration fee, the NASD filing fee and the Nasdaq National Market listing fee.

<TABLE>

<\$>	<c></c>
SEC registration fee	\$ 41,570
NASD filing fee	15,450
Nasdaq National Market listing fee	90,000
Printing and engraving expenses	150,000
Legal fees and expenses	300,000
Accounting fees and expenses	300,000
Blue Sky fees and expenses (including legal fees)	10,000
Transfer agent and registrar fees and expenses	12,000

</TABLE>

Item 14. Indemnification of Directors and Officers.

Article EIGHTH of the Registrant's Amended and Restated Certificate of Incorporation (the "Restated Certificate") provides that no director of the Registrant shall be personally liable for any monetary damages for any breach of fiduciary duty as a director, except to the extent that the Delaware General Corporation Law prohibits the elimination or limitation of liability of directors for breach of fiduciary duty.

Article NINTH of the Restated Certificate provides that a director or officer of the Registrant (a) shall be indemnified by the Registrant against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement incurred in connection with any litigation or other legal proceeding (other than an action by or in the right of the Registrant) brought against him by virtue of his position as a director or officer of the Registrant if he acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Registrant, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful and (b) shall be indemnified by the Registrant against all expenses (including attorneys' fees) and amounts paid in settlement incurred in connection with any action by or in the right of the Registrant brought against him by virtue of his position as a director or officer of the Registrant if he acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Registrant, except that no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the Registrant, unless the Court of Chancery of Delaware determines that, despite such adjudication but in view of all of the circumstances, he is entitled to indemnification of such expenses. Notwithstanding the foregoing, to the extent that a director or officer has been successful, on the merits or otherwise, including, without limitation, the dismissal of an action without prejudice, he is required to be indemnified by the Registrant against all expenses (including attorneys' fees) incurred in connection therewith. Expenses shall be advanced to a director or officer at his request, unless it is determined that he did not act in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Registrant, and, with respect to any criminal action or proceeding had reasonable cause to believe that his conduct was unlawful, provided that he undertakes to repay the amount advanced if it is ultimately determined that he is not entitled to indemnification for such expenses.

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Indemnification is required to be made unless the Registrant determines that the applicable standard of conduct required for indemnification has not been met. In the event of a determination by the Registrant that the director or officer did not meet the applicable standard of conduct required for indemnification, or if the Registrant fails to make an indemnification payment within 60 days after such payment is claimed by such person, such person is permitted to petition the court to make an independent determination as to whether such person is entitled to indemnification. As a condition precedent to the right of indemnification, the director or officer must give the Registrant notice of the action for which indemnity is sought and the Registrant has the right to participate in such action or assume the defense thereof.

Article NINTH of the Restated Certificate further provides that the indemnification provided therein is not exclusive, and provides that in the event that the Delaware General Corporation Law is amended to expand the indemnification permitted to directors or officers, the Registrant must indemnify those persons to the fullest extent permitted by such law as so amended.

Section 145 of the Delaware General Corporation Law provides that a corporation has the power to indemnify a director, officer, employee or agent of the corporation and certain other persons serving at the request of the corporation in related capacities against amounts paid and expenses incurred in connection with an action or proceeding to which he is or is threatened to be made a party by reason of such position, if such person shall have acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, in any criminal proceeding, if such person had no reasonable cause to believe his conduct was unlawful; provided that, in the case of actions brought by or in the right of the corporation, no indemnification shall be made with respect to any matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the adjudicating court determines that such indemnification is proper under the circumstances.

The Underwriting Agreement provides that the Underwriters are obligated, under certain circumstances, to indemnify directors, officers and controlling persons of the Company against certain liabilities, including liabilities under the Securities Act of 1933, as amended (the "Act"). Reference is made to the form of Underwriting Agreement to be filed as Exhibit 1.1 hereto.

The Registrant expects to obtain liability insurance for its officers and directors.

Item 15. Recent Sales of Unregistered Securities.

Since inception, the Registrant has issued the following securities that were not registered under the Securities Act as summarized below.

- (a) Issuances of Capital Stock.
- 1. Between February 18, 1998 and October 28, 1998, the Registrant issued and sold pursuant to stock restriction agreements outside of the 1998 Stock Incentive Plan an aggregate of 16,546,812 shares of its common stock for an aggregate purchase price of approximately \$158,005.
- 2. Between February 19, 1998 and October 29, 1998, the Registrant issued and sold an aggregate of 8,961,812 shares of its Series A redeemable convertible preferred stock for an aggregate purchase price of approximately \$8,155,249.
- 3. Between October 26, 1998 and July 31, 1999, the Registrant issued and sold pursuant to stock restriction agreements under the 1998 Stock Incentive Plan an aggregate of 1,852,500 shares of its common stock for an aggregate purchase price of \$353,250.
- 4. Between December 3, 1998 and February 11, 1999, the Registrant issued and sold an aggregate of 3,607,062 shares of its Series B redeemable convertible preferred stock for an aggregate purchase price of \$12,624,717.

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- 5. On March 2, 1999, the Registrant issued and sold an aggregate of 2,500,000 shares of its Series C redeemable convertible preferred stock for an aggregate purchase price of \$20,000,000.
- 6. On July 23, 1999, the Registrant issued and sold an aggregate of 692,201 shares of its Series D redeemable convertible preferred stock for an aggregate price of \$14,999,996.
- (b) Certain Grants and Exercises of Stock Options.
- 1. From inception through July 31, 1999, the Registrant granted stock options to purchase 7,760,100 shares of common stock at exercise prices ranging from \$.02 to \$3.00 per share to employees,

consultants and directors pursuant to its 1998 Stock Incentive Plan, as amended.

2. From inception through July 31, 1999, the Registrant issued and sold an aggregate of 6,073,800 shares of its common stock to employees, consultants and directors for aggregate consideration of \$2,939,031 pursuant to exercises of options granted under its 1998 Stock Incentive Plan.

No underwriters were involved in any of the foregoing sales of securities. Such sales were made in reliance upon an exemption from the registration provisions of the Securities Act set forth in Section 4(2) thereof relative to sales by an issuer not involving any public offering or the rules and regulations thereunder, or, in the case of options to purchase common stock and sales of restricted common stock, Rule 701 of the Securities Act. All of the foregoing securities are deemed restricted securities for the purposes of the Securities Act.

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Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibits:

<TABLE> <CAPTION> Exhibit

No. Description

<C> <S>

- *1.1 Form of Underwriting Agreement
- **3.1 Certificate of Incorporation of the Registrant, as amended
 - 3.2 Form of Amended and Restated Certificate of Incorporation of the Registrant, to be filed prior to the closing of this offering
- **3.3 By-Laws of the Registrant
 - 3.4 Form of Amended and Restated By-Laws of the Registrant, to be effective upon the closing of this offering
- *4.1 Specimen common stock certificate
- **4.2 See Exhibits 3.1, 3.2, 3.3 and 3.4 for provisions of the Certificate of Incorporation and By-Laws of the Registrant defining the rights of holders of common stock of the Registrant
- **4.3 Second Amended and Restated Investor Rights Agreement dated February 26, 1999, as amended by Amendment No. 1 dated July 23, 1999
- *5.1 Opinion of Hale and Dorr LLP
- **10.1 1998 Stock Incentive Plan, as amended
 - 10.2 1999 Non-Employee Directors' Option Plan
- **+10.3 Purchase and License Agreement between Sycamore and Williams Communications, Inc.
- **10.4 Letter Agreement between Sycamore and Fleet National Bank dated April 22, 1999
- **10.5 Inventory and Accounts Receivable Security Agreement between Sycamore and Fleet National Bank dated April 22, 1999
- **10.6 Supplementary Security Agreement between Sycamore and Fleet National Bank dated April 22, 1999
- **10.7 Lease dated as of December 21, 1998 between BerCar II LLC, a
 Massachusetts limited liability company and the Company regarding 10
 Elizabeth Drive, Chelmsford, MA
 - 10.8 1999 Stock Incentive Plan
 - 23.1 Consent of PricewaterhouseCoopers LLP
- *23.2 Consent of Hale and Dorr LLP (included in Exhibit 5.1)
- **24.1 Powers of Attorney (see page II-5)
 - 27.1 Financial Data Schedule

</TABLE>

- * To be filed by amendment.
- ** Previously filed.
- + Confidential treatment requested for certain portions of this Exhibit

pursuant to Rule 406 promulgated under the Securities Act, which portions are omitted and filed separately with the Securities and Exchange Commission.

(b) Financial Statement Schedules:

All schedules for which provision is made in the applicable accounting regulation of the Securities and Exchange Commission are not required under the related instructions or are inapplicable, and therefore have been omitted.

Item 17. Undertakings.

The undersigned registrant hereby undertakes to provide to the Underwriters at the closing specified in the Underwriting Agreement, certificates in such denominations and registered in such names as required by the Underwriters to permit prompt delivery to each purchaser.

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Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended (the "Act"), may be permitted to directors, officers and controlling persons of the registrant pursuant to the Delaware General Corporation Law, the Restated Certificate of the registrant, the Underwriting Agreement, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered hereunder, the registrant will, unless in the opinion of counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

- (1) For purpose of determining any liability under the Act, the information omitted from the form of prospectus filed as part of this Registration Statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4), or 497(h) under the Act shall be deemed to be part of this Registration Statement as of the time it was declared effective.
- (2) For purpose of determining any liability under the Act, each posteffective amendment that contains a form of prospectus shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant has duly caused this Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Chelmsford, Massachusetts, on this 10th day of September, 1999.

SYCAMORE NETWORKS, INC.

By: /s/ Daniel E. Smith _____

Daniel E. Smith President and Chief Executive

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 1 to the Registration Statement has been signed by the following persons in the capacities set forth below on September 10, 1999.

<TABLE> <S> <C>

Signature Title

/s/ Gururaj Deshpande Chairman of the Board of Directors

Gururaj Deshpande

/s/ Daniel E. Smith President, Chief Executive Officer and Director

Daniel E. Smith

/s/ Frances M. Jewels Chief Financial Officer, Vice President,
Finance and Administration, Secretary and

----- Treasurer

Frances M. Jewels

/s/ Timothy Barrows Director

Timothy Barrows

/s/ Paul Ferri Director

Paul J. Ferri

/s/ John W. Gerdelman Director

John W. Gerdelman

By /s/ Frances M. Jewels

Frances M. Jewels Attorney-in-fact

</TABLE>

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EXHIBIT INDEX

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- * To be filed by amendment.
- ** Previously filed.
- + Confidential treatment requested for certain portions of this Exhibit pursuant to Rule 406 promulgated under the Securities Act, which portions are omitted and filed separately with the Securities and Exchange Commission.

AMENDED AND RESTATED

CERTIFICATE OF INCORPORATION

OF

SYCAMORE NETWORKS, INC.

Sycamore Networks, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware, does hereby certify as follows:

- 1. The Corporation filed its original Certificate of Incorporation with the Secretary of State of the State of Delaware (the "Delaware Secretary") on February 17, 1998. A Certificate of Amendment of Certificate of Incorporation was filed with the Delaware Secretary on October 29, 1999. A Certificate of Amendment of Certificate of Incorporation was filed with the Delaware Secretary on December 3, 1999. A Certificate of Amendment of Certificate of Incorporation was filed with the Delaware Secretary on February 25, 1999. A Certificate of Amendment of Certificate of Incorporation was filed with the Delaware Secretary on July 23, 1999.
- 2. At a duly called meeting of the Board of Directors of the Corporation at which a quorum was present at all times, a resolution was duly adopted, pursuant to Sections 242 and 245 of the General Corporation Law of the State of Delaware, setting forth an Amended and Restated Certificate of Incorporation of the Corporation and declaring said Amended and Restated Certificate of Incorporation advisable. The stockholders of the Corporation duly approved said proposed Amended and Restated Certificate of Incorporation by written consent in accordance with Sections 228, 242 and 245 of the General Corporation Law of the State of Delaware, and written notice of such consent has been given to all stockholders who have not consented in writing to said restatement. The resolution setting forth the Amended and Restated Certificate of Incorporation is as follows:

RESOLVED: That the Certificate of Incorporation of the Corporation, be and

hereby is amended and restated in its entirety so that the same shall read as follows:

FIRST. The name of the Corporation is:

Sycamore Networks, Inc.

SECOND. The address of its registered office in the State of Delaware is Corporation Trust Center, 1209 Orange Street, in the City of Wilmington, County

of New Castle. The name of its registered agent at such address is The Corporation Trust Company.

THIRD. The nature of the business or purposes to be conducted or promoted by the Corporation is as follows:

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

FOURTH: The total number of shares of all classes of stock which the Corporation shall have authority to issue is 255,000,000 shares, consisting of (i) 250,000,000 shares of Common Stock, \$.001 par value per share ("Common Stock"), and (ii) 5,000,000 shares of Preferred Stock, \$.01 par value per share ("Preferred Stock").

The following is a statement of the designations and the powers, privileges and rights, and the qualifications, limitations or restrictions thereof in respect of each class of capital stock of the Corporation.

A. COMMON STOCK.

- 1. General. The voting, dividend and liquidation rights of the holders
 ----of the Common Stock are subject to and qualified by the rights of the holders of
 the Preferred Stock of any series as may be designated by the Board of Directors
 upon any issuance of the Preferred Stock of any series.
- 2. Voting. The holders of the Common Stock are entitled to one vote for ----each share held at all meetings of stockholders. There shall be no cumulative voting.

The number of authorized shares of Common Stock may be increased or decreased (but not below the number of shares thereof then outstanding) by the affirmative vote of the holders of a majority of the stock of the Corporation entitled to vote, irrespective of the provisions of Section 242(b)(2) of the General Corporation Law of Delaware.

- 3. Dividends. Dividends may be declared and paid on the Common Stock
 ----from funds lawfully available therefor as and when determined by the Board of
 Directors and subject to any preferential dividend rights of any then
 outstanding Preferred Stock.
 - 4. Liquidation. Upon the dissolution or liquidation of the Corporation,

whether voluntary or involuntary, holders of Common Stock will be entitled to receive all assets of the Corporation available for distribution to its stockholders, subject to any preferential rights of any then outstanding Preferred Stock.

