
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

FORM S-4
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

CIENA Corporation

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

3661
(Primary Standard Industrial
Classification Code Number)

23-2725311
(I.R.S. Employer
Identification Number)

1201 Winterson Road
Linthicum, MD 21090
(410) 865-8500
(Address, including zip code, and telephone number,
including area code, of registrant's principal executive offices)

Russell B. Stevenson, Jr.
Senior Vice President, General Counsel and Secretary
CIENA Corporation
1201 Winterson Road
Linthicum, MD 21090
(410) 865-8500
(Name, address, including zip code, and telephone number,
including area code, of agent for service)

Copies to:

Michael J. Silver
Amy Bowerman Freed
Stephanie D. Marks
Hogan & Hartson L.L.P.
111 South Calvert Street
Baltimore, MD 21202
(410) 659-2700

Kathy A Fields
Howard J. Beber
Testa, Hurwitz & Thibault, LLP
125 High Street
Boston, MA 02110
(617) 248-7000

Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement becomes effective and all other conditions to the merger contemplated by the Agreement and Plan of Merger dated as of April 9, 2003, as such agreement may be amended, described in the enclosed Prospectus have been satisfied or waived.

If the securities being registered on this Form are being offered in connection with the formation of a holding company and there is compliance with General Instruction G, 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 of 1933, please check the following box and list the Securities Act of 1933 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(d) under the Securities Act of 1933, check the following box and list the Securities Act of 1933 registration statement number of the earlier effective registration statement for the same offering. _____

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered	Amount to be registered	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
Common Stock, \$.01 par value(1)(2)	36,047,498	Not Applicable	\$725,459(3)	\$58.69

- (1) The Registration Statement covers the maximum number of shares of CIENA common stock which are expected to be issued in connection with the transactions described herein in the proposed merger of WaveSmith Networks, Inc. with and into CIENA, assuming the exercise of all stock options and warrants that will be outstanding at closing.
- (2) Includes corresponding rights to purchase shares of CIENA series A Junior Participating Preferred Stock pursuant to a Rights Agreement dated as of December 29, 1997, as amended, between CIENA and BankBoston N.A.
- (3) Pursuant to Rule 457(f)(2), because there is currently no public trading market for WaveSmith common and preferred stock, the registration fee was computed on the basis of 1/3 of the par value of the shares of common and preferred stock of WaveSmith computed as of April 29, 2003. The par value equaled \$2,176,376.28 in the aggregate.

The registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, or until the Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

The information in this joint proxy statement/prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This joint proxy statement/prospectus is not an offer to sell these securities and we are not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

Preliminary Prospectus dated April 29, 2003. Subject to Completion.



Dear WaveSmith Stockholder:

After careful consideration, the boards of directors of WaveSmith Networks, Inc. and CIENA Corporation have approved the merger of WaveSmith with CIENA. I am pleased to provide to you the enclosed proxy statement/prospectus relating to a special meeting of the stockholders of WaveSmith to be held on _____, 2003, at [9:00 a.m.] Eastern Time, at the offices of Testa, Hurwitz & Thibault, LLP at 125 High Street, Boston, Massachusetts.

At the special meeting, you will be asked to vote, in person or by proxy, on the proposed merger of WaveSmith with CIENA. The merger will be effected pursuant to the agreement and plan of merger, dated as of April 9, 2003, by and between CIENA and WaveSmith. Pursuant to the agreement and plan of merger, each outstanding share of capital stock of WaveSmith will be converted into the right to receive shares of CIENA common stock in the amounts set forth in the agreement and plan of merger. CIENA will issue approximately 33 million shares in the merger to WaveSmith's stockholders, including shares underlying WaveSmith stock options and warrants. CIENA common stock is traded on the Nasdaq National Market under the symbol "CIEN." The closing price for CIENA common stock reported on the Nasdaq National Market on April _____, 2003, was \$ _____ per share. If the merger is approved and consummated, WaveSmith will cease to exist as a separate entity. Following the merger, based on 434,980,818 outstanding shares of CIENA common stock as of April 25, 2003, and assuming that all of the WaveSmith stock options or warrants have been exercised, WaveSmith stockholders would own approximately 7.7% of the combined company and CIENA stockholders would own approximately 92.3% of the combined company. The merger is described more fully in the proxy statement/prospectus.

As described in the notice to stockholders dated April _____, 2003, if the proposed merger with CIENA is approved at the special meeting, WS Contract Corp., a Delaware corporation and wholly-owned subsidiary of WaveSmith, will merge with and into WaveSmith immediately prior to the merger of WaveSmith into CIENA. In connection with the merger of WS Contract Corp. into WaveSmith, the Third Amended and Restated Certificate of Incorporation of WaveSmith will be amended and restated in its entirety and the liquidation preferences of the shares of WaveSmith's preferred stock will be reduced.

WaveSmith's board of directors has carefully reviewed and considered the terms and conditions of the merger and the agreement and plan of merger and has concluded that the terms are fair to, and in the best interests of, WaveSmith and its stockholders. WaveSmith's board of directors recommends that you vote **FOR** approval and adoption of the merger and the agreement and plan of merger.

The agreement and plan of merger must be approved and adopted by the holders of (i) a majority of the outstanding shares of WaveSmith's common stock and preferred stock, voting as a single class on an as-converted basis, (ii) a majority of the outstanding shares of WaveSmith's series A and series A-1 preferred stock, voting together as a single class on an as-converted basis, (iii) 60% of the outstanding shares of WaveSmith's series B and series B-1 preferred stock, voting together as a single class on an as-converted basis, and (iv) 75% of the outstanding shares of WaveSmith's series C preferred stock, voting as a separate class on an as-converted basis. Stockholders of WaveSmith entitled to vote at the special meeting who collectively beneficially own approximately 25.5% of WaveSmith's common stock, 87.9% of WaveSmith's series A and A-1 preferred stock, on an as-converted basis, 81.0% of WaveSmith's series B and B-1 preferred stock, on an as-converted basis, 72.0% of WaveSmith's series C preferred stock, on an as-converted basis and 63.4% of WaveSmith's common stock and preferred stock together, on an as-converted basis, have already agreed to vote their shares in favor of the merger and the agreement and plan of merger. **You are encouraged to review the enclosed proxy statement/prospectus and in particular review the matters referred to under "Risk Factors" starting on page 8.** Whether or not you plan to attend the special meeting, please take the time to vote by promptly completing and mailing the enclosed proxy card in the postage-paid envelope provided. **Your vote is very important.**

On Behalf of the Board of Directors,

A handwritten signature in cursive script, appearing to read "Thomas Burkardt".

Thomas Burkardt
Chief Executive Officer and President

Prospectus dated _____, 2003

First mailed to stockholders on or about _____, 2003

Neither the Securities and Exchange Commission nor any state securities regulator has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus and proxy statement. Any representation to the contrary is a criminal offense.

WAVESMITH NETWORKS, INC.

35 Nagog Park
Acton, MA 01720
(978) 929-9100

NOTICE OF SPECIAL MEETING OF STOCKHOLDERS

TO BE HELD ON _____, 2003

To the stockholders of WaveSmith Networks, Inc.:

A special meeting of the stockholders of WaveSmith Networks, Inc., a Delaware corporation, will be held at the offices of Testa, Hurwitz & Thibault, LLP, 125 High Street, Boston, Massachusetts, on _____, 2003 at [9:00 a.m.] Eastern Time for the following purposes:

1. To approve and adopt the merger and the agreement and plan of merger, dated as of April 9, 2003, by and between CIENA Corporation and WaveSmith pursuant to which WaveSmith will be merged with and into CIENA, with CIENA being the surviving corporation. A copy of the agreement and plan of merger is attached as Annex A to the proxy statement/prospectus accompanying this notice;
2. To grant discretionary authority to the WaveSmith board of directors to adjourn or postpone the WaveSmith special meeting to solicit additional votes to approve the merger, if necessary; and
3. To consider and act upon any other matter which may properly come before the special meeting.

This proxy statement/prospectus and the proxy card are being furnished to the stockholders of WaveSmith in connection with the solicitation of proxies by WaveSmith's board of directors for use at the special meeting of stockholders.

WaveSmith's board of directors has approved the merger and the agreement and plan of merger and recommends that you vote **FOR** approval and adoption of the merger and agreement and plan of merger and **FOR** the grant of discretionary authority to adjourn the special meeting. The proposals are described in more detail in the accompanying proxy statement/prospectus, which you should read in its entirety before voting.

The board of directors has fixed the close of business on _____, 2003 as the record date for determining the stockholders entitled to receive this notice, and to vote their shares at the meeting or any adjournment or postponement of the meeting. Only holders of record of common stock and preferred stock of WaveSmith at the close of business on the record date will be entitled to notice of, and to vote at, the meeting and any adjournment or postponement of the meeting. As of that date, there were (i) 79,787,626 shares of common stock outstanding, (ii) 185,000 shares of series A preferred stock outstanding, (iii) 9,015,000 shares of series A-1 preferred stock outstanding, (iv) 2,353,370 shares of series B preferred stock outstanding, (v) 33,333,331 shares of series B-1 preferred stock outstanding and (vi) 92,963,301 shares of series C preferred stock outstanding.

Each share of common stock is entitled to 1 vote on each matter brought properly before the meeting. Each share of preferred stock is entitled to a number of votes equal to the number of shares of common stock into which such share of preferred stock may be converted into pursuant to WaveSmith's certificate of incorporation. Each share of series A preferred stock is entitled to 2 votes for each matter brought properly before the meeting. Each share of series A-1 preferred stock is entitled to 3.51667 votes for each matter brought properly before the meeting. Each share of series B preferred stock is entitled to 1 vote for each matter brought properly before the meeting. Each share of series B-1 preferred stock is entitled to 2.4 votes for each matter brought properly before the meeting. Each share of series C preferred stock is entitled to 1 vote for each matter brought properly before the meeting.

The representation in person, or by properly executed proxy, of the holders of a majority of all shares of capital stock entitled to vote at the special meeting is necessary to constitute a quorum at the special meeting of WaveSmith. In connection with the separate votes by the series A and series A-1 preferred

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stock, series B and series B-1 preferred stock and series C preferred stock, one-third of the outstanding shares of such class or classes of capital stock, present in person or represented by proxy, shall constitute a quorum entitled to take action at the WaveSmith special meeting and in favor of the other proposals.

Under Delaware law and the charter documents of WaveSmith, approval and adoption of the merger and the agreement and plan of merger requires the affirmative votes of (i) a majority of the outstanding shares of WaveSmith's common stock and preferred stock, voting as a single class on an as-converted basis, (ii) a majority of the outstanding shares of WaveSmith's series A and series A-1 preferred stock, voting as a single class on an as-converted basis, (iii) 60% of the outstanding shares of WaveSmith's series B and series B-1 preferred Stock, voting as a single class on an as-converted basis and (iv) 75% of the outstanding shares of WaveSmith's series C preferred stock, voting as a separate class on an as-converted basis.

The board of directors has designated the two persons named on the enclosed proxy card, Thomas Burkardt and Gregg Savage, to serve as proxies in connection with the special meeting. All properly executed proxy cards will be voted (except to the extent that authority to vote has been withheld) and where a choice has been specified by the stockholder as provided in the proxy card, it will be voted in accordance with the specifications on the proxy card. If you sign and send in your proxy card and do not indicate how you want to vote, it will be voted in favor of approval of the merger and the agreement and plan of merger and in favor of the other proposals. You may revoke a proxy prior to its execution by giving written notice to Mr. Savage, the Secretary of WaveSmith, by submission of another proxy bearing a later date, or by voting in person at the special meeting. Such notice or later dated proxy will not affect a vote on any matter taken prior to the receipt of the proxy revocation by WaveSmith. Abstentions from voting identified as such on the proxy card are treated as present or represented for purposes of determining the presence or absence of a quorum at the special meeting. However, abstentions will have the same effect as votes against the merger and the agreement and plan of merger and the other proposals.

The proxy statement/prospectus materials are being mailed on or about _____, 2003 to holders of record of WaveSmith's capital stock as of _____, 2003. The principal executive office and mailing address of WaveSmith is 35 Nagog Park, Acton, MA 01720.

WHETHER OR NOT YOU PLAN TO ATTEND THE MEETING, PLEASE SIGN, DATE AND PROMPTLY RETURN THE ENCLOSED PROXY CARD, WHICH YOU MAY REVOKE AT ANY TIME PRIOR TO ITS USE. **PROMPTLY SIGNING AND RETURNING YOUR PROXY CARD WILL HELP ENSURE THE PRESENCE OF A QUORUM FOR THE MEETING.** A postage-paid, self-addressed envelope is enclosed for your convenience. Your shares will be voted at the meeting in accordance with your proxy.

By Order of the Board of Directors,



Thomas Burkardt, Chief Executive Officer
and President

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This proxy statement/ prospectus incorporates important business and financial information about CIENA from documents that it has filed with the Securities and Exchange Commission but that have not been included in or delivered with this proxy statement/ prospectus. For a listing of documents incorporated by reference into this proxy statement/ prospectus, please see the section entitled “Where You Can Find More Information” beginning on page 76 of this proxy statement/ prospectus.

CIENA will provide you with copies of this information, without charge, upon written or oral request to:

CIENA Corporation
1202 Winterson Road
Linthicum, Maryland 21090
Attention: Investor Relations
Telephone Number: (410) 865-8500

In addition, you may obtain copies of this information by sending an e-mail to ir@ciena.com.

In order for you to receive timely delivery of the documents in advance of the special meeting, CIENA should receive your request no later than [date 5 business days prior to the meeting date].

QUESTIONS AND ANSWERS ABOUT THE MERGER

Q: When and where will the special meeting take place?

A: The special meeting will be held on _____, 2003 at [9:00] a.m. local time, at the offices of Testa, Hurwitz & Thibault, LLP, 125 High Street, Boston, Massachusetts.

Q: What do I need to do now?

A: You should carefully read and consider the information contained in this proxy statement/prospectus. You should then complete and sign your proxy card and return it in the enclosed return envelope as soon as possible so that your shares will be represented at WaveSmith's special meeting. If you sign, date and mail your proxy card without identifying how you want to vote, your proxy will be voted **"FOR"** the merger and **"FOR"** the grant of discretionary authority to adjourn the special meeting. If you do not vote, it will have the same effect as a vote **"AGAINST"** the proposals. You may also vote by appearing at the meeting and voting in person.

Q: Who must approve the merger?

A: In addition to the approvals of the boards of directors of CIENA and WaveSmith which have already been obtained, the following approvals of the stockholders of WaveSmith must be obtained:

- holders of a majority of WaveSmith's common stock and preferred stock, voting as a single class on an as-converted basis;
- holders of a majority of WaveSmith's series A and series A-1 preferred stock, voting together as a single class on an as-converted basis;
- holders of 60% of WaveSmith's series B and series B-1 preferred stock, voting together as a single class on an as-converted basis; and
- holders of 75% of WaveSmith's series C preferred stock, voting as a separate class on an as-converted basis.

Q: Can I change my vote after I mail my signed proxy?

A: Yes. You can change your vote at any time before your proxy is voted at the special meeting of WaveSmith's stockholders. You can do this in one of three ways. First, you can send a written notice stating that you would like to revoke your proxy. Second, you can complete and submit a new proxy. If you choose either of these two methods, you must submit your notice of revocation or your new proxy at the address on page 14. Third, you can attend the special meeting of your company's stockholders and vote in person. Your attendance alone will not revoke your proxy. If you have instructed a broker to vote your shares, you must follow the directions received from your broker to change those instructions.

Q: Should I send in my certificates now?

A: **No, you should not send in your stock certificates with your proxy.** You will receive instructions for exchanging your stock certificates if the merger is consummated.

Q: Who can help answer my questions?

A: If you have any questions about the merger, how to vote or revoke your proxy, or if you need additional copies of this proxy statement/prospectus or the enclosed proxy, you should contact Gregg Savage, WaveSmith's Chief Financial Officer and Secretary at (978) 489-2103.

SUMMARY

This summary highlights selected information from this proxy statement/prospectus. It does not contain all of the information that is important to you. You should carefully read this proxy statement/prospectus and the other documents incorporated by reference into this proxy statement/prospectus. See “Where You Can Find More Information” on page . In this proxy statement/prospectus, “we,” “us” and “our” may refer to either CIENA or WaveSmith, depending on the context in which they are used, and “you” and “your” refer to stockholders of WaveSmith.

The Companies (page 52)

CIENA Corporation

1201 Winterson Road
Linthicum, Maryland 21090
(410) 865-8500

CIENA is a leader in intelligent optical networking systems and software, offering telecommunications network solutions to service providers and enterprises worldwide. CIENA's customers include long-distance carriers, local exchange carriers, Internet service providers, wireless and wholesale carriers, systems integrators, governmental, large businesses and non-profit institutions. CIENA offers network solutions that enable service providers to provision, manage and deliver economic, high-bandwidth services to their customers.

WaveSmith Networks, Inc.

35 Nagog Park
Acton, MA 01720
(978) 929-9100

WaveSmith designs, develops and markets a next generation multi-service switch platform designed to empower telecommunications carriers to cap their investments in aging technology, while they begin deploying next-generation platforms. In this way, WaveSmith's products embrace carriers' near-term, tactical requirements as well as their longer-term strategic visions. WaveSmith's Distributed Node (DNTM) multi-service switch platform is designed from the ground up to sustain and leverage today's layer 2 infrastructure while incorporating an evolutionary path to future technologies.

Vote Required (page 13)

Under Delaware law and WaveSmith's certificate of incorporation, the following stockholder approvals are required:

- holders of a majority of WaveSmith's common stock and preferred stock, voting as a single class on an as-converted basis;
- holders of a majority of WaveSmith's series A and series A-1 preferred stock, voting together as a single class on an as-converted basis;
- holders of 60% of WaveSmith's series B and series B-1 preferred stock, voting together as a single class on an as-converted basis; and
- holders of 75% of WaveSmith's series C preferred stock, voting as a separate class on an as-converted basis.

There were 79,787,626 shares of WaveSmith common stock and 137,850,002 shares of WaveSmith preferred stock, comprised of 185,000 shares of WaveSmith series A preferred stock, 9,015,000 shares of WaveSmith series A-1 preferred stock, 2,353,370 shares of WaveSmith series B preferred stock, 33,333,331 shares of WaveSmith series B-1 preferred stock and 92,963,301 shares of WaveSmith series C preferred stock outstanding as of April 28, 2003. Each holder of WaveSmith common stock is entitled to one vote per share and each holder of WaveSmith preferred stock is entitled to one vote for each full share of common stock into which its shares of preferred stock are convertible.

As of the record date, WaveSmith's officers and directors and their affiliates owned approximately 48.8% of WaveSmith's outstanding common stock, 87.9% of WaveSmith's outstanding series A and A-1 preferred stock on an as-converted basis, 81.0% of WaveSmith's outstanding series B and B-1 preferred stock on an as-converted basis and 54.1% of WaveSmith's outstanding series C preferred stock on an as-converted basis.

Several WaveSmith stockholders beneficially owning in the aggregate the following numbers of shares entered into agreements under which they agreed to vote their shares in favor of the merger and approval of the merger agreement:

- 182,175,585 shares, representing 63.4% of WaveSmith's common stock and preferred

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stock, voting as a single class on an as-converted basis;

- 28,203,689 shares, representing 87.9% of WaveSmith's series A and series A-1 preferred stock, together on an as-converted basis;
- 66,666,661 shares, representing 81.0% of WaveSmith's series B and series B-1 preferred stock, together on an as-converted basis; and
- 66,961,835 shares, representing 72.0% of WaveSmith's series C preferred stock, as a separate class on an as-converted basis.

Additionally, CIENA's wholly-owned subsidiary, MultiWave Investment, Inc., owns 16,666,667 shares of series C preferred stock, representing 17.9% of WaveSmith's series C preferred stock, which it intends to vote in favor of the merger and approval of the merger agreement.

The Merger (page 16)

The merger agreement provides that WaveSmith will merge with and into CIENA and CIENA will be the surviving company.

The merger agreement is included as Annex A to this proxy statement/prospectus. It is the legal document that governs the merger.

Reasons for the Merger and Recommendation of the WaveSmith Board of Directors (page 24)

The WaveSmith board of directors has determined that the merger is advisable and in the best interests of WaveSmith and its stockholders. The WaveSmith board of directors recommends that WaveSmith stockholders vote **"FOR"** the proposal to approve and adopt the merger agreement and approve the merger.

See "The Merger — Recommendation of the WaveSmith Board of Directors and Reasons for the Merger" for the reasons supporting the WaveSmith board of directors' recommendations.

What you will receive in the Merger (page 35)

In the merger, you will receive a fraction of a share of CIENA common stock for each share of WaveSmith common stock or preferred stock that you own, in each case as determined by application of the formulas set forth under "Terms of the Merger Agreement and Related Transactions — Treatment of Stock, Options and Warrants." You will receive cash for any fractional share of CIENA common stock that you would otherwise receive in the merger.

The formulas by which the number of shares of CIENA common stock to be received for each share of WaveSmith capital stock are fixed. The number of shares of CIENA common stock to be received for each share of WaveSmith capital stock is subject to adjustment only in the event that WaveSmith's fully-diluted outstanding capital stock changes due to option issuances, stock repurchases and similar events. Any issuance of WaveSmith capital stock due to the exercise of options or warrants currently outstanding will not affect the exchange ratios, as they are calculated on a fully-diluted, or fully-exercised, basis. WaveSmith stockholders will not know the value of the CIENA common stock they will receive in the merger when the special meeting of the WaveSmith stockholders is held. The value of the CIENA common stock will depend upon its market price when the merger is completed. The number of shares of CIENA common stock received will depend upon the number of shares of WaveSmith capital stock outstanding on the day the merger is completed.

For example, if the total number of shares of WaveSmith capital stock outstanding on a fully-diluted basis on the day the merger is completed is 291,698,422, which is the number of shares of capital stock outstanding on a fully-diluted basis on the record date, the following exchange ratios, rounded to the nearest ten thousandth, would apply:

Class of WaveSmith Stock	Exchange Ratio
Common Stock	0.0852
Series A Preferred	0.3857
Series A-1 Preferred	0.4423
Series B Preferred	0.2512
Series B-1 Preferred	0.3118
Series C Preferred	0.1458

The following chart gives a few examples of the number of shares of CIENA common stock that a holder of 100 shares of WaveSmith common stock would receive in the merger, assuming the application of the exchange ratio from the above table, and the value of those shares at a range of prices of CIENA common stock. The chart does not include cash received for fractional shares or cash paid in respect of dissenting shares.

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Illustrative Closing Price of CIENA Common Stock at Closing	Number of Shares of CIENA Common Stock Issued at Closing to the Holder of 100 Shares of WaveSmith Common Stock	Value of Shares of CIENA Common Stock Issued at Closing to the Holder of 100 Shares of WaveSmith Common Stock
\$6.50	8	\$52.00
\$5.50	8	\$44.00
\$ *	8	
\$4.50	8	\$36.00
\$3.50	8	\$28.00

* The closing price of CIENA common stock on _____, 2003.

See “Terms of the Merger Agreement and Related Transactions — Exchange of Certificates; Fractional Shares” on page 36.

Please do not send your stock certificates at this time.

Total Consideration CIENA Will Pay

At the effective time of the merger, CIENA will issue approximately 35,407,695 shares of its common stock in exchange for all WaveSmith outstanding common and preferred stock, including shares of series C preferred stock owned by MultiWave Investment, Inc. As of April 25, 2003, these shares have an aggregate value of approximately \$149 million. Additionally, CIENA will assume the obligation to issue an additional approximately 639,803 shares of CIENA common stock on the exercise of outstanding options and warrants. This assumes that the number of shares of WaveSmith’s capital stock outstanding on a fully-diluted basis on the day the merger is completed is 291,698,422.

Appraisal Rights of Dissenting Stockholders (page 32)

If you object to the merger, Delaware law permits you to seek relief as a dissenting stockholder and have the “fair value” of your shares of WaveSmith common stock and WaveSmith preferred stock determined by a court and paid to you in cash.

If you are a WaveSmith stockholder and wish to dissent, you must deliver to WaveSmith, prior to the vote on the merger at the special meeting, a written demand for appraisal of your shares. You also must not vote in favor of the merger agreement. To not vote in favor of the merger agreement, you can either:

- vote “no” in person at the special meeting or by proxy;
- abstain from voting;
- fail to vote; or
- if you returned a duly executed proxy and revoke your proxy prior to the special meeting.

Beneficial owners of WaveSmith common stock or WaveSmith preferred stock whose shares are held of record by another person, such as a bank, broker or nominee, and who wish to seek appraisal, should instruct the record holder to follow the appraisal procedures of Delaware law. The relevant provisions of Delaware law are technical in nature and complex. If you wish to exercise appraisal rights and obtain appraisal of the fair value of your shares, you may wish to consult with legal counsel, because the failure to comply strictly with these provisions may result in waiver or forfeiture of your appraisal rights.

A copy of the relevant section of Delaware law governing this process is attached as Annex B to this prospectus and proxy statement.

Indemnification and Escrow Agreement (page 42)

If the merger occurs, all holder of WaveSmith capital stock who have not elected the appraisal rights described above, will be obligated to indemnify CIENA and its affiliates against losses due to, among other things, the breach or inaccuracy of any of WaveSmith’s representations and warranties made in the merger agreement. This obligation is limited to 10% of the total number of shares of CIENA common stock issued in the merger to holders of outstanding WaveSmith capital stock and 10% of the total number of shares of CIENA common stock which is allocable to vested WaveSmith options which are assumed in the merger. An escrow arrangement will be established at closing to hold these amounts. Michael Feinstein, who is a member of WaveSmith’s board of directors and a senior principal of Atlas Venture will serve as Stockholder Representative on behalf of all former WaveSmith stockholders. Investment funds affiliated with Atlas Venture are significant stockholders of WaveSmith. See “Security Ownership of Directors, Executive Officers and More Than Five Percent Stockholders of WaveSmith.” The escrow

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and indemnification obligations will end one year after closing. At that time, the escrowed shares will be released to the former WaveSmith stockholders, reduced by any amounts paid or reserved for claims made by CIENA. WaveSmith stockholders will also contribute a total of 53,011 shares of CIENA common stock to the escrow fund to pay the expenses of the Stockholder Representative. These shares had a value of \$250,000 on April 9, 2003 and a value of approximately \$223,706 on April 25, 2003. See “Terms of the Merger Agreement and Related Transactions — Indemnification and Escrow Arrangement.”

Consequently, in some circumstances you could be required to forfeit to CIENA some of the CIENA common stock you would otherwise receive in the merger.

What is Needed to Complete the Merger (page 43)

Several conditions must be satisfied before the merger will be completed. These include:

- adoption of the merger by the WaveSmith stockholders as described above;
- the waiting period under the Hart-Scott-Rodino Antitrust Improvement Act of 1976 must have expired or been terminated; and
- other customary contractual conditions set forth in the merger agreement.

If the law permits, CIENA or WaveSmith may each waive conditions for the benefit of its company and stockholders and complete the merger even though one or more of these conditions has not been met. WaveSmith’s stockholder approval cannot be waived. If a material condition is waived by WaveSmith, we will resolicit the vote of its stockholders. We cannot assure you that the conditions will be satisfied or waived or that the merger will occur.

Termination of the Merger Agreement; Expenses (page 45)

CIENA and WaveSmith may mutually agree at any time to terminate the merger agreement without completing the merger, even if the WaveSmith stockholders have approved it. Either party (so long as it has not materially breached the merger agreement) may terminate the merger if:

- the merger has not been consummated by August 15, 2003, or, if extended by CIENA under certain conditions, October 15, 2003;
- WaveSmith stockholders do not approve the merger; or
- a court forbids the merger to occur.

WaveSmith may terminate the merger agreement prior to obtaining stockholder approval, so long as it has not materially breached the merger agreement, if:

- the WaveSmith board of directors determines to enter into an alternative transaction that it views as superior to the merger, and
- CIENA does not match the offer made in the other transaction.

CIENA may also terminate the merger agreement if WaveSmith’s board of directors withdraws, modifies or amends, in any respect adverse to CIENA, its recommendation in favor of the merger or determines to pursue another transaction it considers superior.

WaveSmith has agreed to pay CIENA a termination fee of \$5.1 million if the merger agreement is terminated under either of these circumstances and specified other circumstances if a third party has made an offer to acquire WaveSmith. The merger agreement also requires WaveSmith to reimburse CIENA for its out-of-pocket expenses, up to a maximum of \$500,000, in those situations where the termination fee is payable.

Further, under a letter agreement entered into by CIENA, WaveSmith and MultiWave Investment,

Inc., a wholly-owned subsidiary of CIENA in connection with WaveSmith’s series C preferred stock financing in September 2002, if prior to July 1, 2003 WaveSmith enters into a business combination with a party other than CIENA, WaveSmith will be liable to CIENA for a termination fee equal to 5% of the value of that transaction.

In the event that:

- CIENA terminates the merger agreement for reasons other than because the WaveSmith board of directors determined to enter into an alternative transaction that it views as superior to the merger;
- WaveSmith terminates the merger agreement because the August 15 or October 15 expiration date occurs, stockholder approval is not obtained or an order of a court prevents completion of this transaction; or

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- the merger agreement is terminated by either party because the waiting period under the Hart-Scott-Rodino Antitrust Improvement Act of 1976 has not expired or been terminated,

then, the reseller agreement between CIENA and WaveSmith, the letter agreement referred to above between CIENA, MultiWave Investment, Inc. and WaveSmith and the agreements CIENA has with several holders of WaveSmith capital stock will also terminate.

Merger of WS Contract Corp. into WaveSmith

As part of the negotiations of the terms of the merger of WaveSmith into CIENA, WaveSmith and CIENA agreed that the CIENA stock to be issued as consideration in connection with the merger should be distributed in a manner that differed from the results obtained under the existing charter documents of WaveSmith. The distribution agreed upon by the parties resulted in a greater number of shares being allocated to the holders of WaveSmith common stock. Stockholders of WaveSmith have approved the merger of WS Contract Corp. into WaveSmith and the related changes to the charter documents of WaveSmith immediately prior to the merger of WaveSmith into CIENA to implement this change. The changes to the WaveSmith charter documents reduces the preference amounts for each series of preferred stock of WaveSmith as follows:

Class of Stock	Original Preference Amount	New Preference Amount
Series A Preferred Stock	\$1.25	\$1.016030
Series A-1 Preferred Stock	1.25	0.673904
Series B Preferred Stock	0.90	0.783015
Series B-1 Preferred Stock	0.90	0.506835
Series C Preferred Stock	0.45	0.286181

See “Terms of the Merger Agreement and Related Transactions — Merger of WS Contract Corp. into WaveSmith.”

Federal Income Tax Consequences (page 28)

In the opinion of Hogan & Hartson L.L.P., counsel to CIENA, and Testa, Hurwitz & Thibault, LLP, counsel to WaveSmith, the merger will qualify as a tax-free reorganization. As a general matter, therefore, no gain or loss will be recognized by WaveSmith stockholders on the exchange of their WaveSmith capital stock for CIENA common stock pursuant to the reorganization, except with respect to cash received in lieu of fractional shares and cash received in exchange of WaveSmith shares by WaveSmith stockholders who dissent to the merger. There is an exception to the general tax-free treatment, however, resulting from the merger of WS Contract Corp. into WaveSmith immediately prior to the merger of WaveSmith into CIENA. This transaction will cause the value of the WaveSmith common stock to be increased, resulting in WaveSmith common stockholders receiving a greater number of shares of CIENA common stock pursuant to the merger than such stockholders would have received if the merger of WS Contract Corp. into WaveSmith had not occurred. Although the matter is not free from doubt, CIENA and WaveSmith believe that this additional value should be taxed to the WaveSmith common stockholders as ordinary income. For a further discussion of the federal income tax consequences of these transactions, see “The Merger — Federal Income Tax Consequences.” Different tax consequences may apply to you because of your individual circumstances or because special tax rules apply to you.

These matters are very complicated. You should consult your tax advisor for a full explanation of the tax consequences of the merger to you.

SUMMARY SELECTED CONSOLIDATED HISTORICAL

FINANCIAL DATA OF CIENA

Summary Selected Consolidated Historical Financial Data of CIENA

The information in the following summary selected consolidated financial data as of October 31, 1998, 1999, 2000, 2001 and 2002 and for the years ended October 31, 1998, 1999, 2000, 2001 and 2002 is derived from CIENA's audited consolidated financial statements. You should read this information in conjunction with the financial statements and notes to the consolidated financial statements which are incorporated by reference into this proxy statement/prospectus. See "Where You Can Find More Information" which begins on page 76. CIENA's financial statements as of October 31, 2001 and 2002 and for each of the three years ended October 31, 2002 were audited by PricewaterhouseCoopers LLP, independent accountants. Selected financial information as of January 31, 2002 and 2003 and for the three months then ended is derived from CIENA's unaudited consolidated financial statements, which are incorporated into this proxy statement/prospectus by reference. CIENA has a 52 or 53 week fiscal year, which ends on the Saturday nearest to the last day of October in each year. For purposes of financial statement presentation, each fiscal year is described as having ended on October 31. Fiscal 1998, 1999, 2000 and 2002 comprised 52 weeks and fiscal 2001 comprised 53 weeks. Historical events are not necessarily indicative of results to be expected in the future and results of interim periods are not necessarily indicative of the results of the entire year.

	As of October 31,					As of January 31,	
	1998	1999	2000	2001	2002	2002	2003
	(in thousands)						
Balance Sheet Data:							
Cash and cash equivalents	\$250,714	\$143,440	\$ 143,187	\$ 397,890	\$ 377,189	\$ 472,533	\$ 305,053
Working capital	391,305	427,471	639,675	1,936,707	1,413,839	1,653,035	1,154,876
Total assets	602,809	677,835	1,027,201	3,317,301	2,751,022	3,218,778	2,543,066
Long-term obligations, excluding current portion	3,029	4,881	4,882	869,865	999,935	695,740	875,395
Stockholders' equity	\$501,036	\$530,473	\$ 809,835	\$2,128,982	\$1,527,269	\$2,068,365	\$1,427,195

	Year Ended October 31,					Three Months Ended Jan. 31,	
	1998	1999	2000	2001	2002	2002	2003
	(in thousands, except per share data)						

Statement of Operations Data:							
Revenue	\$508,087	\$482,085	\$858,750	\$1,603,229	\$ 361,155	\$162,156	\$70,474
Provision (benefit) for excess and obsolete inventory costs	9,617	6,534	15,022	68,411	286,475	20,414	(2,657)
Cost of goods sold	246,397	293,235	462,371	836,138	309,559	119,273	56,866
Gross profit (loss)	252,073	182,316	381,357	698,680	(234,879)	22,469	16,265

Operating expenses:							
Research and development (exclusive of \$0, \$0, \$0, \$17,783, \$15,672, \$3,951 and \$3,798 deferred stock compensation costs)	71,186	101,006	125,434	235,831	239,619	64,756	53,734
Selling and marketing (exclusive of \$0, \$0, \$0, \$8,378, \$3,560, \$956 and \$759 deferred stock compensation costs)	47,343	61,603	90,922	146,949	130,276	37,600	26,605
General and administrative (exclusive of \$40, \$40, \$40, \$15,206, \$1,092, \$227 and \$374 deferred stock compensation costs)	18,428	22,696	33,960	57,865	50,820	13,655	12,206
Settlement of accrued contract obligation	—	—	(8,538)	—	—	—	—
Deferred stock compensation costs	40	40	40	41,367	20,324	5,134	4,931
Amortization of goodwill	2,341	3,197	3,197	177,786	—	—	—

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	Year Ended October 31,					Three Months Ended Jan. 31,	
	1998	1999	2000	2001	2002	2002	2003
(in thousands, except per share data)							
Amortization of intangible assets (exclusive of \$0, \$0, \$0, \$0, \$0, \$0 and \$381 included in cost of goods sold related to certain technology licenses)	229	438	438	4,413	8,972	1,813	3,554
In-process research and development	9,503	—	—	45,900	—	—	—
Restructuring costs	—	—	—	15,439	225,429	6,828	—
Goodwill impairment	—	—	—	1,719,426	557,286	—	—
Nortel settlement costs	—	—	—	—	—	—	2,500
Pirelli litigation	30,579	—	—	—	1,792	—	—
Merger related costs	2,548	13,021	—	—	—	—	—
Provision for doubtful accounts	806	250	28,010	(6,579)	14,813	—	—
Total operating expenses	183,003	202,251	273,463	2,438,397	1,249,331	129,786	103,530
Income (loss) from operations	69,070	(19,935)	107,894	(1,739,717)	(1,484,210)	(107,317)	(87,265)
Other income (expense), net	12,830	13,944	12,680	32,988	(2,554)	361	(19,518)
Income (loss) before income taxes	81,900	(5,991)	120,574	(1,706,729)	(1,486,764)	(106,956)	(106,783)
Provision (benefit) for income taxes	36,200	(2,067)	39,187	87,333	110,735	(36,365)	359
Net income (loss)	\$ 45,700	\$ (3,924)	\$ 81,387	\$(1,794,062)	\$(1,597,499)	\$ (70,591)	\$(107,142)
Basic net income (loss) per common share	\$ 0.19	\$ (0.01)	\$ 0.29	\$ (5.75)	\$ (4.37)	\$ (0.22)	\$ (0.25)
Diluted net income (loss) per common and dilutive potential common share	\$ 0.18	\$ (0.01)	\$ 0.27	\$ (5.75)	\$ (4.37)	\$ (0.22)	\$ (0.25)
Weighted average basic common shares outstanding	235,980	267,042	281,621	311,815	365,202	327,620	432,572
Weighted average basic common and dilutive potential common shares outstanding	255,788	267,042	299,662	311,815	365,202	327,620	432,572

Significant events affecting CIENA's operating trends. The comparability of CIENA's operating results is affected by a number of significant and nonrecurring items recognized in some periods as well as acquisitions. In fiscal 1998, CIENA incurred special charges of \$30.6 million related to the Pirelli litigation, \$2.6 million of merger related costs associated with the contemplated merger with Tellabs and \$9.5 million in-process research and development charge associated with the acquisition of Terabit Technology. In fiscal 1999, CIENA incurred \$13.0 million of merger related costs associated with the purchase of Lightera and Omnia. In fiscal 2000, CIENA incurred \$28.0 million of additional provision for doubtful accounts associated with the write-off of customer receivables. In fiscal 2001, CIENA recorded a goodwill impairment of \$1,719.4 million related to the Cyras acquisition, an in-process research and development charge of \$45.9 million in connection with the Cyras acquisition, and restructuring costs to close facilities and terminate employees of \$15.4 million. In fiscal 2002, CIENA recorded a \$286.5 million provision for excess and obsolete inventory, \$225.4 million for restructuring costs to close facilities, dispose of certain excess equipment and terminate employees, and \$557.3 million related to goodwill impairment. During the three months ended January 31, 2002, CIENA recorded \$6.8 million of restructuring costs associated with exiting facilities and terminating employees. The operating results have been significantly impacted by the acquisitions of Lightera and Omnia in 1999, Cyras Systems in 2001 and ONI Systems in 2002.

RISK FACTORS

In addition to the risks described in CIENA's most recently filed Form 10-Q, you should carefully consider the following risk factors relating to the merger before deciding how to vote your shares. You should also consider the other information contained in or incorporated by reference into, this proxy statement/prospectus. See "Where You Can Find More Information" on page 76.

The value of the CIENA common stock that WaveSmith stockholders receive in the merger will depend on its market price at the time of the merger, and no adjustment will be made if that market price declines.

The value of CIENA common stock that WaveSmith stockholders will receive in the merger depends on the market price of CIENA common stock. The market price of CIENA common Stock may decline, causing the value of the consideration received by WaveSmith stockholders in the merger to decline. The market price of CIENA common stock is extremely volatile and has fluctuated over a wide range. From _____, 2002 to April _____, 2003, CIENA common stock traded as high as \$ _____ per share and as low as \$ _____ per share. From April 8, 2003, the last trading day prior to the date on which the merger was announced, through April _____, 2003, the price of CIENA common stock has increased approximately _____. The market price of CIENA common stock may continue to fluctuate significantly in response to various factors, including:

- quarterly variations in operating results principally due to customer purchasing decisions;
- changes in estimates by securities analysts;
- continued low levels in capital spending by customers; and
- general economic conditions.

Neither company can terminate the merger due to fluctuations in CIENA's stock price.

Neither party has the right to terminate the merger due to increases or decreases in CIENA's stock price, even if those fluctuations would materially affect the value of the consideration WaveSmith stockholders will receive in the merger. CIENA has agreed to issue approximately 36,047,498 shares of CIENA common stock for all of WaveSmith outstanding capital stock, including the assumption of outstanding options to acquire WaveSmith stock. This represented a value of approximately \$170 million on April 8, 2003, based on a per share price for CIENA common stock of \$4.716, which is the average of the per share prices for CIENA's common stock for the last five trading days prior to the date on which the merger was announced. This amount, however, includes approximately 2,430,508 shares issuable in respect of shares of WaveSmith series C preferred stock that CIENA already owns.

If the price for CIENA common stock increases, CIENA would not be able to terminate the merger, even though it would be paying significantly more for WaveSmith. If the price of CIENA common stock decreases, WaveSmith would not be able to terminate the merger, even though its stockholders would receive less value for their shares of WaveSmith. The value of the aggregate consideration to be received by WaveSmith stockholders was calculated on April 9, 2003, the date the merger agreement was executed, using the average closing price for CIENA common stock for the five days ending on April 8, 2003, which was \$4.716. On April 25, 2003, the closing price of CIENA common stock had decreased to \$4.22, thereby decreasing the value of the consideration to be paid for all of WaveSmith outstanding capital stock and stock options to approximately \$152 million.

Directors and officers of WaveSmith may have conflicts of interest that influenced their decisions to approve the merger.

You should be aware of potential conflicts of interest of, and the benefits available to, directors and executive officers of WaveSmith when considering the WaveSmith board of directors' recommendation of the merger agreement. Some directors and executive officers of WaveSmith have interests in the merger that are in addition to, or different from, their interests as WaveSmith stockholders. These interests are described under "The Merger — Interests of Executive Officers and Directors in the Merger" on page 26.

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These interests include:

- *Accelerated Vesting of Restricted Stock.* WaveSmith's right to repurchase an aggregate of 17,084,327 shares of WaveSmith common stock held by executive officers and directors will terminate upon completion of the merger.
- *Directors' and Officers' Insurance; Indemnification of WaveSmith's Directors and Officers.* Under the merger agreement, CIENA will purchase insurance and provide indemnification for present and former directors of WaveSmith with respect to acts and omissions in their capacities as directors and officers of WaveSmith, for six years following closing, including acts and omissions relating to the merger.
- *Reallocation of Consideration to Common Stockholders.* As a result of the merger of WS Contract Corp. into WaveSmith immediately prior to the merger of WaveSmith into CIENA, the value of the WaveSmith common stock will be increased, resulting in WaveSmith common stockholders, including stockholders who are executive officers of WaveSmith, receiving a greater number of shares of CIENA common stock pursuant to the merger than such stockholders would have received if the merger of WS Contract Corp. into WaveSmith had not occurred.

The structure and implementation of the merger involve a number of risks including risks of integration, unknown liabilities, tax, securities and accounting matters.

The merger involves the combination of CIENA with a private company with limited operating history and is a complex transaction. Among the risks the merger involves are risks of successful integration, potential liabilities that may be incurred as a result of the merger, tax consequences, securities law matters and accounting treatment.

Successful integration involves numerous risks, including:

- assimilating WaveSmith's technology and product offerings, which may be more difficult than anticipated because the technology is very complex;
- coordinating research and development efforts, which may involve unexpected problems;
- diversion of management attention from business matters to integration issues;
- identifying and retaining key personnel which may be difficult in the combined company;
- integrating accounting, engineering, information technology and administrative systems which may be unexpectedly difficult or costly;
- making significant cash expenditures that may be required to retain personnel, eliminate unnecessary resources and integrate the business;
- maintaining uniform standards, controls, procedures and policies which may be harder than we anticipate and interfere with efficient administration of the combined company; and
- changes in the businesses as a result of the merger that impair relationships with employees, customers or vendors.

In addition, as a result of the merger, CIENA will succeed to any liabilities of WaveSmith now existing or arising out of WaveSmith's businesses prior to closing, including unknown liabilities. These liabilities may include liabilities to customers, suppliers or employees, as well as potential liabilities that can arise from intellectual property disputes.

The merger also involves complex tax, securities law and accounting issues, some of which entail risks that may affect the combined company or the former WaveSmith stockholders. For instance, while the federal income tax consequences of the merger are the subject of opinions of counsel and are discussed below in "Federal Income Tax Consequences," CIENA will not request a ruling from the Internal Revenue Service as to the tax consequences of the merger, and opinions of counsel are not binding on the IRS or the courts. There is some uncertainty as to whether obtaining the agreements of stockholders to vote in favor of the merger prior to filing a registration statement with the SEC complies with the registration requirements of the Securities Act. While the parties believe that the merger will

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result in the federal income tax consequences described herein, and that the merger has been and will be effected in compliance with applicable securities and other laws, there can be no assurance that this is the case. CIENA will also be required to make estimates of the fair market value of certain acquired assets and liabilities which will depend on predictions about future developments. If these predictions are incorrect CIENA may be required to record adjustments to its financial statements in the future.

Failure to overcome these risks or any other problems encountered in connection with the merger could have a material adverse effect on CIENA's business, results of operations and financial condition.

The current telecommunications industry downturn could continue to adversely affect the revenues, gross margins and expenses of the combined company.

The revenues and gross margins of the combined company will depend significantly on the overall demand for telecommunications equipment. Continued weak demand for telecommunications equipment of CIENA and WaveSmith caused by the ongoing economic downturn may result in decreased revenues for the combined company. The downturn has contributed to revenue declines during recent quarters, as well as a lowered revenue outlook for both companies. It has also caused both companies to take restructuring actions and contributed to writedowns to reflect the impairment of certain assets. There could be more of these adverse effects. If the combined company cannot realign its costs relative to its revenues in response to economic conditions and competitive pressures, its margins could be adversely affected.

WaveSmith common stockholders may be required to bear the market risk for income taxes due as a result of the merger of WS Contract Corp. into WaveSmith.

As a result of the merger of WS Contract Corp. into WaveSmith immediately prior to the merger of WaveSmith into CIENA, the value of the WaveSmith common stock will be increased, resulting in WaveSmith common stockholders receiving a greater number of shares of CIENA common stock pursuant to the merger than such stockholders would have received if the merger of WS Contract Corp. into WaveSmith had not occurred. Although the matter is not free from doubt, CIENA and WaveSmith believe that the additional value received by the WaveSmith common stockholders, as a result of the increased value of the WaveSmith common stock, should be taxed to the WaveSmith common stockholders as ordinary income, as discussed below, under the heading "The Merger — Federal Income Tax Consequences." Accordingly, the WaveSmith common stockholders may be required to recognize the ordinary income attributable to the merger of WS Contract Corp. into WaveSmith, even though they may not be able to satisfy this liability by immediately selling the shares of CIENA common stock received in the merger with CIENA. If the value of the additional shares of CIENA common stock declines between the effective time of the merger of WS Contract Corp. and WaveSmith and the date such shares are sold, such sale will result in a capital loss in certain circumstances. The ability to offset capital losses against ordinary income is limited. For a further discussion of the federal income tax consequences of these transactions, see "The Merger — Federal Income Tax Consequences."

FORWARD-LOOKING STATEMENTS

Some of the statements contained, or incorporated by reference, in this proxy statement/prospectus discuss future expectations, contain projections of results of operations or financial condition or state other “forward-looking” information. Those statements are subject to known and unknown risks, uncertainties and other factors that could cause the actual results to differ materially from those contemplated by the statements. The “forward-looking” information is based on various factors and was derived using numerous assumptions. In some cases, you can identify these so-called “forward-looking statements” by words like “may,” “will,” “should,” “expects,” “plans,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” or “continue” or the negative of those words and other comparable words. You should be aware that those statements only reflect our predictions. Actual events or results may differ substantially. Important factors that could cause our actual results to be materially different from the forward-looking statements are disclosed under the heading “Risk Factors” beginning on page 8 and throughout this proxy statement/prospectus.

THE SPECIAL MEETING OF WAVESMITH NETWORKS, INC. STOCKHOLDERS

General

WaveSmith is furnishing this proxy statement/prospectus to its stockholders in connection with the solicitation of proxies by the WaveSmith board of directors for use at the special meeting of stockholders of WaveSmith to be held on _____, 2003, and at any adjournment or postponement thereof. This document is also being furnished to WaveSmith stockholders by CIENA as a prospectus of CIENA in connection with the issuance by CIENA of shares of CIENA common stock as contemplated by the merger agreement.

This document was first mailed to stockholders of WaveSmith on or about _____, 2003.

Date, Time and Place

The special meeting will be held on _____, 2003 at [9:00] a.m., local time, at the offices of Testa, Hurwitz & Thibault, LLP, 125 High Street, Boston, Massachusetts. WaveSmith's telephone number is (978) 929-9100.

Purpose of the Special Meeting

The purpose of the WaveSmith special meeting is to consider and vote upon proposals to:

1. Approve and adopt the Agreement and Plan of Merger, dated as of April 9, 2003, between CIENA Corporation, a Delaware corporation, and WaveSmith pursuant to which WaveSmith will be merged with and into CIENA, with CIENA being the surviving corporation;
2. Grant the WaveSmith board of directors discretionary authority to adjourn the special meeting to solicit additional votes for approval and adoption of the merger agreement and for approval of the merger; and
3. Consider and act upon any other matter which may properly come before the special meeting.

Record Date and Voting

Holders of record of shares of WaveSmith common stock and preferred stock at the close of business on _____, 2003, referred to in this proxy statement/prospectus as the record date, are entitled to notice of and to vote at the WaveSmith special meeting. On the record date, there were outstanding

- 79,787,626 shares of common stock,
- 185,000 shares of series A preferred stock,
- 9,015,000 shares of series A-1 preferred stock,
- 2,353,370 shares of series B preferred stock,
- 33,333,331 shares of series B-1 preferred stock and
- 92,963,301 shares of series C preferred stock.

Each share of common stock is entitled to 1 vote on each matter brought properly before the meeting. Each share of preferred stock is entitled to a number of votes equal to the number of shares of common stock into which such share of preferred stock may be converted into pursuant to WaveSmith certificate of incorporation. Each share of series A preferred stock is entitled to 2 votes for each matter brought properly before the meeting. Each share of series A-1 preferred stock is entitled to 3.51667 votes for each matter brought properly before the meeting. Each share of series B preferred stock is entitled to 1 vote for each matter brought properly before the meeting. Each share of series B-1 preferred stock is entitled to 2.4 votes for each matter brought properly before the meeting. Each share of series C preferred stock is

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entitled to 1 vote for each matter brought properly before the meeting. However, as described below, approval of the merger requires special votes of preferred stockholders.

Generally, the representation, in person or by properly executed proxy, of the holders of a majority of all the shares of capital stock issued and outstanding and entitled to vote at the WaveSmith special meeting is necessary to constitute a quorum at the WaveSmith special meeting. In connection with the separate vote by the series A and series A-1 preferred stock, series B and series B-1 preferred stock and series C preferred stock, one-third of the outstanding shares of such class or classes of capital stock, present in person or represented by proxy, shall constitute a quorum entitled to take action at the WaveSmith special meeting. If you sign and send in your proxy card and do not indicate how you want to vote, it will be voted in favor of approval of the merger and the agreement and plan of merger and in favor of the other proposals.

Under Delaware law and the charter documents of WaveSmith, approval of the merger and the agreement and plan of merger requires the affirmative vote of:

- a majority of the outstanding shares of WaveSmith's common stock and preferred stock, voting as a single class on an as-converted basis;
- a majority of the outstanding shares of WaveSmith's series A and series A-1 preferred stock, voting together as a single class on an as-converted basis;
- 60% of the outstanding shares of WaveSmith's series B and series B-1 preferred stock, voting together as a single class on an as-converted basis; and
- 75% of the outstanding shares of WaveSmith's series C preferred stock, voting as a separate class on an as-converted basis.

Abstentions from voting identified as such on the proxy card are treated as present or represented for purposes of determining the presence or absence of a quorum at the special meeting. However, abstentions will have the same effect as votes against the merger.

As of the close of business on the record date for the special meeting, WaveSmith directors and executive officers (and their respective affiliates) held approximately 38,936,610 shares of WaveSmith common stock and 145,165,518 shares of WaveSmith preferred stock on an as converted basis or approximately 48.8% and 70.0% of the shares of WaveSmith common stock and preferred stock entitled to vote at the special meeting, excluding options and warrants to purchase WaveSmith common stock or preferred stock which were unexercised as of the record date. In addition, directors, executive officers and stockholders of WaveSmith beneficially owning

- 182,175,585 shares, representing 63.4% of WaveSmith's common stock and preferred stock, voting as a single class on as as-converted basis,
- 28,203,689 shares, representing 87.9% of WaveSmith's series A and series A-1 preferred stock, together on an as-converted basis,
- 66,666,661 shares, representing 81.0% of WaveSmith's series B and series B-1 preferred stock, together on an as-converted basis, and
- 66,961,835 shares, representing 72.0% of WaveSmith's series C preferred stock, voting as a separate class on an as-converted basis,

have entered into agreements, pursuant to which they have agreed to vote their WaveSmith shares in favor of adoption and approval of the merger agreement and approval of the merger, against any proposal made in opposition to, or in competition with, the merger, and against any proposal intended to impede, frustrate, prevent or nullify the merger, or that could reasonably be expected to change the voting rights of the capital stock. In addition, a majority of the stockholders that have signed a voting agreement have granted CIENA an option to purchase its shares at the merger price, for cash, in the event the merger agreement is terminated by WaveSmith to allow WaveSmith to pursue an offer for

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WaveSmith that its board considers superior. See the section entitled “The Merger — Interests of Directors and Officers of WaveSmith in the Merger.” As of the close of business on the record date, CIENA, through its wholly-owned subsidiary, MultiWave Investment, Inc., owned 16,666,667 shares of WaveSmith series C preferred stock, representing approximately 17.9% of WaveSmith series C preferred stock, which it intends to vote in favor of the merger and approval of the merger agreement. As of the close of business on the record date, no officer or director of CIENA owned shares of WaveSmith common or preferred stock.

Voting of Proxies at the Special Meeting and Revocation of Proxies

All shares of WaveSmith capital stock that are entitled to vote and are represented at the WaveSmith special meeting by properly executed proxies received prior to or at such meeting, and not revoked, will be voted at such meeting in accordance with the instructions indicated on such proxies. If no instruction is indicated, such proxies will be voted **FOR** approval and adoption of the merger and the agreement and plan of merger and in favor of the other proposals.

The WaveSmith board of directors does not know of any matters other than those described in the notice of the WaveSmith special meeting that are to come before such meeting. If any other matters are properly presented at the WaveSmith special meeting for consideration, the persons named in the enclosed proxy card and acting thereunder generally will have discretion to vote on such matters in accordance with their best judgment.

Any proxy given pursuant to the solicitation may be revoked by the person giving it at any time before it is voted. Proxies may be revoked by

- filing with Gregg Savage, the Secretary of WaveSmith, at or before the taking of a vote at the WaveSmith special meeting, a written notice of revocation bearing a later date than the proxy,
- duly executing a later dated proxy relating to the same shares and delivering it to Mr. Savage before the taking of the vote at the WaveSmith special meeting, or
- attending the WaveSmith special meeting and voting in person (although attendance at the WaveSmith special meeting will not in and of itself constitute a revocation of a proxy).

Any written notice of revocation or subsequent proxy should be sent to WaveSmith, Inc., 35 Nagog Park, Acton, MA 01720, Attn: Gregg Savage, Secretary, or hand-delivered to Mr. Savage at or before the taking of the vote at the WaveSmith special meeting.

WaveSmith will be soliciting proxies on its own behalf. WaveSmith intends to solicit proxies through this proxy statement/prospectus and directly through its directors, officers and regular employees. Solicitation of some stockholders may be made in person or by mail, telephone, facsimile transmission or other means of electronic transmission.

WaveSmith will bear its own expenses in connection with the solicitation of proxies for its special meeting of stockholders, except that CIENA will bear all printing and filing costs and expenses, other than attorneys’ and accountants’ fees and expenses of WaveSmith. CIENA will bear all other expenses incurred in connection with the preparation of this document and the preparation and filing of the registration statement of which this document forms a part.

Quorum and Abstentions

A majority of all shares of WaveSmith common stock and preferred stock outstanding as of the record date and one-third of each class or classes of preferred stock entitled to a special vote outstanding as of the record date, represented in person or by proxy, constitutes a quorum for the transaction of business at the special meeting. Broker non-votes and shares held by persons abstaining will be counted in determining whether a quorum is present at the WaveSmith special meeting. WaveSmith has appointed Gregg Savage, its Secretary, to function as the inspector of elections of the special meeting. The inspector of elections will ascertain whether a quorum is present, tabulate votes and determine the voting results on

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all matters presented to WaveSmith stockholders at the special meeting. If a quorum is not present, or fewer shares of WaveSmith common and preferred stock are voted for the adoption and approval of the merger agreement than the required amount to approve the merger vote at the special meeting in person or by proxy, if stockholders approve the grant of discretionary authority to the WaveSmith board of directors to adjourn the meeting, the special meeting may be postponed or adjourned for the purpose of allowing additional time for obtaining additional proxies or votes, and, if stockholders approve the grant of discretionary authority to the WaveSmith board of directors to adjourn the meeting, at any subsequent reconvening of the special meeting, all proxies will be voted in the same manner as the proxies would have been voted at the original convening of the special meeting, except for any proxies that have been effectively revoked or withdrawn prior to the subsequent reconvening of the special meeting.

If you submit a proxy that indicates an abstention from voting in all matters, your shares will be counted as present for the purpose of determining the existence of a quorum at the special meeting, but they will not be voted on any matter at the applicable special meeting. Consequently, your abstention will have the same effect as a vote against the proposal to adopt and approve the merger agreement and to approve the merger.

Board of Directors Recommendation

The WaveSmith board of directors has unanimously determined that the merger agreement is advisable, and that the terms of the merger agreement and the merger are fair to and in the best interests of WaveSmith and its stockholders. Accordingly, the WaveSmith board of directors has unanimously approved the merger agreement and unanimously recommends that stockholders vote **“FOR”** adoption and approval of the merger agreement and approval of the merger, as well as **“FOR”** approval of the grant of discretionary authority to adjourn the meeting to solicit additional votes if necessary. In considering such recommendations, WaveSmith stockholders should be aware that some WaveSmith directors and officers have interests in the merger that are different from, or in addition to, those of WaveSmith stockholders, and that WaveSmith and CIENA have provided indemnification arrangements to directors and officers of WaveSmith. See “The Merger and Related Transactions — Interests of Directors and Officers of WaveSmith in the Merger.”

The matter to be considered at the special meeting is of great importance to the stockholders of WaveSmith. Accordingly, WaveSmith stockholders are urged to read and carefully consider the information presented in this document and to complete, date, sign and promptly return the enclosed proxy in the enclosed, postage-paid envelope.

WaveSmith’s stockholders should not send any stock certificates with their proxy cards. A transmittal form with instructions for the surrender of WaveSmith common stock certificates will be mailed to WaveSmith stockholders promptly following completion of the merger. For more information regarding the procedures for exchanging WaveSmith stock certificates for CIENA stock certificates, see “The Merger and Related Transactions — The Merger Agreement — Exchange of WaveSmith Stock Certificates for CIENA Stock Certificates.”

THE MERGER

General

The boards of directors of CIENA and WaveSmith have each approved the merger agreement, which provides for the merger of WaveSmith with and into CIENA, with CIENA being the surviving corporation of the merger. Each share of WaveSmith common stock and WaveSmith series A preferred stock, series A-1 preferred stock, series B preferred stock, series B-1 preferred stock and series C preferred stock outstanding immediately prior to the merger will be converted into the right to receive shares of CIENA common stock. The shares of WaveSmith common stock and WaveSmith preferred stock will be converted into a number of shares of CIENA common stock in accordance with the formulas specified in the merger agreement, as described under “Terms of the Merger Agreement and Related Transactions — Conversion of WaveSmith Preferred Stock and Common Stock; Treatment of Options and Warrants.” Fractional shares of CIENA common stock will not be issued in connection with the merger, and WaveSmith stockholders otherwise entitled to a fractional share will be paid in cash for the fractional share, in the manner described under “Terms of the Merger Agreement and Related Transactions — Exchange of Certificates; Fractional Shares.”

Background of the Merger

As a regular part of their businesses, CIENA and WaveSmith from time to time have each independently considered opportunities to expand and strengthen their own technology, products, research and development capabilities and distribution channels, including distribution agreements, acquisitions, investments, licenses, development agreements and joint ventures.

Beginning in January 2002, WaveSmith’s management, upon instructions from its board of directors, began to seek additional sources of funding for WaveSmith. Members of WaveSmith’s management had meetings with numerous strategic and financial investors regarding a potential investment in and/or strategic transaction with WaveSmith.

As a result of these discussions, Company A, a large Nasdaq-listed telecommunications equipment manufacturer, expressed interest in a potential strategic transaction with WaveSmith. During June 2002, representatives of Company A visited WaveSmith’s offices several times to conduct a due diligence investigation of WaveSmith and to meet with WaveSmith’s management.

On June 5, 2002, at the Supercomm 2002 trade show in Atlanta, Georgia, Emil Savov, CIENA’s Senior Director Corporate Development, met with Mike Deskewies, Vice President Business Development for Équipe Communications Corporation, a manufacturer of core multiservice switches. CIENA had previously announced both a strategic investment in Équipe and a worldwide reseller agreement between CIENA and Équipe. Mr. Deskewies suggested to Mr. Savov that it would be useful for CIENA to meet with WaveSmith in order to explore possible synergies and complementary product offerings.

On June 6, 2002, Mr. Savov and Jeff Wabik, CIENA’s Vice President Systems Architecture, met with Brian Fitzgerald, then WaveSmith’s Executive Vice President for Worldwide Sales, and Chad Dunn, then WaveSmith’s Director of Product Management. On the same day, Stephen Alexander, CIENA’s Senior Vice President and Chief Technology Officer, and Stephen Kaye, CIENA’s Vice President Corporate Development, met with Messrs. Fitzgerald and Dunn. The topics of discussion at both meetings included WaveSmith’s products and technology, value proposition, capital requirements and financing activities, as well as the potential for cooperation between the two companies and a possible strategic investment in WaveSmith by CIENA.

On June 11, 2002, CIENA and WaveSmith entered into a nondisclosure agreement.

On June 12, 2002, after discussions with several investment banking firms, WaveSmith engaged the investment banking firm Thomas Weisel Partners LLC (“TWP”) to act as its financial advisor to assist with negotiations with Company A and to identify additional potential sources of capital and/or strategic partners for WaveSmith.

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Also on June 12, 2002, Robert Dalias, then WaveSmith's President and Chief Executive Officer, had conversations with Mr. Savov regarding a potential strategic relationship between WaveSmith and CIENA. Mr. Savov indicated that CIENA may be interested in such a relationship. The discussion was focused on an investment in WaveSmith by CIENA and a commercial agreement between the parties giving CIENA rights to distribute WaveSmith products.

In late June 2002, Company A informed WaveSmith that it had decided to end discussions regarding a potential strategic transaction between the companies.

During the period between June 2002 and September 2002, TWP contacted approximately seven potential strategic partners on behalf of WaveSmith including several publicly traded telecommunications equipment manufacturers. In addition, members of WaveSmith's management contacted approximately 20 potential financial investors and/or strategic partners.

On June 20, 2002, Mr. Wabik visited WaveSmith's offices in Acton, Massachusetts, to conduct technical due diligence on WaveSmith's products and technology, and met with Mr. Dunn and Jim Donovan, WaveSmith's Director of Systems Engineering.

On June 26, 2002, a meeting took place in Columbia, Maryland between representatives of CIENA and WaveSmith. CIENA's team consisted of Gary Smith, CIENA's President and Chief Executive Officer, Steve Chaddick, CIENA's Senior Vice President and Chief Strategy Officer, Joseph R. Chinnici, CIENA's Senior Vice President Finance and Chief Financial Officer, and Mr. Kaye. WaveSmith was represented by Mr. Dalias, John O'Hara, then WaveSmith's Vice President of Engineering and Mr. Fitzgerald. The parties discussed their respective products' technology, business strategies and the potential for cooperation between the two companies.

On June 28, 2002, Messrs. Kaye and Savov met with Messrs. Dalias, O'Hara, Fitzgerald and Donovan at WaveSmith's offices, to conduct business due diligence on WaveSmith and to explore further the possibility of a CIENA investment in WaveSmith.

Over the next few weeks, Mr. Kaye performed additional due diligence by contacting several customer references provided by WaveSmith, and the parties continued to discuss the specifics of a potential business arrangement.

On July 11, 2002, CIENA sent WaveSmith a draft of a non-binding letter of intent with respect to a proposed equity investment in WaveSmith's next round of funding and certain special rights for CIENA surrounding such investment. The letter of intent also provided general terms for a worldwide reseller agreement, which would give CIENA the right to market, sell and support WaveSmith's products into larger carrier accounts. Over the next several weeks, CIENA and WaveSmith negotiated the terms of the letter of intent.

On July 30 and 31, 2002, Mr. Wabik performed additional technical due diligence on WaveSmith's products and technology at WaveSmith's offices.

On July 30, 2002, WaveSmith received a letter of intent from Company B, an outside financial investor, to lead WaveSmith's next round of financing.

On July 31, 2002, at a meeting of WaveSmith's board of directors, the directors discussed and evaluated the proposed strategic relationship with CIENA. The board of directors approved the CIENA letter of intent as negotiated and instructed management to execute the CIENA letter of intent. The board members also discussed the letter of intent from Company B and instructed management to pursue negotiations with Company B.

From July 30, 2002 through August 14, 2002, members of WaveSmith's management, upon instructions from the board of directors, attempted to negotiate the terms of the letter of intent with Company B, particularly Company B's valuation of WaveSmith, which WaveSmith's management and board of directors viewed as unacceptable.

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On July 31, 2002, CIENA and WaveSmith entered into the letter of intent regarding the proposed financing and the strategic relationship.

Also on July 31, 2002, Mr. Dalias visited with members of management from Company C, a Nasdaq-listed telecommunications equipment manufacturer, regarding a potential acquisition of WaveSmith. Mr. Dalias reported Company C's interest to each of the members of WaveSmith's board of directors. The members of the board of directors concluded that Company C's valuation of WaveSmith was not acceptable.

On August 12, 2002, Mr. Dalias informed Company C that WaveSmith's board of directors did not support a potential acquisition of WaveSmith on the terms discussed. No further discussions between WaveSmith and Company C occurred until March 2003.

On August 14, 2002, Company B informed WaveSmith's management that it was not willing to proceed with an investment in WaveSmith at any valuation greater than the initial valuation it had proposed. No further discussions between WaveSmith and Company B occurred thereafter.

Throughout August and September, 2002, CIENA and WaveSmith directly, and indirectly through their respective counsel, Hogan & Hartson L.L.P. for CIENA and Testa, Hurwitz & Thibault, LLP for WaveSmith, had numerous conversations and exchanged drafts of the financing agreements and related agreements and the reseller agreement. The parties ultimately agreed that, in connection with CIENA's equity investment in WaveSmith's third round of funding, CIENA would be entitled to the following: (i) observer status on the WaveSmith board of directors; (ii) notification rights in the event that a third party made an offer to acquire WaveSmith; (iii) the right to a fee of 5% of the total consideration paid to WaveSmith in the event that WaveSmith agreed to be acquired by a third party prior to July 1, 2003; and (iv) the right to acquire WaveSmith during the period beginning on July 1, 2003 and ending on March 31, 2004 for \$150,000,000, to be paid upon closing of the acquisition, plus an "earn out" payment equal to two times the gross profit attributable to sales of WaveSmith's products for the 12 month period following the close of the acquisition. In connection therewith, the parties agreed that stockholders holding at least 80% of WaveSmith's total voting securities would immediately execute stockholder option agreements in favor of CIENA, pursuant to which they would agree to sell their shares to CIENA in the event that CIENA exercised its option after July 1, 2003 to acquire WaveSmith.

On September 10, 2002, the WaveSmith board of directors met to discuss the proposed terms of the financing and the strategic relationship with CIENA. The board of directors also discussed the efforts of management and TWP in connection with locating other potential sources of financing and/or strategic partners for WaveSmith. The board of directors authorized and instructed management to proceed with the financing and the strategic relationship with CIENA on the terms that were negotiated.

On September 18, 2002, WaveSmith and CIENA executed a series C preferred stock purchase agreement and related agreements and a worldwide reseller agreement. CIENA also executed documents with several of WaveSmith's principal stockholders giving CIENA an option to purchase their shares in the event that CIENA exercised its option after July 1, 2003 to acquire WaveSmith.

On October 21, 2002, WaveSmith issued a press release announcing the closing of the series C preferred stock financing.

On November 1, 2002, Thomas M. Burkardt, WaveSmith's recently appointed Chairman, President and Chief Executive Officer, visited CIENA's offices in Linthicum, Maryland, and met with Messrs. Smith, Kaye and Savov and Jim Collier, CIENA's Vice President North American Sales, to introduce himself and discuss the parties' business arrangement.

On January 28, 2003, Mr. Smith and Mr. Burkardt met at WaveSmith's offices to discuss the status of the parties' business relationship, the status of specific customer accounts, and WaveSmith's projected capital requirements. On the same date, Mr. Smith also met with Rob Soni, a former member of the WaveSmith board of directors and then a partner with Bessemer Venture Partners, one of WaveSmith's lead investors, to discuss the business arrangement between CIENA and WaveSmith. Also on January 28,

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2003, Mr. Smith had dinner with Robert O'Neil, WaveSmith's new Vice President of Worldwide Sales, Michael Regan, WaveSmith's Vice President of Engineering, and Mr. Donovan.

On February 17, 2003, Mr. Burkardt contacted Mr. Smith to discuss the status of the parties' existing business arrangement, WaveSmith's projected capital requirements and topics pertaining to joint customers. During the call, Mr. Burkardt inquired as to whether CIENA would be interested in pursuing a business combination with WaveSmith in advance of July 1, 2003.

On February 18, 2003, Mr. Smith informed Mr. Burkardt that CIENA would be interested in acquiring WaveSmith, provided that the parties could agree on a purchase price. Messrs. Smith and Burkardt agreed that the earn out portion of CIENA's option to acquire WaveSmith was problematic. They also discussed the purchase prices for the transaction. After discussions regarding the capital structure of WaveSmith and the morale of WaveSmith employees, the parties agreed that any transaction would have to contain structural elements intended to provide appropriate incentives for employees of WaveSmith. Mr. Smith then suggested some terms for discussion purposes with WaveSmith's board. Mr. Burkardt informed Mr. Smith that he would discuss the proposal with WaveSmith's board of directors before he could formally respond to Mr. Smith's suggested terms.

On February 20, 2003, Mr. Burkardt had conversations with each of the members of WaveSmith's board of directors regarding his discussions with Mr. Smith.

Over the next three days, Messrs. Smith and Burkardt had several discussions about the purchase price. On February 21, 2003, Messrs. Burkardt and Smith reached a tentative understanding on purchase price. Mr. Smith indicated, however, that the price was subject to completion of CIENA's due diligence. Also on February 21, 2003, WaveSmith's board of directors met to continue discussions regarding the terms of the potential acquisition of WaveSmith by CIENA including the consideration to be paid to WaveSmith stockholders and the structure of the proposed transaction. The board of directors also discussed the status of discussions with other potential acquirers of WaveSmith and the likelihood of receiving additional indications of interest. The board of directors directed Mr. Burkardt to proceed with negotiations with CIENA.

On February 22, 2003, CIENA's legal advisors from Hogan & Hartson commenced a legal due diligence review of WaveSmith, which continued through February 26, 2003.

On February 22, 23 and 25, 2003, WaveSmith's board of directors met with WaveSmith's legal advisors to discuss the status of the negotiations between the parties and the potential structures of the transaction. The board considered that if an agreement for the acquisition of WaveSmith by CIENA was executed but later terminated prior to consummation of the transaction, the business relationship between the parties would be severely damaged. Therefore, the board instructed management to negotiate a provision in the merger agreement providing that if the transaction was not consummated, the existing Reseller Agreement and related agreements with CIENA would terminate.

On February 24, 25 and 26, 2003, a CIENA due diligence team conducted a series of meetings with WaveSmith representatives at a hotel in Massachusetts near WaveSmith's offices and at the offices of Testa, Hurwitz & Thibault in Boston. CIENA representatives at one or more of those meetings included Messrs. Kaye and Chinnici, Russell B. Stevenson, Jr., CIENA's Senior Vice President and General Counsel, Andrew C. Petrik, CIENA's Vice President, Controller and Treasurer, and Lynn Moore, CIENA's Vice President Compensation. WaveSmith representatives at one or more of those meetings included Mr. Burkardt, Mr. O'Neil, Gregg Savage, Chief Financial Officer, Brian Silver, Director of Products & Technology Steven Kalus, Controller and Kathleen Boyle, Manager Human Resources.

On February 25, 2003, Hogan & Hartson sent to WaveSmith and Testa, Hurwitz & Thibault a first draft of a definitive merger agreement, stockholder voting agreements and related agreements.

On February 26, 2003, Mr. Kaye contacted Mr. Burkardt in the late afternoon and informed him that CIENA had concluded from its due diligence on WaveSmith's revenue prospects that a downward adjustment in the proposed purchase price for WaveSmith might be required. Shortly thereafter, as a

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result of that discussion, Mr. Burkardt requested the cessation of all due diligence activities until he could speak further with Mr. Smith.

On February 28, 2003, at a meeting of WaveSmith's board of directors, Mr. Burkardt provided an update as to the status of discussions with CIENA. The board of directors instructed management to arrange a meeting with CIENA to attempt to resolve the remaining pending issues. The board also instructed management to contact TWP for the purpose of assisting in the identification of other potential partners and to assist in the negotiations with CIENA. In addition, the board instructed management to continue to investigate the interest of other potential strategic partners through their own contacts.

On March 1, 2003, Mr. Smith spoke with Mr. Burkardt and confirmed CIENA's desire to reduce the purchase price.

On March 4, 2003, representatives of TWP had a meeting with Messrs. Kaye, Chinnici and Petrik to discuss the open issues.

On March 6, 2003, at a meeting of WaveSmith's board of directors, Mr. Burkardt reported that CIENA and WaveSmith were still working to resolve open issues. In addition, Mr. Burkardt reported on efforts to locate other parties interested in a strategic transaction with WaveSmith. Mr. Burkardt reported that WaveSmith's financial advisors had contacted several publicly traded telecommunications equipment companies.

During the period from March 6, 2003 to March 28, 2003, WaveSmith management and CIENA management had various meetings to discuss creating more efficiencies under the reseller agreement between the parties.

On March 11, 2003, Messrs. Smith and Burkardt discussed the major substantive issues that had arisen as a result of CIENA's due diligence.

On March 12, 2003, at the regularly scheduled quarterly meeting of the CIENA board of directors, CIENA's senior management provided an update on the status of discussions with WaveSmith regarding a possible business combination, including the strategic and financial reasons for such a combination and the fact that no agreement had been reached as to the purchase price. After discussion, the CIENA board of directors expressed general support for the strategic value of an acquisition of WaveSmith, and authorized management to continue discussions with a view toward reaching agreement on acceptable terms.

On March 14, 2003, Messrs. Smith and Burkardt again spoke about the status of negotiations, and Mr. Burkardt suggested that TWP be provided a further opportunity to explain their analysis of WaveSmith to CIENA.

Starting in mid-March 2003, three other potential transaction partners contacted WaveSmith. Between March 31, 2003 and April 5, 2003, Mr. Burkardt had discussions with each of the three parties that had expressed interest in a strategic transaction with WaveSmith. Of the three, only Company C indicated a firm interest in pursuing an acquisition of WaveSmith. Company C proposed a cash acquisition of WaveSmith for a price lower than CIENA's proposal. During the same time, Messrs. Burkardt, Smith, Chinnici and Savage had various discussions regarding the open issues relating to the transaction between CIENA and WaveSmith.

On March 21 and 23, 2003, Messrs. Smith and Burkardt had further discussions of the purchase price for the transaction, as well as the potential for a reduction in the liquidation preferences for WaveSmith's preferred stockholders to enable employees holding common stock to receive a greater portion of the acquisition price. On March 31, 2003, the parties reached a tentative agreement regarding the purchase price for the transaction and a reduction in the existing liquidation preferences for WaveSmith's preferred stockholders, contingent on successful conclusion of the negotiations of the merger agreement.

On March 31, 2003, at a meeting of WaveSmith's board of directors, Mr. Burkardt outlined the existing terms of CIENA's acquisition proposal. The board also discussed CIENA's desire to provide sufficient incentives to retain employees. Mr. Burkardt also reported that three other telecommunications

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equipment vendors had recently expressed interest in discussing a strategic transaction with WaveSmith, one of which was Company C. WaveSmith's board instructed management to continue negotiating definitive documentation with CIENA while also exploring the possibility of alternative transactions.

On April 1, 2003, WaveSmith caused Testa, Hurwitz & Thibault to send to CIENA comments on the draft of the merger agreement and related agreements on behalf of WaveSmith. Also on April 1, 2003, Mr. Burkardt received a telephone call from Mr. Smith to discuss the status of outstanding issues and the desire to complete the remaining due diligence and contract negotiations as soon as possible. Mr. Smith informed Mr. Burkardt that CIENA was comfortable with an acquisition price in CIENA common stock that valued WaveSmith at \$170 million and the parties agreed that the structure of the transaction should reflect appropriate incentives for WaveSmith employees.

Following this discussion, until the definitive merger agreement was signed on April 9, 2003, the parties and their respective legal advisors had numerous discussions regarding due diligence matters and conducted negotiations of the definitive terms of the transaction, including the terms of the merger agreement and the escrow agreement. Throughout these discussions, representatives of CIENA reiterated CIENA's condition that directors of the Company, and their affiliates, should execute voting agreements in substantially the form of the stockholder agreements.

On April 6, 2003, the CIENA board of directors held a meeting by teleconference, at which CIENA's senior management team presented the proposed terms of the merger. At the conclusion of the meeting, the CIENA board approved the terms of the merger and authorized management to complete and execute the merger agreement and related agreements.

Also on April 6, 2003, at a meeting of WaveSmith's board of directors, Mr. Burkardt reported on WaveSmith's discussions with the three parties that had expressed interest in a strategic transaction with WaveSmith. Mr. Burkardt informed the board of the proposal made by Company C. The board of directors concluded that Company C's proposal was inferior and instructed Mr. Burkardt to reject the proposal by Company C unless the consideration could be increased. Mr. Burkardt then updated the board on the negotiations with CIENA including the discussions regarding providing adequate incentives to WaveSmith employees. The members of the board of directors agreed that revising the company's capital structure so that additional consideration from the transaction would be paid to WaveSmith's common stockholders was acceptable to the Company. WaveSmith's legal counsel explained that this would require a reduction in the liquidation preferences of WaveSmith's preferred stock. To avoid the uncertainty and delay associated with solicitation of votes to accomplish a charter amendment during the period between execution of the merger agreement and the closing of the transaction, the most efficient means to effect the desired changes in WaveSmith's charter was through a statutory merger with WS Contract Corp., a wholly owned subsidiary of WaveSmith, which could be approved by directors and stockholders prior to execution of a merger agreement with CIENA.

On April 7, 8 and 9, 2003, representatives of CIENA and WaveSmith finalized the merger agreement and related agreements.

On April 9, 2003, at a meeting of WaveSmith's board of directors, WaveSmith's board of directors reviewed the status of the negotiations with CIENA and the terms of the definitive merger agreement. After the review, the board determined that the terms of the merger and the merger agreement and the transactions contemplated thereby were fair to, and in the best interest of WaveSmith and its stockholders, and the directors unanimously recommended the approval of the merger, the adoption of the merger agreement and the transactions contemplated thereby and the merger of WaveSmith and WS Contract Corp. to the stockholders of WaveSmith.

The merger agreement and related documents, including the stockholder agreements, were executed on the afternoon of April 9, 2003.

On April 9, 2003, CIENA and WaveSmith issued a joint press release announcing the signing of the merger agreement.

CIENA's Reasons for the Merger

Strategic Fit

Optical networking products of the type currently offered by CIENA perform at the so-called "Physical Layer," or "Layer 1," of the Open System Interconnection Reference Model (OSI), the set of standards that allow for networking communications. CIENA's transport products essentially provide the means for sending and receiving data across physical devices. These products operate in both the "core" portion of a network and the "metro" portion of a network (which carries signals within metropolitan regions), which is closer to the "edge" of a network.

The recent general economic climate, and that of the telecommunications industry in particular, including consolidation and reduced spending by carriers, has resulted in dramatically reduced demand for the type of products currently manufactured by CIENA and its competitors. In response, over the past several months CIENA has embarked upon a corporate strategy designed to increase its addressable market and, thus, its opportunities to derive revenue. One element of this strategy is to move "up" into Layer 2 of the OSI model, the "Data Link Layer" where information is converted into packets and where errors, flow control and frame synchronization are handled. A second element is to move "out" from the core further toward to the edge of a network, where the majority of carrier spending is expected to occur in the near future. CIENA has also determined to increase its sales efforts on the most financially stable service providers — those of the regional Bell operating companies (RBOCs), in the U.S. and the PTTs and other incumbent operators in Europe and Asia.

CIENA believes that a combination of its next-generation Layer 1 optical networking equipment, and WaveSmith's Layer 2 multiservice data switching, fits with CIENA's strategy. It will enable CIENA to broaden its product portfolio into Layer 2 and will strengthen its overall value proposition to current and potential incumbent carrier customers. WaveSmith's multiservice switches sit at the edge of a carrier's network. They are based on the widely-deployed ATM (Asynchronous Transfer Mode) and frame relay standards and also provide an easy migration path to next-generation technologies such as IP/MPLS (multiprotocol label switching). This migration strategy enables carriers to build on their existing infrastructure and provide revenue-generating services in an efficient and cost-effective way without having to replace legacy network products.

CIENA calls the network architecture created by its products "LightWorks." This architecture is designed to dramatically simplify a carrier's network by reducing the number of network elements. As the WaveSmith DN product family is integrated into CIENA's LightWorks portfolio, CIENA will offer a unified, automated solution that converges Layer 1 and Layer 2, evolving networks so that carriers can address the enterprise data services market efficiently and profitably. CIENA's existing reseller relationship with WaveSmith has allowed it to begin these such integration efforts already.

In particular, CIENA believes that the following benefits will result from the merger:

- **Product Compatibility.** In today's networks, CIENA's products perform transport and circuit switching functions which reside in Layer 1 of the OSI model. WaveSmith's products, on the other hand, perform packet switching and aggregation functions typically associated with Layer 2 of the OSI model. In this environment, CIENA's products generally create the infrastructure over which data services travel, while WaveSmith's products route the data traffic and adapt data services (such as ATM or frame relay) to be carried over the Layer 1 infrastructure.

These two layers are interconnected in most networks via standardized SONET (synchronous optical network) interfaces. Both CIENA and WaveSmith utilize these interfaces for interconnection, so the two companies' products can be easily interconnected to provide data services. Consequently, it is a simple matter to integrate CIENA's and WaveSmith's products to reduce the cost of building a network to provide data services.

Today, the Layer 1 and Layer 2 portions of the network are controlled independently. CIENA is a technology leader in automating the operation of the Layer 1 part of the network. Combining

CIENA's portfolio with WaveSmith's products presents the opportunity to also consolidate the operation of these two layers of the network and automate the delivery of data services.