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B. PREFERRED STOCK.

Preferred Stock may be issued from time to time in one or more series, each of such series to have such terms as stated or expressed herein and in the resolution or resolutions providing for the issue of such series adopted by the Board of Directors of the Corporation as hereinafter provided. Any shares of Preferred Stock which may be redeemed, purchased or acquired by the Corporation may be reissued except as otherwise provided by law. Different series of Preferred Stock shall not be construed to constitute different classes of shares for the purposes of voting by classes unless expressly provided.

Authority is hereby expressly granted to the Board of Directors from time to time to issue the Preferred Stock in one or more series, and in connection with the creation of any such series, by resolution or resolutions providing for the issue of the shares thereof, to determine and fix such voting powers, full or limited, or no voting powers, and such designations, preferences and relative participating, optional or other special rights, and qualifications, limitations or restrictions thereof, including without limitation thereof, dividend rights, conversion rights, redemption privileges and liquidation preferences, as shall be stated and expressed in such resolutions, all to the full extent now or hereafter permitted by the General Corporation Law of Delaware. limiting the generality of the foregoing, the resolutions providing for issuance of any series of Preferred Stock may provide that such series shall be superior or rank equally or be junior to the Preferred Stock of any other series to the extent permitted by law. Except as otherwise provided in this Certificate of Incorporation, no vote of the holders of the Preferred Stock or Common Stock shall be a prerequisite to the designation or issuance of any shares of any series of the Preferred Stock authorized by and complying with the conditions of this Certificate of Incorporation, the right to have such vote being expressly waived by all present and future holders of the capital stock of the Corporation.

FIFTH. The Corporation shall have a perpetual existence.

SIXTH. In furtherance of and not in limitation of powers conferred by statute, it is further provided that the Board of Directors is expressly authorized to adopt, amend or repeal the By-Laws of the Corporation.

SEVENTH. Except to the extent that the General Corporation Law of Delaware prohibits the elimination or limitation of liability of directors for breaches of fiduciary duty, no director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for any breach of

fiduciary duty as a director, notwithstanding any provision of law imposing such liability. No amendment to or repeal of this provision shall apply to or have any effect on the liability or alleged liability of any director of the Corporation for or with respect to any acts or omissions of such director occurring prior to such amendment.

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EIGHTH. 1. Actions, Suits and Proceedings Other than by or in the Right
of the Corporation. The Corporation shall indemnify each person who was or is a

party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the Corporation), by reason of the fact that he is or was, or has agreed to become, a director or officer of the Corporation, or is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan) (all such persons being referred to hereafter as an "Indemnitee"), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or on his behalf in connection with such action, suit or proceeding and any appeal therefrom, if he acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his conduct was unlawful. The termination of any action, suit or proceeding by judgment, order, settlement, conviction or upon a plea of nolo contendere or its equivalent, shall not, of itself, create a

presumption that the person did not act in good faith and in a manner which he reasonably believed to be in, or not opposed to, the best interests of the Corporation, and, with respect to any criminal action or proceeding, had reasonable cause to believe that his conduct was unlawful. Notwithstanding anything to the contrary in this Article, except as set forth in Section 7 below, the Corporation shall not indemnify an Indemnitee seeking indemnification in connection with a proceeding (or part thereof) initiated by the Indemnitee unless the initiation thereof was approved by the Board of Directors of the Corporation. Notwithstanding anything to the contrary in this Article, the Corporation shall not indemnify an Indemnitee to the extent such Indemnitee is reimbursed from the proceeds of insurance, and in the event the Corporation makes any indemnification payments to an Indemnitee and such Indemnitee is subsequently reimbursed from the proceeds of insurance, such Indemnitee shall promptly refund such indemnification payments to the Corporation to the extent of such insurance reimbursement.

 threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the Corporation to procure a judgment in its favor by reason of the fact that he is or was, or has agreed to become, a director or officer of the Corporation, or is or was serving, or has agreed to serve, at the request of the Corporation, as a director, officer or trustee of, or in a similar capacity with, another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan), or by reason of any action alleged to have been taken or omitted in such capacity, against all expenses (including attorneys' fees) and, to the extent permitted by law, amounts paid in settlement actually and reasonably incurred by him or on his behalf in connection with such action, suit or proceeding and any appeal therefrom,

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if he acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the Corporation, except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the Corporation unless and only to the extent that the Court of Chancery of Delaware shall determine upon application that, despite the adjudication of such liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses (including attorneys' fees) which the Court of Chancery of Delaware shall deem proper.

3. Indemnification for Expenses of Successful Party. Notwithstanding the

other provisions of this Article, to the extent that an Indemnitee has been successful, on the merits or otherwise, in defense of any action, suit or proceeding referred to in Sections 1 and 2 of this Article, or in defense of any claim, issue or matter therein, or on appeal from any such action, suit or proceeding, he shall be indemnified against all expenses (including attorneys' fees) actually and reasonably incurred by him or on his behalf in connection therewith. Without limiting the foregoing, if any action, suit or proceeding is disposed of, on the merits or otherwise (including a disposition without prejudice), without (i) the disposition being adverse to the Indemnitee, (ii) an adjudication that the Indemnitee was liable to the Corporation, (iii) a plea of guilty or nolo contendere by the Indemnitee, (iv) an adjudication that the

Indemnitee did not act in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the Corporation, and (v) with respect to any criminal proceeding, an adjudication that the Indemnitee had reasonable cause to believe his conduct was unlawful, the Indemnitee shall be considered for the purposes hereof to have been wholly successful with respect thereto.

4. Notification and Defense of Claim. As a condition precedent to his

right to be indemnified, the Indemnitee must notify the Corporation in writing as soon as practicable of any action, suit, proceeding or investigation

involving him for which indemnity will or could be sought. With respect to any action, suit, proceeding or investigation of which the Corporation is so notified, the Corporation will be entitled to participate therein at its own expense and/or to assume the defense thereof at its own expense, with legal counsel reasonably acceptable to the Indemnitee. After notice from the Corporation to the Indemnitee of its election so to assume such defense, the Corporation shall not be liable to the Indemnitee for any legal or other expenses subsequently incurred by the Indemnitee in connection with such claim, other than as provided below in this Section 4. The Indemnitee shall have the right to employ his own counsel in connection with such claim, but the fees and expenses of such counsel incurred after notice from the Corporation of its assumption of the defense thereof shall be at the expense of the Indemnitee unless (i) the employment of counsel by the Indemnitee has been authorized by the Corporation, (ii) counsel to the Indemnitee shall have reasonably concluded that there may be a conflict of interest or position on any significant issue between the Corporation and the Indemnitee in the conduct of the defense of such action or (iii) the Corporation shall not in fact have employed counsel to assume the defense of such action, in each of which cases the fees and expenses of counsel for the

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Indemnitee shall be at the expense of the Corporation, except as otherwise expressly provided by this Article. The Corporation shall not be entitled, without the consent of the Indemnitee, to assume the defense of any claim brought by or in the right of the Corporation or as to which counsel for the Indemnitee shall have reasonably made the conclusion provided for in clause (ii) above.

5. Advance of Expenses. Subject to the provisions of Section 6 below, in

the event that the Corporation does not assume the defense pursuant to Section 4 of this Article of any action, suit, proceeding or investigation of which the Corporation receives notice under this Article, any expenses (including attorneys' fees) incurred by an Indemnitee in defending a civil or criminal action, suit, proceeding or investigation or any appeal therefrom shall be paid by the Corporation in advance of the final disposition of such matter; provided, however, that the payment of such expenses incurred by an Indemnitee in advance of the final disposition of such matter shall be made only upon receipt of an undertaking by or on behalf of the Indemnitee to repay all amounts so advanced in the event that it shall ultimately be determined that the Indemnitee is not entitled to be indemnified by the Corporation as authorized in this Article. Such undertaking shall be accepted without reference to the financial ability of the Indemnitee to make such repayment.

6. Procedure for Indemnification. In order to obtain indemnification or

advancement of expenses pursuant to Section 1, 2, 3 or 5 of this Article, the Indemnitee shall submit to the Corporation a written request, including in such request such documentation and information as is reasonably available to the

Indemnitee and is reasonably necessary to determine whether and to what extent the Indemnitee is entitled to indemnification or advancement of expenses. such indemnification or advancement of expenses shall be made promptly, and in any event within 60 days after receipt by the Corporation of the written request of the Indemnitee, unless with respect to requests under Section 1, 2 or 5 the Corporation determines within such 60-day period that the Indemnitee did not meet the applicable standard of conduct set forth in Section 1 or 2, as the case may be. Such determination shall be made in each instance by (a) a majority vote of the directors of the Corporation consisting of persons who are not at that time parties to the action, suit or proceeding in question ("disinterested directors"), whether or not a quorum, (b) a majority vote of a committee of disinterested directors designated by majority vote of disinterested directors, whether or not a quorum, (c) a majority vote of a quorum of the outstanding shares of stock of all classes entitled to vote for directors, voting as a single class, which quorum shall consist of stockholders who are not at that time parties to the action, suit or proceeding in question, (d) independent legal counsel (who may, to the extent permitted by law, be regular legal counsel to the Corporation), or (e) a court of competent jurisdiction.

7. Remedies. The right to indemnification or advances as granted by this

Article shall be enforceable by the Indemnitee in any court of competent jurisdiction if the Corporation denies such request, in whole or in part, or if no disposition thereof is made within the 60-day period referred to above in Section 6. Unless

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otherwise required by law, the burden of proving that the Indemnitee is not entitled to indemnification or advancement of expenses under this Article shall be on the Corporation. Neither the failure of the Corporation to have made a determination prior to the commencement of such action that indemnification is proper in the circumstances because the Indemnitee has met the applicable standard of conduct, nor an actual determination by the Corporation pursuant to Section 6 that the Indemnitee has not met such applicable standard of conduct, shall be a defense to the action or create a presumption that the Indemnitee has not met the applicable standard of conduct. The Indemnitee's expenses (including attorneys' fees) incurred in connection with successfully establishing his right to indemnification, in whole or in part, in any such proceeding shall also be indemnified by the Corporation.

8. Subsequent Amendment. No amendment, termination or repeal of this

Article or of the relevant provisions of the General Corporation Law of Delaware or any other applicable laws shall affect or diminish in any way the rights of any Indemnitee to indemnification under the provisions hereof with respect to any action, suit, proceeding or investigation arising out of or relating to any actions, transactions or facts occurring prior to the final adoption of such amendment, termination or repeal.

9. Other Rights. The indemnification and advancement of expenses

provided by this Article shall not be deemed exclusive of any other rights to which an Indemnitee seeking indemnification or advancement of expenses may be entitled under any law (common or statutory), agreement or vote of stockholders or disinterested directors or otherwise, both as to action in his official capacity and as to action in any other capacity while holding office for the Corporation, and shall continue as to an Indemnitee who has ceased to be a director or officer, and shall inure to the benefit of the estate, heirs, executors and administrators of the Indemnitee. Nothing contained in this Article shall be deemed to prohibit, and the Corporation is specifically authorized to enter into, agreements with officers and directors providing indemnification rights and procedures different from those set forth in this Article. In addition, the Corporation may, to the extent authorized from time to time by its Board of Directors, grant indemnification rights to other employees or agents of the Corporation or other persons serving the Corporation and such rights may be equivalent to, or greater or less than, those set forth in this Article.

10. Partial Indemnification. If an Indemnitee is entitled under any

provision of this Article to indemnification by the Corporation for some or a portion of the expenses (including attorneys' fees), judgments, fines or amounts paid in settlement actually and reasonably incurred by him or on his behalf in connection with any action, suit, proceeding or investigation and any appeal therefrom but not, however, for the total amount thereof, the Corporation shall nevertheless indemnify the Indemnitee for the portion of such expenses (including attorneys' fees), judgments, fines or amounts paid in settlement to which the Indemnitee is entitled.

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11. Insurance. The Corporation may purchase and maintain insurance, at

its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise (including any employee benefit plan) against any expense, liability or loss incurred by him in any such capacity, or arising out of his status as such, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under the General Corporation Law of Delaware.

12. Merger or Consolidation. If the Corporation is merged into or

consolidated with another corporation and the Corporation is not the surviving corporation, the surviving corporation shall assume the obligations of the Corporation under this Article with respect to any action, suit, proceeding or investigation arising out of or relating to any actions, transactions or facts occurring prior to the date of such merger or consolidation.

13. Savings Clause. If this Article or any portion hereof shall be

invalidated on any ground by any court of competent jurisdiction, then the Corporation shall nevertheless indemnify each Indemnitee as to any expenses (including attorneys' fees), judgments, fines and amounts paid in settlement in connection with any action, suit, proceeding or investigation, whether civil, criminal or administrative, including an action by or in the right of the Corporation, to the fullest extent permitted by any applicable portion of this Article that shall not have been invalidated and to the fullest extent permitted by applicable law.

14. Definitions. Terms used herein and defined in Section 145(h) and

Section 145(i) of the General Corporation Law of Delaware shall have the respective meanings assigned to such terms in such Section 145(h) and Section 145(i).

15. Subsequent Legislation. If the General Corporation Law of Delaware is

amended after adoption of this Article to expand further the indemnification permitted to Indemnitees, then the Corporation shall indemnify such persons to the fullest extent permitted by the General Corporation Law of Delaware, as so amended.

NINTH. The Corporation reserves the right to amend, alter, change or repeal any provision contained in this Certificate of Incorporation, in the manner now or hereafter prescribed by statute and this Certificate of Incorporation, and all rights conferred upon stockholders herein are granted subject to this reservation.

TENTH. This Article is inserted for the management of the business and for the conduct of the affairs of the Corporation.

1. Number of Directors. The number of directors of the Corporation shall

not be less than three. The exact number of directors within the limitations specified in the preceding sentence shall be fixed from time to time by, or in the manner provided in, the Corporation's By-Laws.