- **Customer Relationships.** CIENA believes that WaveSmith has developed valuable relationships with RBOCs, as evidenced by its recent announcement of the selection of WaveSmith's DN product family by SBC. CIENA believes that these relationships will enhance CIENA's ability to compete for business from RBOCs and complement CIENA's existing sales and distribution channels. Conversely, CIENA believes it will be able to leverage its existing sales channels and customer relationships to offer the WaveSmith products to a wider range of customers than WaveSmith currently reaches, including large incumbent operators in Europe and Asia, where WaveSmith currently has no presence.
- **Expand Addressable Market.** CIENA believes that the proposed merger will expand its addressable market. CIENA currently has no product offering in the multi-service switch market. WaveSmith's DN is a leading platform in this market and will give CIENA entry into this multi-billion dollar market.
- **Broader Scope.** CIENA believes that the current telecommunications environment makes vendors with a broad portfolio more attractive to large incumbent carriers than companies with point solutions. In an effort to simplify their networks and reduce operating expenses, large operators are reducing the number of equipment vendors, forming strong relationships with a few large, strategic vendors. CIENA believes that the acquisition of WaveSmith will strengthen its position with major operators by allowing it to offer a more complete portfolio of products covering a larger portion of network operators' equipment needs.

Additional Reasons for the Merger

The strategic fit with WaveSmith represents the principal rationale for the merger. However, the following factors, each of which CIENA took into account in evaluating the proposed merger, also support this rationale and enhance the likelihood of achieving the full potential of the combination:

- **Competitive Advantage.** The WaveSmith DN product family has been developed using the most current generation of hardware and software technology, resulting in a platform that offers superior price and performance characteristics as compared to the older generation products offered by more established vendors. The WaveSmith products have also completed the Telcordia OSMINE Services process for the TIRKS Operations Support System, which is a requirement of most RBOCs before deployment in their networks. Due to the high costs and long time frames associated with OSMINE testing, WaveSmith's completion of such testing gives CIENA a competitive advantage at the incumbent carrier accounts.
- **Cultural Fit.** CIENA and WaveSmith share a common heritage as entrepreneurial companies as well as a common vision of "distributed network intelligence." Both companies have established reputations for being flexible, innovative, agile and customer-focused.
- **Positive Business Model Effect.** The addition of WaveSmith's data switches to CIENA's product portfolio should have a positive effect on CIENA's business model. Data switches such as those offered by WaveSmith typically carry higher margins than the optical networking equipment in CIENA's existing product portfolio.
- **Strong Engineering Teams.** CIENA believes that WaveSmith has a strong engineering team that would add significantly to CIENA's engineering resources and enhance its ability to continue to innovate and rapidly bring new products to market.

In view of the variety of factors considered in connection with its evaluation of the merger, the CIENA board of directors did not quantify or otherwise assign relative weights to the factors considered in reaching its conclusions. In addition, individual members of the CIENA board of directors may have given

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different weights to different factors. However, on an overall basis, the CIENA board of directors concluded that the factors favoring the merger outweigh the countervailing factors.

For the strategic reasons set forth above, after consultation with CIENA's senior management and its advisors and consideration of the terms and conditions of the merger agreement and the transactions contemplated by the merger agreement, the CIENA board of directors determined that the merger agreement and the merger are in the best interests of CIENA and its stockholders.

Recommendation of the WaveSmith's Board of Directors and Reasons for the Merger

At a special meeting held on April 9, 2003, the WaveSmith board of directors unanimously approved the terms and conditions of the agreement and plan of merger and the transactions contemplated thereby, including the merger. In evaluating the agreement and plan of merger and the transactions contemplated thereby, and deciding to approve them, the WaveSmith board of directors considered a number of factors, including the following:

- the consideration being offered by CIENA for shares of WaveSmith's capital stock;
- WaveSmith's prospects if it were to remain independent, including:
 - * the resources necessary to insure WaveSmith's future growth;
 - * WaveSmith's ability to raise the additional capital necessary for continuing operations and to expand its business, especially in light of the fact that WaveSmith's operating plan indicated a need for additional investment capital in the near term and the investment terms for private companies like WaveSmith have not been favorable;
 - * CIENA's existing options to acquire a significant percentage of WaveSmith's capital stock at any time between July 1, 2003 and March 31, 2004, thus creating a challenge for WaveSmith to raise additional investment capital in that time period;
 - * WaveSmith's ability to market efficiently, sell to and support its existing customers while remaining an independent, private company;
 - * WaveSmith's ability to independently develop the necessary infrastructure to attract and support larger customers including regional Bell operating companies (RBOCs) critical to WaveSmith's long-term viability even with CIENA as a strategic partner;
 - * the challenge faced by WaveSmith of dedicating significant resources to growth while at the same time focusing on achieving profitability; and
 - * WaveSmith's ability to effectively compete with large telecommunication equipment companies operating in its market.
- the possible alternatives to the CIENA transaction, including:
 - * the possibility of continuing to operate WaveSmith as an independent entity and the resulting strain on WaveSmith's resources such an option would present;
 - * the possibility of continuing to seek another strategic partner;
 - * the range of possible benefits to WaveSmith's stockholders of these alternatives;
 - * the timing and likelihood of accomplishing the goal of any of these alternatives; and
 - * the contacts that had been made with potential acquirers and the fact that, although companies with a potential interest in acquiring WaveSmith had been contacted, only discussions with CIENA had advanced beyond preliminary stages.
- the strategic value of WaveSmith in the hands of a company with significantly greater financial resources, such as CIENA, which by virtue of its existing customer relationships is well positioned to more optimally exploit WaveSmith's products and technology in the telecommunications carrier

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marketplace and which, as a large corporation, enjoys many other competitive advantages not presently available to WaveSmith;

- the ability of the two companies to combine their technological resources to develop new products with increased functionality and bring them to market faster;
- the availability to the combined company of greater resources for product marketing and distribution;
- the likelihood that CIENA's offer would be completed, in light of the experience, reputation and financial capabilities of CIENA and the terms of the agreement and plan of merger;
- the WaveSmith board of directors' belief, based on its assessment of the negotiations, that a more favorable purchase price could not be achieved through continued negotiations with CIENA;
- the fact that certain significant stockholders of WaveSmith were willing to support the transaction, thereby increasing the likelihood that the conditions to CIENA's offer would be satisfied;
- the fact that the other conditions to CIENA's obligations to consummate the merger were customary and, in the assessment of the WaveSmith board of directors, not unduly onerous;
- the terms of the agreement and plan of merger including the limited conditions to the parties' respective obligations under the agreement and plan of merger; and that the exchange ratios in the agreement and plan of merger did not limit the appreciation of the value of CIENA's common stock;
- CIENA's right, pursuant to a letter agreement between WaveSmith and CIENA dated September 18, 2002, if at any time prior to July 2003 WaveSmith receives an acquisition offer from a third party, to receive notification of the offer prior to the execution of a definitive agreement and a fee of 5% of the total price paid by the third party if the transaction is consummated, thereby creating a disincentive for any third party to make an offer to acquire WaveSmith;
- the expectation that the merger will qualify as a tax-free reorganization under federal tax law;
- the opportunity created by the merger for WaveSmith stockholders to share in the combined company's long term growth;
- information concerning WaveSmith's and CIENA's respective businesses, historical financial performance and condition, operations, technology, products, customers, competitive positions, prospects and management; and
- due diligence discussions with CIENA by the WaveSmith board of directors and reports from WaveSmith management as to the results of its due diligence investigation of CIENA.

The WaveSmith board of directors also identified and considered a variety of potentially negative factors in its deliberations concerning the merger, including, but not limited to:

- the risk that the potential benefits sought in the merger might not be fully realized;
- the possibility that the merger might not be completed and the effect such a result would have on WaveSmith's operations;
- that the exchange ratios in the agreement and plan of merger provided no protection against the depreciation of the value of CIENA's common stock;
- the challenges relating to the integration of the two companies;
- the possibility of management and employee disruption associated with the proposed merger and integrating the operations of the companies; and
- the risks relating to CIENA's business and how they would affect the operations of the combined company.

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The WaveSmith board of directors believed that these risks were outweighed by the potential benefits of the merger. In view of the wide variety of factors, both positive and negative, considered by the WaveSmith board of directors, the WaveSmith board of directors did not find it practical to, and did not, quantify or otherwise assign relative weights to the specific factors considered and did not find that any factor was of special importance. Rather, the WaveSmith board of directors viewed its position and recommendations as being based on the totality of the information presented to and considered by it. In addition, different members of the WaveSmith board of directors may have assigned different weights to the various factors described above.

For the reasons discussed above, WaveSmith's board of directors has unanimously approved the merger agreement and the merger and has unanimously determined that the merger is fair to, and in the best interests of, WaveSmith and its stockholders and unanimously recommends that WaveSmith stockholders vote for adoption of the merger agreement and vote for approval of the merger.

In addition, WaveSmith's board of directors considered the interests that its officers and directors may have with respect to the merger in addition to their interests as WaveSmith stockholders. See "—Interests of Executive Officers and Directors in the Merger" for a more complete discussion of these interests.

Interests of Executive Officers and Directors in the Merger

In considering the recommendation of the WaveSmith board of directors regarding the merger, WaveSmith stockholders should be aware that some WaveSmith directors and executive officers have interests in the merger and related arrangements that are different from, or in addition to, their interests as WaveSmith stockholders. These interests may create potential conflicts of interest for these directors and officers because they may be more likely to approve the merger than WaveSmith stockholders generally. The WaveSmith board of directors was aware of these interests and took these interests into account in its deliberations of the merits of the merger and in approving the merger and the transactions contemplated by the merger agreement.

Stock Ownership. As of April 25, 2003, the directors and executive officers (and their affiliates) of WaveSmith beneficially owned 38,936,610 shares of common stock, no shares of series A preferred stock, 28,203,689 shares of series A-1 preferred stock, no shares of series B preferred stock, 66,666,661 shares of series B-1 preferred stock and 50,295,168 shares of series C preferred stock, representing approximately 63.1% of the fully-diluted outstanding WaveSmith capital stock. These shares would represent approximately 4.8% of the outstanding shares of CIENA after completion of the merger, based on shares outstanding on April 25, 2003.

Acceleration of Vesting of WaveSmith Restricted Stock. Assuming the merger is consummated, WaveSmith's right to repurchase an aggregate of 17,084,327 shares of WaveSmith common stock held by executive officers will terminate upon completion of the merger.

The table below sets forth the following: (i) the number of shares of common stock owned by the executive officers and directors, including executive officers during the last fiscal year, which are subject to rights of repurchase; (ii) the issue/repurchase price of such shares; (iii) the number of shares of common stock no longer subject to repurchase rights as of April 9, 2003 and (iv) the number of shares of common

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stock for which repurchase rights terminate in connection with the merger between WaveSmith and CIENA:

Officer/Director	Number of Shares of Common Stock Beneficially Owned Subject to Repurchase Rights as of 4/9/03	Issue/Repurchase Price	Number of Shares of Common Stock no Longer Subject to Repurchase Rights as of 4/9/03	Number of Shares of Common Stock for which Repurchase Rights Terminate in Connection With Merger
Thomas M. Burkardt	13,870,293	\$0.01	1,731,012	12,139,281
John Burnham	2,504,975	\$0.01	0	626,243
Robert Doucette	800,000	\$0.09	299,840	100,000
Robert Doucette	1,400,000	\$0.00	485,290	254,808
John O'Hara (former executive officer)	2,727,699	\$0.00	2,200,761	526,938
Robert O'Neil	5,825,523	\$0.01	0	1,456,380
Michael Regan	5,009,950	\$0.01	0	1,252,487
Gregg Savage	2,912,762	\$0.01	0	728,190

WS Contract Merger. As a result of the merger of WS Contract Corp. into WaveSmith immediately prior to the merger of WaveSmith into CIENA, the value of the WaveSmith common stock will be increased, resulting in the WaveSmith common stockholders, including some directors and executive officers, receiving a greater number of shares of CIENA common stock pursuant to the merger than such directors and executive officers would have received if the merger of WS Contract Corp. into WaveSmith had not occurred. The table below sets forth the number of shares of CIENA common stock which such executive officers would have received in the merger assuming that the merger of WS Contract Corp. into WaveSmith had not taken place, and the number of shares of CIENA common stock those executive officers will receive in the merger, assuming that there are 291,698,422 shares of WaveSmith capital stock outstanding on an as-converted basis on the effective date of the merger:

Officer	Shares of CIENA common stock to be received assuming WS Contract Corp. is not merged into WaveSmith	Shares of CIENA common stock to be received assuming WS Contract Corp. is merged into WaveSmith
Thomas M. Burkardt	849,141	1,198,050
John Burnham	152,382	214,995
Robert Doucette	132,769	187,324
John O'Hara (former executive officer)	333,595	470,669
Robert O'Neil	351,570	496,028
Michael Regan	302,350	426,584
Gregg Savage	183,027	258,232
Robert J. Dalias	378,579	534,138

Indemnification. The merger agreement provides that, upon the completion of the merger, for a period of six years CIENA will fulfill the obligations of WaveSmith to indemnify and hold harmless each person who is or was a director or officer of WaveSmith against any losses incurred based upon matters existing or occurring prior to the completion of the merger to the same extent that these persons were indemnified pursuant to WaveSmith's certificate of incorporation, bylaws or any indemnification agreement immediately prior to the merger. In addition, CIENA will cause the combined company to use commercially reasonable efforts to maintain in effect, if available, directors' and officers' liability insurance covering the individuals who are currently covered by WaveSmith's directors' and officers' insurance, on terms that are comparable to those currently applicable to WaveSmith directors and officers, provided that CIENA will not be required to pay annual premiums for such individuals in excess of 200% of the last annual premium paid by WaveSmith for directors' and officers' liability insurance prior to the date of the merger, but will at least maintain the level of coverage that can be purchased for that amount.

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Stockholder Agreements. The following WaveSmith directors and officers (and their respective affiliates) have entered into stockholder agreements pursuant to which they have agreed to vote shares of WaveSmith common and preferred stock over which they exercise voting control in favor of the adoption of the merger agreement and the merger:

- Thomas M. Burkardt — chief executive officer, president and chairman of the board of directors
- Robert J. Dalias — director
- Michael Feinstein — director
- G. Felda Hardymon — director
- Robert C. Ketterson, Jr. — director

The stockholder agreements also grant to CIENA an irrevocable option to purchase the shares of WaveSmith stock that are owned beneficially or of record by the stockholders who entered into the stockholder agreements. CIENA may exercise the options if the WaveSmith board withdraws its recommendation of the merger, WaveSmith breaches the terms of the merger agreement or terminates the merger agreement, or the stockholder fails to comply with the voting agreement. The option price is payable in cash at an exercise price based on the exchange formula set forth in the merger agreement, as if the merger became effective on April 9, 2003. See “Terms of the Merger Agreement and Related Transactions — Stockholder Agreements.”

The total number of shares of WaveSmith capital stock (on an as-converted to common stock basis) covered by these agreements is 165,508,918 which represents approximately 57.6% of WaveSmith’s outstanding common stock and preferred stock (on an as-converted to common stock basis) as of April 24, 2003.

Accounting Treatment

The merger is expected to be accounted for using the purchase method of accounting. CIENA will be deemed the acquiror for financial reporting purposes. Under the purchase method of accounting, the purchase price in the merger is allocated among the WaveSmith assets acquired and the WaveSmith liabilities assumed to the extent of their fair market value, with any excess purchase price being allocated to goodwill.

Listing on The Nasdaq Stock Market

CIENA has agreed to cause the shares of CIENA common stock issued in the merger to be approved for listing on the Nasdaq Stock Market.

Governmental and Regulatory Approvals

The Hart-Scott-Rodino Act and its related rules and regulations prohibit WaveSmith and CIENA from completing the merger until CIENA and WaveSmith make a filing with the Antitrust Division of the Department of Justice and the Federal Trade Commission, and the Hart-Scott-Rodino Antitrust Improvements Act waiting period requirements have been satisfied. Even after the waiting period expires or terminates, the Antitrust Division or the Federal Trade Commission may later challenge the merger on antitrust grounds. CIENA and WaveSmith made the filings with the Department of Justice and the Federal Trade Commission on April 10, 2003. The merger also may be subject to review by the governmental authorities of various other jurisdictions under the antitrust laws of those jurisdictions.

Federal Income Tax Consequences

Generally

The following discussion describes the material U.S. federal income tax consequences of the exchange of shares of WaveSmith’s capital stock for CIENA common stock pursuant to the merger that are

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generally applicable to holders of WaveSmith capital stock. This discussion is based on currently existing provisions of the Internal Revenue Code of 1986, as amended (the “Code”), existing and proposed Treasury regulations thereunder and current administrative rulings and court decisions, all of which are subject to change. Any such change, which may or may not be retroactive, could alter the tax consequences to WaveSmith stockholders as described herein. Neither WaveSmith nor CIENA has requested nor will request a ruling from the Internal Revenue Service with regard to any of the tax consequences of the merger.

WaveSmith stockholders should be aware that this discussion does not deal with all U.S. federal income tax considerations that may be relevant to particular WaveSmith stockholders in light of their particular circumstances, such as stockholders who are dealers in securities, who are subject to the alternative minimum tax provisions of the Code, who are foreign persons, insurance companies, tax-exempt organizations, financial institutions, or broker-dealers, who hold their shares as part of a hedge, straddle, conversion or other risk-reduction transaction, who do not hold their WaveSmith stock as capital assets, who hold their WaveSmith stock through a partnership or other pass-through entity or who acquired their shares in connection with stock option or stock purchase plans or in other compensatory transactions. In particular, this discussion does not discuss the tax consequences of payments that may be subject to the “golden parachute” provisions of the Code. The section labeled “Federal Income Tax Consequences of the Merger of WS Contract Corp. into WaveSmith” discusses the tax consequences to holders of WaveSmith common stock of the changes to the liquidation preferences of the various classes of WaveSmith preferred stock as a result of the merger of WS Contract Corp. into WaveSmith immediately prior to the merger with CIENA. In addition, unless specifically addressed below, the following discussion does not address the tax consequences of the merger under foreign, state or local tax laws, the tax consequences of transactions effectuated prior or subsequent to, or concurrently with, the merger (whether or not any such transactions are undertaken in connection with the merger), including without limitation any transaction in which shares of WaveSmith capital stock are acquired or shares of CIENA common stock are disposed of, or the tax consequences of the assumption by CIENA of the WaveSmith employee options or the tax consequences of any receipt of rights to acquire CIENA common stock.

Accordingly, WaveSmith stockholders are urged to consult their own tax advisors as to the specific tax consequences to them of the merger, including the applicable federal, state, local and foreign tax consequences.

In the opinion of Hogan & Hartson L.L.P., counsel to CIENA, and Testa, Hurwitz & Thibault, LLP, counsel to WaveSmith, the merger will be treated for U.S. federal income tax purposes as a reorganization within the meaning of Section 368(a) of the Code. The opinions:

- Will not be binding on the IRS or the courts nor preclude the IRS from adopting a contrary position;
- Will be based on the assumption that the merger will be consummated in accordance with the terms of the merger agreement; and
- Will be subject to the limitations discussed below.

Additionally, the opinions will be based on certain assumptions and limitations, as well as factual representations made by, among others, CIENA and WaveSmith. Such representations, if incorrect, could jeopardize the conclusions reached in the opinions. Neither CIENA nor WaveSmith is currently aware of any facts or circumstances which would cause any such representations made to counsel to be untrue or incorrect in any material respect.

Federal Income Tax Consequences if the Merger Qualifies as a Reorganization

Assuming the merger qualifies as a reorganization within the meaning of Section 368(a) of the Code and the merger is completed under the current terms of the merger agreement, subject to the discussion below under the headings “Federal Income Tax Consequences of the Merger of WS Contract Corp. into

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WaveSmith” and “Taxation of Escrowed Shares,” the following U.S. federal income tax consequences generally will result:

- No gain or loss will be recognized by holders of WaveSmith capital stock solely upon their receipt of CIENA common stock, including CIENA common stock subject to the escrow, in exchange for such WaveSmith capital stock in the merger (except with respect to cash received in lieu of fractional shares as discussed below).
- The aggregate tax basis of the CIENA common stock received by each WaveSmith stockholder in the merger (including any fractional share interest in CIENA common stock and CIENA common stock subject to the escrow) will be the same as the aggregate tax basis of the WaveSmith capital stock surrendered by such WaveSmith stockholder in exchange therefor.
- The holding period of the CIENA common stock received by each WaveSmith stockholder in the merger (including the CIENA common stock subject to the escrow) will include the period for which the WaveSmith capital stock surrendered in exchange therefor was considered to be held, provided that the WaveSmith capital stock so surrendered is held as a capital asset at the time of the merger.
- Any cash payment received by a holder of WaveSmith capital stock in lieu of a fractional share of CIENA common stock will be treated as if such fractional share had been issued in the merger and then redeemed by CIENA. A WaveSmith stockholder receiving such cash will recognize gain or loss upon such payment, measured by the difference, if any, between the amount of cash received and the basis in such fractional share. The gain or loss will be capital gain or loss provided that the shares of WaveSmith capital stock were held as capital assets and will be long-term capital gain or loss if the WaveSmith capital stock exchanged for that fractional share of CIENA common stock had been held for more than one year at the time of the merger. However, if the receipt of cash instead of fractional shares is essentially equivalent to a dividend (determined by application of Section 302 of the Code on a stockholder by stockholder basis), some or all of this gain may be treated as a dividend and taxed as ordinary income.
- If a WaveSmith stockholder dissents to the merger and receives solely cash in exchange for such stockholder’s WaveSmith capital stock, such cash generally will be treated as a distribution in redemption of such stockholder’s WaveSmith capital stock. Where such stockholder owns no CIENA common stock either directly or by reason of certain attribution rules set forth in the Code, the stockholder should recognize gain or loss measured by the difference between the amount of cash received and the adjusted tax basis of the WaveSmith capital stock surrendered. Different tax consequences will apply to any interest awarded by a court to a dissenting WaveSmith stockholder.

Taxation of Escrowed Shares

WaveSmith stockholders will be treated as owning an allocable portion of the CIENA common stock issued in the merger and deposited in escrow. An allocable portion of any dividends received on escrowed stock will be taxed to each former WaveSmith stockholder as ordinary income when such amounts are received by the escrow agent. CIENA does not anticipate declaring dividends. The escrow agreement provides that a portion of the shares of CIENA common stock placed in the escrow may be sold to reimburse the expenses of the stockholders’ representative. The sale of such shares of CIENA common stock will be treated as a taxable sale to the WaveSmith stockholders. Each WaveSmith stockholder will recognize capital gain or loss as a result of such sale, measured as the difference between such WaveSmith stockholder’s basis in such sold shares of CIENA common stock and the fair market value of such shares of CIENA common stock, as of the date of such sale. Likewise, WaveSmith stockholders will be allocated their portion of any interest or other income earned from the investment of the proceeds of such sale. No gain or loss will be recognized by a WaveSmith stockholder upon the distribution of escrowed stock to the stockholder upon termination of the escrow arrangement or upon the release of escrowed stock to CIENA pursuant to the terms of the escrow agreement.

Federal Income Tax Consequences of the Merger of WS Contract Corp. into WaveSmith

As discussed below in “Terms of the Merger Agreement and Related Transactions — Merger of WS Contract Corp. into WaveSmith,” the liquidation preferences of the various classes of WaveSmith preferred stock will change as a result of the merger of WS Contract Corp. into WaveSmith. As a result of these changes, the value of the WaveSmith common stock will be increased, resulting in the WaveSmith common stockholders receiving a greater number of shares of CIENA common stock (the “Additional Shares”) pursuant to the merger than they would have received if the merger of WS Contract Corp. into WaveSmith had not occurred. Although the matter is not free from doubt, CIENA and WaveSmith believe that this additional value should not be treated as being received by the common stockholders pursuant to a reorganization within the meaning of Section 368(a) of the Code. Consequently, the discussion above under the heading “Federal Income Tax Consequences if the Merger Qualifies as a Reorganization” does not apply to the value represented by the Additional Shares.

CIENA will take the position that the value of the Additional Shares (including a portion of the escrow shares) is taxable to the WaveSmith common stockholders as ordinary income. As a result of this position, to the extent that any Additional Shares are not subject to a “substantial risk of forfeiture” within the meaning of Section 83 of the Code, in the hands of a WaveSmith common stockholder as of the effective time of the merger, such stockholder should recognize, as of the effective time, ordinary income in an amount equal to the fair market value of such Additional Shares. Such stockholder’s basis in such Additional Shares should equal the fair market value of such shares as of the effective time of the merger, and the stockholder’s holding period for such shares should begin the day after the merger.

If any Additional Shares are subject to a substantial risk of forfeiture, including a vesting requirement in the hands of a WaveSmith common stockholder, as of the effective time of the merger, such stockholder should not recognize ordinary income upon the effective time of the merger with respect to such Additional Shares. Instead, such stockholder should recognize ordinary income on the date when such Additional Shares vest (*i.e.*, cease to be subject to a substantial risk of forfeiture) in an amount equal to the fair market value of the vested shares at the time of vesting. The stockholder’s basis in such vested shares should equal the fair market value of such shares as of the vesting date, and the stockholder’s holding period for such shares should begin the day after the vesting date. A WaveSmith common stockholder may accelerate the date of his or her recognition of ordinary income and the beginning of the capital gains holding period with respect to any Additional Shares that are subject to a substantial risk of forfeiture by filing an election pursuant to Section 83(b) of the Code within 30 days of the merger of WS Contract Corp. into WaveSmith with respect to such Additional Shares. **Each WaveSmith common stockholder is urged to consult with his or her own tax advisors in order to determine (i) whether such stockholder should make a Section 83(b) election with respect to any Additional Shares that are subject to a substantial risk of forfeiture and (ii) whether such stockholder should make a “protective” Section 83(b) election with respect to other shares of CIENA common stock received pursuant to the merger in exchange for WaveSmith shares as to which the stockholder previously made a Section 83(b) election.**

Any ordinary income recognized as a result of the receipt of, or vesting in, the Additional Shares by a WaveSmith common stockholder who is a current or former employee of WaveSmith will be treated as compensation income and may be subject to income and employment tax withholding. Ordinary income recognized as a result of the receipt of, or vesting in, the Additional Shares by a WaveSmith common stockholder other than current or former employees will be reported on a Form 1099.

Federal Income Tax Consequences if the Merger Does Not Qualify as a Reorganization

Subject to the discussion above under the heading “Federal Income Tax Consequences of the Merger of WS Contract Corp. into WaveSmith,” a successful IRS challenge to the reorganization status of the merger would result in WaveSmith stockholders recognizing taxable gain or loss with respect to each share of WaveSmith capital stock surrendered equal to the difference between the stockholder’s basis in such

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share and the fair market value, as of the effective time, of the CIENA common stock received in exchange therefor. In such event, a WaveSmith stockholder's aggregate basis in the CIENA common stock so received would equal its fair market value as of the effective time and the stockholder's holding period for such stock would begin the day after the merger. Such a challenge would not affect the taxable nature of the additional CIENA shares received by holders of WaveSmith common stock as a result of the merger of WS Contract Corp. into WaveSmith.

Tax Reporting

Each of CIENA and WaveSmith has agreed to report the merger as a reorganization within the meaning of Section 368(a) of the Code in all applicable tax returns filed by each party. Each WaveSmith stockholder will be required to file with such stockholder's U.S. federal income tax return a statement setting forth certain facts relating to the merger.

U.S. Federal Backup Withholding

A holder of WaveSmith capital stock may be subject, under some circumstances, to backup withholding at a rate of 30% with respect to certain payments made in the merger unless the holder provides proof of an applicable exemption or a correct taxpayer identification number, and otherwise complies with applicable requirements of the backup withholding rules. Any amounts withheld under the backup withholding rules are not an additional tax and may be refunded or credited against the holder's U.S. federal income tax liability, provided the required information is furnished to the Internal Revenue Service.

Appraisal Rights of Dissenting Stockholders of WaveSmith

If the merger is consummated, a holder of record of WaveSmith stock on the date of making a demand for appraisal, as described below, will be entitled to have those shares appraised by the Delaware Court of Chancery under Section 262 of the Delaware corporation statute and to receive payment for the "fair value" of those shares instead of the consideration provided for in the merger agreement. In order to be eligible to receive this payment, however, a WaveSmith stockholder must (1) continue to hold his or her shares through the time of the merger; (2) strictly comply with the procedures discussed under Section 262; and (3) not vote in favor of the merger. This prospectus and proxy statement is being sent to all holders of record of WaveSmith stock on the record date for the WaveSmith special meeting and constitutes notice of the appraisal rights available to those holders under Section 262.

The statutory right of appraisal granted by Section 262 requires strict compliance with the procedures in Section 262. Failure to follow any of these procedures may result in a termination or waiver of dissenters' rights under Section 262. The following is a summary of the principal provisions of Section 262.

The following summary is not a complete statement of Section 262 of the Delaware corporation statute, and is qualified in its entirety by reference to Section 262 which is incorporated herein by reference, together with any amendments to the laws that may be adopted after the date of this prospectus and proxy statement. A copy of Section 262 is attached as Annex B to this prospectus and proxy statement.

A holder of WaveSmith stock who elects to exercise appraisal rights under Section 262 must deliver a written demand for appraisal of its shares of WaveSmith prior to the vote on the merger. The written demand must identify the stockholder of record and state the stockholder's intention to demand appraisal of his or her shares. All demands should be delivered to WaveSmith, Attention: Gregg Savage, Chief Financial Officer and Secretary.

Only a holder of shares of WaveSmith stock on the date of making a written demand for appraisal who continuously holds those shares through the time of the merger is entitled to seek appraisal. Demand for appraisal must be executed by or for the holder of record, fully and correctly, as that holder's name

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appears on the holder's stock certificates representing shares of WaveSmith stock. If WaveSmith stock is owned of record in a fiduciary capacity by a trustee, guardian or custodian, the demand should be made in that capacity. If WaveSmith stock is owned of record by more than one person, as in a joint tenancy or tenancy in common, the demand should be made by or for all owners of record. An authorized agent, including one or more joint owners, may execute the demand for appraisal for a holder of record; that agent, however, must identify the record owner or owners and expressly disclose in the demand that the agent is acting as agent for the record owner or owners of the shares.

A record holder such as a broker who holds shares of WaveSmith stock as a nominee for beneficial owners, some of whom desire to demand appraisal, must exercise appraisal rights on behalf of those beneficial owners with respect to the shares of WaveSmith stock, held for those beneficial owners. In that case, the written demand for appraisal should state the number of shares of WaveSmith stock covered by it. Unless a demand for appraisal specifies a number of shares, the demand will be presumed to cover all shares of WaveSmith stock held in the name of the record owner.

Beneficial owners who are not record owners and who intend to exercise appraisal rights should instruct the record owner to comply with the statutory requirements with respect to the exercise of appraisal rights before the date of the WaveSmith special meeting.

Within 10 days after the merger, the surviving or resulting corporation is required to send notice of the effectiveness of the merger to each stockholder who prior to the time of the merger complies with the requirements of Section 262.

Within 120 days after the merger, the surviving corporation or any stockholder who has complied with the requirement of Section 262 may file a petition in the Delaware Court of Chancery demanding a determination of the fair value of the shares of WaveSmith stock held by all stockholders seeking appraisal. A dissenting stockholder must serve a copy of the petition on the surviving corporation. If no petition is filed by either the surviving corporation or any dissenting shareholder within the 120-day period, the rights of all dissenting stockholders to appraisal will cease. Stockholders seeking to exercise appraisal rights should not assume that the surviving corporation will file a petition with respect to the appraisal of the fair value of their shares or that the surviving corporation will initiate any negotiations with respect to the fair value of those shares. The surviving corporation is under no obligation to and has no present intention to take any action in this regard. Accordingly, stockholders who wish to seek appraisal of their shares should initiate all necessary action with respect to the perfection of their appraisal rights within the time periods and in the manner prescribed in Section 262. **Failure to file the petition on a timely basis will cause the stockholder's right to an appraisal to cease.**

Within 120 days after the time of the merger, any stockholder who has complied with subsections (a) and (d) of Section 262 is entitled, upon written request, to receive from the surviving corporation a statement setting forth the total number of shares of WaveSmith stock not voted in favor of the merger with respect to which demands for appraisal have been received by WaveSmith and the number of holders of those shares. The statement must be mailed within 10 days after WaveSmith has received the written request or within 10 days after the time for delivery of demands for appraisal under subsection (d) of Section 262 has expired, whichever is later.

If a petition for an appraisal is filed in a timely manner, at the hearing on the petition, the Delaware Court of Chancery will determine which shareholders are entitled to appraisal rights and will appraise the shares of WaveSmith stock owned by those stockholders. The court will determine the fair value of those shares, exclusive of any element of value arising from the accomplishment or expectation of the merger, together with a fair rate of interest, to be paid, if any, upon the fair value.

Stockholders who consider seeking appraisal should consider that the fair value of their shares under Section 262 could be more than, the same as, or less than, the value of the consideration provided for in the merger agreement without the exercise of appraisal rights. The Court of Chancery may determine the cost of the appraisal proceeding and assess it against the parties as the Court deems equitable. Upon application of a dissenting stockholder, the Court may order that all or a portion of the expenses incurred

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by any dissenting stockholder in connection with the appraisal proceeding (including, without limitation, reasonable attorney's fees and the fees and expenses of experts) be charged pro rata against the value of all shares of WaveSmith stock entitled to appraisal. In the absence of a court determination or assessment, each party bears its own expenses.

Any stockholder who has demanded appraisal in compliance with Section 262 will not, after the merger, be entitled to vote such stock for any purpose or receive payment of dividends or other distributions, if any, on the WaveSmith stock, except of dividends or distributions, if any, payable to stockholders of record at a date prior to the merger.

A stockholder may withdraw a demand for appraisal and accept the CIENA common stock at any time within 60 days after the merger. If an appraisal proceeding is properly instituted, it may not be dismissed as to any stockholder without the approval of the Delaware Court of Chancery, and any such approval may be conditioned on the Court of Chancery's deeming the terms to be just. If, after the merger, a holder of WaveSmith stock who had demanded appraisal for his shares fails to perfect or loses his right to appraisal, those shares will be treated under the merger agreement as if they were converted into CIENA common stock at the time of the merger.

In view of the complexity of these provisions of the Delaware corporate law, any WaveSmith stockholder who is considering exercising appraisal rights should consult a legal advisor.

TERMS OF THE MERGER AGREEMENT AND RELATED TRANSACTIONS

The following summary of the material terms and provisions of the merger agreement is qualified in its entirety by reference to the merger agreement. The merger agreement is attached as Annex A to this proxy statement/prospectus and is incorporated herein by reference. All stockholders are urged to read the merger agreement carefully.

General

The merger agreement provides that WaveSmith will be merged with and into CIENA, at the effective time of the merger. Pursuant to the merger agreement, WaveSmith will cease to exist and CIENA will be the surviving corporation. At the effective time of the merger, each outstanding share of WaveSmith capital stock will be converted into CIENA common stock, all as more fully described below.

This section of the proxy statement/prospectus describes aspects of the merger, including the material provisions of the merger agreement.

Structure of the Merger

Subject to the terms and conditions of the merger agreement and in accordance with the Delaware General Corporation Law, the DGCL, at the effective time of the merger, WaveSmith will merge with and into CIENA. WaveSmith will then cease to exist, and CIENA will continue as the surviving company. The certificate of incorporation of CIENA will be the certificate of incorporation of the surviving corporation. The bylaws of CIENA will be the bylaws of the surviving corporation and the board of directors and the officers of CIENA will remain the board of directors and officers of the surviving corporation.

Management and Operations After the Merger

Following the merger, CIENA will integrate all of WaveSmith's operations into its own. All of the officers and directors of CIENA before the merger will remain officers and directors of CIENA after the merger.

Treatment of Stock, Options and Warrants

At the effective time of the merger, each issued and outstanding share of WaveSmith capital stock, other than shares held in the treasury of WaveSmith, will be converted into shares of CIENA common stock in accordance with the formulas described below. WaveSmith stockholders will also receive cash, without interest, for any fractional shares of CIENA common stock they would otherwise receive in the merger. Each share of CIENA common stock issued in the merger will include the corresponding fraction of a right to purchase shares of junior preferred stock, par value \$0.01 per share, pursuant to the Rights Agreement dated as of December 29, 1997 between CIENA and Equiserve Trust Co., N.A. (formerly BankBoston, N.A.) as Rights Agent, as amended.

At the effective time of the merger, the WaveSmith stockholders will be entitled to receive:

- in the case of each share of preferred stock, a fraction of a share of CIENA common stock equal to:
 - * that share's liquidation preference, as established in Article FOURTH, Section (a)(1)(a) through (f) of the WaveSmith certificate of incorporation as in effect immediately prior to the effective time and giving effect to the changes effected by the merger of WS Contract Corp. into WaveSmith, treating the merger as a "liquidation" for purposes of that section, divided by
 - * \$4.716, which is defined in the merger agreement as the "Per Share Price,"
- thereafter, each share of common stock and preferred stock, treating the WaveSmith preferred stock as converted into common stock pursuant to the provision of WaveSmith's certificate of

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incorporation immediately prior to the effective time, giving effect to the adjustment to the terms of the liquidation preferences of the shares of WaveSmith's preferred stock to reduce such preferences for purposes of this calculation, shall receive a fraction of a share of CIENA common stock equal to:

- * 36,047,498 shares of CIENA common stock less that number of shares of CIENA common stock distributed to the holders of WaveSmith preferred stock as described above, divided by
- * the number of shares of WaveSmith common stock outstanding plus the number of shares of WaveSmith common stock issuable upon the exercise of all WaveSmith stock options or warrants to purchase WaveSmith common stock outstanding at the effective time (excluding those options which expire on or prior to the effective time or by their terms will expire following the effective time without becoming exercisable due to vesting provisions) plus the number of share of WaveSmith common stock that would be issuable upon conversion of all WaveSmith preferred stock outstanding at the effective time, or issuable upon the exercise of warrants to purchase WaveSmith preferred stock.

However, no preferred stockholder may receive an amount of CIENA common stock having a value, based on the Per Share Price, in excess of certain limits in WaveSmith's certificate of incorporation. It is not expected that these limits will be reached. In addition, 10% of the CIENA shares otherwise distributable at closing, plus certain additional shares, will not be delivered to the WaveSmith stockholders but will instead be deposited into an escrow fund to secure certain indemnity claims CIENA may make for up to one year. See "— Indemnification and Escrow Arrangement."

If, prior to the effective time of the merger, the outstanding shares of CIENA common stock are changed into or exchanged for a different number of shares or a different class as a result of any stock split, combination, reclassification or dividend, the nature of the consideration to be received by the holders of WaveSmith capital stock and the exchange ratios will be appropriately and proportionately adjusted.

Each share of WaveSmith capital stock held in the treasury of WaveSmith, or by any direct or indirect wholly owned subsidiary of WaveSmith will be canceled and extinguished at the effective time of the merger without the payment of any consideration.

CIENA will assume each option or warrant to acquire WaveSmith common stock and preferred stock granted under WaveSmith's stock plan or otherwise issued by WaveSmith and that is outstanding and unexercised immediately prior to the effective time of the merger, and at the effective time of the merger, CIENA will replace them with an option or warrant, respectively, to purchase CIENA common stock. In each case, the number of shares of CIENA common stock subject to the new CIENA option or warrant will be equal to the number of shares of WaveSmith common stock or preferred stock subject to the WaveSmith stock option or warrant, assuming full vesting, multiplied by the appropriate exchange ratio (and rounding any fractional share down to the nearest whole share) and the exercise price per share of CIENA common stock will be equal to the aggregate exercise price per share of WaveSmith common stock subject to the WaveSmith stock option or warrant divided by the appropriate exchange ratio. The duration and other terms of each such CIENA option or warrant, including the vesting schedule, will be the same as the prior WaveSmith stock option or warrant, unless the vesting is accelerated by the terms of the instrument as a result of the merger.

Exchange of Certificates; Fractional Shares

CIENA has agreed to deposit with a bank or trust company designated as exchange agent by CIENA for the benefit of the holders of issued and outstanding shares of WaveSmith common stock, certificates representing the shares of CIENA common stock to be issued pursuant to the merger agreement.

At the earliest practicable date after the effective time of the merger, the exchange agent will mail a letter of transmittal to each holder of record of WaveSmith common stock. The letter of transmittal will contain instructions with respect to the surrender of stock certificates to the exchange agent.

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You should not return your stock certificates with the enclosed proxy nor should you forward them to the exchange agent unless and until you receive the letter of transmittal, at which time you should forward them only in accordance with the instructions specified in the letter of transmittal.

Until the holders of certificates representing WaveSmith capital stock to be converted into CIENA common stock in the merger surrender them for exchange at or after the effective time of the merger, they will accrue but will not receive dividends or other distributions declared after the effective time of the merger with respect to CIENA common stock into which their WaveSmith stock has been converted. When they surrender such certificates, any unpaid dividends or other distributions will be paid, without interest. All stock certificates presented after the effective time of the merger will be canceled and exchanged for a certificate representing the applicable number of shares of CIENA common stock.

CIENA will not issue any fractional shares. Instead, each WaveSmith stockholder who would otherwise have been entitled to receive a fractional share of CIENA common stock will receive cash, without interest, in an amount rounded to the nearest whole cent, determined by multiplying (1) \$4.716 by (2) the fraction of a share of CIENA common stock to which the holder would otherwise be entitled.

Any shares of CIENA common stock and cash that the exchange agent has not distributed six months after the effective time of the merger will be delivered to CIENA upon demand. Certificates representing WaveSmith capital stock must thereafter be surrendered for exchange to CIENA. Neither CIENA, WaveSmith, nor the exchange agent will be liable for any shares of CIENA common stock, dividends or distributions with respect thereto, or cash delivered to a public official pursuant to any abandoned property, escheat or similar laws.

If a certificate representing WaveSmith capital stock is lost, stolen or destroyed, the exchange agent will issue the CIENA common stock in exchange for the certificate only upon the making of an affidavit of such loss, theft or destruction by the claimant, and, if required by CIENA, the posting of a bond as indemnity against any claim that may be made against CIENA or the exchange agent with respect to such certificate.

For a description of the CIENA common stock and a description of the differences between the rights of the holders of CIENA common stock and holders of WaveSmith capital stock, see "CIENA Capital Stock and Comparison of Stockholder Rights."

Effective Time

The merger will occur after specified conditions set forth in Article V of the merger agreement have been satisfied or waived. No later than the second business day after the satisfaction or waiver of these conditions, the parties will hold a scheduled closing. On the day the merger occurs, CIENA will file a certificate of merger with the Secretary of State of the State of Delaware. The effective time of the merger will be the date and time of such filing. CIENA and WaveSmith each anticipate that, if the merger is approved at the special meetings, it will be consummated during CIENA's third fiscal quarter of 2003. However, a delay in obtaining governmental consents required prior to consummation of the transactions contemplated in the merger agreement could delay the merger. There can be no assurances as to if or when such governmental consents will be obtained or that the merger will be consummated.

Representations and Warranties

The merger agreement contains various representations of CIENA and WaveSmith. WaveSmith has made customary representations and warranties relating to, among other things:

- the corporate organization and existence of WaveSmith, including that it is duly organized, validly existing and in good standing with the corporate power and authority to own, operate and lease its properties and to carry on its business as currently conducted;
- the certificate of incorporation and bylaws or other organizational documents of WaveSmith;

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- the capitalization of WaveSmith, including the number of shares of capital stock authorized, the number of shares and rights to acquire shares outstanding and the number of shares reserved for issuance;
- the corporate power and authority of WaveSmith to execute and deliver the merger agreement and related documents and to consummate the transactions contemplated by these documents;
- the compliance of the merger agreement and related documents with (1) WaveSmith's certificate of incorporation and bylaws and the certificate or articles of incorporation and bylaws of its subsidiary, (2) applicable laws, and (3) material agreements of WaveSmith, including the absence of events of default thereunder;
- the required governmental and third-party consents;
- the possession and validity of all required licenses, the filing of required regulatory reports and compliance with applicable laws by WaveSmith;
- WaveSmith's financial statements through February 28, 2003, including that the information in the financial statements is a fair presentation of the financial condition and results of operations of WaveSmith and is in compliance with GAAP, except for year-end adjustments or reclassifications;
- the absence of material undisclosed liabilities;
- the absence of certain changes in WaveSmith's business since February 28, 2003;
- the absence of material legal proceedings, injunctions and disputes;
- the validity of and absence of defaults under certain debt instruments, leases and other agreements WaveSmith;
- compliance with laws relating to employees or the workplace, and the absence of material disputes with employees;
- the filing and accuracy of WaveSmith's tax returns;
- the absence of certain business practices of WaveSmith;
- knowledge regarding customer and supplier relationships;
- the ownership and condition of the assets owned by WaveSmith;
- complete and correct books and records;
- the absence of intellectual property infringement or contests;
- the absence of brokers or finders other than Thomas Weisel Partners LLC;
- compliance with environmental laws and the absence of environmental liabilities; and
- employee benefit plans and related matters, including that the plans have been operated and administered in accordance with applicable laws;
- insurance; and
- related party transactions.

WaveSmith's representations and warranties will survive until the end of the first year after the effective time of the merger. After the effective time of the merger, the maximum liability of WaveSmith's stockholders for any breach of the representations, covenants or agreements will be limited to 10% of the shares issued in the merger transaction. CIENA and certain other indemnified persons may make a claim for indemnification for any breach of any of the foregoing representations and warranties until the end of the first year after the effective time of the merger. See "Terms of the Merger Agreement and Related Transactions — Indemnification."

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The merger agreement also contains customary representations and warranties of CIENA as to, among other things:

- the corporate organization and existence of CIENA;
- the certificate of incorporation and bylaws or other organizational documents of CIENA;
- the corporate power and authority of CIENA;
- the compliance of the merger agreement and related documents with CIENA's certificate of incorporation and bylaws, applicable laws, and certain material agreements of CIENA;
- the required governmental and third-party consents;
- absence of undisclosed fees being paid to brokers;
- CIENA's filings with the SEC;
- the valid issuance of the shares of CIENA common stock to be issued in the merger;
- the capitalization of CIENA;
- the absence of material legal proceedings, injunctions and disputes; and
- the absence of specified changes in CIENA's business since January 31, 2003.

Business of WaveSmith Pending the Merger; Other Agreements

Pursuant to the merger agreement, WaveSmith has agreed to:

- maintain its existence in good standing;
- conduct its business in the ordinary and usual manner consistent with past practices;
- maintain business and accounting records consistent with past practices; and
- use commercially reasonable efforts (1) to preserve its business intact, (2) to keep available to it the services of its present officers and employees, and (3) to preserve for it the goodwill of its suppliers, customers and others having business relations with it.

Interim Operations of WaveSmith:

Unless CIENA otherwise approves or if necessary in order to comply with law, WaveSmith and its subsidiaries may not:

- amend or otherwise change its certificate of incorporation, other than the adoption of the new WaveSmith certificate of incorporation in connection with the merger of WS Contract Corp. into WaveSmith, or its bylaws;
- other than pursuant to the adoption of the new WaveSmith certificate of incorporation in connection with the merger of WS Contract Corp. into WaveSmith, issue any stock or grant any options with certain exceptions in the ordinary course, including under its equity program;
- declare, set aside, make or pay any dividend or other distribution, payable in cash, stock, property or otherwise with respect to any of its capital stock;
- reclassify, combine, split, subdivide or redeem, purchase or otherwise acquire, directly or indirectly, any of its capital stock, except for the effects of the changes in the new WaveSmith certificate of incorporation and repurchases of shares in connection with the termination of any employee or consultant pursuant to stock option, restricted stock purchase agreements or stock award agreements;
- other than pursuant to its existing Loan and Security Agreement with Comerica Bank, incur any indebtedness for borrowed money or issue any debt securities or assume, guarantee or endorse, or

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otherwise become responsible for, the obligations of any person, or make any loans or advances, with certain exceptions;

- acquire, including, without limitation, by merger, consolidation, or acquisition of stock or assets, any corporation, partnership, other business organization or any division thereof or any material amount of assets other than purchases of assets consistent with WaveSmith's spending plan and the merger of WS Contract Corp. into WaveSmith;
- enter into any contract or agreement other than in the ordinary course of business, consistent with past practice and involving amounts not in excess of those set forth in WaveSmith's spending plan and other than in connection with the merger of WS Contract Corp. into WaveSmith;
- authorize any capital commitment or capital lease which is in excess of \$500,000 or capital expenditures, except as set forth in WaveSmith's spending plan;
- mortgage, pledge or subject to encumbrance any of its material assets or properties, or agree to do so, other than in the ordinary course of business;
- assume, guarantee or otherwise become responsible for the obligations of any other person or agree to do so;
- enter into or agree to enter into any employment agreement, other than offer letters or letter agreements for non-executive new hires entered into in the ordinary course of business;
- except as set forth in WaveSmith's spending plan, increase the compensation of its officers or employees, or grant any severance or termination pay to, or enter into any severance agreement with any director, officer or other employee of WaveSmith, or establish, adopt, enter into or amend any collective bargaining, bonus, profit sharing, thrift, compensation, stock option, restricted stock, pension, retirement, deferred compensation, employment, termination, severance or other plan, agreement, trust, fund, policy or arrangement for the benefit of any such director, officer or employee except for customary bonuses consistent with past practices and amendments to existing employee benefit plans as necessary to maintain compliance with applicable laws;
- change in any respect its accounting policies or procedures, including, without limitation, procedures with respect to the payment of accounts payable and collection of accounts receivables except as required by GAAP;
- make any tax election or settle or compromise any federal, state, local or foreign material income tax liability in excess of \$50,000;
- settle or compromise any material pending or threatened suit, action or claim or initiate any litigation against a third party;
- pay, discharge or satisfy any claim, liability or obligation, other than the payment, discharge or satisfaction, in the ordinary course of business and consistent with past practice, of liabilities reflected or reserved against in the latest balance sheet included in the last audited financial statement provided to CIENA or subsequently incurred in the ordinary course of business and consistent with past practice in amounts not in excess of \$100,000;
- sell, assign, transfer, license or sublicense, other than in the ordinary course of business and consistent with past practice, pledge or otherwise encumber any of the intellectual property rights, other than in the ordinary course of business and consistent with past practice; or
- agree to do any of the foregoing.

Interim Operations of CIENA:

Unless WaveSmith otherwise approves, CIENA may not declare, set aside, make or pay any dividend or other distribution, payable in cash, stock, property or otherwise with respect to any of its capital stock,

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except where (1) an adjustment is made to the exchange ratio for WaveSmith capital stock or (2) the holder of WaveSmith capital stock will otherwise receive an equivalent, proportional dividend or distribution in connection with the merger as if they had been holders of CIENA common stock on the record date for such dividend or distribution.

No Solicitation by WaveSmith

Pursuant to the merger agreement, WaveSmith may not, nor may it authorize or permit any of its affiliates or any officer, director, employee, investment banker, attorney or other adviser or representative of WaveSmith or any of its affiliates to:

- solicit, initiate, or encourage any acquisition proposal;
- enter into any agreement with respect to any acquisition proposal; or
- participate in any discussions or negotiations regarding, or furnish to any person any information for the purpose of facilitating the making of, or take any other action to facilitate any inquiries or the making of any proposal that constitutes, or may reasonably be expected to lead to, any acquisition proposal.

The merger agreement does not preclude WaveSmith from, prior to receipt of the requisite stockholder approval, providing information to (subject to appropriate confidentiality protections), or entering into negotiations with, a person who has delivered an unsolicited written bona fide acquisition proposal, so long as in each case:

- the board of directors of WaveSmith determines in good faith, after consultation with its financial advisor and outside legal counsel, that the acquisition proposal, if accepted, is reasonably likely to be consummated;
- the board of directors of WaveSmith determines in good faith, after consultation with its financial advisor, that the acquisition proposal would, if consummated, result in a transaction that is more favorable to WaveSmith's stockholders; and
- the board of directors of WaveSmith determines in good faith, after consultation with its outside legal counsel, that the failure to take such action would be inconsistent with its fiduciary duties to WaveSmith's stockholders under applicable law.

WaveSmith must promptly advise CIENA of any acquisition proposal and inquiries with respect to any acquisition proposal. Acquisition proposal means any proposal for a merger or other business combination involving WaveSmith or any proposal or offer to acquire in any manner, directly or indirectly, 10% or more of the equity securities, voting securities, or assets of WaveSmith.

The merger agreement provides that the WaveSmith board of directors may not withdraw, amend, modify or qualify in a manner adverse to CIENA its recommendation of the merger to its stockholders unless it provides CIENA with two business days' prior notice, it has otherwise complied in all respects with its obligations under the merger agreement, and after consulting with its outside legal counsel, the WaveSmith board of directors determines in good faith that to not withdraw, amend or modify its recommendation would be inconsistent with its fiduciary duties to WaveSmith's stockholders under applicable law.

Additional Agreements of CIENA and WaveSmith

Pursuant to the merger agreement, CIENA and WaveSmith have also agreed to use their reasonable best efforts to take all necessary, proper or appropriate actions to consummate the transactions contemplated by the merger agreement. In accordance with its certificate of incorporation and bylaws, WaveSmith will take all action necessary to convene a meeting or meetings of the holders of WaveSmith stock, to be held as promptly as practicable after the S-4 registration statement is declared effective.

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Subject to the fiduciary duty exceptions described above, the WaveSmith board of directors:

- will recommend approval by its stockholders;
- will not withdraw or modify its recommendation; and
- will take all lawful action to solicit stockholder approval as promptly as possible.

The WaveSmith board of directors may withdraw, amend, modify or qualify in a manner adverse to CIENA its recommendation upon two business days notice, by following the procedures described above in the last paragraph of “— No Solicitation by WaveSmith.”

Indemnification and Escrow Arrangement

Under the merger agreement, CIENA and its officers, directors and affiliates are indemnified by the WaveSmith stockholders, other than those dissenting stockholders exercising rights of appraisal under Section 262 of the DGCL who do not receive CIENA common stock in the merger, against all claims, losses, and liabilities, incurred as a result of:

- any inaccuracy or breach of a representation or warranty of WaveSmith contained in the merger agreement or a certificate of any officer of WaveSmith delivered pursuant to the merger agreement;
- the actions taken by WaveSmith in authorizing, approving and carrying out the merger of WS Contract Corp. into WaveSmith and the adoption of the restated WaveSmith certificate of incorporation, other than CIENA's loss of the deduction for compensation associated with the parachute payments under Section 280G of the Internal Revenue Code, loss of net operating losses for state tax purposes, withholding or employment taxes and the costs or expenses of withholding payroll or employment taxes; or
- any failure by WaveSmith to perform or comply with any covenant contained in the merger agreement.

The aggregate amount available to indemnify the indemnified parties may not exceed the amount deposited in the escrow fund, referred to below, and no stockholder is required to indemnify the indemnified parties for an amount that would exceed such stockholder's pro rata share of the CIENA stock deposited in the escrow fund. In addition, there will be no indemnification liability, except as provided in the merger agreement, unless the aggregate amount of losses incurred exceeds \$1,000,000 in which event the entire amount of losses will be indemnifiable. The stockholders will have no right of contribution from WaveSmith with respect to any loss claimed by CIENA after the closing date. Nothing in the merger agreement limits the liability of WaveSmith for any breach of any representation, warranty or covenant if the merger is not consummated.

Escrow Fund. The merger agreement provides that 10% of the shares of CIENA common stock allocable to holders of WaveSmith capital stock to be issued to the WaveSmith stockholders in the merger and 10% of the shares of CIENA common stock allocable to vested options to purchase WaveSmith common stock will be placed in escrow with an escrow agent as soon as practicable after the merger is completed. Additionally, 53,011 shares of CIENA common stock which are allocable to WaveSmith stockholders in the merger will be deposited with the escrow agent to pay any expenses of Michael Feinstein, the stockholder representative. The escrow fund will be the sole and exclusive source available to compensate CIENA for the indemnification obligations of each WaveSmith stockholder under the merger agreement. The merger agreement does not, however, limit any remedies against the parties to the merger agreement in the event of fraud. The deposit with the escrow agent constitutes an escrow fund to be governed by the terms set forth in the escrow agreement. The portion of the escrow amount contributed on behalf of each stockholder must be proportional to the aggregate CIENA common stock to which such holder would otherwise be entitled. The form of escrow agreement is attached to this prospectus and proxy statement as Annex D.

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The vote being taken at the upcoming special meeting to approve and adopt the merger agreement includes approval of the provision of the merger agreement establishing Michael Feinstein as stockholders' representative under the escrow agreement.

Directors' and Officers' Insurance and Indemnification

CIENA has agreed to fulfill and honor in all respects the indemnification agreements WaveSmith has previously entered into with its officers and directors and to fulfill and honor any indemnification provisions of WaveSmith's charter documents. The merger agreement provides that all rights to indemnification for present and former officers and directors of WaveSmith will survive the merger and continue in full force and effect for a period of not less than six years from the date of the completion of the merger in the case of certain omissions.

Conditions Precedent to Each Party's Obligation to Effect the Merger

The following conditions must be satisfied before the merger can become effective:

- All applicable waiting periods under the Hart-Scott-Rodino Act have expired or been terminated;
- CIENA and WaveSmith have obtained all authorizations, consents, orders, declarations or approvals of, or filings with, any governmental authority required in connection with the merger, which the failure to obtain, make or occur would have the effect of making the merger or any of the transactions contemplated by it illegal or would have a material adverse effect on CIENA or a material adverse effect on WaveSmith;
- No court or governmental entity enacts, issues, promulgates, enforces or enters, or institutes a proceeding to do so, any law, statute, ordinance, rule, regulation, judgment, decree, injunction or other order which is in effect and which restrains, enjoins or otherwise prohibits consummation of the merger;
- The S-4 registration statement must have become effective under the Securities Act, and there must be no stop order or threat of proceedings by the SEC to suspend the effectiveness of the S-4;
- The merger of WS Contract Corp. into WaveSmith shall have become effective and the new WaveSmith certificate of incorporation shall have been filed with the Secretary of State of the State of Delaware; and
- Holders of WaveSmith capital stock must approve the merger.

Conditions Precedent to CIENA's Obligations

CIENA's obligations to effect the merger are subject to the fulfillment or satisfaction, prior to or on the closing date, of each of the following conditions:

- WaveSmith must have performed and complied in all material respects with all agreements and conditions to be performed prior to or on the closing date;
- WaveSmith must have received certain specified consents or waivers, in form and substance satisfactory to CIENA, from the other parties to certain contracts, leases or agreements to which WaveSmith is a party; and
- The escrow agreement shall have been executed and delivered.

Conditions Precedent to WaveSmith's Obligations

WaveSmith's obligations to effect the merger are subject to the satisfaction of the following conditions prior to the closing date:

- CIENA must have performed and complied in all material respects with all agreements and conditions to be performed prior to or on the closing date; and

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- If required, CIENA shall have filed a timely notification of listing of additional shares with the Nasdaq National Market.

Termination of the Merger Agreement

The merger agreement may be terminated, and the merger may be abandoned at any time prior to the closing date:

- by the mutual written agreement of CIENA and WaveSmith;
- by CIENA or WaveSmith if:
 - * the closing date has not occurred by August 15, 2003 (the “termination date”) or the approval of WaveSmith’s stockholders as required by the merger agreement has not been obtained at a meeting convened for that purpose, except that the right to terminate the merger agreement is not available to any party who has caused the delay in the closing date by failing to fulfill its obligations under the merger agreement; or
 - * any court of competent jurisdiction in the United States or other United States governmental authority issues an order or takes any other final and non-appealable action restraining, enjoining or otherwise prohibiting the merger.

However, CIENA may, by notice to WaveSmith given on or prior to two business days prior to August 15, 2003, extend the termination date to October 15, 2003, if CIENA provides at least \$7.5 million in subordinated bridge financing to WaveSmith having customary terms, including an interest rate of prime plus 200 basis points, with interest cumulating and added to principal on maturity or conversion, and providing that such bridge financing will convert into equity on terms equivalent to the next bona fide private equity financing round of WaveSmith.

- by WaveSmith if:
 - * WaveSmith’s board of directors authorizes WaveSmith, subject to complying with the merger agreement, to enter into a binding written agreement concerning a superior proposal and CIENA does not make, within two business days of receipt of notification of WaveSmith’s intent, an offer that the WaveSmith board of directors determines in good faith, after consultation with its outside legal counsel and its financial advisors, is at least as favorable as the superior proposal; or
 - * CIENA breaches any material representation, warranty, covenant or agreement in the merger agreement, and fails to cure the breach ten days after receiving written notice of it.
- by CIENA if:
 - * WaveSmith’s board of directors has withdrawn, modified or amended in any respect adverse to CIENA its recommendation in favor of the merger or failed to reconfirm its recommendation within three business days of a written request of CIENA to do so;
 - * WaveSmith has recommended or entered into an agreement with respect to, or consummated, any acquisition proposal from a person other than CIENA or any of its affiliates; or
 - * WaveSmith breaches any material representation, warranty, covenant or agreement in the merger agreement, and fails to cure the breach ten days after receiving notice of it.

If the merger agreement is terminated by WaveSmith in order to enter into an agreement for a superior proposal, or by CIENA because WaveSmith’s board of directors withdraws, amends or modifies its recommendation in favor of the merger, then WaveSmith must pay CIENA a termination fee of \$5.1 million, as well as reimbursement of up to \$500,000 for expenses incurred in the merger negotiation. In addition, WaveSmith will be obligated to pay CIENA a fee of 5% of the price of a superior proposal under the letter agreement it entered into with CIENA in September 2002 if WaveSmith is sold to a party other than CIENA prior to July 1, 2003, unless the 2002 letter agreement is terminated as described

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below. In addition, if the merger agreement is terminated by WaveSmith to enable it to enter into a superior transaction, CIENA may exercise its options under the stockholder agreements to acquire the shares of the stockholders who are parties to the stockholder agreements, for cash, at the original merger price. See “— Stockholder Agreements” below.

In the event that:

- CIENA terminates the merger agreement for any reason other than because the WaveSmith board of directors determined to enter into an alternative transaction that it views as superior to the merger;
- WaveSmith terminates the merger agreement for any reason other than its board of directors determining to enter into an alternative transaction that it views as superior to the merger; or
- the merger agreement is terminated by either party because the waiting period under the Hart-Scott-Rodino Antitrust Improvement Act of 1976 has not expired or been terminated,

then, the reseller agreement between CIENA and WaveSmith, the letter agreement between CIENA, MultiWave Investment, Inc., a wholly-owned subsidiary of CIENA, and WaveSmith and the agreements CIENA has with several holders of WaveSmith capital stock will also terminate.

Waiver and Amendment of the Merger Agreement

At any time prior to the effective time of the merger, the parties to the merger agreement may agree in writing to:

- extend the time for the performance of any obligation or other act required to be performed under the merger agreement;
- waive any inaccuracies in the representations and warranties contained in the merger agreement or in any document delivered pursuant to the merger agreement;
- waive compliance with any of the agreements or conditions contained in the merger agreement; or
- amend the merger agreement.

Expenses

CIENA and WaveSmith will pay their own expenses incidental to the preparation of the merger agreement, the carrying out of the provisions of the merger agreement and the consummation of the transactions contemplated by the merger agreement.

Stockholder Agreements

Voting

Certain directors and officers of WaveSmith, and their affiliates, owning common and preferred stock of WaveSmith have signed stockholder agreements with CIENA. In the aggregate, as of April 24, 2003, these individuals own 57.6% of the common and preferred stock, on an as-converted basis, 87.9% of the series A and A-1 preferred stock, on an as-converted basis, 81.0% of the series B and B-1 preferred stock, on an as-converted basis, and 54.1% of the series C stock, on an as-converted basis. The form of these stockholder agreements is attached as Annex C to this proxy statement/prospectus.

Pursuant to these stockholder agreements, these directors and officers of WaveSmith, and their affiliates, have agreed to do the following:

- vote in favor of adopting and approving the terms of the merger agreement;
- vote against any alternative acquisition proposal; and

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- vote against any proposal that would in any manner impede, frustrate, prevent or nullify the merger or the merger agreement or change in any manner the voting rights of any class of capital stock of WaveSmith.

These stockholders have also agreed not to:

- sell, transfer, pledge, assign or otherwise dispose of, or enter into any contract, option or other arrangement (including any profit-sharing arrangement) with respect to the transfer of their WaveSmith shares to any person, subject to limited exceptions;
- enter into any voting arrangement, whether by proxy, voting agreement or otherwise, in relation to their WaveSmith shares; or
- (i) directly or indirectly solicit, initiate or knowingly encourage the submission of, any alternative acquisition proposal or (ii) directly or indirectly participate in any discussions or negotiations regarding, or furnish to any person any information with respect to, or facilitate any inquiries or the making of any proposal that constitutes or may lead to, any alternative acquisition proposal or permit any affiliate, director, officer, employee, investment banker, attorney or other advisor or representative of the stockholder to do so.

Grant of Option

The stockholder agreements also grant to CIENA an irrevocable option to purchase the shares of WaveSmith stock that are owned beneficially or of record by the stockholders who entered into the stockholder agreements.

CIENA may exercise the options if:

- WaveSmith terminates the merger agreement;
- CIENA terminates the merger agreement because the WaveSmith board of directors withdraws, or modifies in a manner adverse to CIENA its recommendation of the merger agreement and the merger or recommends or enters into an acquisition proposal with someone other than CIENA;
- CIENA terminates the merger agreement because WaveSmith is in material breach of the terms of the merger agreement and CIENA is not in material breach of the terms of the merger agreement; or
- the stockholder breaches its obligations to vote in favor of the merger and otherwise as described in this section.

The option price is payable in cash at an exercise price based on the exchange formula set forth in the merger agreement, as if the merger became effective on the date of the merger agreement and assuming that WaveSmith had issued certain options reserved for grant to employees that may be hired prior to the effective time of the merger.

If CIENA decides to exercise the options it must purchase the total number of shares subject to the options received from all of the WaveSmith stockholders who have granted these options to CIENA.

The options will terminate upon the earliest of:

- the date the merger agreement is terminated by Wave Smith because:
 - * the WaveSmith stockholders do not approve the merger agreement, but only if the stockholder has not breached its voting agreement and other obligations described in this section;
 - * the closing of the merger has not occurred by August 15, 2003 and CIENA does not extend financing to WaveSmith on the terms described above under “— Termination of the Merger Agreement;” or

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* the merger has not closed by October 15, 2003 if the termination date has been extended by CIENA.

- the date the merger agreement is terminated by CIENA other than because the WaveSmith board of directors has withdrawn or modified its recommendation in favor of the merger or recommended or entered into an acquisition proposal with someone other than CIENA;
- the date the merger agreement has been terminated by WaveSmith or CIENA because termination of the HSR waiting period has not occurred; or
- six months after termination of the merger agreement.

CIENA required that the stockholders deliver these agreements as a condition to CIENA's willingness to enter into the merger agreement.

In addition to these stockholder agreements, WaveSmith entered into a voting agreement with a stockholder who owns 16,666,667 shares of the series C preferred stock, which represents 17.9% of the series C preferred stock and 5.80% of the common stock on an as-converted basis. Under this voting agreement that stockholder has agreed to vote his shares in favor of the merger, against any alternative acquisition proposal and against any proposal that would in any manner impede, frustrate, prevent or nullify the merger or the merger agreement or change in any manner the voting rights of any class of capital stock of WaveSmith. This voting agreement will terminate either upon the termination of the merger agreement or upon mutual agreement by the parties.

Although the shares subject to the stockholder agreements and the voting agreement are insufficient in themselves to ensure approval of the merger, if the merger agreement is not terminated (by WaveSmith to pursue a superior proposal, among other reasons) and the agreements themselves are not terminated as described above, then, depending on the number of shares of WaveSmith common stock outstanding at that time, these shares, when taken together with the shares of series C preferred stock owned by CIENA's subsidiary, MultiWave Investment, Inc., are sufficient to approve the merger at the stockholder meeting. If the options granted under the stockholder agreements are exercised under the circumstances described above, depending on the number of shares of WaveSmith common stock outstanding at that time, CIENA could profit from an alternative proposal that is completed at a price higher than the option price and may be able to prevent or delay the consummation of an alternative proposal. These agreements are not intended to and do not prevent the WaveSmith directors from pursuing a superior proposal.

Restrictions on Resales by Affiliates

The shares of CIENA stock to be issued to WaveSmith stockholders in the merger have been registered under the Securities Act. These shares may be traded freely and without restriction by those stockholders not deemed to be "affiliates" of WaveSmith as that term is defined under the Securities Act. An affiliate of a corporation, as defined by the rules promulgated under the Securities Act, is a person who directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, that corporation. Any transfer by an affiliate of WaveSmith must be one permitted by the resale provisions of Rule 145 promulgated under the Securities Act. If a WaveSmith affiliate becomes an affiliate of CIENA, any transfer must be permitted by the resale provisions of Rule 144 promulgated under the Securities Act or otherwise permitted under the Securities Act. These restrictions are not expected to apply to the executive officers and directors of WaveSmith.

Merger of WS Contract Corp. into WaveSmith

As part of the negotiations of the terms of the merger of WaveSmith into CIENA, WaveSmith and CIENA agreed that the CIENA stock to be issued as consideration in connection with the merger should be distributed in a manner that differed from the results obtained under the charter documents of WaveSmith. The distribution agreed upon by the parties resulted in a greater number of shares being allocated to the holders of WaveSmith common stock. Stockholders of WaveSmith have approved the merger of WS Contract Corp. into WaveSmith and the related adjustment of the charter documents of WaveSmith immediately prior to the merger of WaveSmith into CIENA. The adjustment to the WaveSmith charter documents reduces the preference amounts for each series of preferred stock of WaveSmith as follows:

Class of Stock	Original Preference Amount	New Preference Amount
Series A Preferred Stock	\$1.25	\$1.016030
Series A-1 Preferred Stock	1.25	0.673904
Series B Preferred Stock	0.90	0.783015
Series B-1 Preferred Stock	0.90	0.506835
Series C Preferred Stock	0.45	0.286181

Approving the merger and the related changes to the WaveSmith charter documents in advance of executing the agreement and plan of merger with CIENA allowed WaveSmith to avoid the uncertainty and delay associated with a solicitation regarding a merger and a charter amendment during the period between execution of the agreement and plan of merger with CIENA and the closing of the transaction. WaveSmith determined to effect the changes to its charter through a merger, rather than a charter amendment, so as to avoid as much as possible questions as to whether WaveSmith would have to seek a separate class vote on an amendment from each series of preferred stock, which could have delayed the execution of the merger agreement.

UNAUDITED PRO FORMA COMBINED FINANCIAL STATEMENT

The following unaudited pro forma combined statement of operations present the merger between CIENA and ONI Systems as if the merger had been completed on November 1, 2001. CIENA acquired ONI Systems, Inc. on June 21, 2002.

The unaudited pro forma combined financial data is based on estimates and assumptions that have been made solely for the purposes of developing these unaudited pro forma combined financial data. The unaudited pro forma combined financial data is not necessarily an indication of the results that would have been achieved had the transaction been consummated as of the dates indicated or results that may be achieved in the future.

This unaudited pro forma combined consolidated financial data should be read in conjunction with the summary selected historical consolidated financial data.

UNAUDITED PRO FORMA COMBINED
STATEMENT OF OPERATIONS
Year Ended October 31, 2002
(In thousands, except per share data)

	October 31, 2002 Historical CIENA	Period from October 1, 2001 to June 21, 2002 Historical ONI Systems	Adjustments	Pro Forma October 31, 2002 CIENA
Revenue	\$ 361,155	\$ 69,858	\$ —	\$ 431,013
Excess and obsolete inventory costs	286,475		—	286,475
Cost of goods sold	309,559	61,610	—	371,169
Gross profit (loss)	(234,879)	8,248	—	(226,631)
Operating expenses				
Research and development (exclusive of \$15,672, \$1,833, \$2,439 and \$19,944 deferred stock compensation)	239,619	51,213	—	290,832
Selling and marketing (exclusive of \$3,560, \$1,396, (\$684) and \$4,272 deferred stock compensation)	130,276	37,688	—	167,964
General and administrative (exclusive of \$1,092, \$731, \$213 and \$2,036 deferred stock compensation)	50,820	30,650	—	81,470
Deferred stock compensation costs	20,324	3,960	1,968 A	26,252
Amortization of goodwill	—	1,233	(1,233)B	—
Amortization of intangible assets	8,972	3,363	(2,363)C	9,972
Restructuring costs	225,429	3,051	—	228,480
Goodwill impairment	557,286	—	—	557,286
Pirelli litigation	1,792	—	—	1,792
Provision for doubtful accounts	14,813	—	—	14,813
Total operating expenses	1,249,331	131,158	(1,628)	1,378,861
Income (loss) from operations	(1,484,210)	(122,910)	1,628	(1,605,492)
Other income (expense), net	(2,554)	2,197	(16,504) D	(16,861)
Income (loss) before income taxes	(1,486,764)	(120,713)	(14,876)	(1,622,353)
Provision for income taxes	110,735	364	—	111,099
Net income (loss)	\$(1,597,499)	\$(121,077)	\$(14,876)	\$(1,733,452)
Basic net loss per common share	\$ (4.37)			\$ (4.00)
Diluted net loss per common share and dilutive potential common share	\$ (4.37)			\$ (4.00)
Weighted average basic common shares outstanding	365,202		67,640 E	432,842
Weighted average basic common and dilutive potential common shares outstanding	365,202		67,640 E	432,842

NOTES TO UNAUDITED PRO FORMA

COMBINED FINANCIAL DATA

NOTE 2 — PRO FORMA ADJUSTMENTS

- A. To eliminate historical deferred stock compensation and related amortization charges for ONI Systems stock option grants and record deferred stock compensation in accordance with FIN 44, “Accounting for Certain Transactions Involving Stock Compensation — an interpretation of APB 25,” related to ONI Systems unvested stock options and restricted common stock.
- B. To eliminate historical goodwill amortization for ONI Systems. CIENA adopted Statement of Financial Accounting Standards No. 142, “Goodwill and Other Intangible Assets” (SFAS No. 142), and ceased amortizing goodwill beginning on November 1, 2001.
- C. To eliminate historical amortization of the non-goodwill intangibles for ONI Systems and record amortization of intangibles associated with the ONI Systems acquisition for the period prior to the consummation date.
- D. To record accretion of notes acquired with the purchase of ONI Systems for entire twelve-month period.
- E. To adjust the CIENA weighted average common shares to reflect the acquisition of ONI Systems as of November 1, 2001.

INFORMATION ABOUT CIENA

General

CIENA is a leader in intelligent optical networking systems and software, offering telecommunications network solutions to service providers and enterprises worldwide. CIENA's customers include long-distance carriers, local exchange carriers, Internet service providers, wireless and wholesale carriers, systems integrators, governmental, large businesses and non-profit institutions. CIENA offers network solutions that enable service providers to provision, manage and deliver economic, high-bandwidth services to their customers.

Additional Information

A detailed description of CIENA's business and various benefit plans, including stock option plans, financial statements and other matters related to CIENA is incorporated by reference in this proxy statement/prospectus or set forth in CIENA's Annual Report on Form 10-K for the year ended October 31, 2002 and Quarterly Report on Form 10-Q for the quarter ended January 31, 2003. Stockholders desiring copies of such documents may contact CIENA at its address or telephone number indicated under the caption "Where You Can Find More Information."

INFORMATION ABOUT WAVESMITH

General

WaveSmith Networks designs, develops and markets a next generation multi-service switch platform designed to empower telecommunications carriers to cap their investments in aging technology, while they begin deploying next-generation platforms. In this way, WaveSmith's products embrace carriers' near-term, tactical requirements as well as their longer-term strategic visions. WaveSmith's Distributed Node (DNTM) multi-service switch platform is designed from the ground up to sustain and leverage today's layer 2 infrastructure while incorporating an evolutionary path to future technologies.

WaveSmith was incorporated in March 2000 in the state of Delaware and was a development stage company into 2002. The Company achieved its first revenues with multiple customers in 2002. Currently, WaveSmith's operating activities consist primarily of research and development, sales and marketing, product design, manufacturing and testing.

SECURITY OWNERSHIP OF DIRECTORS, EXECUTIVE OFFICERS AND MORE THAN

FIVE PERCENT STOCKHOLDERS OF WAVESMITH

The following table sets forth certain information regarding the beneficial ownership of WaveSmith's common stock as of April 9, 2003, assuming that all outstanding shares of WaveSmith preferred stock have been converted into common stock on that date: (i) by each person who is known by WaveSmith to own beneficially more than 5% of each of the classes of WaveSmith capital stock, on an as-converted basis; (ii) by each director of WaveSmith; (iii) by the chief executive officer and the five most highly compensated executive officers, other than the chief executive officer, of WaveSmith; and (iv) by all of the directors and all of the executive officers of WaveSmith as a group. Except as noted below, the address of each person listed on the table is c/o WaveSmith Networks, Inc., 35 Nagog Park, Acton, MA 01720.

As of April 9, 2003, 79,787,626 shares of common stock, 185,000 shares of series A preferred stock, 9,015,000 shares of series A-1 preferred stock, 2,353,370 shares of series B preferred stock, 33,333,331 shares of series B-1 preferred stock, and 92,963,301 shares of series C preferred stock of WaveSmith were issued and outstanding.

Each share of common stock is entitled to 1 vote. Each share of preferred stock is entitled to a number of votes equal to the number of shares of common stock into which such share of preferred stock may be converted into pursuant to WaveSmith's certificate of incorporation. Each share of series A preferred stock converts into 2 shares of common stock. Each share of series A-1 preferred stock converts into 3.51667 shares of common stock. Each share of series B preferred stock converts into 1 share of common stock. Each share of series B-1 preferred stock converts into 2.4 shares of common stock. Each share of series C preferred stock converts into 1 share of common stock. No other classes of capital stock are authorized under the WaveSmith certificate of incorporation.

The following table is based on 32,072,771 shares of series A and series A-1 preferred stock, 82,353,358 shares of series B and series B-1 preferred stock, 92,963,301 shares of series C preferred stock and 287,177,056 shares of common and preferred stock, deemed outstanding as of April 9, 2003, assuming that all outstanding shares of WaveSmith preferred stock have been converted into common stock as of that date. Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission and includes voting and investment power with respect to the shares of capital stock.

Name of Beneficial Owner(1)(2)	Common and Preferred Stock Outstanding on an As-Converted Basis		Series A and A-1 Preferred Stock Outstanding on an As-Converted Basis		Series B and B-1 Preferred Stock Outstanding on an As-Converted Basis		Series C Preferred Stock Outstanding on an As-Converted Basis	
	Amount and Nature of Beneficial Ownership	Percent of Class	Amount and Nature of Beneficial Ownership	Percent of Class	Amount and Nature of Beneficial Ownership	Percent of Class	Amount and Nature of Beneficial Ownership	Percent of Class
Michael Feinstein(3)(4) c/o Atlas Venture 890 Winter Street, Suite 320 Altham, MA 02451	58,066,677	20.22%	14,066,678	43.86%	23,999,999	29.14%	20,000,000	21.51%
Entities Affiliated with Atlas Venture(3)(5) 890 Winter Street, Suite 320 Waltham, MA 02451	58,066,677	20.22%	14,066,678	43.86%	23,999,999	29.14%	20,000,000	21.51%
G. Felda Hardymon(3)(6) c/o Bessemer Venture Partners 1865 Palmer Avenue, Suite 104 Larchmont, NY 10538	43,658,108	15.20%	14,066,678	43.86%	15,999,996	19.43%	13,591,434	14.62%
Entities Affiliated with Bessemer Venture Partners(3)(7) 1865 Palmer Avenue, Suite 104 Larchmont, NY 10538	43,658,108	15.20%	14,066,678	43.86%	15,999,996	19.43%	13,591,434	14.62%

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Name of Beneficial Owner(1)(2)	Common and Preferred Stock Outstanding on an As-Converted Basis		Series A and A-1 Preferred Stock Outstanding on an As-Converted Basis		Series B and B-1 Preferred Stock Outstanding on an As-Converted Basis		Series C Preferred Stock Outstanding on an As-Converted Basis	
	Amount and Nature of Beneficial Ownership	Percent of Class	Amount and Nature of Beneficial Ownership	Percent of Class	Amount and Nature of Beneficial Ownership	Percent of Class	Amount and Nature of Beneficial Ownership	Percent of Class
Robert C. Ketterson, Jr.(3)(8) c/o Fidelity Ventures 100 Summer Street, 27 th Floor Boston, MA 02110	43,333,333	15.09%	0	0%	26,666,666	32.38%	16,666,667	17.93%
Entities Affiliated with Fidelity Ventures(3)(9) 100 Summer Street, 27 th Floor Boston, MA 02110	43,333,333	15.09%	0	0%	26,666,666	32.38%	16,666,667	17.93%
Commonwealth Capital Ventures L.P.(3)(10) 20 William Street, Suite 225 Wellesley, MA 02481	7,992,357	2.78%	2,813,335	8.77%	2,666,665	3.24%	2,512,357	2.70%
Entities Affiliates with Venture Investment Management Company(3)(11) 177 Milk Street Boston, MA 02109	7,392,637	2.57%	0	0%	5,333,330	6.48%	2,059,307	2.22%
George B. Kaiser(3) c/o Argonaut Private Equity 6733 South Yale Tulsa, OK 74136	16,666,667	5.80%	0	0%	0	0%	16,666,667	17.93%
MultiWave Investment, Inc.(3)(12) 1201 North Market Street, Suite 1604 Wilmington, DE 19801	16,666,667	5.80%	0	0%	0	0%	16,666,667	17.93%
Thomas Burkardt(3)(13)	14,177,693	4.94%	70,333	0.22%	0	0%	37,067	0.04%
Robert J. Dalias(3)(14)	6,273,107	2.18%	0	0%	0	0%	0	0%
Robert O'Neil(15)	5,825,523	2.03%	0	0%	0	0%	0	0%
Michael Regan(16)	5,009,950	1.74%	0	0%	0	0%	0	0%
John T. O'Hara(3)(17)	5,527,699	1.92%	0	0%	0	0%	0	0%
Gregg Savage(18)	3,032,762	1.06%	0	0%	0	0%	0	0%
John Burnham(19)	2,524,975	*	0	0%	0	0%	0	0%
All executive officers and directors as a group (11 persons)(20)	189,629,827	66.03%	28,203,689	87.94%	66,666,661	80.95%	50,295,168	54.10%

- (1) The persons identified in the table above possess sole voting and investment power with respect to all shares shown as beneficially owned by them, except as noted in the footnotes below and subject to applicable community property laws.
- (2) The inclusion herein of any shares of WaveSmith capital stock deemed beneficially owned does not constitute an admission of beneficial ownership of those shares.
- (3) These WaveSmith stockholders have been party to a stockholders agreement since the time of their acquisition of WaveSmith capital stock that requires that they vote all of the voting securities of WaveSmith capital stock that they own or control to cause and maintain the election of the persons specified in the stockholders agreement to the WaveSmith board of directors. All of the current members of the WaveSmith board of directors have been elected pursuant to this voting arrangement. Under applicable federal securities laws, this voting arrangement may mean that each stockholder who is a party to the agreement is deemed to be the beneficial owner of all of the shares of WaveSmith capital stock owned by each of the stockholders who are parties to the agreement. Stockholders who are parties to the stockholders agreement own 100% of WaveSmith's outstanding shares of series A and A-1 preferred stock; 100% of WaveSmith's outstanding shares of series B and B-1 preferred stock; 100% of WaveSmith's outstanding shares of series C preferred stock; 21.26% of WaveSmith's outstanding shares of common stock; and 78.12% of all of WaveSmith's outstanding shares of capital stock, on an as-converted basis.