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2. Classes of Directors. The Board of Directors shall be and is divided

into three classes: Class I, Class II and Class III. No one class shall have more than one director more than any other class. If a fraction is contained in the quotient arrived at by dividing the designated number of directors by three, then, if such fraction is one-third, the extra director shall be a member of Class I, and if such fraction is two-thirds, one of the extra directors shall be a member of Class I and one of the extra directors shall be a member of Class II, unless otherwise provided from time to time by resolution adopted by the

3. Election of Directors. Elections of directors need not be by written

ballot except as and to the extent provided in the By-Laws of the Corporation.

4. Terms of Office. Each director shall serve for a term ending on the

date of the third annual meeting following the annual meeting at which such director was elected; provided, that each initial director in Class I shall serve for a term ending on the date of the annual meeting in 2000; each initial director in Class II shall serve for a term ending on the date of the annual meeting in 2001; and each initial director in Class III shall serve for a term ending on the date of the annual meeting in 2002; and provided further, that the term of each director shall be subject to the election and qualification of his successor and to his earlier death, resignation or removal.

5. Allocation of Directors Among Classes in the Event of Increases or

Decreases in the Number of Directors. In the event of any increase or decrease

in the authorized number of directors, (i) each director then serving as such shall nevertheless continue as a director of the class of which he is a member and (ii) the newly created or eliminated directorships resulting from such increase or decrease shall be apportioned by the Board of Directors among the three classes of directors so as to ensure that no one class has more than one director more than any other class. To the extent possible, consistent with the foregoing rule, any newly created directorships shall be added to those classes whose terms of office are to expire at the latest dates following such allocation, and any newly eliminated directorships shall be subtracted from those classes whose terms of offices are to expire at the earliest dates following such allocation, unless otherwise provided from time to time by resolution adopted by the Board of Directors.

6. Quorum; Action at Meeting. A majority of the directors at any time in

office shall constitute a quorum for the transaction of business. In the event one or more of the directors shall be disqualified to vote at any meeting, then the required quorum shall be reduced by one for each director so disqualified, provided that in no case shall less than one-third of the number of directors fixed pursuant to Section 1 above constitute a quorum. If at any meeting of the Board of Directors there shall be less than such a quorum, a majority of those present may adjourn the meeting from time to time. Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present shall be regarded as the act of the Board of Directors unless a greater number is required by law, by the By-Laws of the Corporation or by this Certificate of Incorporation.

Removal. Directors of the Corporation may be removed only for cause by the affirmative vote of the holders of at least two-thirds of the shares of the capital stock of the Corporation issued and outstanding and entitled to vote.

7.

resignation or removal.

_____ including a vacancy resulting from an enlargement of the size of the Board of Directors, shall be filled only by a vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office, and a director chosen to fill a position resulting from an increase in the number of directors shall hold office until the next

election of the class for which such director shall have been chosen, subject to

the election and qualification of his successor and to his earlier death,

Vacancies. Any vacancy in the Board of Directors, however occurring,

- 9. Stockholder Nominations and Introduction of Business, Etc. _____ notice of stockholder nominations for election of directors and other business to be brought by stockholders before a meeting of stockholders shall be given in the manner provided by the By-Laws of the Corporation.
- 10. Amendments to Article. Notwithstanding any other provisions of law, ______ this Certificate of Incorporation or the By-Laws of the Corporation, and

notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the shares of capital stock of the Corporation issued and outstanding and entitled to vote shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article TENTH.

Stockholders of the Corporation may not take any action by written consent in lieu of a meeting. Notwithstanding any other provisions of law, this Certificate of Incorporation or the By-Laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the shares of capital stock of the Corporation issued and outstanding and entitled to vote shall be required to amend or repeal, or to adopt any provision inconsistent with, this Article ELEVENTH.

Special meetings of stockholders may be called at any time by only the Chairman of the Board of Directors, the President or the Board of Directors. Business transacted at any special meeting of stockholders shall be limited to matters relating to the purpose or purposes stated in the notice of meeting. Notwithstanding any other provision of law, this Certificate of Incorporation or the By-Laws of the Corporation, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the shares of

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IN WITNESS WHEREOF, the Certificate of Incorporation	-		
, 1999.			
	SYCAMORE NETWOR	RKS, INC.	
	Daniel E. Smith	 1	

President

BY-LAWS

OF

SYCAMORE NETWORKS, INC.

ARTICLE 1 - Stockholders

- - 1.2 Annual Meeting. The annual meeting of stockholders for the election

of directors and for the transaction of such other business as may properly be brought before the meeting shall be held on a date to be fixed by the Board of Directors, the Chairman of the Board or the President (which date shall not be a legal holiday in the place where the meeting is to be held) at the time and place to be fixed by the Board of Directors, the Chairman of the Board or the President and stated in the notice of the meeting. If no annual meeting is held in accordance with the foregoing provisions, the Board of Directors shall cause the meeting to be held as soon thereafter as convenient. If no annual meeting is held in accordance with the foregoing provisions, a special meeting may be held in lieu of the annual meeting, and any action taken at that special meeting shall have the same effect as if it had been taken at the annual meeting, and in such case all references in these By-Laws to the annual meeting of the stockholders shall be deemed to refer to such special meeting.

- 1.4 Notice of Meetings. Except as otherwise provided by law, written

notice of meeting.

notice of each meeting of stockholders, whether annual or special, shall be given not less than ten nor more than 60 days before the date of the meeting to each stockholder entitled to vote at such meeting. The notices of all meetings

shall state the place, date and hour of the meeting. The notice of a special meeting shall state, in addition, the purpose or purposes for which the meeting is called. If mailed, notice is given when deposited in the United States mail, postage prepaid, directed to the stockholder at the stockholder's address as it appears on the records of the corporation.

1.5 Voting List. The officer who has charge of the stock ledger of the

corporation shall prepare, at least ten days before every meeting of stockholders, a complete list of the stockholders entitled to vote at the meeting, arranged in alphabetical order, and showing the address of each stockholder and the number of shares registered in the name of each stockholder. Such list shall be open to the examination of any stockholder, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, at a place within the city where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time of the meeting, and may be inspected by any stockholder who is present.

1.6 Quorum. Except as otherwise provided by law, the Certificate of

Incorporation or these By-Laws, the holders of a majority of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at the meeting, present in person or represented by proxy, shall constitute a quorum for the transaction of business.

1.7 Adjournments. Any meeting of stockholders may be adjourned to any

other time and to any other place at which a meeting of stockholders may be held under these By-Laws by the stockholders present or represented at the meeting and entitled to vote, although less than a quorum, or, if no stockholder is present, by any officer entitled to preside at or to act as Secretary of such meeting. It shall not be necessary to notify any stockholder of any adjournment of less than 30 days if the time and place of the adjourned meeting are announced at the meeting at which adjournment is taken, unless after the adjournment a new record date is fixed for the adjourned meeting. At the adjourned meeting, the corporation may transact any business which might have been transacted at the original meeting.

1.8 Voting and Proxies. Each stockholder shall have one vote for each

share of stock entitled to vote held of record by such stockholder and a proportionate vote for each fractional share so held, unless otherwise provided by law, the Certificate of Incorporation or these By-Laws. Each stockholder of record entitled to vote at a meeting of stockholders, or to express consent or dissent to corporate action in writing without a meeting, may vote or express such consent or dissent in person or may authorize another person or persons to vote or act for him by proxy executed in writing (or in such other manner permitted by the General Corporation Law of the State of Delaware) by the stockholder or his authorized agent and delivered or transmitted to the

Secretary of the corporation. No such proxy shall be voted or acted upon after three years from the date of its execution, unless the proxy expressly provides for a longer period.

1.9 Action at Meeting. When a quorum is present at any meeting, the

holders of a majority of the stock present or represented and voting on a matter (or if there are two or more classes of stock entitled to vote as separate classes, then in

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the case of each such class, the holders of a majority of the stock of that class present or represented and voting on a matter) shall decide any matter to be voted upon by the stockholders at such meeting, except when a different vote is required by express provision of law, the Certificate of Incorporation or these By-Laws. Any election by stockholders shall be determined by a plurality of the votes cast by the stockholders entitled to vote at the election.

1.10 Nomination of Directors. Only persons who are nominated in

accordance with the following procedures shall be eligible for election as directors. Nomination for election to the Board of Directors of the corporation at a meeting of stockholders may be made by the Board of Directors or by any stockholder of the corporation entitled to vote for the election of directors at such meeting who complies with the notice procedures set forth in this Section 1.10. Such nominations, other than those made by or on behalf of the Board of Directors, shall be made by timely notice in writing to the Secretary of the corporation. To be timely, a stockholder's notice must be delivered to, or mailed and received by, the Secretary at the principal executive offices of the corporation not less than 70 days nor more than 90 days prior to the first anniversary of the preceding year's annual meeting; provided, however, that (i) in the event that the date of the annual meeting is advanced by more than 20 days, or delayed by more than 70 days, from such anniversary date, notice by the stockholder to be timely must be so delivered or received not earlier than the ninetieth day prior to such annual meeting and not later than the close of business on the later of the seventieth day prior to such annual meeting or the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs, and (ii) with respect to the annual meeting of stockholders of the corporation to be held in the year 2000, to be timely, a stockholder's notice must be so received not earlier than the ninetieth day prior to such annual meeting and not later than the close of business on the later of (A) the sixtieth day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever A stockholder's notice to the Secretary shall set forth (a) as to each proposed nominee (i) the name, age, business address and, if known, residence address of each such nominee, (ii) the principal occupation or employment of each such nominee, (iii) the number of shares of stock of the

corporation which are beneficially owned by each such nominee, and (iv) any other information concerning the nominee that must be disclosed as to nominees in proxy solicitations pursuant to Regulation 14A under the Securities Exchange Act of 1934, as amended (including such person's written consent to be named as a nominee and to serve as a director if elected); and (b) as to the stockholder giving the notice (i) the name and address, as they appear on the corporation's books, of such stockholder and (ii) the class and number of shares of the corporation which are beneficially owned by such stockholder. In addition, to be effective, the stockholder's notice must be accompanied by the written consent of the proposed nominee to serve as a director if elected. The corporation may require any proposed nominee to furnish such other information as may reasonably be required by the corporation to determine the eligibility of such proposed nominee to serve as a director of the corporation.

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The chairman of the meeting may, if the facts warrant, determine and declare to the meeting that a nomination was not made in accordance with the foregoing procedure, and if he should so determine, he shall so declare to the meeting and the defective nomination shall be disregarded.

1.11 Notice of Business at Annual Meetings. At an annual meeting of

the stockholders, only such business shall be conducted as shall have been properly brought before the meeting. To be properly brought before an annual meeting, business must be (a) specified in the notice of meeting (or any supplement thereto) given by or at the direction of the Board of Directors, (b) otherwise brought before the meeting by or at the direction of the Board of Directors, or (c) otherwise properly brought before an annual meeting by a stockholder. For business to be properly brought before an annual meeting by a stockholder, if such business relates to the election of directors of the corporation, the procedures in Section 1.10 must be complied with. business relates to any other matter, the stockholder must have given timely notice thereof in writing to the Secretary. To be timely, a stockholder's notice must be delivered to, or mailed and received by, the Secretary at the principal executive offices of the corporation not less than 70 days nor more than 90 days prior to the first anniversary of the preceding year's annual meeting; provided, however, that (i) in the event that the date of the annual meeting is advanced by more than 20 days, or delayed by more than 70 days, from such anniversary date, notice by the stockholder to be timely must be so delivered or received not earlier than the ninetieth day prior to such annual meeting and not later than the close of business on the later of the seventieth day prior to such annual meeting or the tenth day following the day on which notice of the date of such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs, and (ii) with respect to the annual meeting of stockholders of the corporation to be held in the year 2000, to be timely, a stockholder's notice must be so received not earlier than the ninetieth day prior to such annual meeting and not later than the close of business on the later of (A) the sixtieth day prior to such annual meeting and (B) the tenth day following the day on which notice of the date of

such annual meeting was mailed or public disclosure of the date of such annual meeting was made, whichever first occurs. A stockholder's notice to the Secretary shall set forth as to each matter the stockholder proposes to bring before the annual meeting (a) a brief description of the business desired to be brought before the annual meeting and the reasons for conducting such business at the annual meeting, (b) the name and address, as they appear on the corporation's books, of the stockholder proposing such business, (c) the class and number of shares of the corporation which are beneficially owned by the stockholder, and (d) any material interest of the stockholder in such business. Notwithstanding anything in these By-Laws to the contrary, no business shall be conducted at any annual meeting except in accordance with the procedures set forth in this Section 1.11 and except that any stockholder proposal which complies with Rule 14a-8 of the proxy

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rules (or any successor provision) promulgated under the Securities Exchange Act of 1934, as amended, and is to be included in the corporation's proxy statement for an annual meeting of stockholders shall be deemed to comply with the requirements of this Section 1.11.

The chairman of the meeting shall, if the facts warrant, determine and declare to the meeting that business was not properly brought before the meeting in accordance with the provisions of this Section 1.11, and if he should so determine, the chairman shall so declare to the meeting that any such business not properly brought before the meeting shall not be transacted.

1.12 Action without Meeting. Unless otherwise provided in the

Certificate of Incorporation, any action required or permitted to be taken by stockholders for or in connection with any corporate action may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered to the corporation by delivery to its registered office in Delaware by hand or certified or registered mail, return receipt requested, to its principal place of business or to an officer or agent of the corporation having custody of the book in which proceedings of meetings of stockholders are recorded. written consent shall bear the date of signature of each stockholder who signs the consent. No written consent shall be effective to take the corporate action referred to therein unless written consents signed by a number of stockholders sufficient to take such action are delivered to the corporation in the manner specified in this paragraph within sixty days of the earliest dated consent so delivered.

If action is taken by consent of stockholders and in accordance with the foregoing, there shall be filed with the records of the meetings of stockholders the writing or writings comprising such consent.

If action is taken by less than unanimous consent of stockholders, prompt notice of the taking of such action without a meeting shall be given to those who have not consented in writing and a certificate signed and attested to by the Secretary of the corporation that such notice was given shall be filed with the records of the meetings of stockholders.