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- (4) Includes 58,066,677 shares of WaveSmith capital stock, on an as-converted basis, held by the entities listed in note 5 below. Mr. Feinstein is a Senior Principal of Atlas Venture and an affiliate of Atlas Venture Associates V, Inc., the sole general partner of Atlas Venture Associates V, L.P., the sole general partner of the entities listed in note 5 below and may be deemed to share voting and investment power with respect to all shares held by such entities. Mr. Feinstein disclaims beneficial ownership of the shares held by the entities listed in note 5 below except to the extent of his direct pecuniary interest in those shares.
- (5) The holdings of the entities affiliated with Atlas Venture Associates V, Inc. are as follows: (i) Atlas Venture Entrepreneur Fund V, L.P. held an aggregate of 764,036 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 185,089 shares of series A-1 preferred stock, on an as-converted basis, (b) 315,789 shares of series B-1 preferred stock, on an as-converted basis, and (c) 263,158 shares of series C preferred stock, on an as-converted basis; (ii) Atlas Venture Fund V, L.P. held an aggregate of 45,899,707 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 11,119,225 shares of series A-1 preferred stock, on an as-converted basis, (b) 18,971,172 shares of series B-1 preferred stock, on an as-converted basis, and (c) 15,809,310 shares of series C preferred stock, on an as-converted basis; (iii) Atlas Venture Parallel Fund V-A C.V. held an aggregate of 5,701,467 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 1,381,182 shares of series A-1 preferred stock, on an as-converted basis, (b) 2,356,519 shares of series B-1 preferred stock, on an as-converted basis, and (c) 1,963,766 shares of series C preferred stock, on an as-converted basis; and (iv) Atlas Venture Parallel Fund V-B C.V. held an aggregate of 5,701,467 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 1,381,182 shares of series A-1 preferred stock, on an as-converted basis, (b) 2,356,519 shares of series B-1 preferred stock, on an as-converted basis, and (c) 1,963,766 shares of series C preferred stock, on an as-converted basis.
- (6) Includes 43,658,108 shares of WaveSmith capital stock, on an as-converted basis, held by the entities listed in note 7 below. Mr. Hardymon is a Managing Member of Deer V & Co. LLC, the general partner or managing member (as the case may be) of the entities listed in note 7 below and may be deemed to share voting and investment power with respect to all shares held by such entities. Mr. Hardymon disclaims beneficial ownership of the shares held by the entities listed in note 7 below except to the extent of his direct pecuniary interest in those shares.
- (7) The holdings of the entities affiliated with Deer V & Co. LLC are as follows: (i) Bessec Ventures V L.P. held an aggregate of 15,740,721 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 5,232,804 shares of series A-1 preferred stock, on an as-converted basis, (b) 5,681,599 shares of series B-1 preferred stock, on an as-converted basis, and (c) 4,826,318 shares of series C preferred stock, on an as-converted basis; (ii) Bessemer Venture Investors II L.P. held an aggregate of 2,760,150 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 984,667 shares of series A-1 preferred stock, on an as-converted basis, (b) 959,997 shares of series B-1 preferred stock, on an as-converted basis, and (c) 815,486 shares of series C preferred stock, on an as-converted basis; (iii) Bessemer Venture Partners V L.P. held an aggregate of 17,167,554 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 7,849,207 shares of series A-1 preferred stock, on an as-converted basis, (b) 5,038,404 shares of series B-1 preferred stock, on an as-converted basis, and (c) 4,279,943 shares of series C preferred stock, on an as-converted basis; (iv) BVE 2001 LLC held an aggregate of 256,761 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 138,830 shares of series B-1 preferred stock, on an as-converted basis, and (b) 117,931 shares of series C preferred stock, on an as-converted basis; (v) BVE 2001 (Q) LLC held an aggregate of 4,181,953 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 2,261,169 shares of series B-1 preferred stock, on an as-converted basis, and (b) 1,920,784 shares of series C preferred stock, on an as-converted basis; and (vi) BIP 2001 L.P. held an aggregate of 3,550,969 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 1,919,997 shares of series B-1 preferred stock, on an as-converted basis, and (b) 1,630,972 shares of series C preferred stock, on an as-converted basis.

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- (8) Includes 43,333,333 shares of WaveSmith capital stock, on an as-converted basis, held by the entities listed in note 9 below. Mr. Ketterson is a Vice President of Fidelity Investment Management, LLC, the ultimate general partner of the entities listed in note 9 below and may be deemed to share voting and investment power with respect to all shares held by such entities. Mr. Ketterson disclaims beneficial ownership of the shares held by the entities listed in note 9 below, except to the extent of his direct pecuniary interest in those shares.
- (9) The holdings of the entities affiliated with Fidelity Investment Management, LLC are as follows: (i) Fidelity Ventures III Limited Partnership held an aggregate of 42,116,531 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 25,917,864 shares of series B-1 preferred stock, on an as-converted basis, and (b) 16,198,667 shares of series C preferred stock, on an as-converted basis; and (ii) Fidelity Ventures Principals III Limited Partnership held an aggregate of 1,216,802 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 748,802 shares of series B-1 preferred stock, on an as-converted basis, and (b) 468,000 shares of series C preferred stock, on an as-converted basis.
- (10) The holdings of the entities affiliated with Commonwealth Venture Partners II, L.P. are as follows: (i) Commonwealth Capital Ventures II, L.P. held an aggregate of 7,615,839 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 2,680,799 shares of series A-1 preferred stock, on an as-converted basis, (b) 2,541,040 shares of series B-1 preferred stock, on an as-converted basis and (c) 2,394,000 shares of series C preferred stock, on an as-converted basis; and (ii) CCV II Associates, L.P. held an aggregate of 376,518 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 132,536 shares of series A-1 preferred stock, on an as-converted basis, (b) 125,625 shares of series B-1 preferred stock, on an as-converted basis and (c) 118,357 shares of series C preferred stock, on an as-converted basis.
- (11) The holdings of the entities affiliated with Venture Investment Management Company LLC are as follows: (i) VIMAC Early Stage Fund, L.P. held an aggregate of 5,544,478 shares of WaveSmith capital stock, on an as-converted basis consisting of (a) 3,999,998 shares of series B-1 preferred stock, on an as-converted basis, and (b) 1,544,480 shares of series C preferred stock, on an as-converted basis; (ii) VIMAC WS Limited Partnership held 1,333,332 shares of series B-1 preferred stock, on an as-converted basis; (iii) VIMAC WS2 Limited Partnership held 514,827 shares of series C preferred stock, on an as-converted basis.
- (12) MultiWave Investment, Inc. is a subsidiary of CIENA Corporation.
- (13) Consists of 70,333 shares of series A-1 preferred stock, on an as-converted basis and 37,067 shares of series C preferred stock, on an as-converted basis, held by TriTower Limited Partnership and 14,070,293 shares of common stock held by Thomas Burkardt personally, of which 1,931,012 shares are not subject to WaveSmith's right of repurchase. The vesting of 12,139,281 shares of common stock will accelerate fully upon consummation of the merger. Mr. Burkardt disclaims beneficial ownership of the shares held by TriTower Limited Partnership except to the extent of his direct pecuniary interest in those shares. Mr. Burkardt and his wife, Pamela Burkardt, are the general partners of TriTower Limited Partnership, which holds the shares for the benefit of certain members of Mr. Burkardt's family. All voting and investment power for TriTower Limited Partnership resides in Mr. Burkardt.
- (14) Consists of 5,473,107 shares of common stock held by Robert Dalias personally, 600,000 shares of common stock held by The Dalias Family Trust and 200,000 shares of common stock held by The Dalias Relatives Trust. Mr. Dalias disclaims beneficial ownership of the shares held by the foregoing entities. Marianne Dalias, Mr. Dalias' wife, and Donna Bernhardson, Mr. Dalias' sister, are the trustees of The Dalias Family Trust, which holds shares for Mr. Dalias' children. Marianne Dalias and Thomas Bernhardson, Mr. Dalias' brother-in-law, are the trustees of The Dalias Relatives Trust, which hold shares for the benefit of certain members of Mr. Dalias' family. All voting and investment power under these trusts resides in their trustees.

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- (15) Consists of 5,825,523 shares of common stock subject to WaveSmith's right of repurchase which lapses over time, of which the vesting of 1,456,380 shares will accelerate and be fully vested upon consummation of the merger.
- (16) Consists of 5,009,950 shares of common stock subject to WaveSmith's right of repurchase which lapses over time, of which the vesting of 1,252,487 shares will accelerate and be fully vested upon consummation of the merger.
- (17) Consists of 4,687,699 shares of common stock held by John O'Hara personally, of which the vesting of 526,938 shares will accelerate and be fully vested upon consummation of the merger, and 840,000 shares of common stock held by The O'Hara Childrens Trust. Mr. O'Hara disclaims beneficial ownership of the shares held by The O'Hara Childrens Trust. Gerald A. Polcari, Mr. O'Hara's tax and financial advisor, is the trustee for The O'Hara Childrens Trust, which holds shares for Mr. O'Hara's children. All voting and investment power for The O'Hara Childrens Trust resides in its trustee.
- (18) Consists of 3,032,762 shares of common stock of which 2,912,762 shares are subject to WaveSmith's right of repurchase which lapses. The vesting of 728,190 shares of common stock will accelerate and be fully vested upon consummation of the merger.
- (19) Consists of 2,524,975 shares of common stock of which 2,504,975 shares are subject to WaveSmith's right of repurchase which lapses over time, of which the vesting of 626,243 shares will accelerate and be fully vested upon consummation of the merger.
- (20) Includes 17,084,327 shares of common stock with regard to which WaveSmith's right of repurchase will lapse upon consummation of the merger.

DESCRIPTION OF CIENA CAPITAL STOCK

The following summary description of the capital stock of CIENA does not purport to be complete and is qualified in its entirety by the provisions of CIENA's certificate of incorporation and bylaws and by the applicable provisions of the Delaware General Corporation Law. For information on how to obtain copies of CIENA's certificate of incorporation and bylaws, see "Where You Can Find More Information."

Authorized and Outstanding Capital Stock of CIENA

Pursuant to CIENA's certificate of incorporation, CIENA has authority to issue 1,000,000,000 shares of capital stock, consisting of 980,000,000 shares of CIENA common stock, par value \$0.01 per share, and 20,000,000 shares of preferred stock, par value \$.01 per share. As of April 25, 2003, 434,980,818 shares of CIENA common stock, and no shares of CIENA preferred stock were issued and outstanding.

The rights of the holders of CIENA common stock discussed below are subject to such rights as the CIENA board of directors may hereafter confer on holders of CIENA preferred stock that may be issued in the future. Such rights may adversely affect the rights of holders of CIENA common stock.

CIENA Common Stock

Voting Rights. Each holder of CIENA common stock is entitled to attend all special and annual meetings of the stockholders of CIENA and to vote upon any matter, including, without limitation, the election of directors, properly considered and acted upon by the stockholders of CIENA. Holders of CIENA common stock are entitled to one vote per share of common stock held.

Liquidation Rights. In the event of any dissolution, liquidation or winding up of CIENA, whether voluntary or involuntary, the holders of CIENA common stock and holders of any class or series of stock entitled to participate therewith, will be entitled to participate in the distribution of any assets of CIENA remaining after CIENA has paid all of its debts and liabilities and after CIENA has paid, or set aside for payment, to the holders of any class of stock having preference over the CIENA common stock in the event of dissolution, liquidation or winding up the full preferential amounts, if any, to which they are entitled.

Dividends. Dividends may be paid on the CIENA common stock and on any class or series of stock entitled to participate therewith when and as declared by the CIENA board of directors out of funds available for the payment of dividends as provided by law.

No Preemptive or Conversion Rights. The holders of CIENA common stock have no preemptive or subscription rights to purchase additional securities issued by CIENA nor any rights to convert their CIENA common stock into other securities of CIENA or to have their shares redeemed by CIENA.

CIENA Preferred Stock

CIENA has no preferred stock outstanding. However, CIENA has classified shares of series A junior participating preferred stock in connection with the establishment of its Stockholder Rights Plan, as described further below.

Limitation of Liability and Indemnification

Limitations of Director Liability. Delaware law authorizes corporations to limit or eliminate the personal liability of directors to corporations and their stockholders for monetary damages for breach of directors' fiduciary duty of care. Although Delaware law does not change directors' duty of care, it enables corporations to limit available relief to equitable remedies such as injunction or rescission. CIENA's certificate of incorporation limits the liability of directors to CIENA or its stockholders to the full extent permitted by Delaware law. Specifically, directors of CIENA are not personally liable for monetary

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damages to CIENA or its stockholders for breach of the director's fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to CIENA or its stockholders;
- acts or omissions not in good faith or that involve intentional misconduct or a knowing violation of law;
- unlawful payments of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

Indemnification. CIENA's bylaws provide for mandatory indemnification of directors and officers of CIENA to the fullest extent permitted by the Delaware General Corporation Law against any expense, liability or loss to which they may become subject, or which they may incur as a result of being or having been a director or officer of CIENA. In addition, CIENA must advance or reimburse directors and officers for expenses they incur in connection with indemnifiable claims or may pay such expenses in advance of the final disposition of the claim upon receipt of an undertaking by such director or officer to repay advanced expenses if it is ultimately determined that the director is not entitled to indemnification.

CIENA also maintains directors' and officers' liability insurance.

Certain Charter and Statutory Provisions; Stockholder Rights Plan

Classified Board of Directors. CIENA's certificate of incorporation provides for the division of the CIENA board of directors into three classes of directors, consisting of two or more directors each, serving staggered three-year terms. CIENA's certificate of incorporation further provides that the approval of the holders of at least two-thirds of the shares entitled to vote thereon and the approval of a majority of the entire CIENA board of directors are necessary for the alteration, amendment or repeal of certain sections of CIENA's certificate of incorporation relating to the election and classification of the CIENA board of directors, action by written consent, limitation of director liability, indemnification and the vote requirements for such amendments to CIENA's certificate of incorporation. These provisions may deter hostile takeovers or delay changes in control or management of CIENA.

Action by Written Consents. CIENA's certificate of incorporation eliminates action by written consent of stockholders. This provision, which makes it difficult for stockholders to act outside of a special meeting, may also deter hostile takeovers or delay changes in control or management of CIENA.

Certain Statutory Provisions. CIENA is subject to the provisions of Section 203 of the DGCL. In general, this 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 became an interested stockholder, unless:

- prior to such date, the corporation's board of directors approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in such person becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding, for purposes of determining the number of shares outstanding, shares owned by certain directors or certain employee stock plans; or
- on or after the date the stockholder became an interested stockholder, the business combination is approved by the corporation's board of directors and authorized by the affirmative vote, and not by written consent, of at least two-thirds of the outstanding voting stock of the corporation excluding that stock owned by the interested stockholder.

A "business combination" includes a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder. An "interested stockholder" is a person, other than the corporation and any direct or indirect wholly owned subsidiary of the corporation, who together with affiliates and

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associates, owns or, as an affiliate or associate, within three years prior, did own 15% or more of the corporation's outstanding voting stock.

Section 203 expressly exempts from the requirements described above any business combination by a corporation with an interested stockholder who becomes an interested stockholder in a transaction approved by that corporation's board of directors.

Stockholder Rights Plan. In December 1997, CIENA's board of directors adopted a stockholders rights plan. This plan is designed to deter any potential coercive or unfair takeover tactics in the event of an unsolicited takeover attempt. It is not intended to prevent a takeover of CIENA on terms that are favorable and fair to all stockholders and will not interfere with a merger approved by the board of directors. Under the plan, each CIENA stockholder received a right that entitles stockholders to buy one one-thousandth of a share of junior preferred stock of CIENA for each share of common stock held. The rights will be exercisable only if a person or a group acquires or announces a tender or exchange offer to acquire 15% or more of CIENA's common stock or if CIENA enters into certain other business combination transactions not approved by the board of directors. In the event the rights become exercisable, the rights plan allows for CIENA stockholders to acquire stock of CIENA or the surviving corporation, whether or not CIENA is the surviving corporation, having a value twice that of the exercise price of the rights. The rights were distributed to stockholders of record in January 1998. The rights will expire December 29, 2007 and are redeemable for \$0.001 per right at the approval of CIENA's board of directors. All of the CIENA shares to be issued to WaveSmith stockholders will be issued with rights attached.

Transfer Agent and Registrar

The transfer agent and registrar for the CIENA common stock is EquiServe Trust Company.

COMPARISON OF STOCKHOLDER RIGHTS

General

Both WaveSmith and CIENA are corporations organized under the laws of the State of Delaware and are therefore subject to the Delaware corporation statute. However, there are some differences in the charters and bylaws of WaveSmith and CIENA that affect the rights of their respective stockholders.

Capitalization

CIENA. CIENA is authorized to issue 980,000,000 shares of common stock and 20,000,000 shares of preferred stock. On April 25, 2003, 434,980,818 shares of CIENA common stock were outstanding and no shares of CIENA preferred stock were outstanding. CIENA's board has the authority, without stockholder approval, to issue shares of preferred stock from time to time in one or more series and to fix the rights and preferences, including voting rights, of each such series of preferred stock, which rights and preferences may be superior to that of CIENA's common stock.

WaveSmith. WaveSmith is authorized to issue 400,000,000 shares of common stock, 9,200,000 shares of series A preferred stock, 9,200,000 shares of series A-1 preferred stock, 38,064,993 shares of series B preferred stock, 38,064,993 shares of series B-1 preferred stock and 110,640,000 shares of series C preferred stock. As of April 9, 2003, WaveSmith had issued and outstanding 79,787,626 shares of common stock, 185,000 shares of series A preferred stock, 9,015,000 shares of series A-1 preferred stock, 2,353,370 shares of series B preferred stock, 33,333,331 shares of series B-1 preferred stock and 92,963,301 shares of series C preferred stock.

As of the record date, there were outstanding warrants to purchase 1,377,861 shares of series B preferred stock, 640,000 shares of series C preferred stock and 150,000 shares of common stock. WaveSmith has reserved 1,377,861 shares of series B preferred stock, 640,000 shares of series C preferred stock and 150,000 shares of common stock for issuance upon the exercise of these warrants. In addition, options to purchase 2,353,505 shares of common stock were outstanding under WaveSmith's Amended and Restated 2000 Stock Option and Incentive Plan.

Voting Rights

CIENA. Each holder of CIENA common stock is entitled to one vote for each share and may not cumulate votes for the election of directors.

WaveSmith. Subject to the voting rights of the holders of the preferred stock, the holders of common stock are entitled to one vote for each share held of record upon such matters and in such manner as may be provided by law.

The preferred stock votes together with the common stock and not as a separate class, except as specifically required by law or by the certificate of incorporation, with these exceptions set forth below. Each share of preferred stock has the number of votes equal to the number of shares of common stock then issuable upon conversion of such share of preferred stock.

Board of Directors. Pursuant to a stockholder agreement between certain holders of WaveSmith preferred stock and common stock:

- Bessemer Venture Partners V L.P. Representative. Bessemer Venture Partners, a holder of WaveSmith's series A-1, series B-1 and series C preferred stock, is entitled to designate one member and fill any vacancy caused by the resignation, death or removal of the member. G. Felda Hardymon currently serves as the Bessemer Venture representative.
- Atlas Venture Fund V L.P. Representative. Atlas Venture, a holder of WaveSmith's series A-1, series B-1 and series C preferred stock, is entitled to designate one member and fill any vacancy caused by the resignation, death or removal of the member. Michael Feinstein currently serves as the Atlas Venture representative.

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- Fidelity Ventures III Limited Partnership Representative. Fidelity Ventures, a holder of WaveSmith's series B-1 and series C preferred stock, is entitled to designate one member and fill any vacancy caused by the resignation, death or removal of the member. Robert C. Ketterson, Jr. currently serves as the Fidelity Ventures representative.
- Stockholders Representatives. Stockholders, defined in the stockholder agreement as (i) Robert J. Dalias, (ii) The Dalias Family Trust, (iii) The Dalias Relatives Trust, (iv) High Street Investors 2000, (v) John T. O'Hara and (vi) The O'Hara Children's Trust, all holders of WaveSmith's common stock, are entitled to designate one member and fill any vacancy caused by the resignation, death or removal of the member. Robert J. Dalias currently serves as the Stockholders representative.
- At-Large Representatives. The chief executive officer of WaveSmith is entitled to designate two at-large members, both of whom must be approved by a majority of holders of WaveSmith outstanding common stock and a majority of holders of WaveSmith outstanding preferred stock all voting together as a single class (assuming conversion of all outstanding preferred stock) and fill any vacancy caused by resignation, death or removal of these members. Each of the at-large board sets are currently vacant.
- Chief Executive Officer. WaveSmith's chief executive officer, currently Thomas M. Burkardt, is entitled to serve on the board of directors.

Protective Provisions. For so long as an aggregate of 2,300,000 shares of series A preferred stock and series A-1 preferred stock remain outstanding, the consent of the holders of a majority of the series A preferred stock and series A-1 preferred stock, voting together as a single class, is necessary to take any of the following actions:

- enter into any sale of all or substantially all of the assets of WaveSmith, consolidate, merge or convert or liquidate WaveSmith;
- declare or pay any dividend on any class of capital stock or repurchase any shares of capital stock, except for redemptions of preferred stock, and except for repurchases of stock issued under any stock or option plan approved by the board of directors pursuant to an agreement approved by the board of directors and repurchases under the current stockholders agreement, as may be amended;
- effect any recapitalization or reclassification of shares of capital stock;
- amend or repeal any provision of WaveSmith's certificate of incorporation or its by-laws in any manner that would materially and adversely change any of the rights, preferences or privileges of the series A preferred stock and/or the series A-1 preferred stock or holders thereof;
- authorize or issue any securities senior or on par with the series A preferred stock or the series A-1 preferred stock with respect to dividends, redemptions or payments made in liquidation;
- increase or decrease the number of authorized shares of series A preferred stock or series A-1 preferred stock; or
- amend the sections relating to the protective provision of the series A preferred stock and series A-1 preferred stock.

For so long as an aggregate of 7,222,222 shares of series B preferred stock and series B-1 preferred stock remain outstanding, the consent of the holders of sixty percent (60%) of the series B preferred stock and series B-1 preferred stock, voting together as a single class, is necessary to take any of the following actions:

- enter into any sale of all or substantially all of the assets of WaveSmith, consolidate, merge or convert or liquidate WaveSmith;
- declare or pay any dividend on any class of capital stock or repurchase any shares of capital stock, except for redemptions of preferred stock, and except for repurchases of stock issued under any

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stock or option plan approved by the board of directors pursuant to an agreement approved by the board of directors and repurchases under the current stockholders agreement, as may be amended;

- effect any recapitalization or reclassification of shares of capital stock;
- amend or repeal any provision of WaveSmith's certificate of incorporation or its by-laws in any manner that would materially and adversely change any of the rights, preferences or privileges of the series B preferred stock and/or the series B-1 preferred stock or holders thereof;
- authorize or issue any securities senior or on par with the series B preferred stock or the series B-1 preferred stock with respect to dividends, redemptions or payments made in liquidation;
- increase or decrease the number of authorized shares of series B preferred stock or series B-1 preferred stock; or
- amend the sections relating to the protective provision of the series B preferred stock and series B-1 preferred stock.

For so long as 27,500,000 shares of series C preferred stock remain outstanding, the consent of the holders of seventy-five percent (75%) of the series C preferred stock, voting as a separate class, is necessary to take any of the following actions:

- enter into any sale of all or substantially all of the assets of WaveSmith, consolidate, merge or convert or liquidate WaveSmith;
- acquire greater than 50% of the voting control of any other entity or all or substantially all of the assets of another entity;
- declare or pay any dividend on any class of capital stock or repurchase any shares of capital stock, except for redemptions of preferred stock, and except for repurchases of stock issued under any stock or option plan approved by the board of directors pursuant to an agreement approved by the board of directors and repurchases under the current stockholders agreement, as may be amended;
- effect any recapitalization or reclassification of shares of capital stock;
- amend or repeal any provision of WaveSmith's certificate of incorporation or its by-laws in any manner that would materially and adversely change any of the rights, preferences or privileges of the series C preferred stock or holders thereof;
- authorize or issue any securities senior or on par with the series C preferred stock with respect to dividends, redemptions or payments made in liquidation;
- increase or decrease the number of authorized shares of series C preferred stock; or
- amend the sections relating to the protective provision of the series C preferred stock.

Number and Classification of Directors

CIENA. CIENA's charter provides that its board of directors will be comprised of three classes of two or more directors each, with each class elected for a term of three years, so that a different class of directors stands for election each year. CIENA currently has eight directors and the board of directors may increase or decrease the size of the board of directors by resolution.

WaveSmith. WaveSmith's by-laws provide that the board of directors will have at least one member and that the size of the board of directors may be increased by a majority vote of the directors then in office or by the stockholders at the annual meeting of stockholders. WaveSmith's bylaws provide for a single class of directors who are elected at the annual meeting of stockholders and hold office until their successors are elected and qualified. Certain stockholders have the right to designate directors as described above.

Removal of Directors

CIENA. CIENA's charter provides that, subject to the rights of the then outstanding series of preferred stock, any director or the entire board of directors may be removed from office at any time, with or without cause, by the affirmative vote of a majority of the shares of capital stock of CIENA outstanding and entitled to vote on the election of directors, voting together as a separate class. CIENA's bylaws provide that a director may only be removed from office by the stockholders at a special meeting called for that purpose.

WaveSmith. WaveSmith's by-laws and stockholder agreement provide that the holder of a majority of the shares entitled to elect a director may remove that director. WaveSmith's by-laws provide that a director may be removed from office, with or without cause, by the affirmative vote of a majority of the shares of capital stock of WaveSmith outstanding and entitled to vote at an election of directors for such director.

Filling Vacancies on the Board of Directors

CIENA. CIENA's charter provides that, subject to the rights of any then-existing series of preferred stock, if a vacancy occurs on the CIENA board of directors, (other than a vacancy resulting from the removal of a director by the stockholders but including a vacancy resulting from an increase in the size of the board of directors), the vacancy may be filled only by a majority vote of the directors then in office, even if they constitute less than a quorum. However, if a vacancy results from the removal of a director by the stockholders at a meeting called for that purpose, then the stockholders may fill the vacancy at that meeting.

WaveSmith. WaveSmith's by-laws provide that vacancies may be filled by a majority of the directors then in office, though less than a quorum, or by a sole remaining director. WaveSmith's stockholder agreement provides that any vacancy on the board of directors may be filled by a majority of the shares entitled to elect a director to the vacant seat, except that in the case of a vacancy created by the resignation, removal, incapacity or death of a director who is also the chief executive officer, the vacancy is filled by the board of directors, which designates the new chief executive officer. The directors so chosen serve until the next annual election and until their successors are duly elected and qualified.

Charter Amendments

CIENA. CIENA's charter provides that the affirmative vote of the holders of at least 66 2/3% of the voting power of all then outstanding shares of the capital stock of CIENA entitled to vote on the election of directors, voting together as a separate class, is required to amend certain provisions of CIENA's charter relating to the board of directors, stockholder action, amendment of the charter and indemnification of officers and directors of CIENA. Otherwise, the charter may be amended by the holders of a majority of the voting power of all outstanding shares of CIENA stock.

WaveSmith. WaveSmith's charter may be amended, with the following exceptions, in accordance with Delaware law, which provides that the charter may be amended with the affirmative vote of at least a majority of the voting power of all outstanding shares of the capital stock of WaveSmith (assuming conversion of all outstanding preferred stock) entitled to vote on the election of directors:

- no provision affecting each series of preferred stock may be amended, modified or waived in any manner that affects similarly the holders of each series of preferred stock without the vote of at least a majority of the then outstanding shares of preferred stock voting together as a single class;
- no provision affecting series A preferred stock or series A-1 preferred stock may be amended, modified or waived in any manner that affects differently the holders of series B preferred stock, series B-1 preferred stock and series C preferred stock without the vote of at least a majority of the then outstanding shares of series A preferred stock and series A-1 preferred stock voting as a single class;

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- no provision affecting series B preferred stock or series B-1 preferred stock may be amended, modified or waived in any manner that affects differently the holders of series A preferred stock, series A-1 preferred stock and series C preferred stock without the vote of at least sixty percent (60%) of the then outstanding shares of series B preferred stock and series B-1 preferred stock voting as a single class; and
- no provision affecting series C preferred stock may be amended, modified or waived in any manner that affects differently the holders of series A preferred stock, series A-1 preferred stock, series B preferred stock and series B-1 preferred stock without the vote of at least seventy-five percent (75%) of the then outstanding shares of series C preferred stock voting as a separate class.

Amendments to Bylaws

CIENA. CIENA's charter provides that the bylaws may be amended by a majority vote of the total number of authorized directors (whether or not there exist any vacancies in the previously authorized directorships at the time any resolution providing for amendment is presented to the board of directors) or in addition to any vote of any holders of any class or series of CIENA stock required by law or by CIENA's charter by an affirmative vote of the holders of at least 66 2/3% of the voting power of all then outstanding shares of the capital stock of CIENA entitled to vote on the election of directors voting together as a single class.

WaveSmith. WaveSmith's by-laws provide that they may be amended by the stockholders or by the board of directors, when such power is conferred upon the board of directors by the certificate of incorporation, at any regular meeting of the board of directors or of the stockholders or at any special meeting of the board of directors or of the stockholders if notice of such amendment is contained in the notice of such special meeting of stockholders. With respect to amendment by the stockholders, Delaware law provides that a majority vote of the holders of the outstanding voting shares at any regular meeting of the stockholders is required to amend the by-laws.

Action by Written Consent

CIENA. CIENA's charter provides that any action by the stockholders may only be taken at an annual or special meeting and may not be taken by written consent.

WaveSmith. WaveSmith's by-laws provide that any action that must or may be required to be taken by stockholders may be taken by written consent.

Notice of Stockholder Actions

CIENA. Neither CIENA's charter nor its bylaws require advance notice of stockholder nominations of directors or any other business to be brought by stockholders before any meeting of stockholders, except in the case of a special meeting of the stockholders, which requires notice of the purposes for which a meeting is called.

WaveSmith. WaveSmith's by-laws require at least ten (10) days and no more than sixty (60) days advance notice of business to be brought by stockholders before any annual or special meeting of stockholders.

Right to Call Special Meeting of Stockholders

CIENA. CIENA's bylaws provide that a special meeting of stockholders may only be called by the board of directors pursuant to a resolution adopted by a majority of the total number of authorized directors (whether or not there exist any vacancies in the previously authorized directorships at the time any such resolution is presented to the board of directors for adoption) or by the holders of not less than ten percent (10%) of all of the shares entitled to cast votes at the meeting.

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WaveSmith. WaveSmith's by-laws provide that a special meeting of stockholders may be called at any time by the board of directors or the chief executive officer and must be called by the chief executive officer or secretary at the request in writing of a majority of the board of directors or at the request in writing of stockholders owning a majority in amount of the entire capital stock issued and outstanding and entitled to vote, with such written request stating the purpose or purposes for the proposed meeting. Business transacted at any special meeting must be limited to matters related to the purpose or purposes stated in the notice of meeting.

Dividends

CIENA. CIENA's bylaws provide that, from time to time, CIENA's board may declare and pay dividends upon shares of CIENA stock, but only out of funds available for the payment of dividends as provided by law.

WaveSmith. WaveSmith's charter provides that holders of series A preferred stock and series A-1 preferred stock are entitled to receive non-cumulative dividends at the rate of \$0.10 per annum, holders of series B preferred stock and series B-1 preferred stock are entitled to receive non-cumulative dividends at the rate of \$0.09 per annum and holders of series C preferred stock are entitled to receive non-cumulative dividends at the rate of \$0.03 per annum, with the amounts to be adjusted upon a stock split, reverse split or similar event, when and if declared by the board of directors out of funds legally available therefor.

Liquidation Rights

CIENA. CIENA's charter provides that, in the event of a liquidation of CIENA, the holders of CIENA common stock shall receive all remaining assets of CIENA ratably in proportion to the number of shares of common stock held by them.

WaveSmith. WaveSmith's new certificate, after the merger of WS Contract Corp. with WaveSmith, provides that in the event WaveSmith liquidates, dissolves or winds up, after payment of WaveSmith's liabilities, the holders of series A preferred stock, series A-1 preferred stock, series B preferred stock, series B-1 preferred stock and series C preferred stock shall be entitled to receive in preference to the holders of the common stock, a per share amount equal to \$1.016030, \$0.673904, \$0.783015, \$0.506835 and \$0.286181, respectively, plus any declared but unpaid dividends. If the assets are insufficient to pay such amounts, the assets shall be distributed ratably to holders of series C preferred stock. If the series C preferred stock preference is paid in full, the remaining assets shall be distributed ratably to the holders of series A-1 preferred stock and series B-1 preferred stock. If the series A-1 preferred stock, series B-1 preferred stock and series C preferred stock preferences are paid in full, the remaining assets shall be distributed ratably to the holders of series A preferred stock and series B preferred stock. If all preferred stock preferences are paid in full, the remaining assets shall be distributed ratably among holders of common stock and preferred stock based on the number of shares of common stock held by each holder, assuming the conversion of all shares of preferred stock, provided that the preferred holders are limited to total consideration of \$6.25 per share of series A and A-1 preferred stock, \$4.50 per share of series B and B-1 preferred stock and \$1.50 per share of series C preferred stock. Unless the holders of a majority of the outstanding shares of WaveSmith's preferred stock, voting on an as-converted basis, vote otherwise, any of the following events will be deemed a liquidation, dissolution or winding up:

- the merger, consolidation or sale of WaveSmith with or into any other corporation in which the stockholders immediately prior to the merger, consolidation or sale do not own greater than fifty percent (50%) of the surviving corporation's voting power; or
- a sale of all or substantially all of the assets of WaveSmith.

Conversion and Redemption

CIENA. Holders of CIENA common stock have no right to convert their shares into any other shares of the capital stock of CIENA or any other securities.

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WaveSmith. Holders of series A preferred stock, series A-1 preferred stock, series B preferred stock, series B-1 preferred stock and series C preferred stock have the right at any time to convert any shares of preferred stock into shares of common stock based on the conversion rates of 2, 3.51667, 1, 2.4 and 1, respectively, although these conversion rates are subject to adjustment as described below. The WaveSmith preferred stock will automatically convert into common stock, at the then effective applicable conversion rate, upon the earliest to occur of the closing of a firm commitment underwritten public offering of WaveSmith common stock in which the gross proceeds are not less than \$25 million and the price to the public is not less than \$1.20 per share or the election of the holders of a majority of the then outstanding shares of preferred stock, voting together as a single class.

The number of shares of common stock into which preferred stock is convertible will be subject to adjustment in the following circumstances, subject to certain exceptions:

- WaveSmith issues or sells shares of common stock without consideration or at a price less than \$0.625 for series A preferred stock, \$0.3554502 for series A-1 preferred stock, \$0.90 for series B preferred stock, \$0.3750 series B-1 preferred stock and \$0.30 for series C preferred stock. The issuance of warrants, options or purchase rights under certain circumstances is deemed an issuance of common stock;
- any issuance of common stock as a dividend or other distribution;
- any subdivision or combination of outstanding shares of common stock;
- any adjustment of the common stock issuable upon the conversion of the preferred stock, whether by capital reorganization, reclassification or otherwise; or
- any merger or consolidation with or into another corporation or the sale of all or substantially all of WaveSmith's assets.

Registration Rights

CIENA. The common stock of CIENA is, and the shares to be issued in the merger will be, registered under the Securities Act of 1933.

WaveSmith. Set forth below is a summary of the registration rights of certain holders of common stock and the holders of preferred stock pursuant to WaveSmith's Second Amended and Restated Registration Rights Agreement entered into among WaveSmith and many of its stockholders, including all holders of preferred stock. The term "registrable securities," as used below, means WaveSmith common stock issued or issuable upon conversion of the preferred stock and upon exercise of outstanding warrants to purchase preferred stock and common stock held by WaveSmith's founders. Registrable securities does not include any securities sold by a person in a transaction in which the registration rights are not assigned, sold to the public or sold pursuant to Rule 144 under the Securities Act.

Demand Registration Rights. If holders of at least 30% of the registrable securities then outstanding and entitled to registration request in writing that WaveSmith file a registration statement under the Securities Act covering all the registrable securities that the holders request to be registered, WaveSmith is obligated to use its best efforts to cause the requested shares to be registered. However, it is not obligated to effect any registration:

- prior to the earlier of six months after the effective date of its initial public offering with an aggregate offering price of at least \$25 million and January 1, 2004;
- if the registrable securities are offered at a proposed offering price to the public of less than \$7,500,000;
- after effecting three demand registrations;

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- from the time of filing of any other registration statement pertaining to an underwritten public offering of securities for the account of WaveSmith or any holder of registrable securities through 180 days following the effective date of such registration statement;
- from the time of filing of any other registration statement filed pursuant to a demand registration through 12 months following the effective date of such registration statement;
- if, in the case of WaveSmith's initial public offering, WaveSmith and the requesting holders of registrable securities are unable to obtain the commitment of an underwriter selected pursuant to procedures set forth in the Registration Rights Agreement; or
- for a period of up to 90 days after the date of a demand registration if, at the time of the request, (i) WaveSmith is engaged or plans to engage within 90 days of the request in a firm commitment underwritten public offering of common stock in which the holders of registrable securities include registrable securities pursuant to a "piggyback" registration or (ii) WaveSmith is currently engaged in a self-tender or exchange offer and the filing of a registration would result in a violation of the Exchange Act.

WaveSmith has the right to delay such registration for a period not in excess of 120 days once in any 12-month period if it furnishes a certificate signed by the chief executive officer stating that, in the good faith judgment of the board of directors, it would not be in the best interest of WaveSmith and its stockholders for such registration to be filed.

Piggyback Registration Rights. The holders of registrable securities are also entitled to "piggyback" registration rights on all WaveSmith registrations, excluding registrations relating to any employee benefit plan or corporate reorganization or a registration in which the only security being registered is common stock issuable upon conversion of convertible debt securities that are also being registered. If the registration is an underwritten offering, then the holder's participation shall be conditioned upon the party agreeing to participate in the underwriting by executing the underwriting agreement. If the underwriter of the registration determines that marketing factors require a limitation on the aggregate amount of securities sold on the market, WaveSmith is required to include in the offering only the number of securities which the managing underwriter believes marketing factors allow. No cut-back can reduce the amount of securities of the selling holders included in the registration to below 20% of the total amount of securities included in the registration, unless the registration is with respect to WaveSmith's initial public offering from which all registrable securities may be excluded.

Form S-3 Registration Rights. Any holder of registrable securities may also demand up to two registrations on Form S-3 provided Form S-3 is available for such offering and the aggregate proceeds are not less than \$500,000. WaveSmith may delay such registration for a period not in excess of 90 days once in any 12-month period if it furnishes a certificate signed by its chief executive officer stating that, in the good faith judgment of the board of directors, it would not be in the best interests of WaveSmith and its stockholders for such registration to be filed.

Indemnification. To the extent permitted by law, WaveSmith will indemnify the other parties to the agreement and certain related parties against any losses, claims, damages or liabilities, joint or several, to which they may become subject based on any untrue statement or alleged untrue statement of material fact contained in, or material fact omitted from, a registration statement covering registrable securities, or any other violation or alleged violation of any state or federal securities laws by WaveSmith.

To the extent permitted by law, each investor holding registrable securities included in a registration that WaveSmith effected must indemnify WaveSmith, its officers, directors, employees, agents, control persons and underwriters and any other parties and certain related parties selling securities in such registration against any losses, claims, damages or liabilities, joint or several, to which they may become subject based on any of the violations enumerated above to the extent such violation occurs in reliance upon written information supplied by such investor for use in such registration.

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Transferability. The aforementioned registration rights may be transferred to:

- any affiliate, subsidiary, partner, member or stockholder of any holder;
- any immediate family member or trust for the benefit of any holder or family member of any holder;
- any trust in respect of which any holder serves as trustee;
- a family limited partnership, limited liability company or similar estate planning vehicle all partners or members of which are members of any holder's immediate family; or
- in connection with the sale or transfer of not less than an aggregate of 500,000 shares of registrable securities or some lesser number if the number represents all the registrable securities held by any holder, provided any such transfer is in accordance with the securities laws.

Expenses. WaveSmith is obligated to bear registration expenses, exclusive of underwriting discounts and commissions, for all of the above-described demand, piggy-back and S-3 registrations, including the reasonable fees and disbursements of one counsel for all of the selling stockholders.

Market Standoff. Each holder of registrable securities has agreed that it will not, upon the request of WaveSmith or its underwriter, sell, transfer or otherwise dispose of any common stock or other securities of WaveSmith, held by the holder, other than those included in the registration, for up to 180 days (90 days for certain stockholders) following the effective date of a registration statement filed under the Securities Act relating to WaveSmith's initial public offering, provided all of its officers and directors who hold stock or options to purchase or common stock are similarly bound.

Termination. The above registration rights terminate upon the earlier of (i) five years after the closing date of WaveSmith's initial public offering or (ii) with respect to any holder, the time that such holder is able to sell all of their shares pursuant to Rule 144(k) of the Securities Act.

Amendment. Registration rights may be amended or waived upon WaveSmith's consent and the consent of holders holding or having the right to acquire in the aggregate a majority of the registrable securities then outstanding.

Additional Rights of WaveSmith Stockholders

In connection with the merger, WaveSmith must terminate, effective upon the consummation of the merger, agreements providing the following rights:

Preemptive Rights. Until the earlier of (i) a firm commitment underwritten public offering with aggregate gross proceeds to WaveSmith of at least \$25 million at a price per share of common stock of at least \$1.20 or (ii) less than 16,500,000 shares of series C preferred stock remain outstanding, holders of an aggregate of at least 3,300,000 shares of WaveSmith common stock issued or issuable upon conversion of preferred stock, have the right in the event that WaveSmith proposes to offer securities to any person to purchase on a pro rata, fully diluted basis, all or any portion of such securities. These preemptive rights do not apply to:

- any shares of WaveSmith common stock or options therefor, issued to WaveSmith employees, officers, directors, consultants, service providers, vendors and advisors pursuant to stock or option plans or other arrangements approved by a majority of the board of directors, with such majority including the Bessemer Venture Representative or the Atlas Venture Representative;
- any shares of WaveSmith common stock issuable upon conversion of preferred stock or upon a stock split, stock dividend, recapitalization or similar transaction;
- securities offered by WaveSmith to the public pursuant to a firm commitment underwritten public offering with aggregate gross proceeds to WaveSmith of at least \$25 million at a price per share of common stock of at least \$1.20;

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- securities issued for non-cash consideration pursuant to the acquisition of another business by merger, purchase of assets or other reorganization approved by a majority of the board of directors, with such majority including either the Bessemer Venture Representative or the Atlas Venture Representative and the Fidelity Ventures Representative;
- securities issued to financial institutions and leasing companies in connection with borrowing or leasing arrangements, landlords and service companies approved by a majority of the board of directors, with such majority including either the Bessemer Venture Representative or the Atlas Venture Representative and the Fidelity Ventures Representative;
- securities issued to a non-financial corporation in connection with a strategic alliance, joint venture, license arrangement, distribution arrangement development arrangement, funding arrangement or similar arrangement approved by a majority of the board of directors;
- securities issued to acquire technology or licenses the terms of which are approved by a majority of the board of directors, with such majority including either the Bessemer Venture Representative or the Atlas Venture Representative and the Fidelity Ventures Representative;
- securities issued upon exercise of warrants to purchase preferred stock issued to Silicon Valley Bank, GATX Ventures, Inc. and Comdisco, Inc. pursuant to a loan and security agreement; or
- securities issued upon exercise of warrants to purchase preferred stock issued to Comerica Bank pursuant to a loan and security agreement.

Inspection and Information Rights. Each holder of at least 3,300,000 shares of WaveSmith common stock on an as-converted basis is entitled to the delivery of:

- annual financial statements within 120 days following the end of each fiscal year;
- quarterly financial statements within 45 days following the end of each of the first three quarters of the year;
- monthly unaudited consolidated balance sheets within 30 days following the end of each month; and
- a budget, prepared on a monthly basis, and operating plan for the fiscal year at least 30 days prior to the beginning of each fiscal year.

Each holder of at least 3,300,000 shares of WaveSmith common stock on an as-converted basis and the authorized representatives of such stockholder is entitled to visit and inspect WaveSmith's properties, to examine its books of account and records and to discuss its affairs, all at such reasonable times as may be requested by the stockholder, and to be provided other information that such stockholder may reasonably request unless a majority of the board of directors determines in good faith that such actions could be materially detrimental to WaveSmith, with such majority including either the Bessemer Venture Representative or the Atlas Venture Representative and the Fidelity Ventures Representative.

Each holder of at least 3,300,000 shares of WaveSmith common stock on an as-converted basis is entitled to written notice of any suit or proceeding commenced against WaveSmith that, if adversely determined, would result in a material adverse change in the condition or business of WaveSmith.

As long as Commonwealth Capital Ventures II, L.P. and its affiliates own at least 7,500,000 shares of common stock, VIMAC Early Stage Fund, L.P. and its affiliates own at least 7,250,000 shares of common stock and George B. Kaiser owns at least 16,000,000 of common stock (assuming the conversion of all outstanding preferred stock), these stockholders or their representatives are entitled to attend all meetings of the board of directors in a non-voting, observer capacity and to receive notice of board of directors meetings and a copy of all materials provided to directors. However, WaveSmith has the right to withhold any information and to exclude the observer from any meeting or portion thereof if WaveSmith reasonably believes that access to the information or attendance at the meeting would involve the disclosure of highly confidential information, would impair the attorney-client privilege between WaveSmith and its legal

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counsel or if including such observers would reasonably be inconsistent with the board of directors' fiduciary duties, as determined in good faith by the board of directors.

CIENA Side Letter

In connection with CIENA's equity investment in WaveSmith, CIENA and WaveSmith entered into a letter agreement that entitles CIENA to certain rights. These rights include:

- observer status on the WaveSmith board of directors;
- right to notification of any proposed public offering of WaveSmith capital stock;
- certain rights related to third party offers to acquire WaveSmith, described in greater detail below; and
- the right to receive a fee upon the closing of an acquisition of WaveSmith by a third party if WaveSmith had entered into a definitive acquisition agreement with that third party prior to July 1, 2003, described in greater detail below.

If prior to April 1, 2004, WaveSmith receives an acquisition proposal from a third party, it is required to give CIENA notice of that proposal either within five days of the receipt of a written offer, or ten days prior to the execution of a definitive acquisition agreement. If that notice is received by CIENA prior to July 1, 2003, then CIENA has five days during which it may submit an offer to acquire WaveSmith. If prior to July 1, 2003, WaveSmith enters into a definitive acquisition agreement with a third party and that transaction subsequently closes, CIENA is entitled to receive from WaveSmith an amount equal to 5% of the total consideration received by WaveSmith or its stockholders. Therefore, if WaveSmith were to terminate the merger agreement prior to July 1, 2003 in order to accept an alternative acquisition proposal and that alternative acquisition proposal is completed, CIENA would be entitled under the letter agreement to receive 5% of the consideration paid to WaveSmith or its stockholders as a result of that proposal.

In connection with the letter agreement, CIENA entered into stockholder option agreements with certain stockholders of WaveSmith to provide CIENA an option to acquire WaveSmith. Under the stockholder option agreements, the stockholders granted an irrevocable option to CIENA to purchase the shares of capital stock owned by the respective stockholder. CIENA agreed in the letter agreement that if it exercises its rights to purchase shares of WaveSmith capital stock pursuant to these stockholder option agreements, it will acquire the remaining shares of capital stock of WaveSmith through a merger or other business combination. The letter agreement provides that the total consideration payable by CIENA for WaveSmith in connection with an acquisition of WaveSmith in this manner is \$150 million, plus an "earn out" payment. The earn out is equal to two times the gross profit attributable to sales of WaveSmith's products in the 12-month period following the close of the acquisition. The letter agreement provides that if CIENA acquires WaveSmith pursuant to the stockholder option agreements, then 10% of the earn out amount (as described below) would be set aside to be used as retention bonuses for employees who would be designated by the WaveSmith board of directors. Below is a summary of the terms and conditions required by the stockholder option agreements.

Exercise. CIENA may exercise the option on or after July 1, 2003 until March 31, 2004 subject to the following exceptions:

- the option is not exercisable if WaveSmith has executed a definitive agreement prior to July 1, 2003 to (i) consummate any merger or consolidation where the voting securities of WaveSmith outstanding immediately prior to the merger or consolidation represents less than a majority of the voting power of the voting securities of the surviving entity, (ii) sale or transfer all or substantially all of WaveSmith's assets or (iii) sale at least eighty percent (80%) of the voting power of WaveSmith's voting securities and such transaction subsequently closes; and
- the option is immediately exercisable if a stockholder breaches any covenants in the Option Agreement.

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If CIENA determines to exercise its option with respect to one stockholder, it must exercise options to purchase all the shares subject to substantially identical agreements.

Termination. The option terminates upon the earliest of:

- the closing of an initial public offering that yields gross proceeds of at least \$80 million before June 30, 2003, with such date subject to extension under certain circumstances;
- March 31, 2004 subject to extension under certain extensions;
- the execution of a definitive agreement to (a) consummate any merger or consolidation where the outstanding voting securities of WaveSmith or CIENA immediately prior to the merger or consolidation represent less than a majority of the voting power of the voting securities of the surviving entity, (b) sale or transfer all or substantially all of WaveSmith's or CIENA's assets or (c) sale at least eighty percent (80%) of the voting power of WaveSmith's or CIENA's voting securities and where such transaction subsequently closes;
- upon CIENA's refusal to participate in its proportionate percentage of any new round of equity financing that occurs after March 17, 2003;
- the first date on which CIENA or one of its affiliates, successors or assigns no longer owns at least twenty percent (20%) of series C preferred stock purchased by MultiWave;
- the date CIENA executes a definitive agreement with any entity that is developing, selling or licensing multi-service edge Asynchronous Transfer Mode switching equipment for telecommunications systems (a "WaveSmith Competitor") to distribute or resell such products to certain customers in the United States;
- the execution of a definitive agreement for the acquisition of a WaveSmith Competitor by CIENA; or
- the expiration date of the Reseller Agreement between WaveSmith and CIENA.

Notwithstanding these dates and events, if the option cannot be exercised because of any applicable judgment, decree, order, law or regulation, the option will not terminate until the earlier of:

- the date upon which such impediment is final and not subject to appeal;
- 5:00 p.m. New York City time on the tenth business day after such impediment is removed; or
- March 31, 2005.

Exercise Price. The purchase price calculation for the shares treats all outstanding unexercised options or warrants as fully exercised, and if the shares subject to the option constitute an option or warrant, the purchase price calculation reduces the purchase price by the exercise price payable upon full exercise of the warrant or option. The purchase price is payable, at CIENA's option, in one of the following ways:

- cash in an amount equal to, (i) for shares having a liquidation preference, the liquidation preference calculated in accordance with WaveSmith's charter based on an assumed liquidation value of \$150 million and (ii) for shares having no liquidation preference, the common share equivalent value after giving effect to all liquidation preferences and all rights of participation provided in WaveSmith's charter based on an assumed liquidation value of \$150 million;
- the number of shares of CIENA common stock having a value, determined by the greater of (i) the average closing price of CIENA's common stock for the 20 trading days preceding the date of the option exercise or (ii) the average closing price of CIENA's common stock for the 20 trading days preceding the date of the closing for the purchase of the shares subject to the option, equal to the relevant common share equivalent value after giving effect to all liquidation preferences and all rights of participation provided in WaveSmith's charter based on an assumed liquidation value of \$150 million; or
- a combination of cash and CIENA's common stock as calculated above.

If the sum of the purchase price of all the options and the consideration payable under the letter agreement to holders of WaveSmith preferred stock exceeds \$130 million, the exercise price is reduced so

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that the sum does not exceed \$130 million, with the reduction applied ratably among all participating holders.

If the consideration payable under the letter agreement to holders of shares of common stock is less than \$20 million, CIENA must pay the difference between \$20 million and the aggregate consideration payable to holders of shares of common stock.

Registration. CIENA is required to file and use its reasonable best efforts to have declared effective a shelf registration covering the resale of CIENA's common stock on Form S-3 promptly after the closing of the purchase of the options and maintain the effectiveness of the registration statement until the earlier of (i) two years from the date of effectiveness and (ii) such time as such shares may be sold pursuant to Rule 144 without regard to the volume restrictions under Rule 144(e). CIENA may suspend the use of any prospectus associated with the registration statement for up to 120 days in any 12-month period if CIENA finds it necessary to do so due to the pendency of a material corporate transaction or other material development. CIENA's requirement to maintain effectiveness of the registration statement will be extended for an amount of time equal to the time of suspension.

Stockholder Covenants. The stockholders must vote the shares subject to the options against any amendment or agreement that would impede, frustrate, prevent or nullify the stockholder option agreements. The stockholders are prohibited from selling, transferring pledging or assigning the shares subject to the options, except to an "accredited investor" as defined in Rule 501 of Regulation D under the Securities Act, and from entering into any voting arrangement in relation to the shares subject to the options.

Under the terms of the letter agreement, WaveSmith agreed, subject to certain exceptions for pre-approved financing activities, not to issue capital stock until stockholders representing at least 80% of WaveSmith's outstanding capital stock, on an as-converted basis, have entered into stockholder option agreements with CIENA. Currently, WaveSmith stockholders who in the aggregate own 82.4% of WaveSmith's outstanding capital stock, on an as-converted basis, have entered into stockholder option agreements with CIENA.

The merger agreement provides that the letter agreement and the stockholder option agreements will terminate if:

- the merger agreement is terminated by Wave Smith because:
 - the WaveSmith stockholders do not approve the merger and merger agreement and WaveSmith has not breached its obligations under the merger agreement;
 - there is a non-appealable court order enjoining the merger;
 - CIENA is in material breach of its obligations under the merger agreement and does not cure its breach after receiving written notice from WaveSmith;
 - the closing of the merger has not occurred by August 15, 2003 and CIENA does not extend financing to WaveSmith on the terms described above under "— Termination of the Merger Agreement;" or
 - the merger has not closed by October 15, 2003 if the termination date has been extended by CIENA.
- the merger agreement is terminated by CIENA other than because the WaveSmith board of directors has withdrawn or modified its recommendation in favor of the merger or recommended or entered into an acquisition proposal with someone other than CIENA; or
- the merger agreement is terminated by WaveSmith or CIENA because termination of the Hart-Scott-Rodino Act waiting period has not occurred.

Stockholder Proposals

CIENA. All stockholder proposals intended to be presented at CIENA's 2004 Annual Meeting must be received by CIENA not later than September 28, 2003 and must otherwise comply with the rules of

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the SEC for inclusion in CIENA's proxy statement and form of proxy relating to that meeting. Proposals should be delivered to CIENA Corporation, 1201 Winterson Road, Linthicum, Maryland 21090, Attention: Corporate Secretary.

Except in the case of proposals made in accordance with Rule 14a-8, stockholders intending to bring any business before an annual meeting of stockholders must deliver written notice thereof to CIENA's Secretary not less than 45 days prior to the anniversary of the date on which CIENA first mailed its proxy materials for its immediately preceding annual meeting of stockholders. The deadline for matters sought to be presented at the 2004 Annual Meeting is December 12, 2003. If a stockholder gives notice of such a proposal after the December 12, 2003 deadline, CIENA's proxy holders will be allowed to use their discretionary voting authority to vote against the stockholder proposal when and if the proposal is raised at the Corporation's 2004 Annual Meeting.

WaveSmith. Pursuant to WaveSmith's by-laws, stockholders owning a majority in amount of WaveSmith's entire capital stock issued and outstanding and entitled to vote may call a special meeting of the stockholders by giving notice in writing to the WaveSmith board of directors. In the notice requesting a special meeting, the stockholders must specify the purpose or purposes of the proposed meeting. Business transacted at this special meeting shall be limited to the purpose or purposes stated in the relevant notice of the meeting.

OTHER MATTERS

Legal Matters

The legal validity of the CIENA common stock offered hereby will be passed upon by Hogan & Hartson L.L.P., counsel to CIENA.

The federal income tax consequences described in this proxy statement/prospectus are the subject of opinions issued by Hogan & Hartson L.L.P., counsel to CIENA, and Testa, Hurwitz & Thibault, LLP, counsel to WaveSmith.

As of the date of this proxy statement/prospectus, Testa, Hurwitz & Thibault, LLP beneficially owns 114,000 shares of WaveSmith common stock under the name High Street Investors 2000.

Experts

The consolidated financial statements of CIENA Corporation as of October 31, 2002 and 2001 and for each of the three years in the period ended October 31, 2002 incorporated in this proxy statement/prospectus by reference to CIENA's Annual Report on Form 10-K for the year ended October 31, 2002 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

The consolidated financial statements of ONI Systems Corp. as of December 31, 2001 and 2000, and for each of the years in the three-year period ended December 31, 2001, have been incorporated by reference in this proxy statement/prospectus by reference to ONI Systems' Annual Report on Form 10-K for the year ended December 31, 2001 in reliance upon the report of KPMG LLP, independent accountants, incorporated by reference herein, and upon the authority of said firm as experts in auditing and accounting. CIENA has agreed to indemnify KPMG LLP against legal costs and expenses KPMG LLP may incur in connection with KPMG LLP's successful defense of any legal proceeding arising out of its consent to the incorporation by reference of the foregoing report in this proxy statement/prospectus.

The financial statements of Cyrus Systems, Inc., a development stage company, as of December 31, 2000 and 1999 and for the period from July 24, 1998 (inception) to December 31, 1998, for the years ended December 31, 2000 and 1999 and for the period from July 24, 1998 (inception) to December 31, 2000 incorporated in this proxy statement/prospectus by reference to the CIENA Form 8-K dated April 2, 2001 have been audited by Deloitte & Touche LLP, independent auditors, as stated in their report, which is incorporated herein by reference, and have been so incorporated in reliance upon the report of such firm, given upon their authority as experts in accounting and auditing.

Other Matters

As of the date of this proxy statement/prospectus, the WaveSmith board of directors knows of no matter that will be presented for consideration at the special meeting other than as described in this proxy statement/prospectus. If any other matters come before the special meeting or any adjournments or postponements thereof and are voted upon, the enclosed proxies will confer discretionary authority on the individuals named as proxies therein to vote the shares represented by such proxies as to any such matters. The individuals named as proxies intend to vote or not to vote in accordance with the recommendation of the management of WaveSmith.

WHERE YOU CAN FIND MORE INFORMATION

CIENA has filed the registration statement of which this proxy statement/prospectus is a part. The registration statement registers the distribution to WaveSmith stockholders of the shares of CIENA common stock to be issued in connection with the merger.

CIENA files annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any of this information at the SEC's public reference room at 450 Fifth Street N.W., Room 1024, Washington, D.C. 20549. You may obtain information on the operation of the SEC's Public Reference Room by calling the SEC at 1-800-SEC-0330.

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The SEC also maintains an Internet web site that contains reports, proxy statements and other information regarding issuers, like CIENA, that file electronically with the SEC. The address of that site is <http://www.sec.gov>. The SEC file number for CIENA documents filed under the Exchange Act is 0-21969.

The SEC allows CIENA to “incorporate by reference” information into this proxy statement/prospectus. This means that CIENA can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is considered to be a part of this proxy statement/prospectus, except for any information that is superseded by information that is included directly in this document.

This proxy statement/prospectus incorporates by reference the documents listed below that CIENA has previously filed or will file with the SEC. They contain important information about CIENA and its financial condition.

- CIENA’s annual report on Form 10-K for its fiscal year ended October 31, 2002, filed on December 12, 2002;
- CIENA’s quarterly report on Form 10-Q for the fiscal quarter ended January 31, 2003, filed on February 20, 2003;
- CIENA’s definitive proxy statement filed on January 27, 2003;
- CIENA’s current reports on Form 8-K filed on December 12 and December 20, 2002 and January 14 and January 23, 2003;
- Item 7(a) of CIENA’s current report on Form 8-K filed April 2, 2001;
- ONI Systems Corp.’s annual report on Form 10-K for its fiscal year ended December 31, 2001, filed on March 19, 2002 (File No. 000-30633);
- ONI Systems Corp.’s quarterly report on Form 10-Q for the fiscal quarter ended March 31, 2002, filed on May 15, 2002 (File No. 000-30633);
- All documents filed with the SEC by CIENA pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this proxy statement/prospectus and prior to the date of the special meeting are incorporated by reference into this proxy statement/prospectus, effective the date such documents are filed; and
- The description of CIENA common stock set forth in the CIENA registration statement filed under Section 12 of the Exchange Act on Form 8-A on January 13, 1997, including any amendment or report filed with the SEC for the purpose of updating such description.

In the event of conflicting information in these documents, the information in the latest filed document should be considered correct.

You can obtain any of the documents incorporated by reference in this document through CIENA or from the SEC through the SEC’s web site at the address described above. Documents incorporated by reference are available from CIENA without charge, excluding any exhibits to those documents unless the exhibit is specifically incorporated by reference as an exhibit in this proxy statement/prospectus. You can obtain documents incorporated by reference in this proxy statement/prospectus by requesting them in writing or by telephone from CIENA at the following address:

CIENA Corporation
1201 Winterson Road
Linthicum, Maryland 21090
Attn: General Counsel
Telephone (410) 865-8500

You can also contact CIENA at its website, www.ciena.com. If you would like to request documents, please do so by [five business days prior to meeting date], 2003 to receive them before the special

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meeting. If you request any incorporated documents from CIENA, it will mail them to you by first class mail, or another equally prompt means, within two business days after it receives your request.

This document constitutes the prospectus of CIENA and the proxy statement of WaveSmith. CIENA has supplied all information contained or incorporated by reference in this proxy statement/prospectus relating to CIENA and WaveSmith has supplied all such information relating to WaveSmith.

Neither CIENA nor WaveSmith has authorized anyone to give any information or make any representation about the merger, CIENA or WaveSmith that is different from, or in addition to, that contained in this proxy statement/prospectus or in any of the materials that CIENA or WaveSmith has incorporated into this document. Therefore, if anyone does give you information of this sort, you should not rely on it. The information contained in this document speaks only as of the date of this document, unless the information specifically indicates that another date applies.

AGREEMENT AND PLAN OF MERGER
BETWEEN
CIENA CORPORATION
AND
WAVESMITH NETWORKS, INC.

Dated as of April 9, 2003

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AGREEMENT AND PLAN OF MERGER

AGREEMENT AND PLAN OF MERGER (this “Agreement”) dated as of April 9, 2003 by and between **CIENA CORPORATION**, a Delaware corporation (“CIENA”) and **WAVESMITH NETWORKS, INC.**, a Delaware corporation (the “Company”).

RECITALS

WHEREAS, the Boards of Directors of each of CIENA and the Company have determined that the merger of the Company with and into CIENA (the “Merger”) in accordance with the provisions of the Delaware General Corporation Law, as amended (the “DGCL”), and subject to the terms and conditions of this Agreement, is advisable and in the best interests of CIENA and the Company and their respective stockholders;

WHEREAS, the Company is a Delaware corporation and has authorized 400,000,000 shares of common stock, par value \$0.01 per share (“Company Common Stock”), and 205,169,986 shares of preferred stock, \$0.01 par value per share (“Company Preferred Stock”), of which 9,200,000 shares have been designated Series A Preferred Stock (“Series A Preferred Stock”), 9,200,000 shares have been designated Series A-1 Preferred Stock (“Series A-1 Preferred Stock”), 38,064,993 shares have been designated Series B Preferred Stock (the “Series B Preferred Stock”), 38,064,993 shares have been designated Series B-1 Preferred Stock (the “Series B-1 Preferred Stock”) and 110,640,000 shares have been designated Series C Preferred Stock (“Series C Preferred Stock”) (the Series A and A-1 Preferred Stock, the Series B and B-1 Preferred Stock and the Series C Preferred Stock are referred to as the “Company Preferred Stock,” and the Company Preferred Stock and the Company Common Stock are referred to as the “Company Capital Stock”);

WHEREAS, in order to induce CIENA to enter into this Agreement, concurrently herewith certain stockholders of the Company are entering into stockholder agreements with CIENA in the form attached hereto as **Exhibit A**, pursuant to which, among other things, each such stockholder agrees to vote in favor of adoption of this Agreement and the Merger, and grants an option to CIENA to purchase such stockholder’s Company Capital Stock upon the occurrence of certain events;

WHEREAS, on or prior to the date hereof, the Company has, by legally valid and sufficient action of its Board of Directors and stockholders, adopted an agreement and plan of merger dated the date hereof between the Company and its subsidiary under which the Initial Merger shall be effected prior to the Merger (the “Initial Merger Agreement”); and

WHEREAS, the parties intend that, for federal income tax purposes, (i) the Merger shall qualify as a reorganization within the meaning of Section 368(a) of the Code and (ii) this Agreement constitutes a plan of reorganization.

NOW, THEREFORE, in consideration of the foregoing and the mutual representations, warranties, covenants and agreements contained herein and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto intending to be legally bound do hereby agree as follows:

ARTICLE I

THE MERGER

SECTION 1.1. General.

(a) Subject to the terms and conditions of this Agreement and in accordance with the DGCL, at the Effective Time (as defined below) (i) the Company shall be merged with and into CIENA, (ii) the separate corporate existence of the Company shall cease and (iii) CIENA shall be the surviving company (the “Surviving Company”) and shall continue its legal existence under the laws of the State of Delaware.

(b) The Merger shall become effective at the time of filing of a Certificate of Merger with the Secretary of State of the State of Delaware in accordance with the provisions of Section 251 of the DGCL, or at such later time as may be stated in the Certificate of Merger (the “Effective Time”). The closing of the Merger (the “Closing”) shall take place at the offices of Hogan & Hartson L.L.P., 111 South Calvert Street, Baltimore, Maryland 21202 at 10:00 A.M., as soon as possible, but in any event not later than two Business Days, after the date on which the last of the conditions set forth in **Article V** shall have been satisfied or waived, or on such other date, time and place as the Company and CIENA may mutually agree (the “Closing Date”).

(c) At the Effective Time, the effect of the Merger shall be as provided in the applicable provisions of the DGCL. Without limiting the generality of the foregoing, and subject thereto, at the Effective Time, all the property, rights, privileges, powers and franchises of the Company shall vest in the Surviving Company, and all debts, liabilities, obligations, restrictions, disabilities and duties of the Company shall become the debts, liabilities, obligations, restrictions, disabilities and duties of the Surviving Company.

SECTION 1.2. Certificate of Incorporation.

The Certificate of Incorporation of CIENA, as in effect immediately prior to the Effective Time (the “CIENA Certificate”), shall be the Certificate of Incorporation of the Surviving Company, until thereafter amended as provided therein and by law.

SECTION 1.3. The By-Laws.

The bylaws of CIENA, as in effect immediately prior to the Effective Time, shall be the bylaws of the Surviving Company, until thereafter amended as provided therein and by law.

SECTION 1.4. Board of Directors and Officers.

From and after the Effective Time, the Board of Directors and Officers of CIENA at the Effective Time shall be the Board of Directors and Officers of the Surviving Company, each to hold office until his or her respective successors are duly elected or appointed and qualified.

SECTION 1.5. Conversion of Securities.

At the Effective Time, by virtue of the Merger and without any action on the part of the Company or the holders of the Company’s Capital Stock (the “Stockholders”):

(a) Each share of common stock of CIENA issued and outstanding immediately prior to the Effective Time shall remain outstanding and unaffected as issued and outstanding shares of the Surviving Company;

(b) Each share of Company Capital Stock held in the treasury of the Company shall be canceled without any conversion thereof and no payment or distribution shall be made with respect thereto; and

(c) At the Effective Time, the then issued and outstanding shares of Company Capital Stock shall be converted into shares of CIENA common stock, par value \$0.01 per share (“CIENA Common Stock” or “CIENA Stock”), in accordance with this **Section 1.5(c)**. Subject to the provisions of **Sections 1.6** and **1.9**, each share of Company Capital Stock issued and outstanding immediately prior to the Effective Time

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(other than (i) shares canceled in accordance with **Section 1.5(b)** and (ii) Dissenting Shares (as defined below)) shall be converted into a fraction of a share of CIENA Common Stock including the corresponding fraction of a right (“Right”) to purchase shares of series A junior participating preferred stock, par value \$0.01 per share, pursuant to the Rights Agreement dated as of December 29, 1997 between CIENA and Equiserve Trust Company, N.A. (formerly BankBoston, N.A.) as Rights Agent, as amended on September 13, 1998 and October 19, 1998, determined as follows:

(i) initially each share of a particular series of Company Preferred Stock outstanding, if any, at the Effective Time shall receive in exchange therefor a portion of a share of CIENA Common Stock (the “Preferred Stock Exchange Ratio”) equal to:

Preferred Liquidation Value

Per Share Price

(ii) thereafter each share of Company Common Stock and Company Preferred Stock (treating the Company Preferred Stock as converted into Common Stock for purposes of this calculation only) outstanding at the Effective Time shall receive a portion of a share of CIENA Common Stock (the “Common Stock Exchange Ratio”) equal to:

Aggregate Share Consideration– Preferred Share Liquidation Consideration

Company Outstanding Shares + Common Stock Equivalents

, provided, however, that (x) the maximum number of shares that shall be issued by CIENA in the Merger, under Assumed Options and under any assumed warrants will not exceed the Aggregate Share Consideration, and (y) no holder of Company Preferred Stock shall receive any portion of the Aggregate Share Consideration that would cause such shares of Company Preferred Stock to receive a portion of the Aggregate Share Consideration having a value, based on the Per Share Price, in excess of the limitations set forth in Article FOURTH Section A(1)(g) of the Company Certificate (and any such excess shares shall be allocated among the remaining holders of Company Capital Stock as provided therein).

For purposes hereof, the following definitions apply:

“Aggregate Share Consideration” =	36,047,498 shares of CIENA Common Stock
“Company Outstanding Shares” =	the total number of shares of Company Common Stock outstanding at the Effective Time including shares deemed issued in respect of common stock warrants expiring at the Effective Time.
“Per Share Price” =	\$4.716
“Preferred Liquidation Value” =	the liquidation preference attributable to each of the outstanding shares of a particular series of Company Preferred Stock pursuant to Article FOURTH Section (A)(1)(a) through (f) of the New Company Certificate, treating the Merger as a Liquidation for purposes thereof.
“Preferred Share Liquidation Consideration” =	the total number of shares of CIENA Common Stock allocated at the Effective Time to holders of Company Preferred Stock under Section 1.5(c)(i) only.
“Common Stock Equivalents” =	the number of shares of Company Common Stock issuable upon exercise of all Company Stock Options outstanding at the Effective Time (except for those which expire on or prior to the Effective Time or by their terms will expire following the Effective Time without becoming exercisable due to vesting provisions) plus the number that would be issuable upon

conversion of all Company Preferred Stock outstanding, or issuable upon exercise of Company Preferred Warrants, on the date of determination.

All references in this Agreement to CIENA Common Stock to be received in accordance with the Merger shall be deemed to include the Rights. After the Effective Time, all shares of Company Capital Stock shall no longer be outstanding and shall automatically be canceled and retired, and each holder of a certificate representing any such shares shall cease to have any rights with respect thereto other than (i) the right to receive shares of CIENA Common Stock to be issued in consideration therefor upon the surrender of such certificate, (ii) any dividends and other distributions in accordance with **Section 1.8(c)** and (iii) any cash, without interest, to be paid in lieu of any fractional share of CIENA Common Stock in accordance with **Section 1.9**.

SECTION 1.6. Adjustment of the Exchange Ratios.

In the event that, prior to the Effective Date, any stock split, combination, reclassification or stock dividend with respect to the CIENA Common Stock, any change or conversion of CIENA Common Stock into other securities or any other dividend or distribution with respect to the CIENA Common Stock should occur or, if a record date with respect to any of the foregoing should occur, appropriate and proportionate adjustments shall be made to the Exchange Ratios, and thereafter all references to the Exchange Ratios shall be deemed to be to such Exchange Ratios as so adjusted.

SECTION 1.7. Dissenting Shares.

(a) Notwithstanding any provision of this Agreement to the contrary, shares of Company Capital Stock that are outstanding immediately prior to the Effective Time and which are held by stockholders who shall not have voted in favor of the Merger or consented thereto in writing and who shall have demanded properly in writing appraisal for such shares in accordance with Section 262 of the DGCL (collectively, the "Dissenting Shares") shall not be converted into or represent the right to receive the consideration set forth in **Section 1.5**. Such stockholders shall be entitled to receive such consideration as is determined to be due with respect to such Dissenting Shares in accordance with the provisions of Section 262, except that all Dissenting Shares held by stockholders who shall have failed to perfect or who effectively shall have withdrawn or lost their rights to appraisal of such shares under Section 262 shall thereupon be deemed to have been converted into and to have become exchangeable for, as of the Effective Time, the right to receive the shares of CIENA Common Stock specified in **Section 1.5**, without any interest thereon, upon surrender, in the manner provided in **Section 1.8**, of the certificate or certificates that formerly evidenced by such Dissenting Shares less the number of shares of CIENA Common Stock allocable to such stockholder that have been deposited in the Escrow Fund and the Reimbursement Fund in respect of Company Capital Stock pursuant to **Sections 1.8(b)** and **6.2**.

(b) The Company shall give CIENA (i) prompt notice of any demands for appraisal received by the Company, withdrawals of such demands, and any other instruments served pursuant to the DGCL and received by the Company and (ii) the opportunity to direct all negotiations and proceedings with respect to demands for appraisal under the DGCL. The Company shall not, except with the prior written consent of CIENA, make any payment with respect to any demands for appraisal or offer to settle or settle any such demands.

SECTION 1.8. Exchange Procedures; Distributions with Respect to Unexchanged Shares; Stock Transfer Books.

(a) As of the Effective Time, CIENA shall deposit with the Exchange Agent for the benefit of the holders of shares of Company Capital Stock, certificates representing shares of the CIENA Common Stock to be issued pursuant to **Section 1.5(c)** in exchange for the shares of Company Capital Stock less the Escrow Amount and the Reimbursement Amount (each as defined in **Section 1.8(b)**), together with cash in an amount sufficient to permit the payment of cash in lieu of fractional shares pursuant to

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Section 1.9. (Such shares of CIENA Common Stock, together with any dividends or distributions with respect thereto pursuant to **Sections 1.8(c)** and **1.9**, are referred to herein as the “Exchange Fund”).

(b) As soon as practicable, but in any event within five Business Days, after the Effective Time, CIENA shall cause the Exchange Agent to send to each Person who was, at the Effective Time, a holder of record of certificates which represented outstanding Company Capital Stock (the “Certificates”) which shares were converted into the right to receive CIENA Common Stock pursuant to **Section 1.5**, a letter of transmittal which (i) shall specify that delivery shall be effected and risk of loss and title to such Certificates shall pass, only upon actual delivery thereof to the Exchange Agent and (ii) shall contain instructions for use in effecting the surrender of the Certificates. Upon surrender to the Exchange Agent of Certificates for cancellation, together with such letter of transmittal duly executed, such holder shall be entitled to receive in exchange therefor within five Business Days (A) a certificate representing the number of whole shares of CIENA Common Stock into which the Company Capital Stock represented by the surrendered Certificate shall have been converted at the Effective Time (less such holder’s pro rata portion of the number of shares of CIENA Common Stock to be deposited in the Escrow Fund and the Reimbursement Fund on such holder’s behalf pursuant to **Section 6.2**), (B) cash in lieu of any fractional share of CIENA Common Stock in accordance with **Section 1.9** and (C) certain dividends and distributions in accordance with **Section 1.8(c)**, and the Certificates so surrendered shall then be canceled. Subject to **Section 1.8(c)** and **Section 1.9**, until surrendered as contemplated by this **Section 1.8(b)**, each Certificate, from and after the Effective Time, shall be deemed to represent only the right to receive, upon such surrender, the number of shares of CIENA Common Stock into which such Company Capital Stock shall have been converted. As soon as practicable after the Effective Time, and subject to and in accordance with the provisions of **Section 6.2**, CIENA, on behalf of the Stockholders, shall cause to be delivered to the Escrow Agent (as defined in **Section 6.2**) (x) certificates representing 10% of the shares of CIENA Common Stock that are allocable to Stockholders under **Section 1.5(c)** hereof in the Merger plus 10% of the Aggregate Share Consideration that is allocable in respect of vested options that are included in Common Stock Equivalents in **Section 1.5(c)(ii)** above (the “Escrow Amount”) and (y) 53,011 shares of CIENA Common Stock that are allocable to Stockholders under **Section 1.5(c)** hereof in the Merger (the “Reimbursement Amount”) which shall, in each case, be registered in the name of the Escrow Agent as nominee for the holders of Certificates canceled pursuant to this **Section 1.8**. With respect to each Stockholder, the portion of vested and unvested shares to be delivered to the Escrow Agent shall be calculated ratably in proportion to the number of vested and unvested shares held by such Stockholder. Such shares shall be beneficially owned by such holders, shall be held in escrow and shall be available to settle certain contingencies as provided in the Escrow Agreement. To the extent not used for such purpose, such shares shall be released, as provided in the Escrow Agreement.

(c) No dividends or other distribution declared or made after the Effective Time with respect to the CIENA Common Stock with a record date after the Effective Time shall be paid to any holder entitled by reason of the Merger to receive certificates representing CIENA Common Stock and no cash payment in lieu of a fractional share of CIENA Common Stock shall be paid to any such holder pursuant to **Section 1.9** until such holder shall have surrendered its Certificates pursuant to this **Section 1.8**. Subject to applicable law, following surrender of any such Certificate, such holder shall be paid, in each case, without interest, (i) the amount of any dividends or other distributions theretofore paid with respect to the shares of CIENA Common Stock represented by the certificate received by such holder and having a record date on or after the Effective Time and a payment date prior to such surrender and (ii) at the appropriate payment date or as promptly as practicable thereafter, the amount of any dividends or other distributions payable with respect to such shares of CIENA Common Stock and having a record date on or after the Effective Time but prior to such surrender and a payment date on or after such surrender.

(d) If any certificate representing shares of CIENA Common Stock or any cash is to be issued or paid to any Person other than the registered holder of the Certificate surrendered in exchange therefor, it shall be a condition to such exchange that such surrendered Certificate shall be properly endorsed and otherwise in proper form for transfer and such Person either (i) shall pay to the Exchange Agent any transfer or other taxes required as a result of the issuance of such certificates of CIENA Common Stock

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and the distribution of such cash payment to such Person or (ii) shall establish to the reasonable satisfaction of the Exchange Agent that such tax has been paid or is not applicable. CIENA or the Exchange Agent shall be entitled to deduct and withhold from the consideration otherwise payable pursuant to this Agreement to any holder of shares of Company Capital Stock such amounts as CIENA or the Exchange Agent is required to deduct and withhold with respect to the making of such payment, or the actions taken by the Company and its Board of Directors and Stockholders in authorizing, approving and carrying out the Initial Merger and the adoption of the New Company Certificate, under the Code, or any provision of state, local or foreign tax law. CIENA or the Exchange Agent shall remit to the proper taxing authority an aggregate amount on behalf of each Stockholder equal to the fair market value of the shares of CIENA Common Stock withheld or deducted pursuant to the previous sentence. To the extent that amounts are so withheld by CIENA or the Exchange Agent, such withheld amounts shall be treated for all purposes of this Agreement as having been paid to the holder of the shares of Company Capital Stock in respect of which such deduction and withholding was made by CIENA or the Exchange Agent. All amounts in respect of taxes received or withheld by CIENA shall be disposed of by CIENA in accordance with the Code or such state, local or foreign tax law, as applicable. CIENA shall use commercially reasonable efforts to enable the holders of Company Capital Stock to sell CIENA Common Stock they receive in the Merger as soon as reasonably practicable after the Effective Time in an amount sufficient to satisfy the obligation to deduct and withhold taxes with respect to the making of such payment under the Code, or any provision of state, local or foreign tax law.

(e) If any Certificate shall have been lost, stolen or destroyed, upon the making of an affidavit of that fact by the Person claiming such Certificate to be lost, stolen or destroyed and subject to such other conditions as the Board of Directors of the Surviving Company may impose, the Surviving Company shall issue in exchange for such lost, stolen or destroyed Certificate the shares of CIENA Common Stock as determined under **Section 1.5(c)** and pay any cash, dividends and distributions as determined in accordance with **Section 1.8(c)** and **Section 1.9** in respect of such Certificate. When authorizing such issue of shares of CIENA Common Stock (and payment of any such cash, dividends and distribution) in exchange for such Certificate, the Board of Directors of the Surviving Company (or any authorized officer thereof) may, in its reasonable discretion and as a condition precedent to the issuance thereof, require the owner of such lost, stolen or destroyed Certificate to give the Surviving Company a bond in such sum as the Board of Directors may direct as indemnity against any claim that may be made against the Surviving Company with respect to the Certificate alleged to have been lost, stolen or destroyed.

(f) At the close of business on the day on which the Effective Time occurs, the stock transfer books of the Company shall be closed and thereafter there shall be no further registration of transfers of shares of Company Capital Stock on the records of the Company. From and after the Effective Time, the holders of shares of Company Capital Stock outstanding immediately prior to the Effective Time shall cease to have any rights with respect to such shares except as otherwise provided herein or by applicable law.

SECTION 1.9. No Fractional Shares.

No certificates or scrip representing fractional shares of CIENA Common Stock shall be issued upon the surrender for exchange of Certificates and such a fractional share shall not entitle the record or beneficial owner thereof to vote or to any other rights as a stockholder of CIENA. In lieu of receiving any such fractional share, each holder of Company Capital Stock who would otherwise have been entitled thereto upon the surrender of Certificates for exchange will receive cash (without interest) in an amount rounded to the nearest whole cent, determined by multiplying (i) the Per Share Price, by (ii) the fractional share to which such holder would otherwise be entitled. CIENA shall make available to the Exchange Agent the cash necessary for this purpose.

SECTION 1.10. Return of Exchange Fund.

Any portion of the Exchange Fund which remains undistributed to the former holders of Company Capital Stock for six months after the Effective Date shall be delivered to CIENA, upon its request, and any such former holders who have not theretofore surrendered to the Exchange Agent their Certificates in

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compliance herewith shall thereafter look only to CIENA for payment of their claim for shares of CIENA Common Stock, any cash in lieu of fractional shares of CIENA Common Stock and any dividends or distributions with respect to such shares of CIENA Common Stock. Neither CIENA nor the Company shall be liable to any former holder of Company Capital Stock for any such shares of CIENA Common Stock held in the Exchange Fund (and any cash, dividends and distributions payable in respect thereof) which is delivered to a public official pursuant to an official request under any applicable abandoned property, escheat or similar law.

SECTION 1.11. No Further Ownership Rights in Company Capital Stock.

All shares of CIENA Common Stock delivered upon the surrender for exchange of any Certificate in accordance with the terms hereof (including any cash paid pursuant to **Section 1.9**) shall be deemed to have been delivered (and paid) in full satisfaction of all rights pertaining to the Company Capital Stock previously represented by such Certificate.

SECTION 1.12. Further Assurances.

If at any time after the Effective Time the Surviving Company shall consider or be advised that any deeds, bills of sale, assignments or assurances or any other acts or things are necessary, desirable or proper (a) to vest, perfect or confirm, of record or otherwise, in the Surviving Company, its right, title or interest in, to or under any of the rights, privileges, powers, franchises, properties or Assets of the Company or (b) otherwise to carry out the purposes of this Agreement, the Surviving Company and its proper officers and directors or their designees shall be authorized to execute and deliver, in the name and on behalf of the Company all such deeds, bills of sale, assignments and assurances and do, in the name and on behalf of the Company, all such other acts and things necessary, desirable or proper to vest, perfect or confirm its right, title or interest in, to or under any of the rights, privileges, powers, franchises, properties or Assets of the Company, and otherwise to carry out the purposes of this Agreement.

ARTICLE II

REPRESENTATIONS AND WARRANTIES OF THE COMPANY

The Company hereby represents and warrants to CIENA as follows:

SECTION 2.1. Organization and Qualification.

The Company is a corporation duly organized, validly existing and in good standing under the laws of Delaware. The Company has the requisite power and authority to carry on its business as now being conducted and to perform the terms of this Agreement and the transactions contemplated hereby. The Company is duly qualified to conduct its business, and is in good standing, in each jurisdiction in which the ownership or leasing of its Assets or the nature of its activities in connection with the conduct of its business makes such qualification necessary except for those jurisdictions where the failure to be so qualified and in good standing would not have a Company Material Adverse Effect. Other than WS Contract Corp., a Delaware corporation, which is a wholly-owned Subsidiary of the Company, the Company has no subsidiaries or any equity interest in any Person.

SECTION 2.2. Certificate of Incorporation and Bylaws.

The Company has heretofore delivered to CIENA a complete and correct copy of its Certificate of Incorporation (the "Company Certificate") and the bylaws of the Company, each as amended to date, and a copy of the Fourth Amended and Restated Certificate of Incorporation of the Company to be filed prior to the Effective Time (the "New Company Certificate") in connection with the Initial Merger. Such Company Certificate and bylaws are in full force and effect. The Company is not in violation of any of the provisions of the Company Certificate or its bylaws. The Company has heretofore delivered or made available to CIENA a complete and correct copy of its Subsidiary's charters and bylaws, each as amended to and as in effect as of the date hereof.