In the event that the action which is consented to is such as would have required the filing of a certificate under any provision of the General Corporation Law of the State of Delaware, if such action had been voted upon by the stockholders at a meeting thereof, the certificate filed under such provision shall state, in lieu of any statement required by such provision concerning a vote of stockholders, that written consent has been given under Section 228 of said General Corporation Law and that written notice has been given as provided in such Section 228.

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Notwithstanding the foregoing, if at any time the corporation shall have a class of stock registered pursuant to the provisions of the Securities Exchange Act of 1934, as amended, for so long as such class is registered, any action by the stockholders of such class must be taken at an annual or special meeting of stockholders and may not be taken by written consent.

1.13 Organization. The Chairman of the Board, or in his absence the

Vice Chairman of the Board designated by the Chairman of the Board, or the President, in the order named, shall call meetings of the stockholders to order, and shall act as chairman of such meeting; provided, however, that the Board of Directors may appoint any stockholder to act as chairman of any meeting in the absence of the Chairman of the Board. The Secretary of the corporation shall act as secretary at all meetings of the stockholders; but in the absence of the Secretary at any meeting of the stockholders, the presiding officer may appoint any person to act as secretary of the meeting.

ARTICLE 2 - Directors

2.1 General Powers. The business and affairs of the corporation shall be

managed by or under the direction of a Board of Directors, who may exercise all of the powers of the corporation except as otherwise provided by law, the Certificate of Incorporation or these By-Laws. In the event of a vacancy in the Board of Directors, the remaining directors, except as otherwise provided by law, may exercise the powers of the full Board until the vacancy is filled.

2.2 Number; Election and Qualification. The number of directors which

shall constitute the whole Board of Directors shall be determined by resolution of the Board of Directors, but in no event shall be less than three. The number of directors may be decreased at any time and from time to time by a majority of the directors then in office, but only to eliminate vacancies existing by reason of the death, resignation, removal or expiration of the term of one or more directors. The directors shall be elected at the annual meeting of stockholders by such stockholders as have the right to vote on such election. Directors need not be stockholders of the corporation.

2.3 Classes of Directors. The Board of Directors shall be and is divided

into three classes: Class I, Class II and Class III. No one class shall have more than one director more than any other class. If a fraction is contained in the quotient arrived at by dividing the designated number of directors by three, then, if such fraction is one-third, the extra director shall be a member of Class I, and if such fraction is two-thirds, one of the extra directors shall be a member of Class I and

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one of the extra directors shall be a member of Class II, unless otherwise provided from time to time by resolution adopted by the Board of Directors.

2.4 Terms of Office. Each director shall serve for a term ending on the

date of the third annual meeting following the annual meeting at which such director was elected; provided, that each initial director in Class I shall serve for a term ending on the date of the annual meeting of stockholders in 2000; each initial director in Class II shall serve for a term ending on the date of the annual meeting of stockholders in 2001; and each initial director in Class III shall serve for a term ending on the date of the annual meeting of stockholders in 2002; and provided further, that the term of each director shall be subject to the election and qualification of his successor and to his earlier death, resignation or removal.

in the authorized number of directors, (i) each director then serving as such shall nevertheless continue as a director of the class of which he or she is a member and (ii) the newly created or eliminated directorships resulting from such increase or decrease shall be apportioned by the Board of Directors among the three classes of directors so as to ensure that no one class has more than one director more than any other class. To the extent possible, consistent with the foregoing rule, any newly created directorships shall be added to those classes whose terms of office are to expire at the latest dates following such allocation, and any newly eliminated directorships shall be subtracted from those classes whose terms of offices are to expire at the earliest dates following such allocation, unless otherwise provided from time to time by

resolution adopted by the Board of Directors.

2.6 Vacancies. Any vacancy in the Board of Directors, however occurring,

including a vacancy resulting from an enlargement of the size of the Board, shall be filled only by vote of a majority of the directors then in office, although less than a quorum, or by a sole remaining director. A director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office, and a director chosen to fill a position resulting from an increase in the number of directors shall hold office until the next election of the class for which such director shall have been chosen, subject to the election and qualification of his successor and to his earlier death, resignation or removal.

2.7 Resignation. Any director may resign by delivering his written

resignation to the corporation at its principal office or to the President or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

2.8 Regular Meetings. Regular meetings of the Board of Directors may be

held without notice at such time and place, either within or without the State of Delaware, as shall be determined from time to time by the Board of Directors; provided that any director who is absent when such a determination is made shall

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be given notice of the determination. A regular meeting of the Board of Directors may be held without notice immediately after and at the same place as the annual meeting of stockholders.

2.9 Special Meetings. Special meetings of the Board of Directors may be

held at any time and place, within or without the State of Delaware, designated in a call by the Chairman of the Board, President, two or more directors, or by one director in the event that there is only a single director in office.

2.10 Notice of Special Meetings. Notice of any special meeting of

directors shall be given to each director by the Secretary or by the officer or one of the directors calling the meeting. Notice shall be duly given to each director (i) by giving notice to such director in person or by telephone at least 24 hours in advance of the meeting, (ii) by sending a telegram, telecopy, telex or electronic mail message, or delivering written notice by hand, to his last known business or home address at least 24 hours in advance of the meeting, or (iii) by mailing written notice to his last known business or home address at least 72 hours in advance of the meeting. A notice or waiver of notice of a meeting of the Board of Directors need not specify the purposes of the meeting.

2.11 Meetings by Telephone Conference Calls. Directors or any members

of any committee designated by the directors may participate in a meeting of the Board of Directors or such committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation by such means shall constitute presence in person at such meeting.

2.12 Quorum. A majority of the total number of the whole Board of

Directors shall constitute a quorum at all meetings of the Board of Directors. In the event one or more of the directors shall be disqualified to vote at any meeting, then the required quorum shall be reduced by one for each such director so disqualified; provided, however, that in no case shall less than one-third (1/3) of the number so fixed constitute a quorum. In the absence of a quorum at any such meeting, a majority of the directors present may adjourn the meeting from time to time without further notice other than announcement at the meeting, until a quorum shall be present.

2.13 Action at Meeting. At any meeting of the Board of Directors at

which a quorum is present, the vote of a majority of those present shall be sufficient to take any action, unless a different vote is specified by law, the Certificate of Incorporation or these By-Laws.

2.14 Action by Consent. Any action required or permitted to be taken

at any meeting of the Board of Directors or of any committee of the Board of Directors may be taken without a meeting, if all members of the Board or committee, as the

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case may be, consent to the action in writing, and the written consents are filed with the minutes of proceedings of the Board or committee.

- 2.15 Removal. Directors of the corporation may be removed only for ----cause by the affirmative vote of the holders of at least two-thirds of the shares of the capital stock of the corporation issued and outstanding and entitled to vote.
 - 2.16 Committees. The Board of Directors may designate one or more

committees, each committee to consist of one or more of the directors of the corporation. The Board may designate one or more directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of the committee. In the absence or disqualification of a member of a committee, the member or members of the committee present at any meeting and not

disqualified from voting, whether or not he or they constitute a quorum, may unanimously appoint another member of the Board of Directors to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board of Directors and subject to the provisions of the General Corporation Law of the State of Delaware, shall have and may exercise all the powers and authority of the Board of Directors in the management of the business and affairs of the corporation and may authorize the seal of the corporation to be affixed to all papers which may require it. Each such committee shall keep minutes and make such reports as the Board of Directors may from time to time request. Except as the Board of Directors may otherwise determine, any committee may make rules for the conduct of its business, but unless otherwise provided by the directors or in such rules, its business shall be conducted as nearly as possible in the same manner as is provided in these By-laws for the Board of Directors.

2.17 Compensation of Directors. Directors may be paid such

compensation for their services and such reimbursement for expenses of attendance at meetings as the Board of Directors may from time to time determine. No such payment shall preclude any director from serving the corporation or any of its parent or subsidiary corporations in any other capacity and receiving compensation for such service.

ARTICLE 3 - Officers

3.1 Enumeration. The officers of the corporation shall consist of a

President, a Secretary, a Treasurer and such other officers with such other titles as the Board of Directors shall determine, including a Chairman of the Board, a Vice Chairman of the Board, and one or more Vice Presidents, Assistant Treasurers and Assistant Secretaries. The Board of Directors may appoint such other officers as it may deem appropriate.

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- 3.2 Election. The President, Treasurer and Secretary shall be elected -----annually by the Board of Directors at its first meeting following the annual meeting of stockholders. Other officers may be appointed by the Board of Directors at such meeting or at any other meeting.
- 3.3 Qualification. No officer need be a stockholder. Any two or more -----offices may be held by the same person.
 - 3.4 Tenure. Except as otherwise provided by law, by the Certificate of

Incorporation or by these By-Laws, each officer shall hold office until his successor is elected and qualified, unless a different term is specified in the vote choosing or appointing him, or until his earlier death, resignation or removal.

3.5 Resignation and Removal. Any officer may resign by delivering his or

her written resignation to the corporation at its principal office or to the President or Secretary. Such resignation shall be effective upon receipt unless it is specified to be effective at some other time or upon the happening of some other event.

Any officer may be removed at any time, with or without cause, by vote of a majority of the entire number of directors then in office.

Except as the Board of Directors may otherwise determine, no officer who resigns or is removed shall have any right to any compensation as an officer for any period following his resignation or removal, or any right to damages on account of such removal, whether his compensation be by the month or by the year or otherwise, unless such compensation is expressly provided in a duly authorized written agreement with the corporation.

3.6 Vacancies. The Board of Directors may fill any vacancy occurring in

any office for any reason and may, in its discretion, leave unfilled for such period as it may determine any offices other than those of President, Treasurer and Secretary. Each such successor shall hold office for the unexpired term of his predecessor and until his successor is elected and qualified, or until his earlier death, resignation or removal.

3.7 Chairman of the Board and Vice Chairman of the Board. The Board of

Directors may appoint a Chairman of the Board. If the Board of Directors appoints a Chairman of the Board, he shall perform such duties and possess such powers as are assigned to him by the Board of Directors. Unless otherwise provided by the Board of Directors, he shall preside at all meetings of the stockholders and at all meetings of the Board of Directors. If the Board of Directors appoints a Vice Chairman of the Board, he shall, in the absence or disability of the Chairman of the Board, perform the duties and exercise the powers of the Chairman of the Board and shall perform such other duties and possess such other powers as may from time to time be vested in him by the Board of Directors.

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3.8 President. The President shall, subject to the direction of the Board

of Directors, have general charge and supervision of the business of the corporation. Unless the Board of Directors has designated the Chairman of the Board or another officer as Chief Executive Officer, the President shall be the

Chief Executive Officer of the corporation. The President shall perform such other duties and shall have such other powers as the Board of Directors may from time to time prescribe.

3.9 Vice Presidents. Any Vice President shall perform such duties and

possess such powers as the Board of Directors or the President may from time to time prescribe. In the event of the absence, inability or refusal to act of the President, the Vice President (or if there shall be more than one, the Vice Presidents in the order determined by the Board of Directors) shall perform the duties of the President and when so performing shall have all the powers of and be subject to all the restrictions upon the President. The Board of Directors may assign to any Vice President the title of Executive Vice President, Senior Vice President or any other title selected by the Board of Directors.

3.10 Secretary and Assistant Secretaries. The Secretary shall perform

such duties and shall have such powers as the Board of Directors or the President may from time to time prescribe. In addition, the Secretary shall perform such duties and have such powers as are incident to the office of the secretary, including without limitation the duty and power to give notices of all meetings of stockholders and special meetings of the Board of Directors, to attend all meetings of stockholders and the Board of Directors and keep a record of the proceedings, to maintain a stock ledger and prepare lists of stockholders and their addresses as required, to be custodian of corporate records and the corporate seal and to affix and attest to the same on documents.

Any Assistant Secretary shall perform such duties and possess such powers as the Board of Directors, the President or the Secretary may from time to time prescribe. In the event of the absence, inability or refusal to act of the Secretary, the Assistant Secretary (or if there shall be more than one, the Assistant Secretaries in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Secretary.

In the absence of the Secretary or any Assistant Secretary at any meeting of stockholders or directors, the person presiding at the meeting shall designate a temporary secretary to keep a record of the meeting.

3.11 Treasurer and Assistant Treasurers. The Treasurer shall perform

such duties and shall have such powers as may from time to time be assigned to him or her by the Board of Directors or the President. In addition, the Treasurer shall perform such duties and have such powers as are incident to the office of treasurer, including without limitation the duty and power to keep and be responsible for all funds and securities of the corporation, to deposit funds of the corporation in depositories selected in accordance with these By-Laws, to disburse such funds as

ordered by the Board of Directors, to make proper accounts of such funds, and to render as required by the Board of Directors statements of all such transactions and of the financial condition of the corporation.

The Assistant Treasurers shall perform such duties and possess such powers as the Board of Directors, the President or the Treasurer may from time to time prescribe. In the event of the absence, inability or refusal to act of the Treasurer, the Assistant Treasurer (or if there shall be more than one, the Assistant Treasurers in the order determined by the Board of Directors) shall perform the duties and exercise the powers of the Treasurer.

3.12 Salaries. Officers of the corporation shall be entitled to such -----salaries, compensation or reimbursement as shall be fixed or allowed from time to time by the Board of Directors.

ARTICLE 4 - Capital Stock

4.2 Certificates of Stock. Every holder of stock of the corporation shall

be entitled to have a certificate, in such form as may be prescribed by law and by the Board of Directors, certifying the number and class of shares owned by him or her in the corporation. Each such certificate shall be signed by, or in the name of the corporation by, the Chairman or Vice Chairman, if any, of the Board of Directors, or the President or a Vice President, and the Treasurer or an Assistant Treasurer, or the Secretary or an Assistant Secretary of the corporation. Any or all of the signatures on the certificate may be a facsimile.

Each certificate for shares of stock which are subject to any restriction on transfer pursuant to the Certificate of Incorporation, the By-Laws, applicable securities laws or any agreement among any number of stockholders or among such holders and the corporation shall have conspicuously noted on the face or back of the certificate either the full text of the restriction or a statement of the existence of such restriction.

4.3 Transfers. Except as otherwise established by rules and regulations

adopted by the Board of Directors, and subject to applicable law, shares of stock may be transferred on the books of the corporation by the surrender to the corporation or its transfer agent of the certificate representing such shares properly

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endorsed or accompanied by a written assignment or power of attorney properly executed, and with such proof of authority or the authenticity of signature as the corporation or its transfer agent may reasonably require. Except as may be otherwise required by law, by the Certificate of Incorporation or by these By-Laws, the corporation shall be entitled to treat the record holder of stock as shown on its books as the owner of such stock for all purposes, including the payment of dividends and the right to vote with respect to such stock, regardless of any transfer, pledge or other disposition of such stock until the shares have been transferred on the books of the corporation in accordance with the requirements of these By-Laws.

4.4 Lost, Stolen or Destroyed Certificates. The corporation may issue a

new certificate of stock in place of any previously issued certificate alleged to have been lost, stolen or destroyed, upon such terms and conditions as the Board of Directors may prescribe, including the presentation of reasonable evidence of such loss, theft or destruction and the giving of such indemnity as the Board of Directors may require for the protection of the corporation or any transfer agent or registrar.

4.5 Record Date. The Board of Directors may fix in advance a date as a

record date for the determination of the stockholders entitled to notice of or to vote at any meeting of stockholders, or entitled to receive payment of any dividend or other distribution or allotment of any rights in respect of any change, conversion or exchange of stock, or for the purpose of any other lawful action. Such record date shall not be more than 60 nor less than ten days before the date of such meeting, nor more than 60 days prior to any other action to which such record date relates.

If no record date is fixed, the record date for determining stockholders entitled to notice of or to vote at a meeting of stockholders shall be at the close of business on the day before the day on which notice is given, or, if notice is waived, at the close of business on the day before the day on which the meeting is held. The record date for determining stockholders for any other purpose shall be at the close of business on the day on which the Board of Directors adopts the resolution relating to such purpose.

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

ARTICLE 5 - General Provisions

5.1 Fiscal Year. Except as from time to time otherwise designated by the

Board of Directors, the fiscal year of the corporation shall begin on the first day of August in each year and end on the last day of July in each year.

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- 5.3 Waiver of Notice. Whenever any notice whatsoever is required to be _______ given by law, by the Certificate of Incorporation or by these By-Laws, a waiver of such notice either in writing signed by the person entitled to such notice or such person's duly authorized attorney, or by telegraph, cable or any other available method, whether before, at or after the time stated in such waiver, or the appearance of such person or persons at such meeting in person or by proxy, shall be deemed equivalent to such notice.

- 5.7 Transactions with Interested Parties. No contract or transaction
 -----between the corporation and one or more of the directors or officers, or between the corporation and any other corporation, partnership, association or other organization in which one or more of the directors or officers are directors or

officers, or have a financial interest, shall be void or voidable solely for this reason, or solely because the director or officer is present at or participates in the meeting of the Board of Directors or a committee of the Board of Directors which authorizes the contract or transaction or solely because his or their votes are counted for such purpose, if:

- (1) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the Board of Directors or the committee, and the Board or committee in good faith authorizes the contract or transaction by the affirmative votes of a majority of the disinterested directors, even though the disinterested directors be less than a quorum;
- (2) The material facts as to his relationship or interest and as to the contract or transaction are disclosed or are known to the stockholders entitled

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to vote thereon, and the contract or transaction is specifically approved in good faith by vote of the stockholders; or

(3) The contract or transaction is fair as to the corporation as of the time it is authorized, approved or ratified, by the Board of Directors, a committee of the Board of Directors, or the stockholders.

Common or interested directors may be counted in determining the presence of a quorum at a meeting of the Board of Directors or of a committee which authorizes the contract or transaction.

- 5.8 Severability. Any determination that any provision of these By-Laws -----is for any reason inapplicable, illegal or ineffective shall not affect or invalidate any other provision of these By-Laws.
- 5.9 Pronouns. All pronouns used in these By-Laws shall be deemed to refer -----to the masculine, feminine or neuter, singular or plural, as the identity of the person or persons may require.

ARTICLE 6 - Amendments

6.2 By the Stockholders. Except as otherwise provided in Section 6.3,

these By-Laws may be altered, amended or repealed or new by-laws may be adopted by the affirmative vote of the holders of a majority of the shares of the capital stock of the corporation issued and outstanding and entitled to vote at any regular or special meeting of stockholders, provided notice of such alteration, amendment, repeal or adoption of new by-laws shall have been stated in the notice of such regular or special meeting.

6.3 Certain Provisions. Notwithstanding any other provision of law, the

Certificate of Incorporation or these By-Laws, and notwithstanding the fact that a lesser percentage may be specified by law, the affirmative vote of the holders of at least sixty-six and two-thirds percent (66 2/3%) of the shares of the capital stock of the corporation issued and outstanding and entitled to vote shall be required to amend or repeal, or to adopt any provision inconsistent with Section 1.3, Section 1.10, Section 1.11, Section 1.12, Section 1.13, Article 2 or Article 6 of these By-Laws.

SYCAMORE NETWORKS, INC.

1999 NON-EMPLOYEE DIRECTOR STOCK OPTION PLAN

1. Purpose. This Non-Qualified Stock Option Plan, to be known as the 1999 Non-

Employee Director Stock Option Plan (hereinafter, this "PLAN") is intended to promote the interests of Sycamore Networks, Inc. (hereinafter, the "COMPANY") by providing an inducement to obtain and retain the services of qualified persons who are not employees or officers of the Company to serve as members of its Board of Directors (the "BOARD").

2. Available Shares; Annual Increase in Shares. (a) The total number of shares

of Common Stock, par value \$.001 per share, of the Company (the "COMMON STOCK") for which options may be granted under this Plan shall not exceed 500,000 shares (after giving effect to the three-for-one stock split approved by the Board of Directors on August 17, 1999), subject to adjustment in accordance with paragraph 11 of this Plan. Shares subject to this Plan are authorized but unissued shares or shares that were once issued and subsequently reacquired by the Company. If any options granted under this Plan are surrendered before exercise or lapse without exercise, in whole or in part, the shares reserved therefor shall continue to be available under this Plan.

- (b) As of August 1 of each year, commencing with the year 2000, the aggregate number of Common Shares available for the grant of options under the Plan shall automatically be increased by the number to cause the total number of Common Shares then available to be restored to 500,000.
- 3. Administration. This Plan shall be administered by the Board or by a

committee appointed by the Board (the "Committee"). In the event the Board fails to appoint or refrains from appointing a Committee, the Board shall have all power and authority to administer this Plan. In such event, the word "Committee" wherever used herein shall be deemed to mean the Board. The Committee shall, subject to the provisions of the Plan, have the power to construe this Plan, to determine all questions hereunder, and to adopt and amend such rules and regulations for the administration of this Plan as it may deem desirable. No member of the Board or the Committee shall be liable for any action or determination made in good faith with respect to this Plan or any option granted under it.

4. Automatic Grant of Options. Subject to the availability of shares under this

Plan,

- (a) each person who is or becomes a member of the Board and who is not an employee or officer of the Company (a "Non-Employee Director") shall be automatically granted on the latest of (i) the date such person is first elected to the Board, or (ii) August 17, 1999 (the "Approval Date"), (such later date being referred to herein as the "Grant Date"), without further action by the Board, an option to purchase 30,000 shares of the Common Stock (after giving effect to the three-for-one stock split approved by the Board of Directors on August 17, 1999), and
- (b) beginning on the date of the Company's annual meeting of shareholders for fiscal year 2000, each person receiving an option pursuant to clause (a) hereof who is a Non-Employee Director immediately following each successive annual meeting of stockholders occurring after such person's Grant Date during the term of this Plan shall be automatically granted on each such annual meeting date an option to purchase 10,000 shares of the Common Stock (after giving effect to the three-for-one stock split approved by the Board of Directors on August 17, 1999).

The options to be granted under this paragraph 4 shall be the only options ever to be granted at any time to such member under this Plan. Notwithstanding anything to the contrary set forth herein, if this Plan is not approved by a majority of the Company's stockholders present, or represented, and entitled to vote at the first meeting of Stockholders of the Company following the Approval Date, then the Plan and the options granted pursuant to this Section 4 shall terminate and become void, and no further options shall be granted under this Plan.

5. Option Price. The purchase price of the stock covered by an option granted

pursuant to this Plan shall be 100% of the fair market value of such shares on the day the option is granted. The option price will be subject to adjustment in accordance with the provisions of paragraph 10 of this Plan. For purposes of this Plan, if, at the time an option is granted under the Plan, the Company's Common Stock is publicly traded, "fair market value" shall be determined as of the last business day for which the prices or quotes discussed in this sentence are available prior to the date such option is granted and shall mean (i) the average (on that date) of the high and low prices of the Common Stock on the principal national securities exchange on which the Common Stock is traded, if the Common Stock is then traded on a national securities exchange; or (ii) the last reported sale price (on that date) of the Common Stock on the Nasdaq National Market, if the Common Stock is not then traded on a national securities exchange; or (iii) the closing bid price (or average of bid prices) last quoted (on that date) by an established quotation service for over-the-counter securities, if the Common Stock is not reported on the Nasdaq National Market The "fair market value" of the stock issuable upon exercise of an option granted pursuant to the Plan within 120 days prior to the time the Company's Common Stock is publicly traded shall be deemed to be equal to the initial pershare purchase price at which the Company's Common Stock is offered to the public. However, if the Common Stock is not publicly traded at the time an option is granted under the Plan, "fair market value" shall be deemed to be the fair value of the Common Stock as determined by the Committee after taking into consideration all factors which it deems appropriate, including, without limitation, recent sale and offer prices of the Common Stock in private transactions negotiated at arm's length.

- 6. Period of Option. Unless sooner terminated in accordance with the provisions
- of paragraph 8 of this Plan, an option granted hereunder shall expire on the date which is ten (10) years after the date of grant of the option.
- 7. (a) Vesting of Shares and Non-Transferability of Options. Options granted

under this Plan shall be fully exercisable on the date of grant, subject to such restrictions or repurchase rights as defined below in paragraph 10. Options granted under clause (a) of paragraph 4 of this Plan shall vest in the optionee in accordance with the following schedule, provided that the optionee has continuously served as a member of the Board through such vesting date:

Vested Ratio	Date of Vesting			
33 1/3%	One year from the date of grant			
66 2/3%	Two years from the date of grant			
100%	Three years from the date of grant			

provided, that, in the event that an optionee's term as a director expires at

the date of an annual meeting of stockholders within the 90-day period preceding any vesting date, the installment of such option corresponding to such vesting date shall vest on the date of such meeting.

Options granted under clause (b) of paragraph 4 of the Plan shall vest in the optionee and thus become exercisable on the earlier of one year from the date of grant or the date of the next meeting of stockholders, provided that the optionee has continuously served as a member of the Board through such vesting date.

Notwithstanding the foregoing provisions of this part (a) to paragraph 7, an option installment shall not vest with respect to any of the vesting periods described above in the event the optionee fails to attend at least 75% of the meetings of the Board of Directors during such period.

The number of shares as to which options may be exercised shall be cumulative, so that once the option shall become exercisable as to any shares it shall continue to be exercisable as to said shares, until expiration or

termination of the option as provided in this Plan.

- 8. Termination of Option Rights.
- (a) Except as otherwise specified in the agreement relating to an option, in the event an optionee ceases to be a member of the Board for any reason other than death or permanent disability, by the optionee within 90 days of the date the optionee ceased to be a member of the Board; and all options shall terminate after such 90 days have expired.
- (b) In the event that an optionee ceases to be a member of the Board by reason of his or her death or permanent disability, all unexercised options shall be fully vested and exercisable by the optionee (or by the optionee's personal representative, heir or legatee, in the event of death) until the scheduled expiration date of the option.
- 9. Exercise of Option. Subject to the terms and conditions of this Plan and the

option agreements, an option granted hereunder shall be exercisable in whole or in part by giving

written notice to the Company by mail or in person addressed to Sycamore Networks, Inc., at its principal executive offices, stating the number of shares with respect to which the option is being exercised, accompanied by payment in full for such shares. Payment may be (a) in United States dollars in cash or by check, (b) in whole or in part in shares of the Common Stock of the Company already owned by the person or persons exercising the option or shares subject to the option being exercised (subject to such restrictions and guidelines as the Board may adopt from time to time), valued at fair market value determined in accordance with the provisions of paragraph 5 or (c) consistent with applicable law, through the delivery of an assignment to the Company of a sufficient amount of the proceeds from the sale of the Common Stock acquired upon exercise of the option and an authorization to the broker or selling agent to pay that amount to the Company, which sale shall be at the participant's direction at the time of exercise. There shall be no such exercise at any one time as to fewer than one hundred (100) shares or all of the remaining shares then purchasable by the person or persons exercising the option, if fewer than one hundred (100) shares. The Company's transfer agent shall, on behalf of the Company, prepare a certificate or certificates representing such shares acquired pursuant to exercise of the option, shall register the optionee as the owner of such shares on the books of the Company and shall cause the fully executed certificate(s) representing such shares to be delivered to the optionee as soon

as practicable after payment of the option price in full. The holder of an option shall not have any rights of a stockholder with respect to the shares covered by the option, except to the extent that one or more certificates for such shares shall be delivered to him or her upon the due exercise of the option. The Company shall not be required to issue fractional shares upon the exercise of the Option.

- 10. Unvested Share Repurchase Option.
- (a) Vested Shares and Unvested Shares Defined. The total number of shares

multiplied by the Vested Ratio as set forth in the agreement relating to an option are "Vested Shares." For purposes of this paragraph 10, the "Unvested Shares" are the number of shares acquired upon exercise of the option in excess of the Vested Shares.