SECTION 2.3. Capitalization.

The authorized capital stock of the Company on the date hereof consists of 400,000,000 shares of common stock, \$0.01 par value per share, of which, 79,787,626 shares are issued and outstanding, and 205,169,986 shares of preferred stock, par value \$0.01 per share, of which 9,200,000 shares are designated as Series A Preferred Stock, 185,000 of which are issued and outstanding, 9,200,000 shares are designated as Series A-1 Preferred Stock, 9,015,000 of which are issued and outstanding 38,064,993 shares are designated as Series B Preferred Stock, 2,353,370 of which are issued and outstanding, 38,064,993 shares are designated Series B-1 Preferred Stock, 33,333,331 of which are issued and outstanding and 110,640,000 shares are designated as Series C Preferred Stock, 92,963,301 of which are issued and outstanding. All of the issued and outstanding shares of Series A and Series A-1 Preferred Stock, Series B and Series B-1 Preferred Stock and Series C Preferred Stock and Common Stock of the Company are owned of record by the Stockholders of the Company shown on **Schedule 2.3** hereto. The Company has not granted any options, warrants or other rights, or entered into any agreements, arrangements or commitments of any character relating to the issued or unissued capital stock of the Company, or obligating the Company to issue or sell any shares of capital stock of, or other equity interests in the Company, including any securities directly or indirectly convertible into or exercisable or exchangeable for any capital stock or other equity securities of the Company, except for the adoption of the New Company Certificate in connection with the Initial Merger and except that as of the date of this Agreement, there were (i) 2,353,505 shares of Company Common Stock reserved for issuance pursuant to options outstanding under the Company's Amended and Restated 2000 Stock Option and Incentive Plan, as amended (the "Company Stock Plan"), (ii) 150,000 shares of Company Common Stock reserved for issuance pursuant to warrants issued under the Company Stock Plan, and (iii) 1,377,861 shares of Series B Preferred Stock and 640,000 shares of Series C Preferred Stock reserved for issuance pursuant to issued warrants. The Company does not have outstanding any bonds, debentures, notes or other obligations the holders of which have the right to vote (or convertible into or exercisable for securities having the right to vote) with the Stockholders of the Company on any matter. There are no outstanding obligations or rights of the Company to repurchase, redeem or otherwise acquire any shares of its capital stock or make any investment (in the form of a loan, capital contribution or otherwise) in any other Person except in accordance with the Company Certificate and the New Company Certificate and except for outstanding rights of the Company to repurchase shares of Company Common Stock, at the original purchase price paid per share, upon the holder's termination of service or employment with the Company and certain other circumstances in the amounts and under the terms (including the original purchase price and vesting and acceleration provisions) and from the persons set forth on **Schedule 2.3(a)** (the "Company Restricted Stock"). Each holder of Company Restricted Stock has filed on a timely basis an election under Section 83(b) of the Code with respect to such Company Restricted Stock. All of the issued and outstanding shares of the Company Capital Stock, have been duly authorized and validly issued in accordance with applicable laws and are fully paid and non-assessable and not subject to preemptive rights. All of the outstanding shares of capital stock of the Company's Subsidiary are duly authorized, validly issued, fully paid and non-assessable and is owned by the Company free and clear of any lien, pledge, security interest or other encumbrance. Except as set forth above or on **Schedule 2.3(b)**, no shares of capital stock of the Company are reserved for any purpose. **Schedule 2.3(c)** contains a list which is complete and accurate in all respects as of the date hereof, of each outstanding option, warrant or other stock based award to purchase or acquire shares under the Company Stock Plan (the "Company Options") or otherwise, including whether or not the grant was made under the Company Stock Plan, the holder, date of grant, exercise price, whether the option contains an associated stock appreciation right, vesting and acceleration provisions and numbers of shares subject thereto.

SECTION 2.4. Authority.

(a) The execution and delivery of this Agreement by the Company and the consummation by the Company of the transactions contemplated hereby, including, without limitation, the Initial Merger, have been duly and validly authorized by all necessary corporate action and no other corporate proceedings on the part of the Company are necessary to authorize this Agreement or to consummate the transactions

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contemplated hereby, except that approval of the Merger requires (i) approval by holders of a majority of the shares of the Company Common Stock and the Company Preferred Stock, voting as a single class on an as converted to Company Common Stock basis, (ii) approval of holders of a majority of the Series A and Series A-1 Preferred Stock, voting together as a single class on an as converted to Company Common Stock basis, (iii) approval of holders of 60% of the Series B and Series B-1 Preferred Stock, voting as a single class on an as converted to Company Common Stock basis and (iv) approval of holders of 75% of the Series C Preferred Stock (the “Company Requisite Vote”). Assuming due authorization, execution and delivery by CIENA, this Agreement constitutes, and the Initial Merger constitutes, a legal, valid and binding obligation of the Company, enforceable in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws of general applicability relating to or affecting creditors’ rights generally and by the application of general principles of equity.

(b) The Board of Directors of the Company has duly and unanimously approved this Agreement and the Merger and the other transactions contemplated hereby to which the Company is a party, and has recommended adoption thereof by the Stockholders.

SECTION 2.5. No Conflict; Required Filings and Consents.

(a) Except as set forth on **Schedule 2.5(a)**, the execution and delivery of this Agreement by the Company does not, and the performance by the Company of its obligations under this Agreement will not, (i) conflict with or violate the Company Certificate or the bylaws of the Company, (ii) conflict with or violate any Law applicable to the Company, or (iii) result in any breach of or constitute a default (or an event which with notice or lapse of time or both would become a default) under any note, bond, mortgage, indenture, contract, agreement, lease, license, permit, franchise or other instrument or obligation to which it is subject, except with respect to (ii) or (iii) above, for those instances which would not delay or affect the terms of the transactions contemplated hereby or would otherwise not reasonably be expected to have a Company Material Adverse Effect.

(b) Except as set forth in **Schedule 2.5(b)**, the execution and delivery of this Agreement by the Company does not, and the performance of this Agreement by the Company will not, require any consent, approval, authorization or permit of, or filing with or notification to, any Government Entity by the Company, except for (i) the filing of a Certificate of Merger under the DGCL, (ii) filings under the Hart-Scott-Rodino Antitrust Improvements Act of 1976, as amended (the “Hart-Scott-Rodino Act”), and (iii) state securities law filings.

(c) All consents and waivers required from any person in order to (i) carry out the transactions contemplated hereby under any contract, lease or agreement to which the Company is a party, or (ii) to assign such contract, lease or agreement to the Surviving Company, are set forth on **Schedule 2.5(c)**, except for licenses of widely available “shrink-wrap” software.

SECTION 2.6. Financial Statements.

Attached hereto as **Schedule 2.6** are the audited balance sheets of the Company as of December 31, 2000 and 2001; the unaudited balance sheets as of December 31, 2002 and February 28, 2003; the audited statements of operations and cash flows for the period from March 31, 2000 (inception) to December 31, 2000 and for the fiscal year ended December 31, 2001; and the unaudited statement of operations and cash flows for the fiscal year ended December 31, 2002 and the two months ended February 28, 2003 (collectively, the “Financial Statements”). The audited financial statements referred to in this **Section 2.6** present fairly, in all material respects, the financial condition of the Company as of the respective dates and the results of operations and cash flows for the respective periods indicated and have been prepared in accordance with United States generally accepted accounting principles (“GAAP”) applied on a consistent basis. Except as set forth on **Schedule 2.6**, the unaudited financial statements referred to in this **Section 2.6** present fairly, in all material respects, the financial condition of the Company as of the respective dates and the results of operations and cash flows for the respective periods indicated and have

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been prepared in all material respects in accordance with GAAP applied on a consistent basis except, in the case of interim statements, for the absence of required footnotes and normal recurring year-end audit adjustments. All audited financial statements included in the Financial Statements are accompanied by unqualified audit reports of Arthur Andersen LLP. Except as set forth on **Schedule 2.6** or as reflected in the balance sheet of the Company as of February 28, 2003 (the "Balance Sheet Date"), the Company has not incurred any liabilities, contingent or absolute, matured or unmatured, known or unknown, and knows of no basis for such liabilities, except for liabilities (a) not required under GAAP applied on a consistent basis with that of the preceding accounting periods to be reported on such Financial Statements, and (b) incurred in the Ordinary Course of Business.

SECTION 2.7. Absence of Certain Changes or Events.

(a) Since the Balance Sheet Date, there has been no event or set of circumstances that resulted in or is reasonably likely to result in a Company Material Adverse Effect. Except as set forth on **Schedule 2.7(a)**, since the Balance Sheet Date, the Company and its Subsidiary have each conducted its business in the Ordinary Course of Business, and have not (i) paid any dividend or distribution in respect of, or redeemed or repurchased any of, its capital stock other than the Company's repurchase of shares, at the original purchase price paid per share, from terminating employees or consultants in amounts and from persons described in **Schedule 2.7(a)**; (ii) incurred loss of, or significant injury to, any of the material Assets, whether as the result of any natural disaster, labor trouble, accident, other casualty, or otherwise; (iii) incurred, or become subject to, any material liability (absolute or contingent, matured or unmatured), and knows of no basis for such liabilities, except current liabilities incurred in the Ordinary Course of Business; (iv) mortgaged, pledged or subjected to any Encumbrance any of the Assets; (v) sold, exchanged, transferred or otherwise disposed of any material Assets except in the Ordinary Course of Business, or canceled any debts or claims; (vi) written down the value of any Assets or written off as uncollectible any accounts receivable, except write downs and write-offs in the Ordinary Course of Business, none of which, individually or in the aggregate, could reasonably be expected to have a Company Material Adverse Effect; (vii) entered into any transactions, other than in the Ordinary Course of Business; (viii) made any change in any method of accounting or accounting practice; or (ix) made any agreement to do any of the foregoing, other than negotiations with CIENA and its representatives regarding the transactions contemplated by this Agreement.

(b) Since the Balance Sheet Date, except as set forth on **Schedule 2.7(b)**, there has not been: (i) any damage, destruction or loss (whether or not covered by insurance) or any other event negatively affecting the business or Assets of the Company or its Subsidiary except for those which could not reasonably be expected to have a Company Material Adverse Effect; (ii) any forgiveness or cancellation of debts or claims owed to the Company; (iii) any increase in the compensation or benefits payable or to become payable by the Company or its Subsidiary to any of the directors, officers, consultants or employees of the Company or its Subsidiary, other than salary increases in connection with customary performance reviews and customary bonuses consistent with past practices, the terms and amounts of which are set forth on **Schedule 2.7(b)**; (iv) any discharge or satisfaction of any Lien or payment of any liability or obligation by the Company or its Subsidiary other than current liabilities in the Ordinary Course of Business; or (v) any agreement to do any of the foregoing, other than negotiations with CIENA and its representatives regarding the transactions contemplated by this Agreement.

SECTION 2.8. Ownership and Condition of the Assets.

Except as set forth on **Schedule 2.8**, the Company or its Subsidiary is the sole and exclusive legal and equitable owner of and has good and marketable title to the Assets it purports to own and such Assets are free and clear of all Encumbrances other than Permitted Encumbrances. No person or Government Entity has an option to purchase, right of first refusal or other similar right with respect to all or any part of such Assets other than in the Ordinary Course of Business. All of the personal property of the Company and its Subsidiary is in good working order and repair, ordinary wear and tear excepted, and is suitable and

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adequate for the uses for which it is intended or is being used except for instances which could not reasonably be expected to have a Company Material Adverse Effect.

SECTION 2.9. Leases.

Schedule 2.9 lists all leases and other agreements under which the Company or its Subsidiary is lessee or lessor of any Asset, or holds, manages or operates any Asset owned by any third party, or under which any Asset owned by the Company or its Subsidiary is held, operated or managed by a third party. The Company or its Subsidiary is the holder of all the leasehold estates purported to be granted to such entity by the leases listed in **Schedule 2.9** and is the owner of all equipment, machinery and other Assets purported to be owned by the Company or its Subsidiary thereon, free and clear of all Encumbrances other than Permitted Encumbrances. Each such lease and other agreement is in full force and effect and constitutes a legal, valid and binding obligation of, and is legally enforceable against, the respective parties thereto (except as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws of general applicability relating to or affecting creditors' rights generally and by the application of general principles of equity) and grants the leasehold estate it purports to grant free and clear of all Encumbrances other than Permitted Encumbrances. All necessary governmental approvals required to be obtained by the Company or its Subsidiary with respect thereto have been obtained, all necessary filings or registrations therefor have been made, and to the Company's Knowledge, there have been no threatened cancellations thereof and are no outstanding disputes thereunder. The Company and its Subsidiary have each performed in all material respects all obligations thereunder required to be performed by such entity to date. Neither the Company nor its Subsidiary is in default in any material respect under any of the foregoing and to the Company's Knowledge, no other party is in default in any material respect under any of the foregoing, and there has not occurred any event which (whether with or without notice, lapse of time or the happening or occurrence of any other event) would, constitute a default on the part of the Company or its Subsidiary, or to the Company's Knowledge, a party other than the Company.

SECTION 2.10. Other Agreements.

(a) **Schedule 2.10** is an accurate list of all material contracts and agreements to which the Company or its Subsidiary is a party, or which it or any of its property is bound, (including, without limitation, joint venture agreements, employment contracts, loan agreements, bonds, mortgages, liens, pledges or other security agreements) used in connection with, or relating to the conduct of the business of the Company or its Subsidiary (the "Contracts").

(b) Except as set forth on **Schedule 2.10**, with respect to the conduct of the business of the Company and its Subsidiary and ownership of the Assets, neither the Company nor its Subsidiary is:

- (1) a party to any contract, purchase or sales orders, or commitment that involves a dollar amount in excess of \$50,000 or extends for a period of twelve months or more;
- (2) a party to any employment contracts with employees, agents or consultants;
- (3) a party to any contract with sales or other agents, brokers, franchisees, distributors or dealers;
- (4) a party to any partnership or joint venture agreement;
- (5) a party to any lease or other occupancy or use agreements, oral or written, nor has the Company or its Subsidiary granted any options, rights of first refusal or security or other interests other than Permitted Encumbrances in or relating to the Assets or the business of the Company or its Subsidiary;
- (6) a party to any agreements giving any party the right to renegotiate or require a reduction in price or refund of payments previously made in connection with the business of the Company or its Subsidiary;

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- (7) a party to any agreements for the borrowing or lending of money with respect to the business of the Company or its Subsidiary and is not a party to any guaranty agreement;
- (8) a party to any agreements that contain any provisions requiring the Company or its Subsidiary to indemnify any other party thereto other than agreements entered into in the Ordinary Course of Business which could not reasonably be expected to have a Company Material Adverse Effect;
- (9) a party to any agreement for the sale of goods or services to any Governmental Entity;
- (10) a party to any agreement granting any Person a Lien on any of the Assets other than Permitted Encumbrances;
- (11) a party to any agreement under which the Company or its Subsidiary licenses or transfers any rights to any Company intellectual property rights or under which the Company licenses any intellectual property rights of others except for licenses of widely available “shrink wrap” software;
- (12) a party to any joint venture, co-development, corporate partnering or similar agreement involving the development, marketing or sale of goods or services;
- (13) a party to any severance, bonus, executive or deferred compensation, profit sharing, pension or retirement, stock option or stock purchase, hospitalization, insurance, medical reimbursement or other plan, agreement or arrangement or practice providing employee or executive benefits to any officer or employee or former officer or former employee; and
- (14) a party to or bound by any non-competition, secrecy or confidentiality agreement relating to the business of the Company or its Subsidiary or the Assets or any other contract restricting its right to conduct the business the Company at any time, in any manner or at any place in the world, or the expansion thereof to other geographical areas, customers, suppliers or lines of business.

(c) A true and correct copy of each Contract has been made available to CIENA prior to the date hereof. Each Contract is now valid, in full force and effect and enforceable in accordance with its terms (except as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws of general applicability relating to or affecting creditors’ rights generally and by the application of general principles of equity). Neither the Company nor its Subsidiary has breached or improperly terminated any such Contract, the effect of which would reasonably be expected to have a Company Material Adverse Effect, and neither the Company, its Subsidiary nor, to the Knowledge of the Company, any third party is in default under any such Contract, the effect of which would have a Company Material Adverse Effect. There exists no condition or event of which the Company is aware or that is within the control of the Company that, after notice or lapse of time or both, would constitute any such breach, termination or default. Except as set forth on **Schedule 2.10**, the Company does not know of a bid or contract proposal made by the Company or its Subsidiary, that, if accepted and entered into, is likely to result in a loss to the Company.

SECTION 2.11. Real Property.

Schedule 2.11 contains a list of all leasehold interests in real estate, easements, rights to access, rights-of-way and other real property interests which are owned, or are leased, used or held for use by the Company or its Subsidiary (collectively, the “Real Property”). The Real Property listed in **Schedule 2.11** constitutes all real property interests necessary to conduct the business and operations of the Company and its Subsidiary as now conducted. The Company is not aware of any easement or other real property interest, other than those listed in **Schedule 2.11**, that is required, or that has been asserted by a Government Entity to be required, to conduct the business and operations of the Company or its Subsidiary. The Company has made available to CIENA true and complete copies of all deeds, leases, easements, rights-of-way and other instruments pertaining to the Real Property (including any and all amendments and other modifications of such instruments). All Real Property (including the improvements thereon) (i) is in good condition and repair other than conditions that do not adversely affect its use by

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the Company or its Subsidiary and consistent with its present use, (ii) is available to the Company or its Subsidiary for immediate use in the conduct of its business and operations, and (iii) to the Knowledge of the Company complies in all material respects with all applicable building or zoning codes and in the regulations of any Government Entity having jurisdiction.

SECTION 2.12. Environmental Matters.

(a) The Company and its Subsidiary have complied in all material respects with all Environmental Laws. There are no pending or, to the Knowledge of the Company, threatened actions, suits, claims, legal proceedings or other proceedings against the Company or its Subsidiary based on any Environmental Laws, and the Company has not received any notice of any complaint, order, directive, citation, notice of responsibility, notice of potential responsibility, or information request from any Government Entity or any other person arising out of or attributable to: (i) the current or past presence at any part of the Real Property of Hazardous Materials (as defined below) or any substances that pose a hazard to human health or an impediment to working conditions; (ii) the current or past release or threatened release into the environment from the Real Property (including, without limitation, into any storm drain, sewer, septic system or publicly owned treatment works) of any Hazardous Materials or any substances that pose a hazard to human health or an impediment to working conditions; (iii) the off-site disposal of Hazardous Materials originating on or from the Real Property; (iv) any facility operations or procedures of the Company or its Subsidiary which do not conform to requirements of the Environmental Laws; or (v) any violation of Environmental Laws at any part of the Real Property or otherwise arising from the Company's activities involving Hazardous Materials.

(b) The Company has been duly issued, and currently has all material permits, licenses, certificates and approvals required to be maintained by the Company or its Subsidiary under any Environmental Law with respect to the use of the Real Property by the Company. A true and complete list of such permits, licenses, certificates and approvals, all of which are valid and in full force and effect, is set out in **Schedule 2.12**. Except in accordance with such permits, licenses, certificates and approvals, there has been no discharge of any Hazardous Materials or any other material regulated by such permits, licenses, certificates or approvals.

(c) To the Knowledge of the Company, none of the Real Property contains any underground storage tanks, or underground piping associated with such tanks, used currently or in the past for Hazardous Materials.

SECTION 2.13. Litigation.

Except as set forth on **Schedule 2.13**, neither the Company nor its Subsidiary is involved in any pending action, suit, investigation, claim, arbitration or litigation and, to the Knowledge of the Company, no such matter is threatened against or involving the Company, its Subsidiary or the Assets, at law or in equity, or before or by any court, arbitrator or Government Entity. Neither the Company nor its Subsidiary is operating under, or subject to, any judgment, writ, order, injunction, award or decree of any court, judge, justice or magistrate, including any bankruptcy court or judge, or any order of or by any Government Entity. No property or Assets of the Company or its Subsidiary has been taken or expropriated by any federal, state, provincial, municipal or other Government Entity nor has any notice or proceeding with respect to thereof been given or commenced, nor is the Company aware of any intent or proposal by any Governmental Entity to give any such notice or commence any such proceeding.

SECTION 2.14. Compliance with Laws.

The Company and its Subsidiary are in compliance in all respects with all Laws applicable to the Assets and its business and operations, including all Laws applicable to the Company's and the Subsidiary's relationship with its respective employees except where noncompliance would not be reasonably expected to have a Company Material Adverse Effect.

SECTION 2.15. Intellectual Property.

(a) Except as set forth on **Schedule 2.15(a)**, the Company or its Subsidiary has all right, title, interest and license rights necessary to use all intellectual property used in the business of the Company and its Subsidiary as presently conducted and, to the Company's Knowledge, has the right, title, interest and license rights to use all intellectual property that is currently anticipated by the Company to be required to carry out the Company's product development and marketing plans through at least the next 6 months (the "Intellectual Property Rights"). Except as set forth on **Schedule 2.15(a)**, there are no claims or demands against the Company by any other Person pertaining to any of such Intellectual Property Rights and no proceedings have been instituted, or are pending or to the Knowledge of the Company, threatened, which challenge the rights of the Company or its Subsidiary in respect thereof. The Company or its Subsidiary have the right to use, without infringing the rights of others, all customer lists, designs, manufacturing or other processes, computer software, systems, data compilations, research results and other information required for or incident to its products or its business as presently conducted.

(b) **Schedule 2.15(b)** lists all patents, patent applications, registered trademarks, trademark applications and registrations and registered copyrights owned or licensed by or registered in the name of the Company or its Subsidiary or used by either the Company or its Subsidiary in its business as presently conducted, and generally describes any other Intellectual Property Rights owned by the Company material to the business or operations of the Company or its Subsidiary. All of such patents, patent applications, registered trademarks, trademark applications and registrations and registered copyrights, if any, have been duly registered in, filed in or issued by the United States Patent and Trademark Office, the United States Register of Copyrights, or the corresponding offices of other jurisdictions as identified on **Schedule 2.15(b)**, and have been properly maintained and renewed in accordance with all applicable provisions of law and administrative regulations in the United States and each such jurisdiction except as set forth on **Schedule 2.15(b)**.

(c) All licenses or other agreements under which the Company or its Subsidiary is granted rights in Intellectual Property Rights are listed on **Schedule 2.15(c)** except for licenses of widely available "shrink-wrap" software. All such licenses or other Agreements are in full force and effect, there is no material default by the Company or its Subsidiary or, to the Company's Knowledge, any party thereto. To the Knowledge of the Company, the licensors under such licenses and other agreements have and had all requisite power and authority to grant the rights purported to be conferred thereby. True and complete copies of all such licenses or other Agreements, and any amendments thereto, have been furnished to CIENA.

(d) All licenses or other agreements under which the Company or its Subsidiary has granted rights to others in Intellectual Property Rights owned or licensed by the Company are listed on **Schedule 2.15(d)**. All of such licenses or other agreements are in full force and effect, there is no material default by the Company or its Subsidiary, or to the Company's Knowledge, by any party thereto. True and complete copies of all such licenses or other agreements, and any amendments thereto, have been furnished to CIENA.

(e) The Company and its Subsidiary have each taken all reasonable steps it believes to be required in accordance with sound business practice to establish and preserve its ownership of all material copyright, trade secret and other proprietary rights with respect to its products and technology. The Company and its Subsidiary have each required all professional and technical employees and independent contractors having access to valuable non-public information of the Company and its Subsidiary to execute agreements under which such persons are required to maintain the confidentiality of such information and appropriately restricting the use thereof. The Company does not have Knowledge of any infringement by others of any Intellectual Property Rights of the Company or its Subsidiary.

(f) To the Knowledge of the Company, except as set forth on **Schedule 2.15(f)**, the present business, activities and products of the Company and its Subsidiary do not infringe any Intellectual Property Rights of any other Person. No proceeding charging the Company or its Subsidiary with infringement of any Intellectual Property Rights has been filed or, to the Knowledge of the Company, is

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threatened or likely to be filed. Except as set forth on **Schedule 2.15(f)**, to the Knowledge of the Company, there exists no unexpired patent or patent application that includes claims that would be infringed by the products, activities or business of the Company or its Subsidiary. To the Knowledge of the Company, neither the Company nor its Subsidiary is making any unauthorized use of any confidential information or trade secrets of any Person, including without limitation, any customer of the Company or its Subsidiary, or any past or present employee of the Company or its Subsidiary. Except for customer contracts in the Ordinary Course of Business and confidentiality agreements by Employees with former employers, neither the Company or its Subsidiary nor, to the Knowledge of the Company, any of its employees have any agreements or arrangements with any Persons other than the Company related to confidential information or trade secrets of such Persons or restricting any such employee's engagement in business activities of any nature. The activities of its employees on behalf of the Company or its Subsidiary do not violate any such agreements or arrangements known to the Company that would reasonably be expected to have a Material Adverse Effect.

(g) To the Knowledge of the Company, none of the current officers and employees of the Company or its Subsidiary has any issued patent or patent application pending for any device, process, design or invention of any kind used (currently or in the 12 months prior to the date hereof) by the Company or its Subsidiary, or is intended to be used by the Company or its Subsidiary or its successor in the future, which patent or patent application has not been assigned to the Company or its Subsidiary, with such assignment duly recorded in the patent office of the relevant jurisdiction. Binding, written assignments to the Company or its Subsidiary have been executed by all inventors for those patents and patent applications set forth on **Schedule 2.15(b)**.

SECTION 2.16. Taxes and Assessments.

Except as set forth on **Schedule 2.16**, the Company and its Subsidiary have each (i) duly and timely paid all Taxes which have become due and payable by it, and there are no agreements, waivers or other arrangements providing for an extension of time with respect to the filing of any Tax Return or the payment of any Tax; (ii) received no written notice of, nor does the Company have any Knowledge of, any notice of deficiency or assessment or proposed deficiency or assessment from any taxing Government Entity; (iii) no Knowledge of any audits pending and there are no outstanding agreements or waivers by the Company or its Subsidiary that extend the statutory period of limitations applicable to any federal, state, local, or foreign tax returns or Taxes; and (iv) not entered into any discussions with any federal, state, local, or foreign authority with respect to any Tax asserted by such authority but not yet paid by the Company or its Subsidiary. Since inception of the Company, the Tax Returns of the Company and its Subsidiary have never been audited by federal, state, local, or foreign authorities. There are no Liens for Taxes (other than Taxes not yet due and payable) on any property of the Company or its Subsidiary. The Company and its Subsidiary have withheld from each payment made to any of its past or present employees, officers or directors, and to any non-residents, the amount of Taxes and other deductions required to be withheld therefrom and has paid the same (or set aside for timely payment) to the proper Tax or other receiving officers within the time required under applicable Laws. The provision for Taxes of the Company, if any, as shown in the Financial Statements is adequate for Taxes due or accrued as of the date thereof.

SECTION 2.17. Employment and Benefit Matters.

(a) Pension and Benefit Plans and Other Arrangements. **Schedule 2.17(a)** lists each employee benefit plan, program, arrangement and contract (including, without limitation, any "employee benefit plan" as defined by Section 3(3) of ERISA), applicable to employees or former employees of the Company or its Subsidiary to which it has contributed or under which it has any material liability (collectively, the "Company Benefit Plans"). The Company has made available to CIENA, to the extent they exist, a true and correct copy of (i) the most recent annual report (Form 5500 series) filed with the Internal Revenue Service (the "IRS") with respect to each Company Benefit Plan or similar report of the jurisdiction in which such employee benefit plan is located, (ii) each such Company Benefit Plan

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document and any amendments thereto, (iii) each trust agreement or other funding vehicle relating to each such Company Benefit Plan, (iv) the most recent summary plan description for each Company Benefit Plan for which a summary plan description is required, and (v) the most recent determination letter issued by the IRS with respect to any Company Benefit Plan qualified under Section 401(a) of the Code or similar report of the jurisdiction in which such employee benefit plan is located.

(b) Compliance. The Company and its Subsidiary have complied with the terms of the Company Benefit Plans and all applicable provisions of the Code, ERISA, and all other applicable Laws pertaining to the Company Benefit Plans, except for instances of non-compliance that could not reasonably be expected to have a Company Material Adverse Effect. The Company and its Subsidiary have no liability for any delinquent contributions within the meaning of Section 515 of ERISA (including, without limitation, related attorneys' fees, costs, liquidated damages and interest) or for any arrearages of wages. The Company and its Subsidiary have no pending unfair labor practice charges, contract grievances under any collective bargaining agreement, other administrative charges, claims, grievances or lawsuits before any court, governmental agency, regulatory body, or arbiter arising under any Law governing any Company Benefit Plan, and, to the Knowledge of the Company, there exist no facts that could reasonably be expected to give rise to such a claim.

(c) Collective Bargaining Agreements. There are no collective bargaining agreements applicable to the Company's and its Subsidiary's employees and the Company and its Subsidiary have no duty to bargain with any labor organization with respect to any such persons. There is no pending demand for recognition or any other request or demand from a labor organization for representative status with respect to any persons employed by the Company or its Subsidiary.

(d) Employee Information. The Company has made available to CIENA a list of the names, positions and rates of compensation of all officers, directors, employees and consultants of the Company and its Subsidiary, as of the date hereof, showing each such person's name, positions, and annual remuneration, bonuses, material fringe benefits and any severance or change of control agreement in place for the current fiscal year and the most recently completed fiscal year. With respect to any persons employed by the Company or its Subsidiary, the Company and its Subsidiary are in material compliance with all Laws respecting employment conditions and practices, have withheld all amounts required by any applicable Laws to be withheld and paid from wages, and neither the Company nor its Subsidiary have any liability for any Taxes or penalties for failure to comply with any of the foregoing.

(e) Employment Practices. Except as set forth on **Schedule 2.17(e)**, with respect to any persons employed by the Company or its Subsidiary, (i) the Company and its Subsidiary have not engaged in any unfair labor practice within the meaning of the National Labor Relations Act and has not violated any legal requirement prohibiting discrimination on the basis of race, color, national origin, sex, religion, age, marital status, or handicap in its employment conditions or practices; and (ii) there are no pending or, to the Knowledge of the Company, threatened unfair labor practice charges or discrimination complaints relating to race, color, national origin, sex, religion, age, marital status, or handicap against the Company or its Subsidiary before any Government Entity nor, to the Knowledge of the Company, does any basis therefor exist.

(f) Contributions to the Company Benefit Plans. All contributions to, and payments from, each Company Benefit Plan which may have been required to be made in accordance with the terms of such plan, and, where applicable, the laws of the jurisdiction which govern such plan, have been made in a timely manner, and all material reports, returns and similar documents (including applications for approval of contributions) with respect to any Company Benefit Plan required to be filed with any Government Entity or distributed to any participant of such plan have been duly filed on a timely basis or properly distributed. No Company Benefit Plan is subject to Title IV of ERISA.

(g) Immigration Laws. The Company and its Subsidiary have complied, in all material respects, with all Laws governing the employment of personnel by U.S. companies and the employment of non-U.S. nationals in the United States, including, but not limited to, the Immigration and Nationality Act 8 U.S.C. Sections 1101 et seq. and its implementing regulations.

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(h) Parachute Payments. Except as set forth on **Schedule 2.17(h)**, no amount required to be paid or payable to or with respect to any employee or other service provider of the Company or its Subsidiary in connection with the transactions contemplated hereby (either solely as a result thereof or as a result of such transactions in conjunction with any other event) will be an “excess parachute payment” within the meaning of Section 280G of the Code.

(i) COBRA. **Schedule 2.17(i)** sets forth a list of all persons who are current qualified beneficiaries (as defined in Section 4980B of the Code) as of the date hereof.

SECTION 2.18. Transactions with Related Parties.

Except (i) for standard confidentiality, assignment of invention and non-competition agreements, and stock option awards and restricted stock grants and awards on standard forms under the Company Stock Plan, (ii) as set forth on **Schedule 2.18** and (iii) for any transactions between the Company or its Subsidiary and CIENA, neither any present or former officer, director, stockholder of the Company or its Subsidiary or person known by the Company to be an Affiliate of any of them, is currently a party to any transaction or agreement with the Company or its Subsidiary, including, without limitation, any loan, extension of credit or arrangement for the extension of credit, any agreement providing for the employment of, furnishing of services by, rental of Assets from or to, or otherwise requiring payments to, any such officer, director, stockholder or Affiliate or its Subsidiary.

SECTION 2.19. Insurance and List of Claims.

Schedule 2.19 contains a list of all policies of title, property, fire, casualty, liability, life, workmen’s compensation, libel and slander, and other forms of insurance of any kind relating to the business and operations of the Company in each case which are in full force and effect as of the date hereof. The Company has made available to CIENA true and correct copies of all such policies. All such policies: (a) are sufficient for compliance by the Company and its Subsidiary with all requirements of applicable Law and of all licenses, franchises and other agreements to which the Company or its Subsidiary is a party, except for instances in which non-compliance could not reasonably be expected to have a Company Material Adverse Effect and (b) are valid, outstanding, and enforceable policies. All premiums due and payable on all such policies have been paid. A true and complete list of all claims made since March 31, 2000 under any of the policies (or their predecessors) listed on **Schedule 2.19** is included on **Schedule 2.19**.

SECTION 2.20. Brokers and Transaction Fees.

No broker, finder, investment banker or other person is entitled to any brokerage, finder’s or other fee or commission of any kind in connection with the transactions contemplated by this Agreement based upon arrangements made by or on behalf of any of the Company, except for any fee that may be payable by the Company to Thomas Weisel Partners, LLC upon consummation of the Merger, the terms of which are set forth in a letter agreement dated June 12, 2002, attached hereto as **Schedule 2.20**.

SECTION 2.21. Disclosure.

True and complete copies of all documents listed in the Schedules have been made available or provided to CIENA. The books of account, stock record books and other financial and corporate records of the Company and its Subsidiary, including the minute books of the Company’s Stockholders and Board of Directors, all of which have been made available to CIENA, are complete and correct in all material respects and have been maintained in accordance with good business practices, including the maintenance of an adequate system of internal accounting controls, and such book and records are accurately reflected in the Financial Statements.

SECTION 2.22. Absence of Violation.

To the Knowledge of the Company, none of the Company, its Subsidiary nor any of its officers, directors, employees or agents (or stockholders, distributors, representatives or other persons acting on the express, implied or apparent authority of any of the Company or its Subsidiary) have paid, given or received or have offered or promised to pay, give or receive, any bribe or other unlawful payment of money or other thing of value, any extraordinary discount, or any other unlawful inducement, to or from any person, business association or governmental official or entity in the United States or elsewhere in connection with or in furtherance of the business of the Company or its Subsidiary (including, without limitation, any unlawful offer, payment or promise to pay money or other thing of value (i) to any foreign official or political party (or official thereof) for the purposes of influencing any act, decision or omission in order to assist the Company or its Subsidiary in obtaining business for or with, or directing business to, any person, or (ii) to any person, while knowing that all or a portion of such money or other thing of value will be offered, given or promised to any such official or party for such purposes). To the Knowledge of the Company, the business of the Company and its Subsidiary is not in any manner dependent upon the making or receipt of such unlawful payments, discounts or other inducements.

SECTION 2.23. Customers and Suppliers.

Except as set forth on **Schedule 2.23**, the Company does not have Knowledge of (i) any termination or cancellation of (or any intent to terminate or cancel) the business relationship of the Company or its Subsidiary with (y) any single customer or any group of affiliated customers who represented five percent (5%) or more of the revenues or potential revenues of the business of the Company or its Subsidiary during the fiscal year ended December 31, 2002, or (z) any single supplier or any group of affiliated suppliers who provided five percent (5%) or more of the requirements of the business of the Company during the fiscal year ended December 31, 2002, or (ii) any existing condition, state of facts or circumstances that in the reasonable judgment of the Company will cause the Company or any of its customers to terminate their relationships. To the Knowledge of the Company, none of the business or prospective business of the Company or its Subsidiary is in any manner dependent upon the making or receipt of any payments, discounts or other inducements to any officers, directors, employees, representatives or agents of any customer.

SECTION 2.24 Information Supplied.

The information provided by the Company to CIENA in writing, specifically for use in the Proxy Statement/ Prospectus (as defined below) does not contain any untrue statements of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements contained therein not misleading.

ARTICLE III

REPRESENTATIONS AND WARRANTIES OF CIENA

CIENA represents and warrants to the Company as follows:

SECTION 3.1. Organization and Qualification.

CIENA is a corporation duly organized, validly existing and in good standing under the laws of the State of Delaware. CIENA has the requisite power and authority to own, lease and operate its Assets and properties, to carry on its business as now being conducted and to perform the terms of this Agreement and the transactions contemplated hereby. CIENA is duly qualified to conduct its business, and is in good standing, in each jurisdiction where the ownership or leasing of its properties or the nature of its activities in connection with the conduct of its business makes such qualification necessary.

SECTION 3.2. Certificate of Incorporation and Bylaws.

CIENA has previously made available to Company complete and correct copies of the CIENA Certificate and its Bylaws, as amended to date (together, the “CIENA Charter Documents”). Such CIENA Charter Documents and equivalent organizational documents of each of its subsidiaries are in full force and effect.

SECTION 3.3. Authority.

The execution and delivery of this Agreement by CIENA and the consummation by CIENA of the transactions contemplated hereby have been duly and validly authorized by all necessary corporate action and no other corporate proceedings on the part of CIENA are necessary to authorize this Agreement or to consummate the transactions contemplated hereby. This Agreement has been duly executed and delivered by CIENA and, assuming the due authorization, execution and delivery by the Company, constitutes a legal, valid and binding obligation of CIENA, enforceable in accordance with its terms, except as such enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws of general applicability relating to or affecting creditors’ rights generally and by the application of general principles of equity.

SECTION 3.4. No Conflict; Required Filings and Consents.

(a) The execution and delivery of this Agreement by CIENA does not, and the performance by CIENA of its obligations under this Agreement will not, (i) conflict with or violate the certificate of incorporation or bylaws of CIENA, (ii) conflict with or violate any Law applicable to CIENA or its Assets and properties, or (iii) result in any breach of or constitute a default (or an event which with the notice or lapse of time or both would become a default) under any note, bond, mortgage, indenture, contract, agreement, lease, license, permit, franchise or other instrument or obligation to which CIENA is a party or by which CIENA is bound, or by which any of its properties or Assets is subject.

(b) The execution and delivery of this Agreement by CIENA does not, and the performance of this Agreement by CIENA will not, require any consent, approval, authorization or permit of, or filing with or notification to, any Government Entity other than (i) the filing of the Certificate of Merger under the DGCL, (ii) required filings with the Securities and Exchange Commission and the NASDAQ National Market (“NASDAQ”) (iii) filings under the Hart-Scott-Rodino Act.

SECTION 3.5. Brokers.

No broker, finder or investment banker is entitled to any brokerage, finder’s or other fee or commission in connection with the transactions contemplated by this Agreement based upon arrangements made by or on behalf of CIENA, except for the fee to be paid by CIENA to Houlihan Lokey Howard & Zukin.

SECTION 3.6. Issuance of CIENA Stock.

Upon consummation of the Merger, and as of the Effective Time, the CIENA Common Stock to be issued in the Merger will be duly and validly issued, fully paid and non-assessable, free and clear of all Encumbrances imposed by CIENA, except as contemplated hereby.

SECTION 3.7. SEC Filings.

CIENA has filed all reports required to be filed by it with the Securities and Exchange Commission (the “SEC”) during the last twelve months (the “SEC Filings”). The SEC Filings (i) were prepared in accordance of the requirements of the Securities Exchange Act of 1934, as amended (the “Exchange Act”) and (ii) did not, at the time they were filed, contain any untrue statements of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements made therein, in light of the circumstances under which they were made, not misleading. Since the date of

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CIENA's last periodic report filed with the SEC there has been no event that has resulted in, or development that would reasonably be expected to result in, a CIENA Material Adverse Effect. The financial statements (including the related notes) of CIENA included in the SEC Filings complied, when filed, as to form in all material respects with applicable accounting requirements and the published rules and regulations of the SEC with respect thereto, were prepared in accordance with GAAP (except, in the case of unaudited statements, as permitted by Form 10-Q of the SEC) applied on a consistent basis during the periods involved (except as may be indicated in the notes thereto) and fairly presented in all material respects the consolidated financial position of CIENA and its consolidated Subsidiaries as of the dates thereof and their consolidated results of operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal and recurring year-end audit adjustments and the absence of footnotes).

SECTION 3.8 Litigation.

Except as disclosed in CIENA's SEC Filings filed prior to the date hereof, there is no action, suit, investigation, claim, arbitration or litigation pending or, to the Knowledge of CIENA, threatened against or involving CIENA or its Assets or the business and operations of CIENA, at law or in equity, or before or by any court, arbitrator or Government Entity that would reasonably be expected to result in a CIENA Material Adverse Effect. Except under proceedings that have been disclosed in CIENA's SEC Filings filed prior to the date hereof, CIENA is not operating under nor is it subject to any judgment, writ, order, injunction, award or decree of any court, judge, justice or magistrate, including any bankruptcy court or judge, or any order of or by any Government Entity. No property or Assets of CIENA has been taken or expropriated by any federal, state, provincial, municipal or other Government Entity nor has any notice or proceeding with respect to thereof been given or commenced nor is CIENA aware of any intent or proposal to give any such notice or commence any such proceeding.

SECTION 3.9 Capitalization.

The authorized capital stock of CIENA consists of 980,000,000 shares of common stock, \$0.01 par value per share, of which 434,865,565 shares are issued and outstanding as of April 8, 2003 and 20,000,000 shares of Preferred Stock, par value \$0.01 per share, none of which are issued and outstanding. Except for shares issuable in the Merger Agreement, and for 53,104,997 shares issuable under outstanding stock options and 20,000,000 shares issuable under stock purchase plans and the shares issuable under the terms of the Rights Agreement, there are no options, warrants or other agreements obligating CIENA to issue or sell any shares of capital stock of, or other equity interests in CIENA. Except as disclosed in the SEC Filings, there are no outstanding obligations of CIENA to repurchase, redeem or otherwise acquire any shares of its capital stock. All of the issued and outstanding shares of CIENA capital stock have been duly authorized and validly issued in accordance with applicable laws and are fully paid and non-assessable and not subject to preemptive rights.

SECTION 3.10 Absence of Certain Changes or Events.