(b) Unvested Share Repurchase Option. In the event the optionee ceases to

be a member of the Board for any reason, with or without cause, or if the optionee or the optionee's legal representative attempts to sell, exchange, transfer, pledge, or otherwise dispose of (other than pursuant to an ownership change) any shares acquired upon exercise of the option which exceed the optionee's Vested Shares, the Company shall have the right to repurchase the Unvested Shares under the terms and subject to the conditions set forth in this paragraph 10 (the "Unvested Share Repurchase Option").

(c) Exercise of Unvested Share Repurchase Option. The Company may exercise

the Unvested Share Repurchase Option by written notice to the optionee within sixty (60) days after (i) the optionee ceases to be a member of the Board or (ii) the Company has received notice of the attempted disposition. If the Company fails to give notice within such sixty (60) day period, the Unvested Share Repurchase Option shall terminate unless the Company and the optionee have extended the time for the exercise of the Unvested Share Repurchase Option. The Unvested Share Repurchase Option must be exercised, if at all, for all of the Unvested Shares, except as the Company and the optionee otherwise agree.

(d) Payment for Shares and Return of Shares. Payment by the Company to the

optionee shall be made in cash within thirty (30) days after the date of the mailing of the written notice of exercise of the Unvested Share Repurchase Option. For purposes of the foregoing, cancellation of any indebtedness of the optionee to the Company shall be treated as payment to the optionee in cash to the extent of the unpaid principal—and any accrued interest canceled. The purchase price per share being repurchased by the Company shall be an amount equal to the optionee's original cost per share, as adjusted pursuant to paragraph 13. The shares being repurchased shall be delivered to the Company by the optionee at the same time as the delivery of the purchase price to the optionee.

(e) Assignment of Unvested Share Repurchase Option. The Company shall have

the right to assign the Unvested Share Repurchase Option at any time, whether or not such option is then exercisable, to one (1) or more persons as may be selected by the Company.

11. Escrow.

(a) Establishment of Escrow. To insure shares subject to the Unvested Share

Repurchase Option will be available for repurchase, the Company may require the optionee to deposit the certificate or certificates evidencing the shares which the optionee purchases upon exercise of the option with an escrow agent designated by the Company. If the Company does not require such deposit as a condition of exercise of the option, the Company reserves the right at any time to require the optionee to so deposit the certificate or certificates in escrow. The Company shall bear the expenses of the escrow.

(b) Delivery of Shares to Optionee. Upon the written request by the

optionee to the Company, the Company will instruct the agent to deliver to the optionee as soon as practicable the shares no longer subject to such Unvested Share Repurchase Option restrictions.

(c) Notices and Payments. In the event the shares held in escrow are

subject to the Company's exercise of the Unvested Share Repurchase Option, the notices required to be given to the optionee shall be given to the escrow agent and any payment required to be given to the optionee shall be given to the escrow agent. Within thirty (30) days after payment by the Company, the escrow agent shall deliver the shares which the Company has purchased to the Company and shall deliver the payment received from the Company to the optionee.

(d) Stock Dividends Subject to Option Agreement. If, from time to time,

there is any Adjustment as defined in paragraph 13 or other change in the character or amount of any of the outstanding stock of the Company which is subject to the provisions of this option then in such event any and all new substituted or additional securities to which the optionee is entitled by reason of the optionee's ownership of the shares acquired upon exercise of the option shall be immediately subject to the Unvested Share Repurchase Option with the same force and effect as the shares subject to the Unvested Share Repurchase Option immediately before such event.

12. Legends. The Company may at any time place legends referencing the -----

Unvested Share Repurchase Option set forth in paragraph 10 above and any applicable federal or state securities

law restrictions on all certificates representing shares of stock subject to the provisions of this option. The optionee shall, at the request of the Company, promptly present to the Company any and all certificates representing shares acquired pursuant to the option in the possession of the optionee in order to effectuate the provisions of this paragraph. Unless otherwise specified by the Company, legends placed on such certificates may include, but shall not be limited to, the following:

"THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO AN UNVESTED SHARE REPURCHASE OPTION IN FAVOR OF THE CORPORATION OR ITS ASSIGNEE SET FORTH IN AN AGREEMENT BETWEEN THE CORPORATION AND THE REGISTERED HOLDER, OR SUCH HOLDER'S PREDECESSOR IN INTEREST, A COPY OF WHICH IS ON FILE AT THE PRINCIPAL OFFICE OF THIS CORPORATION."

- 13. Adjustments Upon Changes in Capitalization and Other Events. Upon the
 -----occurrence of any of the following events, an optionee's rights with respect to
 options granted to him or her hereunder shall be adjusted as hereinafter
 provided:

(b) Recapitalization Adjustments. If the Company is to be consolidated with

- or acquired by another entity in a merger, sale of all or substantially all of the Company's assets or otherwise, each option granted under this plan which is outstanding but unvested as of the effective date of such event shall become vested in full thirty (30) days prior to the effective date of such event. In the event of a reorganization, recapitalization, merger, consolidation, or any other change in the corporate structure or shares of the Company, to the extent permitted by Rule 16b-3 under the Securities Exchange Act of 1934, adjustments in the number and kind of shares authorized by this Plan and in the number and kind of shares covered by, and in the option price of outstanding options under this Plan necessary to maintain the proportionate interest of the optionee and preserve, without exceeding, the value of such option, shall be made.

 Notwithstanding the foregoing, no such adjustment shall be made which would, within the meaning of any applicable provisions of the Internal Revenue Code of 1986, as amended, constitute a modification, extension or renewal of any Option or a grant of additional benefits to the holder of an Option.
 - (c) Issuances of Securities. Except as expressly provided herein, no

issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares subject to options. No adjustments shall be made for dividends paid in cash or in property other than securities of the Company.

(d) Adjustments. Upon the happening of any of the foregoing events, the

class and aggregate number of shares set forth in paragraph 2 of this Plan that are subject to options which previously have been or subsequently may be granted under this Plan shall also be appropriately adjusted to reflect such events. The Board shall determine the specific adjustments to be made under this paragraph 13 and its determination shall be conclusive.

14. Restrictions on Issuance of Shares. Notwithstanding the provisions of

paragraphs 4, 9 and 10 of this Plan, the Company shall have no obligation to deliver any certificate or certificates upon exercise of an option until one of the following conditions shall be satisfied:

- (a) The issuance of shares with respect to which the option has been exercised is at the time of the issue of such shares effectively registered under applicable Federal and state securities laws as now in force or hereafter amended; or
- (b) Counsel for the Company shall have given an opinion that the issuance of such shares is exempt from registration under Federal and state securities laws as now in force or hereafter amended; and the Company has complied with all applicable laws and regulations with respect thereto, including without limitation all regulations required by any stock exchange upon which the Company's outstanding Common Stock is then listed.
- 15. Legend on Certificates. The certificates representing shares issued

pursuant to the exercise of an option granted hereunder shall carry such appropriate legend, and such written instructions shall be given to the Company's transfer agent, as may be deemed necessary or advisable by counsel to the Company in order to comply with the requirements of the Securities Act of 1933 or any state securities laws.

- 16. Representation of Optionee. If requested by the Company, the optionee
- shall deliver to the Company written representations and warranties upon exercise of the option that are necessary to show compliance with Federal and state securities laws, including representations and warranties to the effect that a purchase of shares under the option is made for investment and not with a view to their distribution (as that term is used in the Securities Act of 1933).
- 17. Option Agreement. Each option granted under the provisions of this Plan
 -----shall be evidenced by an option agreement, which agreement shall be duly

executed and delivered on behalf of the Company and by the optionee to whom such option is granted. The option agreement shall contain such terms, provisions and conditions not inconsistent with this Plan as may be determined by the officer executing it.

18. Termination and Amendment of Plan. Options may no longer be granted under

this Plan after August 17, 2009, and this Plan shall terminate when all options granted or to be granted hereunder are no longer outstanding. The Board may at any time terminate this Plan or make such modification or amendment thereof as it deems advisable; provided, however, that the Board may not, without approval by the affirmative vote of the holders of a majority of the shares of Common Stock present in person or by proxy and entitled to vote at a meeting, (a) increase the maximum number of shares for which options may be granted under this Plan (except by adjustment pursuant to Section 10), (b) materially modify the requirements as to eligibility to participate in this Plan, (c) materially increase benefits accruing to option holders

under this Plan, (d) change the provisions of this Plan regarding the termination of the options or the times when they may be exercised, (e) change the designation of the class of persons eligible to receive options, or otherwise change paragraph 4, or (f) amend this Plan in any manner which would cause Rule 16b-3 under the Securities Exchange Act (or any successor or amended provision thereof) to become inapplicable to this Plan; and provided further

that the provisions of this Plan specified in Rule 16b-3(c)(2)(ii)(A) (or any successor or amended provision thereof) under the Securities Exchange Act of 1934 (including without limitation, provisions as to eligibility, amount, price and timing of awards) may not be amended more than once every six months, other than to comport with changes in the Internal Revenue Code, the Employee Retirement Income Security Act, or the rules thereunder. Termination or any modification or amendment of this Plan shall not, without consent of a participant, affect his or her rights under an option previously granted to him or her.

19. Withholding of Income Taxes. Upon the exercise of an option, the Company,

in accordance with Section 3402(a) of the Internal Revenue Code, may require the optionee to pay withholding taxes in respect of amounts considered to be compensation includible in the optionee's gross income.

20. Compliance with Regulations. It is the Company's intent that the Plan

comply in all respects with Rule 16b-3 under the Securities Exchange Act of 1934 (or any successor or amended provision thereof) and any applicable Securities and Exchange Commission interpretations thereof. If any provision of this Plan is deemed not to be in compliance with Rule 16b-3, the provision shall be null and void.

21. Governing Law. The validity and construction of this Plan and the

	evidencing optio thout giving eff		-			
22. Approval	l of Board of Di	rectors and	Stockholders	s of the Co	ompany.	
	was adopted by to of the Company		Directors or	n August 17	7, 1999 and	the

SYCAMORE NETWORKS, INC.
----1999 STOCK INCENTIVE PLAN

1. PURPOSE. This 1999 Stock Incentive Plan (the "Plan") is intended to

provide incentives: (a) to the officers and other employees of Sycamore Networks, Inc. (the "Company"), and of any present or future parent or subsidiary of the Company (collectively, "Related Corporations"), by providing them with opportunities to purchase stock in the Company pursuant to options granted hereunder which qualify as "incentive stock options" under Section 422(b) of the Internal Revenue Code of 1986, as amended (the "Code") ("ISO"or "ISOs"); (b) to directors, officers, employees and consultants of the Company and Related Corporations by providing them with opportunities to purchase stock in the Company pursuant to options granted hereunder which do not qualify as ISOs ("Non-Qualified Option" or "Non-Qualified Options"); (c) to directors, officers, employees and consultants of the Company and Related Corporations by providing them with awards of stock in the Company ("Awards"); and (d) to directors, officers, employees and consultants of the Company and Related Corporations by providing them with opportunities to make direct purchases of stock in the Company ("Purchases"). Both ISOs and Non-Qualified Options are referred to hereafter individually as an "Option" and collectively as "Options". Options, Awards and authorizations to make Purchases are referred to hereafter collectively as "Stock Rights". As used herein, the terms "parent" and "subsidiary" mean "parent corporation" and "subsidiary corporation", respectively, as those terms are defined in Section 424 of the Code.

This Plan will become effective on the day before the date of the Company's initial public offering (the "Effective Date").

- 2. ADMINISTRATION OF THE PLAN.
 - A. BOARD OR COMMITTEE ADMINISTRATION. The Plan will be administered

by a committee or committees appointed by the Board of Directors of the Company (the "Board") and consisting of two or more members of the Board. The Board may delegate responsibility for administration of the Plan with respect to designated Stock Right recipients to different committees, subject to such limitations as the Board deems appropriate. Members of a committee will serve for such term as the Board may determine, and may be removed by the Board at any time. The term "Committee," when used in this Plan, refers to the committee that has been delegated authority with respect to a matter. In determining the composition of any committee or subcommittee, the Board or committee, as the

case may be, shall consider the desirability of compliance with the compositional requirements of (i) Rule 16(b)-3 of the Securities and Exchange Commission with respect to Stock Rights grantees who are subject to the trading restrictions of Section 16(b) of the Securities and Exchange Act of 1934 (the "1934 Act") with respect to securities of the Company and (ii) Section 162(m) of the Code, but shall not be bound by such compliance.

B. COMMITTEE ACTIONS. Any Committee has full authority to administer

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Plan within the scope of its delegated responsibilities, including authority to interpret and construe any relevant provision of the Plan, to adopt rules and regulations that it deems necessary, to determine which individuals are eligible to participate and/or receive Stock Rights under the Plan, to determine the amount and/or number of shares subject to such Stock Right, and to determine the terms of such Stock Right made under the Plan (which terms need not be identical). Decisions of a Committee made within the discretion delegated to it by the Board are final and binding on all persons.

C. DELEGATION TO EXECUTIVE OFFICERS. To the extent permitted by

applicable law, the Board may delegate to one or more executive officers of the Company the power to grant Stock Rights and exercise such other powers under the Plan as the Board may determine, provided that the Board shall fix the maximum number of shares subject to Stock Rights and the maximum number of shares for any one participant to be made by such executive officers.

3. ELIGIBLE EMPLOYEES AND OTHERS. ISOs may be granted to any employee of

the Company or any Related Corporation. Those officers and directors of the Company who are not employees may not be granted ISOs under the Plan. Non-Qualified Options, Awards and authorizations to make Purchases may be granted to any employee, officer or director (whether or not also an employee) or consultant of the Company or any Related Corporation. The Committee may take into consideration a recipient's individual circumstances in determining whether to grant an ISO, a Non-Qualified Option, an Award or an authorization to make a Purchase. The granting of any Stock Right to any individual will neither entitle that individual to, nor disqualify him from, participation in any other grant of Stock Rights. Neither the Company nor any Related Corporation shall have any liability to an individual granted an Option hereunder (an "Optionee"), or to any other party, if an Option (or any part thereof) which is intended to be an ISO is not an ISO.

4. STOCK. The stock subject to Stock Rights will be authorized but
---unissued shares of Common Stock of the Company, par value \$.001 per share (the

"Common Stock"), or shares of Common Stock reacquired by the Company in any

manner. Subject to adjustment as provided in Paragraph 19 and further increase as provided below, the aggregate number of shares which may be issued pursuant to the Plan is equal to the number of shares of Common Stock remaining for issuance on the Effective Date under the Company's 1998 Incentive Stock Plan (the "Predecessor Plan"), plus an annual increase beginning August 1, 2000 of

the lesser of (i) 3,000,000 shares; (ii) 5% of the outstanding shares on that date; or (iii) a lesser amount determined by the Board. If any Stock Right granted under the Plan (including outstanding Stock Rights granted under the Predecessor Plan) expires or terminates for any reason without having been exercised in full or ceases for any reason to be exercisable in whole or in part, the unpurchased shares subject to such Stock Right will again be available for grants of Stock Rights under the Plan. No employee of the Company or any Related Corporation may be granted in any calendar year Stock Rights with respect to more than 500,000 shares of Common Stock, in the aggregate. The number of shares which may be issued hereunder shall be set forth under "Plan History".

5. GRANTING OF STOCK RIGHTS. Stock Rights may be granted under the Plan -----at any

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time after the Effective Date and before the tenth anniversary of the Effective Date, except that ISOs must be granted within ten (10) years from the date the Plan is adopted by the Board or the date the Plan is approved by the Company's stockholders, whichever is earlier. The date of grant of a Stock Right under the Plan will be the date specified by the Committee at the time it grants the Stock Right. The Committee may, with the consent of the Optionee, convert an ISO granted under the Plan to a Non-Qualified Option pursuant to paragraph 19, provided, however, that the Optionee's consent to such action shall not be required if the Committee determines that the action, taking into account any related action, will not materially and adversely affect the Optionee. Unless otherwise specified by the Committee in connection with a particular grant, Options granted under the Plan are intended to qualify as performance-based under Section 162(m) of the Code and the regulations thereunder.

6. TERMS OF STOCK RIGHTS. Stock Rights will be evidenced by instruments

(which need not be identical) in such forms as the Committee may from time to time approve. Such instruments must conform to or incorporate by reference the terms set forth in paragraphs 7 through 20 hereof and may contain such other provisions as the Committee deems advisable which are not inconsistent with the Plan. In granting any Non-Qualified Option, the Committee may specify that such Non-Qualified Option is subject to the restrictions set forth herein with respect to ISOs, or to such other termination and cancellation provisions as the Committee may determine.

7. OPTION PRICE. The exercise price per share will be fixed by the

Committee, provided, however, that in no event will the exercise price per share in the case of an ISO or an Option intended to qualify as performance-based compensation under Section 162(m) of the Code be less than one hundred percent (100%) of the fair market value per share of Common Stock on the Option grant date. In the case of an ISO to be granted to an employee owning stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Related Corporation, the price per share specified in the agreement relating to such ISO shall not be less than one hundred ten percent (110%) of the fair market value per share of Common Stock on the date of grant.

8. DOLLAR LIMITATION ON ISOs. For so long as the Code provides, to the

extent that the aggregate fair market value (determined as of the respective date or dates of grant) of the shares with respect to which Options that would otherwise be ISOs are exercisable for the first time by any individual during any calendar year under the Plan (or any other plan of the Company or any Related Corporation) exceeds the sum of One Hundred Thousand Dollars (\$100,000) (or a greater amount permitted under the Code), whether by reason of acceleration or otherwise, those Options will not be treated as ISOs. In making this determination, Options will be taken into account in the order in which they were granted.

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9. DETERMINATION OF FAIR MARKET VALUE. If, at the time an Option is

granted under the Plan, the Company's Common Stock is publicly traded, "fair market value" shall be determined as of the last business day for which the prices or quotes discussed in this sentence are available on the date such Option is granted and shall mean (i) the average (on that date) of the high and low prices of the Common Stock on the principal national securities exchange on which the Common Stock is traded, if the Common Stock is then traded on a national securities exchange; or (ii) the last reported sale price (on that date) of the Common Stock on the Nasdaq National Market, if the Common Stock is not then traded on a national securities exchange; or (iii) the closing bid price (or average of bid prices) last quoted (on that date) by an established quotation service for over-the-counter securities, if the Common Stock is not reported on the Nasdaq National Market. However, if the Common Stock is not publicly traded at the time an Option is granted under the Plan, "fair market value" shall be the fair value of the Common Stock as determined by the Committee after taking into consideration all factors which it deems appropriate, including, without limitation, recent sale and offer prices of the Common Stock in private transactions negotiated at arm's length.

 but not more than (i) ten years from the date of grant in the case of Non-Qualified Options, (ii) ten years from the date of grant in the case of ISOs generally, and (iii) five years from the date of grant in the case of ISOs granted to an employee owning stock possessing more than ten percent (10%) of the total combined voting power of all classes of stock of the Company or any Related Corporation. Subject to earlier termination as provided in paragraph 17, the term of each ISO will be the term set forth in the original instrument granting such ISO, except with respect to any part of such ISO that is converted into a Non-Qualified Option pursuant to paragraph 19.

11. EXERCISE OF OPTION. Subject to the provisions of paragraphs 12

A. RIGHT TO EXERCISE. The Option will either be fully exercisable on

- through 18, each Option granted under the Plan will be exercisable as follows:
- the date of grant, subject to such restrictions or repurchase rights as defined below in paragraph 13, or will become exercisable thereafter in such installments as the Committee may specify.
- - 12. RESTRICTED STOCK.
 - (A) GRANTS. The Committee may grant Stock Rights entitling recipients

to acquire shares of Common Stock, subject to the right of the Company to repurchase all or part of such shares at their issue price or other stated or formula price (or to require forfeiture of such shares if issued at no cost) from the recipient in the event that conditions specified by the Committee in the applicable Stock Rights agreement are not satisfied prior to the end of the applicable restriction period or periods established by the Committee for such Stock Rights

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(each, a "Restricted Stock Award").

(b) TERMS AND CONDITIONS. The Committee shall determine the terms and

conditions of any such Restricted Stock Award, including the conditions for repurchase (or forfeiture) and the issue price, if any. Any stock certificates issued in respect of a Restricted Stock Award shall be registered in the name of the recipient and, unless otherwise determined by the Committee, deposited by the recipient, together with a stock power endorsed in blank, with the Company (or its designee). At the expiration of the applicable restriction periods, the

Company (or such designee) shall deliver the certificates no longer subject to such restrictions to the recipient or if the recipient has died, to the beneficiary designated, in a manner determined by the Committee, by the recipient to receive amounts due or exercise rights of the recipient in the event of the recipient's death (the "Designated Beneficiary"). In the absence of an effective designation by a recipient, Designated Beneficiary shall mean the recipient's estate.

13. OTHER STOCK-BASED AWARDS. The Committee shall have the right to grant

other Stock Rights based upon the Common Stock having such terms and conditions as the Committee may determine, including the grant of shares based upon certain conditions, the grant of securities convertible into Common Stock and the grant of stock appreciation rights.

14. MEANS OF EXERCISING STOCK RIGHTS. A Stock Right (or any part or

installment thereof) shall be exercised by giving written notice to the Company at its principal office address. Such written notice shall be signed by the holder and shall be delivered in person or by certified or registered mail, return receipt requested, to the Chief Financial Officer of the Company, or other authorized representative of the Related Corporation, prior to the termination of the Stock Right as set forth in this Plan, accompanied by full payment of the exercise price for the number of shares being purchased (a) in United States dollars in cash or by check, (b) at the discretion of the Committee, through delivery of shares of Common Stock having a fair market value equal as of the date of the exercise to the cash exercise price of the Stock Right, (c) at the discretion of the Committee, by delivery of a promissory note, the terms of which (including the interest rate and the terms of repayment) shall be established by the Committee, (d) at the discretion of the Committee, by delivery of notice in such form as the Company may designate together with irrevocable instructions to a broker to promptly deliver to the Company the amount of sale or loan proceeds to pay the exercise price or (e) at the discretion of the Committee, by any combination of (a), (b), (c) or (d) above. If the Committee exercises its discretion to permit payment of the exercise price of an ISO by means of the methods set forth in clauses (b), (c), (d) or (e) of the preceding sentence, such discretion shall be exercised in writing at the time of the grant of the ISO in question. The holder of a Stock Right shall not have the rights of a stockholder with respect to the shares covered by such Stock Right until the date of issuance of a stock certificate for such shares. Except as expressly provided in paragraph 19 with respect to changes in capitalization and stock dividends, no adjustment will be made for dividends or similar rights for which the record date is before the date such stock certificate is issued.

A. WITHHOLDING. At the time the Stock Right is exercised, in whole

or in part, or at any time thereafter as requested by the Company, the holder shall make adequate provision for foreign, federal and state tax withholding obligations of the Company, if any, which arise in connection with the Stock Right, including, without limitation, obligations arising upon (i) the exercise, in whole or in part, of the Stock Right, (ii) the transfer, in whole or in part, of any shares acquired on exercise of the Stock Right, (iii) the operation of any law or regulation providing for the imputation of interest, or (iv) the lapsing of any restriction or making of any election with respect to any shares acquired on exercise of the Stock Right. Except as the Committee may otherwise provide in a Stock Right agreement, when the Common Stock is registered under the 1934 Act, a holder may satisfy such tax obligations in whole or in part by delivery of shares of Common Stock, including shares retained from the Stock Right creating the tax obligations, valued at their fair market value. The Company may, to the extent permitted by law, deduct such tax obligations from any payment of any kind otherwise due to an individual.

- name of the Optionee, or, if applicable, the heirs of the Optionee.

C. RESTRICTIONS ON GRANT OF THE OPTION AND ISSUANCE OF SHARES.

The

- _____ grant of the Option and the issuance of the shares upon exercise of the Option shall be subject to compliance with all applicable requirements of federal or state law with respect to such securities. The Option may not be exercised if the issuance of shares upon such exercise would constitute a violation of any applicable federal or state securities laws or other law or regulations. addition, no Option may be exercised unless (i) a registration statement under the Securities Act of 1933, as amended (the "SECURITIES ACT"), shall at the time of exercise of the Option be in effect with respect to the shares issuable upon exercise of the Option or (ii) in the opinion of legal counsel to the Company, the shares issuable upon exercise of the Option may be issued in accordance with the terms of an applicable exemption from the registration requirements of the THE OPTIONEE IS CAUTIONED THAT THE OPTION MAY NOT BE EXERCISABLE UNLESS THE FOREGOING CONDITIONS ARE SATISFIED. ACCORDINGLY, THE OPTIONEE MAY NOT BE ABLE TO EXERCISE THE OPTION WHEN DESIRED EVEN THOUGH THE OPTION IS VESTED. As a condition to the exercise of the Option, the Company may require the Optionee to satisfy any qualifications that may be necessary or appropriate, to evidence compliance with any applicable law or regulation and to make any representation or warranty with respect thereto as may be requested by the Company.
- - 15. UNVESTED SHARE REPURCHASE OPTION.

A. VESTED SHARES AND UNVESTED SHARES DEFINED. The total number of

shares multiplied by the Vested Ratio as set forth in the Stock Right agreement are "Vested Shares." For purposes of this paragraph 13, the "Unvested Shares" are the number of shares acquired upon exercise of the Stock Right in excess of the Vested Shares.

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B. UNVESTED SHARE REPURCHASE OPTION. In the event the Optionee's

employment with the Company or any Related Corporation is terminated for any reason, with or without cause, or if the Optionee or the Optionee's legal representative attempts to sell, exchange, transfer, pledge, or otherwise dispose of (other than pursuant to an Ownership Change) any shares acquired upon exercise of the Option which exceed the Optionee's Vested Shares, the Company shall have the right to repurchase the Unvested Shares under the terms and subject to the conditions set forth in this paragraph 13 (the "UNVESTED SHARE REPURCHASE OPTION").

D. EXERCISE OF UNVESTED SHARE REPURCHASE OPTION. The Company may

exercise the Unvested Share Repurchase Option by written notice to the Optionee within sixty (60) days after (i) such termination of employment or (ii) the Company has received notice of the attempted disposition. If the Company fails to give notice within such sixty (60) day period, the Unvested Share Repurchase Option shall terminate unless the Company and the Optionee have extended the time for the exercise of the Unvested Share Repurchase Option. The Unvested Share Repurchase Option must be exercised, if at all, for all of the Unvested Shares, except as the Company and the Optionee otherwise agree.

E. PAYMENT FOR SHARES AND RETURN OF SHARES. Payment by the Company

to the Optionee shall be made in cash within thirty (30) days after the date of the mailing of the written notice of exercise of the Unvested Share Repurchase Option. For purposes of the foregoing, cancellation of any indebtedness of the Optionee to any Participating Company shall be treated as payment to the Optionee in cash to the extent of the unpaid principal—and any accrued interest canceled. The purchase price per share being repurchased by the Company shall be an amount equal to the Optionee's original cost per share, as adjusted pursuant to paragraph 19. The shares being repurchased shall be delivered to the Company by the Optionee at the same time as the delivery of the purchase price to the Optionee.

F. ASSIGNMENT OF UNVESTED SHARE REPURCHASE OPTION. The Company shall

have the right to assign the Unvested Share Repurchase Option at any time, whether or not such option is then exercisable, to one (1) or more persons as may be selected by the Company.

A. ESTABLISHMENT OF ESCROW. To insure shares subject to the Unvested

Share Repurchase Option will be available for repurchase, the Company may require the Optionee to deposit the certificate or certificates evidencing the shares which the Optionee purchases upon exercise of the Option with an escrow agent designated by the Company. If the Company does not require such deposit as a condition of exercise of the Option, the Company reserves the right at any time to require the Optionee to so deposit the certificate or certificates in escrow. The Company shall bear the expenses of establishing and maintaining the escrow.

B. DELIVERY OF SHARES TO OPTIONEE. Upon the written request by the

Optionee to the Company, the Company will instruct the agent to deliver to the Optionee as soon as practicable the shares no longer subject to such Unvested Share Repurchase Option restrictions.

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C. NOTICES AND PAYMENTS. In the event the shares held in escrow are

subject to the Company's exercise of the Unvested Share Repurchase Option, the notices required to be given to the Optionee shall be given to the escrow agent and any payment required to be given to the Optionee shall be given to the escrow agent. Within thirty (30) days after payment by the Company, the escrow agent shall deliver the shares which the Company has purchased to the Company and shall deliver the payment received from the Company to the Optionee.

17. STOCK DIVIDENDS SUBJECT TO OPTION AGREEMENT. If, from time to time,

there is any Adjustment as defined in paragraph 19 or other change in the character or amount of any of the outstanding stock of the Related Corporation which is subject to the provisions of this Option then in such event any and all new substituted or additional securities to which the Optionee is entitled by reason of the Optionee's ownership of the shares acquired upon exercise of the Option shall be immediately subject to the Unvested Share Repurchase Option with the same force and effect as the shares subject to the Unvested Share Repurchase Option immediately before such event.

18. LEGENDS. The Company may at any time place legends referencing the

Unvested Share Repurchase Option set forth in paragraph 13 above and any applicable federal or state securities law restrictions on all certificates representing shares of stock subject to the provisions of this Option Agreement. The Optionee shall, at the request of the Company, promptly present to the Company any and all certificates representing shares acquired pursuant to the

Option in the possession of the Optionee in order to effectuate the provisions of this paragraph. Unless otherwise specified by the Company, legends placed on such certificates may include, but shall not be limited to, the following:

"THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO AN UNVESTED SHARE REPURCHASE OPTION IN FAVOR OF THE CORPORATION OR ITS ASSIGNEE SET FORTH IN AN AGREEMENT BETWEEN THE CORPORATION AND THE REGISTERED HOLDER, OR SUCH HOLDER'S PREDECESSOR IN INTEREST, A COPY OF WHICH IS ON FILE AT THE PRINCIPAL OFFICE OF THIS CORPORATION."

A. CESSATION OF SERVICE. Except to the extent otherwise specifically

provided in the documents evidencing the Option, any outstanding Option exercisable for fully vested shares at the time the Optionee ceases to provide services to the Company or a Related Corporation as an employee, a non-employee Board member or a consultant for any reason other than disability, death or misconduct, then the Optionee will have a period of three (3) months following the date of such cessation of service during which to exercise each outstanding Option held by such Optionee.

B. DISABILITY. Should such service terminate by reason of disability, then any

of service, disability, death or misconduct:

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outstanding Option exercisable by the Optionee for fully vested shares at the time the Optionee ceases to provide services to the Company may be subsequently exercised by the Optionee during the six (6) month period following the date of such cessation of service. However, should such disability be deemed to constitute permanent disability, then the period during which each outstanding option for fully vested shares held by the Optionee is to remain exercisable will be extended by an additional six (6) months so that the exercise period will be the twelve (12)-month period following the date of the Optionee's cessation of service by reason of such permanent disability. The term "Permanent

Disability," as used in this Plan, means a disability expected to result in

death or that has lasted or can be expected to last for a continuous period of twelve (12) months or more, as described in Section 22(e)(3) of the Code.

C. DEATH. Any Option exercisable for fully vested shares by the
---Optionee at the time of death may be subsequently exercised by the personal representative of the Optionee's estate or by the person or persons to whom the

Option is transferred pursuant to the Optionee's will or in accordance with the laws of descent and distribution during the twelve (12) month period following the date of the Optionee's death.

D. MISCONDUCT. Should the Optionee's service be terminated for

misconduct, then all outstanding Options at the time held by the Optionee will immediately terminate and cease to be outstanding. The term "Misconduct," when

used in this Plan, means the commission of any act of fraud, embezzlement or dishonesty by the Optionee, any unauthorized use or disclosure by such person of confidential information or trade secrets of the Company (or any Related Corporation), or any other intentional misconduct by such person adversely affecting the business or affairs of the Company or any Related Corporation in a material manner. The foregoing definition shall not be deemed to be inclusive of all the acts or omissions which the Company or any Related Corporation may consider as grounds for the dismissal or discharge of any Optionee or other person in the service of the Company or any Related Corporation.

E. LEAVE OF ABSENCE. For purposes of this paragraph 17, a bona fide

leave of absence (such as those attributable to illness, military obligations or governmental service) with the written consent of the Committee, or to the extent required by statute, will not be considered an interruption of service under the Plan. For the purposes of this paragraph, the leave of absence provision described above shall not apply to a consultant or advisor of the Company or any Related Corporation. Additionally, with respect to Options that are intended to qualify as ISOs, the leave of absence permitted under this paragraph shall not exceed the period of time set forth in Treas. Reg. (S) 1.421-7(h)(2) or any successor thereto.

- 20. ASSIGNABILITY. No Option shall be assignable or transferable by the ______Optionee except by will or by the laws of descent and distribution. During the lifetime of the Optionee each Option may be exercised only by the Optionee.

Optionee's rights with respect to Options granted hereunder will be adjusted as hereinafter provided, unless otherwise specifically provided in the written agreement between the Optionee and the Company relating to such Option:

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A. RECAPITALIZATION. If any change is made to the Common Stock

issuable under the Plan by reason of any stock split, stock dividend, recapitalization, combination of shares, exchange of shares or other change affecting the outstanding Common Stock as a class without receipt of consideration, then appropriate adjustments shall be made to (i) the maximum

number and/or class of securities to issuable under the Plan, (ii) the number and/or class of securities and, if applicable, price per share in affect under each outstanding Stock Right under the Plan and (iii) the maximum number of shares issuable to one individual pursuant to paragraph 4.

B. TRANSFER OF CONTROL AND OTHER TRANSACTIONS. A "Transfer of

Control" will be deemed to have occurred in the event any of the following occurs with respect to the Company (which for this purpose includes a successor whose stock is issued under the Plan):

- (i) the direct or indirect sale or exchange by the stockholders in a single transaction or a series of transactions of the Company of all or substantially all of the stock of the Company where the stockholders of the Company immediately before such sale or exchange do not retain, directly or indirectly and in substantially the same proportion, beneficial interest in voting stock of the Company or surviving entity representing at least a majority of the voting power of all voting stock of the Company;
- (ii) a merger, consolidation, reorganization or similar transaction in which the stockholders of the Company immediately before such merger do not retain, directly or indirectly and in substantially the same proportion, beneficial interest in the voting stock of the surviving entity representing a majority of the voting power of all voting stock; or
- (iii) the sale, exchange, or transfer (including, without limitation, pursuant to a liquidation or dissolution) of all or substantially all of the Company's assets (other than a sale, exchange, or transfer to one (1) or more corporations where the stockholders of the Company immediately before such sale, exchange, or transfer retain, directly or indirectly and in substantially the same proportion, beneficial interest in voting stock of the corporation(s) to which the assets were transferred) representing at least a majority of the combined voting power of all voting stock of such entity.

In the event of any Transfer of Control, each outstanding Option, shall automatically accelerate so that each such Option shall, immediately prior to effective date of the Transfer of Control, become fully exercisable with respect to the total number of shares of Common Stock at the time subject to such Option and may be exercised for any or all of those shares as fully vested shares of Common Stock, subject to the consummation of the Transfer of Control. An Option shall not so accelerate if and to the extent: (i) such Option is assumed or otherwise continued in full force or effect by the successor corporation (or parent thereof) pursuant to the terms of the Transfer of Control, (ii) such Option is replaced with a cash incentive program of the successor corporation which preserves the spread existing at the time of the Transfer of Control on the shares of Common Stock for which the Option is not otherwise at that time exercisable and provides for subsequent payout in accordance with the same vesting

schedule applicable to those option shares or (iii) the acceleration of such Option is subject to other limitations imposed by the Committee at the time of the Option grant. All outstanding repurchase rights outstanding on Common Stock previously issued under the Plan will also terminate automatically, and such shares will immediately vest in full, immediately before a Transfer of Control, except to the extent: (i) those repurchase rights are assigned to the successor corporation (or parent thereof) or otherwise continue in full force and effect pursuant to the terms of the Transfer of Control or (ii) such accelerated vesting is precluded by other limitations imposed by the Committee at the time the repurchase right is issued.

Notwithstanding the foregoing, the number of Vested Shares shall, immediately prior to the Transfer of Control, be increased by the number of Shares that would have become Vested Shares on the date twelve months after the consummation of the Transfer of Control, provided that if the Optionee has been employed by the Company for less than twelve months immediately prior to the Transfer of Control, the number of additional Shares that are Vested Shares shall be increased by the number of Shares that would have become Vested Shares on the date six months after the consummation of the Transfer of Control.

If, following the Transfer of Control, the successor corporation (or parent thereof) terminates the employment of the Optionee without Cause, upon such termination all of the Shares shall become Vested Shares. "Cause" for this purpose shall mean the willful engaging by the Optionee in illegal conduct or gross misconduct which is materially injurious to the successor corporation (or parent thereof).

C. MODIFICATION OF ISOs. Notwithstanding the foregoing, any

adjustments made pursuant to subparagraphs A, B or C with respect to ISOs shall be made in a manner intended to avoid any adverse tax consequences for the holders of such ISOs. If the Committee determines that such adjustments made with respect to ISOs would constitute a modification, extension, or renewal (as those terms are defined in Section 424 of the Code) of such ISOs, it may refrain from making such adjustments.

D. ACCELERATION OF VESTING. The Committee shall have the right to

accelerate the Vested Ratio as defined in the Stock Rights Agreement of any installment of any Stock Right; provided that the Committee shall not, without the consent of an Optionee, accelerate the permitted exercise date of any installment of any Option granted to any employee as an ISO (and not previously converted into a Non-Qualified Option pursuant to this paragraph 19) if such acceleration would adversely affect the Optionee's rights thereunder.

E. DISSOLUTION OR LIQUIDATION. In the event of the proposed

dissolution or liquidation of the Company, the Board shall upon written notice to the Optionee, provide that all then unexercised Options will (i) become exercisable in full as of a specified time at least 10 business days prior to

the effective date of such liquidation or dissolution and (ii) terminate effective upon such liquidation or dissolution, except to the extent exercised before such effective date. The Board may specify the effect of a liquidation or dissolution on any Awards or Purchases granted under the Plan at the time of the grant of such Award or Purchase.

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F. ISSUANCES OF SECURITIES. Except as expressly provided herein, no

issuance by the Company of shares of stock of any class, or securities convertible into shares of stock of any class, shall affect, and no adjustment by reason thereof shall be made with respect to, the number or price of shares subject to Options. No adjustments shall be made for dividends paid in cash or in property other than securities of the Company.

G. ADJUSTMENTS. Upon the happening of any of the events described in

subparagraphs A or B above, the class and aggregate number of shares set forth in paragraph 4 hereof that are subject to Stock Rights which previously have been or subsequently may be granted under the Plan (including outstanding Options incorporated into this Plan from the Predecessor Plan) will also be appropriately adjusted to reflect the events described in such subparagraphs. The Committee or the Successor Board shall determine the specific adjustments to be made under this paragraph 19 and, subject to paragraph 2, its determination shall be conclusive.

If any person owning restricted Common Stock obtained by exercise of a Stock Right made hereunder receives shares or securities or cash in connection with a corporate transaction described in subparagraphs A, B or C above as a result of owning such restricted Common Stock, such shares or securities or cash shall be subject to all of the conditions and restrictions applicable to the restricted Common Stock with respect to which such shares or securities or cash were issued, unless otherwise determined by the Committee.

22. TERM AND AMENDMENT OF PLAN. The Plan will expire on the tenth

anniversary of the Effective Date (except as to Options outstanding on that date). Subject to the provisions of paragraph 5 above, Stock Rights other than Options intended to qualify as performance-based compensation under Section 162(m) of the Code may be granted under the Plan before the date of stockholder approval of the Plan. The Board shall have complete and exclusive power and authority to amend or modify the Plan in any or all respects. However, no such amendment or modification may adversely affect the rights and obligations with respect to Stock Rights at the time outstanding under the Plan unless the grantee consents to such amendment or modification. In addition, certain amendments may, as determined by the Board in its sole discretion, require stockholder approval pursuant to applicable laws or regulations.

Stock Rights other than Options intended to qualify as performance-

based compensation under Section 162(m) of the Code may be granted under the Plan in excess of the number of shares then available for issuance under the Plan, provided that any excess shares actually issued shall be held in escrow until there is obtained stockholder approval of an amendment sufficiently increasing the number of shares of Common Stock available for issuance under the Plan. If such stockholder approval is not obtained within twelve (12) months after the date the first such excess issuances are made, then (i) any unexercised Options granted on the basis of such excess shares shall terminate and cease to be outstanding and (ii) the Company shall promptly refund to the holders of any such Stock Rights the exercise or purchase price paid for any excess shares issued under the Plan and held in escrow, together with interest (at the applicable Short Term Federal Rate) for the period the shares were held in escrow, and such shares shall thereupon be automatically cancelled and cease to be outstanding.

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- 23. APPLICATION OF FUNDS. The proceeds received by the Company from the ------sale of shares pursuant to Options granted and Purchases authorized under the Plan shall be used for general corporate purposes.

NOTICE TO COMPANY OF DISQUALIFYING DISPOSITION. Each employee who

- receives an ISO must agree to notify the Company in writing immediately after the employee makes a Disqualifying Disposition of any Common Stock acquired pursuant to the exercise of an ISO. A Disqualifying Disposition is any disposition (including any sale) of such Common Stock before the later of (a) two years after the date the employee was granted the ISO, or (b) one year after the date the employee acquired Common Stock by exercising the ISO. If the employee has died before such stock is sold, these holding period requirements do not apply and no Disqualifying Disposition can occur thereafter.

hereby expressly reserved by each, to terminate such person's service at any time for any reason, with or without cause.

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the use in this Registration Statement on Form S-1 of our report dated August 23, 1999, relating to the financial statements of Sycamore Networks, Inc., which appears in such Registration Statement. We also consent to the references to us under the headings "Experts" and "Selected Financial Data" in such Registration Statement.

PRICEWATERHOUSECOOPERS LLP Boston, Massachusetts September 10, 1999

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