Since January 31, 2003, except as described in public announcements by CIENA or in its SEC Filings, there has not been: (i) any CIENA Material Adverse Effect, (ii) any declaration, setting aside or payment of any dividend on, or other distribution (whether in cash, stock or property) in respect of any of CIENA's capital stock, or any purchase, redemption or other acquisition by CIENA of any of CIENA's capital stock or any other securities of CIENA or any options, warrants, calls or rights to acquire any such shares or other securities except for repurchases from employees following their termination pursuant to the terms of their pre-existing stock option or purchase agreements, (iii) any split, combination or reclassification of any of CIENA's capital stock, or (iv) any material change by CIENA in its accounting methods, principles or practices, except as required by concurrent changes in GAAP, SEC rules and regulations and related interpretations.

ARTICLE IV

COVENANTS

SECTION 4.1. Conduct of Business Pending Closing.

From the date hereof until the Closing, the Company shall and shall cause its Subsidiary to:

- (i) maintain its existence in good standing;
- (ii) conduct its business in the ordinary and usual manner consistent with past practices, except as expressly permitted by this Agreement;
- (iii) maintain business and accounting records consistent with past practices; and
- (iv) use commercially reasonable efforts (a) to preserve its business intact, (b) to keep available to the Company the services of its present officers and employees, and (c) to preserve for the Company the goodwill of its suppliers, customers and others having business relations with the Company.

SECTION 4.2. Prohibited Actions Pending Closing.

(a) Unless approved by the Company in writing, from the date hereof until Closing or termination of this Agreement, CIENA shall not:

(i) declare, set aside, or pay any dividends or make any other distributions (whether in cash, stock, equity securities or property) in respect to CIENA's capital stock, except where (A) an adjustment is made to the exchange ratio in accordance with **Section 1.6** or (B) the holders of Company Capital Stock will otherwise receive an equivalent, proportional dividend or distribution (based on the respective Exchange Ratios, as adjusted pursuant to **Section 1.6**) in connection with the Merger as if they had been holders of CIENA Common Stock on the record date for such dividend or distribution; or

(ii) agree in writing or otherwise take any of the actions described in **Section 4.2(a)(i)** above.

(b) Unless otherwise provided for herein or otherwise necessary in order to comply with Law or the Company's obligations hereunder or approved by CIENA in writing, including, without limitation, by electronic mail, (which approval shall not be unreasonably withheld or delayed), from the date hereof until the Closing, the Company shall operate in the Ordinary Course of Business and it and its Subsidiary shall not:

(i) amend or otherwise change the Company Certificate, other than the adoption of the New Company Certificate in connection with the Initial Merger, or the bylaws of the Company;

(ii) other than pursuant to the adoption of the New Company Certificate in connection with the Initial Merger, issue or sell or authorize for issuance or sale (other than any issuance of Company Capital Stock upon the exercise of any outstanding option or warrant to purchase Company Capital Stock which option or warrant was issued prior to the date hereof in accordance with the terms of the relevant stock option or warrant agreement and the terms of which are disclosed on **Schedule 2.3** or which are subsequently issued in accordance with the succeeding limitations of this **Section 4.2(b)**), or grant any options or restricted stock or make other agreements with respect to, any shares of its capital stock or any other of its securities or modify the terms of existing stock options to purchase Company Stock or restricted stock grants which have been issued under the Company Stock Plan, except that (i) stock options to purchase Company Common Stock or restricted stock grants may be granted under the Company Stock Plan in accordance with past practices (including promotion and new hire grants), provided the exercise price per share of each such option is not less than the fair market value per share of Company Common Stock on the grant date and the total number of shares of Company Common Stock issuable thereunder shall not exceed the amounts set forth on

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Schedule 4.2(b)(ii), and (ii) the Company may carry out those provisions of any agreement with the Exchange Agent which provisions are in furtherance of this Agreement;

(iii) declare, set aside, make or pay any dividend or other distribution, payable in cash, stock, property or otherwise with respect to any of its capital stock;

(iv) reclassify, combine, split, subdivide or redeem, purchase or otherwise acquire, directly or indirectly, any of its capital stock except for the effects of the changes in the New Company Certificate and repurchases of shares in connection with the termination of any employee or consultant pursuant to stock option, restricted stock purchase agreements or stock award agreements, each pursuant to the Company Stock Plan;

(v) other than pursuant to its existing Loan and Security Agreement with Comerica Bank, (which the Company shall take all requisite steps to terminate immediately prior to the Effective Time) incur any indebtedness for borrowed money or issue any debt securities or assume, guarantee or endorse, or otherwise as an accommodation become responsible for, the obligations of any Person, or make any loans or advances;

(vi) acquire (including, without limitation, by merger, consolidation, or acquisition of stock or Assets) any corporation, partnership, other business organization or any division thereof or any material amount of Assets other than (A) purchases of Assets consistent with and limited to amounts set forth in the Spending Plan attached hereto as set forth on **Schedule 4.2(b)(vi)** (the "Spending Plan") and (B) the acquisition of Merger Sub in the Initial Merger;

(vii) enter into any contract or agreement other than in the Ordinary Course of Business, consistent with past practice and involving amounts not in excess of amounts set forth in the Spending Plan and other than in connection with the Initial Merger;

(viii) authorize any capital commitment or capital lease which is in excess of \$500,000 or capital expenditures, except as set forth on in the Spending Plan;

(ix) mortgage, pledge or subject to Encumbrance other than Permitted Encumbrances, any of its Assets or properties or agree to do so other than in the Ordinary Course of Business;

(x) assume, guarantee or otherwise become responsible for the obligations of any other Person, other than its Subsidiary, or agree to so do;

(xi) enter into or agree to enter into any employment agreement (other than offer letters for non-executive new hires entered into in the Ordinary Course of Business);

(xii) increase the compensation payable or to become payable to its officers or employees, or grant any severance or termination pay to, or enter into any severance agreement with any director, officer or other employee of the Company, or establish, adopt, enter into or amend any collective bargaining, bonus, profit sharing, thrift, compensation, stock option, restricted stock, pension, retirement, deferred compensation, employment, termination, severance or other plan, agreement, trust, fund, policy or arrangement for the benefit of any such director, officer or employee, except (i) as set forth in the Spending Plan and (ii) the Company may make any amendments to existing employee benefit plans to the extent necessary to maintain their compliance with applicable Laws;

(xiii) take any action to change in any respect its accounting policies or procedures (including, without limitation, procedures with respect to the payment of accounts payable and collection of accounts receivables);

(xiv) make any Tax election or settle or compromise any federal, state, local or foreign income material Tax liability in excess of \$50,000;

(xv) settle or compromise any pending or threatened suit, action or claim or initiate any litigation against any third party;

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(xvi) pay, discharge or satisfy any claim, liability or obligation (absolute, accrued, asserted or unasserted, contingent or otherwise), other than the payment, discharge or satisfaction, in the Ordinary Course of Business and consistent with past practice, of liabilities reflected or reserved against in the latest balance sheet included in the Financial Statements provided to CIENA or subsequently incurred in the Ordinary Course of Business and consistent with past practice in amounts not in excess of \$100,000;

(xvii) sell, assign, transfer, license or sublicense, pledge or otherwise encumber any of the Intellectual Property Rights (other than in the Ordinary Course of Business and consistent with past practice); or

(xviii) announce an intention, commit or agree to do any of the foregoing.

SECTION 4.3. Access; Documents; Supplemental Information.

(a) From and after the date hereof until the Closing and subject to the Confidentiality Agreement, the Company shall afford, and, with respect to clause (ii) below, shall use its reasonable best efforts to cause the independent certified public accountants for the Company to afford, (i) to the officers, independent certified public accountants, counsel and other representatives of CIENA, upon reasonable notice, free and full access at all reasonable times to the properties, books and records including tax returns filed and those in preparation of the Company and the right to consult with the officers, employees, accountants, counsel and other representatives of the Company in order that CIENA may have full opportunity to make such investigations as it shall deem necessary of the operations, properties, business, financial condition and prospects of the Company, (ii) to the independent certified public accountants of CIENA, free and full access at all reasonable times to the work papers and other records of the accountants relating to the Company, and (iii) to CIENA and its representatives, such additional financial and operating data and other information as to the properties, operations, business, financial condition and prospects of the Company as CIENA shall from time to time require.

(b) From the date of this Agreement through and including the Closing, the Company will furnish to CIENA copies of any notices, documents, requests, court papers, or other materials received from any governmental agency or any other third party with respect to the transactions contemplated by this Agreement.

SECTION 4.4. No Solicitation.

The Company shall not, nor shall it authorize or permit any of its Affiliates or any officer, director, employee, investment banker, attorney or other adviser or representative of the Company or any of its Affiliates to (a) solicit, initiate or encourage any Acquisition Proposal (as hereinafter defined), (b) enter into any agreement with respect to any Acquisition Proposal or (c) participate in any discussions or negotiations regarding, or furnish to any Person any information for the purpose of facilitating the making of, or take any other action to facilitate any inquiries or the making of, any proposal that constitutes, or may reasonably be expected to lead to, any Acquisition Proposal other than the transactions contemplated hereby; provided, however, that nothing contained in this Agreement shall prevent the Company or its Board of Directors or any officer, director, employee, investment banker, attorney or other adviser or representative of the Company, acting at the direction of and on behalf of the Company, at any time prior to the time the Merger has been approved by the Company's stockholders from: (aa) providing information in response to a request therefor by a Person who has delivered to the Company an unsolicited bona fide written Acquisition Proposal if the Company receives from the Person so requesting such information an executed confidentiality agreement the terms of which are (without regard to the terms of the Acquisition Proposal) (i) no less favorable to the Company and (ii) no less restrictive on the Person requesting such information than those contained in the Confidentiality Agreement; or (bb) engaging in negotiations or discussions with a Person who has delivered to Company an unsolicited bona fide written Acquisition Proposal; if, and only to the extent that, in each such case referred to in clause (aa) or (bb) above, (x) the Board of Directors of the Company determines in good faith (after consultation with

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its financial advisor and outside legal counsel) that the Acquisition Proposal, if accepted, is reasonably likely to be consummated, (y) the Board of Directors of the Company determines in good faith (after consultation with its financial adviser) that the Acquisition Proposal would, if consummated, result in a transaction that is more favorable to the Company's stockholders than the Merger (any Acquisition Proposal as to which such determinations are made being referred to in this Agreement as a "Superior Proposal") and (z) the Board of Directors determines in good faith (after consultation with outside legal counsel) that the failure to take such action would be inconsistent with its fiduciary duties to the Company's stockholders under applicable law. Without limiting the foregoing, it is understood that any violation of the restrictions set forth in the immediately preceding sentence by any officer, director, employee, investment banker, attorney, employee, or other adviser or representative of the Company or any of its Affiliates, whether or not such Person is purporting to act on behalf of the Company or any of its Affiliates or otherwise, shall be deemed to be a breach of this **Section 4.4** by the Company. Nothing in this **Section 4.4** shall permit the Company to enter into any agreement, orally or in writing, with respect to an Acquisition Proposal during the term of this Agreement (other than a confidentiality agreement as described above). The Company promptly shall advise CIENA of any Acquisition Proposal (including the terms thereof and the identity of the person making the Acquisition Proposal) and inquiries with respect to any Acquisition Proposal and shall keep CIENA informed on a current basis of the status of any discussions regarding an Acquisition Proposal. Nothing herein shall prevent the Board of Directors from complying with Rule 14e-2 under the Exchange Act. "Acquisition Proposal" means any proposal for a merger or other business combination involving the Company or any proposal or offer to acquire in any manner, directly or indirectly, 10% or more of the equity securities or Assets of the Company (except for sales of products in the Ordinary Course of Business). Except as otherwise provided in this Agreement, the Company will, and will cause its Affiliates to, immediately cease any activities, discussions or negotiations existing as of the date of this Agreement with any Persons (other than CIENA and its representatives) conducted heretofore with respect to any Acquisition Proposal, and will not pursue, directly or indirectly, any Acquisition Proposal received on or prior to the date of this Agreement from any Person (other than CIENA and its representatives). The Company shall not release any third party from, or waive any provisions of, any confidentiality or standstill agreement relating to an Acquisition Proposal to which such party is a party.

SECTION 4.5. Information Supplied.

Each of the Company and CIENA agree that none of the information supplied or to be supplied by it for inclusion or incorporation by reference in (a) the Registration Statement on Form S-4 to be filed with the SEC by CIENA in connection with the issuance of shares of CIENA Common Stock in the Merger (including the proxy statement and prospectus (the "Proxy Statement/ Prospectus") constituting a part thereof) (the "S-4 Registration Statement") will, at the time the S-4 Registration Statement becomes effective under the Securities Act of 1933, as amended (the "Securities Act") contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, not misleading, and (b) the Proxy Statement/ Prospectus and any amendment or supplement thereto will, at the date of mailing to the Company's stockholders and at the times of the meeting of the Company's stockholders to be held in connection with the Merger or the written consent in lieu thereof, contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading.

SECTION 4.6. Stockholders' Meeting.

Whether or not the Board of Directors of the Company shall take any action permitted by the third sentence of this **Section 4.6**, the Company shall cause a meeting of its stockholders (the "Stockholders' Meeting") to be duly called and held as soon as practicable after the date of this Agreement for the purpose of voting on the adoption of this Agreement or, subject to approval of both CIENA and the Company, the Company shall solicit written consents of stockholders in lieu of a Stockholders' Meeting. The Board of Directors of the Company shall (i) include in the Proxy Statement/ Prospectus prepared

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therefor its recommendation in favor of adoption of the Merger Agreement (the “Board Recommendation”) and (ii) use commercially reasonable efforts to obtain the necessary vote in favor of the adoption of this Agreement by its stockholders. The Board of Directors of the Company shall not withdraw, amend, modify or qualify in a manner adverse to CIENA the Board Recommendation (or announce its intention to do so), except that, prior to the receipt of the Company Requisite Vote, the Board of Directors of the Company shall be permitted to withhold, withdraw, amend, modify or materially qualify in a manner adverse to CIENA the Board Recommendation, following two Business Days’ prior notice to CIENA, but only if (A) the Company has complied in all respects with this Agreement, including **Section 4.4**, and (B) after consulting with outside legal counsel, the Board of Directors determines in good faith that to include the Board Recommendation or not withhold, withdraw, amend, modify or qualify the Board Recommendation would be inconsistent with its fiduciary duties to the stockholders of the Company under applicable law.

SECTION 4.7. Filings; Other Actions; Notification.

(a) CIENA shall prepare and file with the SEC the S-4 Registration Statement as promptly as practicable. CIENA shall use its reasonable best efforts to have the S-4 Registration Statement declared effective under the Securities Act as promptly as practicable after such filing, and promptly thereafter mail the Prospectus to the stockholders of the Company. CIENA shall also use its reasonable best efforts to obtain prior to the effective date of the S-4 Registration Statement all necessary state securities law or “blue sky” permits and approvals required in connection with the Merger and to consummate the other transactions contemplated by this Agreement.

(b) The Company and CIENA each shall from the date hereof until the Effective Time cooperate with the other and use its reasonable best efforts to cause to be done all things necessary, proper or advisable on its part under this Agreement and applicable Laws to consummate and make effective the Merger and the other transactions contemplated by this Agreement as soon as practicable, including preparing and filing as promptly as practicable all documentation to effect all necessary notices, reports and other filings and to obtain as promptly as practicable all consents, registrations, approvals, permits and authorizations necessary or advisable to be obtained from any third party and/or any Governmental Entity, including filings under the Hart-Scott-Rodino Act, in order to consummate the Merger or any of the other transactions contemplated by this Agreement. CIENA will advise the Company promptly in respect of any understandings or arguments which it proposes to make or has made with applicable federal, state or foreign governmental bodies having jurisdiction over or rights of review with respect to antitrust law, in connection with the Merger, and CIENA and the Company shall use their reasonable best efforts to seek to resolve any objections to the Merger as may be asserted by a Governmental Entity under applicable laws. Notwithstanding, the foregoing, nothing herein shall require CIENA, in connection with the receipt of any regulatory approval, to agree to sell or divest any material assets or business or agree to restrict in any material way any business conducted by or proposed to be conducted by CIENA or to litigate or formally contest any proceeding relating to any regulatory approval process in connection with the Merger.

(c) The Company and CIENA each shall, upon request by the other, furnish the other with all information concerning itself, its Subsidiaries, directors, executive officers and stockholders and such other matters as may be reasonably necessary or advisable in connection with the Prospectus, the S-4 Registration Statement or any other statement, filing, notice or application made by or on behalf of CIENA, the Company or any of their respective Subsidiaries to any third party and/or any Governmental Entity in connection with the Merger and the transactions contemplated by this Agreement.

(d) The Company shall cause Testa, Hurwitz & Thibault, LLP, counsel to the Company, and CIENA shall cause Hogan & Hartson L.L.P., counsel to CIENA, to deliver a tax opinion for inclusion in the S-4 Registration Statement in the form required by the SEC. In rendering such opinions, Testa, Hurwitz & Thibault, LLP, and Hogan & Hartson L.L.P. may require delivery of and rely upon representation letters delivered by CIENA and the Company in customary form.

(e) The Company and CIENA each shall keep the other apprised of the status of matters relating to completion of the transactions contemplated hereby.

SECTION 4.8. NASDAQ Listing.

To the extent required by the rules of the National Association of Securities Dealers, Inc., as soon as practicable after the date hereof and in any event prior to the Effective Time, CIENA shall list on NASDAQ the shares of CIENA Common Stock to be issued in connection with the Merger and upon exercise of Assumed Options and Company Preferred Warrants (each as defined below).

SECTION 4.9. Company Stock Options; Company Warrants.

(a) Concurrent with the Effective Time, each stock option to purchase Company Common Stock (the “Company Stock Options”) which is outstanding immediately prior to the Effective Time pursuant to the Company Stock Plan in effect on the date hereof shall together with the Company Stock Plan, be assumed by CIENA and shall thereby be converted into an option (an “Assumed Option”) to purchase the number of shares of CIENA Common Stock (decreased to the nearest full share) determined by multiplying (i) the number of shares of Company Common Stock subject to such Company Stock Option immediately prior to the Effective Time by (ii) the Exchange Ratio for the Company Common Stock, at an exercise price per share of CIENA Common Stock (increased to the nearest whole cent) equal to the exercise price per share of Company Common Stock in effect under such Company Stock Options immediately prior to the Effective Time divided by the Exchange Ratio for the Company Common Stock. Except for the foregoing adjustments and the Rights, all the terms and conditions in effect for each Assumed Option immediately prior to the Effective Time, including the vesting thereof under the Company Stock Plan, shall continue in effect following the assumption of such option in accordance with this Agreement. The Company agrees that it will not grant any stock appreciation rights or limited stock appreciation rights and will not permit cash payments to holders of Company Stock Options in lieu of the substitution therefor of Assumed Options.

(b) CIENA shall take all corporate action necessary to reserve for issuance a sufficient number of shares of CIENA Common Stock for delivery upon the exercise of the Assumed Options and the Company Preferred Warrants (as defined below). As soon as practicable after the Effective Time, CIENA shall deliver to the holders of Company Stock Options appropriate notices setting forth such holders’ rights pursuant to CIENA’s stock option plans and the agreements evidencing the grants of such Assumed Options and that such Assumed Options shall continue in effect on the same terms and conditions as the Company Stock Options (subject to the adjustment set forth in this **Section 4.9**).

(c) As soon as practicable after the Effective Time, but in any event within two Business Days after the Effective Time, CIENA shall prepare and file with the SEC a registration statement on Form S-8 (or another appropriate form) registering a number of shares subject to the Assumed Options. Such registration statement shall be kept effective (and the current status of the prospectus required thereby shall be maintained in accordance with the relevant requirements of the Securities Act and the Exchange Act) at least for so long as any Assumed Options remain outstanding.

(d) Concurrent with the Effective Time, each warrant to purchase Company Preferred Stock that is then outstanding and exercisable described in **Schedule 2.3** (each, a “Company Preferred Warrant”), without any action on the part of the holder, shall be deemed assumed by CIENA and shall constitute a warrant to acquire, on the same terms and conditions as were applicable under such Company Preferred Warrant, a number of shares of CIENA Common Stock equivalent to (A) the number of shares of Company Preferred Stock that could have been purchased immediately prior to the Effective Time under such Company Preferred Warrant multiplied by (B) the Exchange Ratio for the series of Company Preferred Stock into which such Company Preferred Warrant is exercisable (rounded down to the nearest whole number), at a price per share of CIENA Common Stock (rounded up to the nearest whole cent) equal to the exercise price per share pursuant to such Company Preferred Warrant immediately prior to the Effective Time divided by the applicable Preferred Stock Exchange Ratio for the series of Company

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Preferred Stock into which such Company Preferred Warrant is exercisable. At or prior to the Effective Time, the Company shall make all necessary arrangements with respect to the Company Preferred Warrants to permit the assumption of the unexercised Company Preferred Warrants by CIENA pursuant to this **Section 4.9(d)**.

(e) Each share of Company Common Stock that is subject to vesting restrictions under the Company Stock Plan shall, upon conversion into CIENA Common Stock in the Merger, continue to be subject to vesting restrictions as provided in the Company Stock Plan.

SECTION 4.10. Notification of Certain Matters.

The Company shall give prompt notice to CIENA, and CIENA shall give prompt notice to the Company, of (a) the occurrence, or non-occurrence, of any event which would be likely to cause (i) any representation or warranty contained in this Agreement to be untrue or inaccurate in any material respect or (ii) any covenant, condition or agreement contained in this Agreement not to be complied with or satisfied; and (iii) any failure of the Company or CIENA, as the case may be, to comply with or satisfy any covenant, condition or agreement to be complied with or satisfied by it hereunder; provided that the delivery of any notice pursuant to this **Section 4.10** shall not limit or otherwise affect the remedies available to the party receiving such notice.

SECTION 4.11. Reorganization.

(a) Each of CIENA and the Company shall use its best efforts to cause the business combination to be effected by the Merger to be qualified as a “reorganization” described in Section 368(a) of the Code. CIENA shall not take or fail to take, or cause any Person to take or fail to take, any action which action or failure would reasonably be expected to cause the Merger to fail to qualify as a “reorganization” within the meaning of Section 368(a) of the Code.

(b) The Merger shall be reported as a “reorganization” within the meaning of Section 368(a) of the Code in all federal, and to the extent permitted, state and local Tax Returns filed after the Effective Time.

SECTION 4.12. Indemnification.

(a) From and after the Effective Time for a period of six years, CIENA shall fulfill the obligations of the Company and the Company’s Subsidiary to indemnify each person who is or was a director or officer of the Company and the Company’s Subsidiary against losses such person may incur based upon matters existing or occurring prior to the Effective Time pursuant to any applicable indemnification agreements and any indemnification provision of the Company Certificate or its bylaws (and the certificate of incorporation or bylaws of the Company’s Subsidiary) as each is in effect on the date hereof. For a period of six years after the Effective Time, CIENA will cause the Surviving Company to use commercially reasonable efforts to maintain in effect, if available, directors’ and officers’ liability insurance covering those persons who are currently covered by the Company’s directors’ and officers’ liability insurance policy on terms comparable to those applicable to the current directors and officers of the Company, provided that CIENA shall not be required to pay an annual premium therefor in excess of 200% of the last annual premium paid for the Company’s directors’ and officers’ liability insurance prior to the date of this Agreement but shall, in such event, maintain such coverage as can be purchased for such amount.

(b) In the event a current or former director or officer of the Company or its Subsidiary is entitled to indemnification under this **Section 4.12**, such director or officer shall be entitled to reimbursement from CIENA (from and after the Closing Date) for reasonable attorney fees and expenses incurred by such director or officer in pursuing such indemnification, including payment of such fees and expenses by CIENA, in advance of the final disposition of such action upon receipt of an undertaking by such current or former director or officer to repay such payment if it shall be adjudicated that such current or former director or officer was not entitled to such payment.

(c) If CIENA or any of its successors or assigns (i) consolidates with or merges into any other Person and shall not be the continuing or surviving corporation or entity of such consolidation or merger, or (ii) transfers all of substantially all of its properties and assets to any Person, then, and in each such case, proper provision shall be made so that the successors and assigns of CIENA assume, as a matter of law or otherwise, the obligations set forth in this **Section 4.12**.

SECTION 4.13. Employee Benefits Matters.

(a) The Company will adopt, or will cause to be adopted, all necessary corporate resolutions to terminate the Company 401(k) Retirement Plan, and any other 401(k) Plan maintained by the Company or its Subsidiary, effective as of no later than one day prior to Closing. Immediately prior to such termination, the Company will make all necessary payments to fund the contributions: (i) necessary or required to maintain the tax-qualified status of the 401(k) Plan; (ii) for elective deferrals made pursuant to the 401(k) Plan for the period prior to termination; and (iii) for employer matching contributions for the period prior to termination. A 401(k) Plan means a qualified plan under Code Section 401(a) sponsored and maintained by the Company or its Subsidiary, which includes a qualified cash or deferred arrangement, as defined in Section 401(k) of the Code. The Company shall provide CIENA with a copy of resolutions duly adopted by the Company's (or the Company Subsidiary's as applicable) board of directors terminating the 401(k) Plan. CIENA will take such steps as are reasonably necessary to ensure that CIENA's 401(k) Plan will permit Company employees to make individual rollover contributions to CIENA's 401(k) Plan of any "eligible rollover distributions," as such term is defined in CIENA's 401(k) Plan, distributed by the Company 401(k) Plan. Effective as of the Closing Date, Continuing Employees (as defined below) will be eligible to participate in the CIENA 401(k) Plan.

(b) Following the Closing Date, CIENA shall arrange for employees of the Company who continue employment with CIENA ("Continuing Employees") to either continue on Company Benefit Plans or participate in the benefit plans of CIENA ("CIENA Benefit Plans") on terms no less favorable than those offered to similarly situated employees of CIENA, and CIENA shall use commercially reasonable efforts to ensure that Continuing Employees who are actually employed and currently working for the Company at the Effective Time do not have a lapse of coverage in the transition from Company Benefit Plans to CIENA Benefit Plans. For purposes of any length of service requirements, waiting periods, vesting periods or differential benefits based on length of service under any CIENA Benefit Plan (including the CIENA 401(k) Plan) for which a Continuing Employee may be eligible after the Closing Date, CIENA shall use its commercially reasonable efforts to ensure that service by such Continuing Employee with the Company shall be deemed to have been service with CIENA.

SECTION 4.14. Section 16.

Assuming that the Company delivers to CIENA the Section 16 Information (as defined below) in a timely fashion, the Board of Directors of CIENA, or a committee of two or more Non-Employee Directors thereof (as such item is defined for purposes of Rule 16b-3 under the Exchange Act), shall adopt resolutions prior to the consummation of the Merger, providing that the receipt by the Company Insiders (as defined below) of CIENA Common Stock in exchange for capital stock of the Company pursuant to the transactions contemplated hereby and to the extent such securities are listed in the Section 16 Information, are intended to be exempt from liability pursuant to Section 16(b) under the Exchange Act. Such resolutions shall comply with the approval conditions of Rule 16b-3 under the Exchange Act for purposes of such Section 16(b) exemption, including, but not limited to, specifying the name of the Company Insiders, the numbers of securities to be acquired or disposed of for each such person, the material terms of any derivative securities, and that the approval is intended make the receipt of such securities exempt pursuant to Rule 16b-3(d). "Section 16 Information" shall mean information accurate in all respects regarding the Company Insiders, the number of shares of capital stock of the Company held by each such Company Insider and expected to be exchanged for CIENA Common Stock in the Merger. "Company Insiders" shall mean those officers and directors of the Company who CIENA

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notifies the Company prior to the Merger will be subject to the reporting requirements of Section 16(b) of the Exchange Act with respect to CIENA and who are listed in the Section 16 Information.

ARTICLE V

CONDITIONS PRECEDENT

SECTION 5.1. Conditions Precedent to Each Party's Obligation to Effect the Merger.

The respective obligations of each party hereto to effect the Merger shall be subject to the fulfillment or satisfaction, prior to or on the Closing Date of the following conditions:

(a) Stockholder Approval. The Merger shall have been duly approved by holders of Company Capital Stock constituting the Company Requisite Vote.

(b) Regulatory Consents. The waiting period applicable to the consummation of the Merger under the Hart-Scott-Rodino Act shall have expired or been terminated. Other than the filing provided for in **Section 1.1(b)**, all other notices, reports and other filings required to be made prior to the Effective Time by the Company or CIENA or any of their respective Subsidiaries with, and all consents, registrations, approvals, permits and authorizations required to be obtained prior to the Effective Time by the Company or CIENA or any of their respective Subsidiaries from, any governmental entity (collectively, "Governmental Consents"), in connection with the execution and delivery of this Agreement, and the consummation of the Merger and the other transactions contemplated by this Agreement shall have been made or obtained, except where the failure to make any such filings or obtain any such Governmental Consents would not have a material adverse effect on CIENA, the Company and their respective Subsidiaries in all jurisdictions requiring such filings or Governmental Consents in the event such filings are not made or such Consents are not obtained.

(c) Litigation. No court or governmental entity of competent jurisdiction shall have enacted, issued, promulgated, enforced or entered any law, statute, ordinance, rule, regulation, judgment, decree, injunction or other order (whether temporary, preliminary or permanent) that is in effect and restrains, enjoins or otherwise prohibits consummation of the Merger (collectively, an "Order") and no governmental entity shall have instituted any proceeding which continues to be pending seeking any such Order.

(d) S-4. The S-4 Registration Statement shall have become effective under the Securities Act. No stop order suspending the effectiveness of the S-4 Registration Statement shall have been issued, and no proceeding for that purpose shall have been initiated or be threatened, by the SEC.

(e) Initial Merger. The Initial Merger shall have become effective and the New Company Certificate shall have been filed with the Secretary of State of the State of Delaware.

SECTION 5.2. Conditions Precedent to Obligations of CIENA.

The obligations of CIENA to effect the Merger shall be subject to the fulfillment or satisfaction, prior to or on the Closing Date, of each of the following conditions precedent:

(a) Performance of Obligations. The Company shall have performed in all material respects and complied in all material respects with all agreements and conditions contained in this Agreement that are required to be performed or complied with by it prior to or at the Closing. CIENA shall have received a certificate dated the Closing Date and signed by the Chairman, President or a Vice-President of the Company, certifying that the conditions specified in this **Section 5.2(a)** have been satisfied.

(b) Consents. The Company shall have received consents or waivers, in form and substance reasonably satisfactory to CIENA, from the other parties to the contracts, leases or agreements to which the Company is a party and which are set forth on **Schedule 5.2(b)**.

(c) Escrow Agreement. The Stockholder Representative shall have executed and delivered the Escrow Agreement in the form attached hereto as **Exhibit B**, on behalf of all stockholders other than the holders of Dissenting Shares.

SECTION 5.3. Conditions Precedent to the Company's Obligations.

The obligations of the Company to effect the Merger shall be subject to the fulfillment or satisfaction, prior to or on the Closing Date, of each of the following conditions precedent:

(a) Performance of Obligations. CIENA shall have performed in all material respects and complied in all material respects with all agreements and conditions contained in this Agreement that are required to be performed or complied with by it prior to or at the Closing. The Company shall have received a certificate dated the Closing Date and signed by the Chairman, President or a Vice-President of CIENA, certifying that the conditions specified in this **Section 5.3(a)** have been satisfied.

(b) NASDAQ Listing. To the extent required by the rules of the National Association of Securities Dealers, Inc., CIENA shall have timely filed a Notification Form: Listing of Additional Shares with respect to the CIENA Common Stock to be issued in the merger and upon exercise of Assumed Options and Company Preferred Warrants.

ARTICLE VI

**SURVIVAL OF REPRESENTATIONS AND WARRANTIES;
INDEMNIFICATION**

SECTION 6.1. Survival of Representations and Warranties.

All of the Company's and CIENA's representations and warranties in this Agreement or in any instrument delivered pursuant to this Agreement shall survive the Merger and continue until the date which is one year following the Closing Date (the "Indemnification Expiration Date").

SECTION 6.2. Indemnification; Escrow Agreements.

(a) Indemnification. CIENA and its respective officers, directors and Affiliates (the "Indemnified Parties") shall be indemnified and held harmless by the Stockholders (other than those dissenting stockholders exercising rights of appraisal under Section 262 of the DGCL who do not receive CIENA Common Stock in the Merger) against all claims, losses, liabilities, damages, deficiencies, costs and expenses, including reasonable attorneys' fees and expenses of investigation (hereinafter individually a "Loss" and collectively "Losses") incurred prior to the Indemnification Expiration Date by the Indemnified Parties directly or indirectly as a result of: (i) any inaccuracy or breach of a representation or warranty of the Company contained in this Agreement or contained in a certificate of any officer of the Company delivered pursuant to this Agreement (it being understood that, notwithstanding the Closing, CIENA shall be entitled to indemnification for breach of inaccuracies of representations and warranties when made and as if made again on the Closing Date), (ii) the actions taken by the Company and its Board of Directors and stockholders in authorizing, approving and carrying out the Initial Merger and the adoption of the New Company Certificate, other than CIENA's loss of the deduction for compensation associated with the 280G payments referred to in Section 2.17(h), loss of net operating losses for state tax purposes, withholding or employment taxes and the costs or expenses of withholding payroll and employment taxes or (iii) any failure by the Company to perform or comply with any covenant or agreement contained in this Agreement. Nothing herein shall limit the liability of the Company for any breach of any representation, warranty, covenant or agreement if the Merger is not consummated.

(b) Indemnification Threshold and Limitations.

(i) Except as set forth below, there shall be no liability for any Stockholder under **Section 6.2** unless the aggregate amount of Losses incurred by the Indemnified Parties exceeds \$1,000,000 (the

“Indemnification Threshold”) in the aggregate, in which event the entire aggregate amount of the Losses shall be indemnifiable pursuant to **Section 6.2(a)**.

(ii) Subject to the last sentence of **Section 6.2(a)** and **Section 6.5**, the Indemnified Parties’ sole and exclusive remedy for any Losses incurred directly or indirectly as a result of any of the items referred to in clauses (i), (ii) and (iii) of **Section 6.2(a)** shall be indemnification pursuant to this **Article VI**. Subject to the last sentence of **Section 6.2(a)** and **Section 6.5**, the liability of the Stockholders under and the right of the Indemnified Parties to seek such indemnification shall be limited solely and exclusively to the Escrow Amount.

(c) Satisfaction of Indemnification Obligations; Escrow Fund; Reimbursement Fund.

Each of the Stockholders receiving CIENA Common Stock in the Merger will be deemed to have received and deposited with the Escrow Agent (as defined below) the Escrow Amount and the Reimbursement Amount (plus, in each case, any additional shares as may be issued upon any stock split, stock dividend or recapitalization effected by CIENA after the Effective Time with respect to the Escrow Amount or the Reimbursement Amount, as applicable). The Escrow Amount will be deposited with and will be held by an institution mutually acceptable to CIENA and the Stockholders’ Representative (as defined in **Section 6.3**) as Escrow Agent (the “Escrow Agent”), such deposit to constitute an escrow fund (the “Escrow Fund”) to be governed by the terms set forth in the Escrow Agreement. Payment of any Loss from the Escrow Amount shall be taken ratably from the Escrow Shares (as defined in the Escrow Agreement). Each payment for Losses satisfied by shares in the Escrow Fund which are subject to repurchase or vesting provisions shall be, in respect of each former Stockholder beneficially owning such shares, be deemed to be taken ratably from such Stockholder’s share of the Escrow Fund in proportion to the number of shares vested and unvested (including with respect to vesting dates). The Reimbursement Amount will be deposited with and will be held by the Escrow Agent, such deposit to constitute a reimbursement fund (the “Reimbursement Fund”) to be governed by the terms set forth in the Escrow Agreement. Payment of any amount out of the Reimbursement Amount shall be taken ratably from the Reimbursement Shares (as defined in the Escrow Agreement).

SECTION 6.3. Stockholders’ Representative.

(a) Appointment. In the event the Stockholders approve the Merger, effective upon such vote and without any further action by the Stockholders, the Company and the Stockholders hereby appoint Michael Feinstein as agent and attorney-in-fact (the “Stockholders’ Representative”) for each Stockholder receiving CIENA Common Stock in the Merger, for and on behalf of the Stockholders. The Stockholders’ Representative shall have full power and authority to represent all of the Stockholders and their successors with respect to all matters arising under this Agreement and the Escrow Agreement and all actions taken by the Stockholders’ Representative hereunder and thereunder shall be binding upon all such Stockholders and their successors as if expressly confirmed and ratified in writing by each of them and no Stockholder shall have the right to object, dissent, protest or otherwise contest the same. The Stockholders’ Representative shall take any and all actions which he believes are necessary or appropriate under this Agreement and the Escrow Agreement for and on behalf of the Stockholders, as fully as if the Stockholders were acting on their own behalf, including, without limitation, executing the Escrow Agreement as Stockholders’ Representative, giving and receiving any notice or instruction permitted or required under this Agreement or the Escrow Agreement by the Stockholders’ Representative or any Stockholder, interpreting all of the terms and provisions of this Agreement and the Escrow Agreement, authorizing payments to be made with respect hereto or thereto, obtaining reimbursement as provided for herein for all out-of-pocket fees and expenses and other obligations of or incurred by the Stockholders’ Representative in connection with this Agreement and the Escrow Agreement, defending all indemnity claims against the Stockholders pursuant to **Section 6.2** of this Agreement (an “Indemnity Claim”), consenting to, compromising or settling all Indemnity Claims, conducting negotiations with CIENA and its agents regarding such claims, dealing with CIENA and the Escrow Agent under this Agreement and the Escrow Agreement with respect to all matters arising under this Agreement and the Escrow Agreement, taking any and all other actions specified in or contemplated by this Agreement and the Escrow

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Agreement, and engaging counsel, accountants or other Stockholders' Representatives in connection with the foregoing matters. Without limiting the generality of the foregoing, the Stockholders' Representative shall have full power and authority to interpret all the terms and provisions of this Agreement and the Escrow Agreement and to consent to any amendment hereof or thereof on behalf of all such Stockholders and such successors. Notwithstanding the foregoing, each Stockholder shall have the right to exercise any voting rights appertaining to the Escrow Shares and the Reimbursement Shares.

(b) Authorization. The Company hereby authorizes the Stockholders' Representative, on its and the Stockholders' behalf (and by their approval of this Agreement and the Merger, the Stockholders hereby authorize the Stockholders' Representative), to:

(i) Receive all notices or documents given or to be given to any of the Stockholders by CIENA pursuant hereto or to the Escrow Agreement or in connection herewith or therewith and to receive and accept service of legal process in connection with any suit or proceeding arising under this Agreement or the Escrow Agreement;

(ii) Deliver to CIENA at the Closing all certificates and documents to be delivered to CIENA by any of the Stockholders pursuant to this Agreement, together with any other certificates and documents executed by any of the Stockholders and deposited with the Stockholders' Representative for such purpose;

(iii) Engage counsel, and such accountants and other advisors for any of the Stockholders and incur such other expenses on behalf of any of the Stockholders in connection with this Agreement or the Escrow Agreement and the transactions contemplated hereby or thereby as the Stockholders' Representative may in its sole discretion deem appropriate; and

(iv) Take such action on behalf of any of the Stockholders as the Stockholders' Representative may in its sole discretion deem appropriate in respect of:

(A) waiving any inaccuracies in the representations or warranties of CIENA contained in this Agreement or in any document delivered by CIENA pursuant hereto;

(B) waiving the fulfillment of any of the conditions precedent to the Company's obligations hereunder or pursuant to the Escrow Agreement;

(C) taking such other action as the Stockholders' Representative or any of the Stockholders is authorized to take under this Agreement or the Escrow Agreement;

(D) receiving all documents or certificates and making all determinations, on behalf of any of the Stockholders, required under this Agreement or the Escrow Agreement;

(E) all such other matters as the Stockholders' Representative may in its sole discretion deem necessary or appropriate to consummate this Agreement or the Escrow Agreement and the transactions contemplated hereby and thereby; and

(F) all such action as may be necessary after the Closing Date to carry out any of the transactions contemplated by this Agreement and the Escrow Agreement, including, without limitation, the defense and/or settlement of any claims for which indemnification is sought pursuant to **Article VI** and any waiver of any obligation of CIENA or the Surviving Company.

All actions, decisions and instructions of the Stockholders' Representative shall be conclusive and binding upon all of the Stockholders and no Stockholder nor any other Person shall have any claim or cause of action against the Stockholders' Representative, and the Stockholders' Representative shall have no liability to any Stockholder or any other Person, for any action taken, decision made or instruction given by the Stockholders' Representative in connection with the Escrow Agreement or this Agreement, except in the case of his own gross negligence or willful misconduct.

(c) Indemnification of Stockholders' Representative. The Stockholders' Representative shall incur no liability to the Stockholders or the Escrow Agent or any other person with respect to any action taken

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or suffered by it in reliance upon any note, direction, instruction, consent, statement or other documents reasonably believed by the Stockholders' Representative to be genuinely and duly authorized by at least a majority in interest of the Stockholders (or the successors or assigns thereto), nor for other action or inaction taken or omitted in good faith in connection herewith or with the Escrow Agreement, in any case except for liability to the Stockholders for its own gross negligence or willful misconduct. The Stockholders' Representative shall be indemnified for and shall be held harmless against any loss, liability or expense incurred by the Stockholders' Representative or any of its Affiliates and any of their respective partners, directors, officers, employees, agents, stockholders, consultants, attorneys, accountants, advisors, brokers, representatives or controlling persons, in each case relating to the Stockholders' Representative's conduct as Stockholders' Representative, other than such losses, liabilities or expenses resulting from the Stockholders' Representative's gross negligence or willful misconduct in connection with its performance under this Agreement and the Escrow Agreement. This indemnification shall survive the termination of this Agreement. The costs of such indemnification (including the costs and expenses of enforcing this right of indemnification) shall be paid from the principal portion of the Reimbursement Fund (or, to the extent the Reimbursement Fund is insufficient to satisfy such costs and expenses, from the Escrow Fund). For all purposes hereunder, a majority in interest of the Stockholders shall be determined on the basis of each Stockholder's ownership of Company Common Stock immediately prior to the Effective Time (assuming the exercise or conversion of all Company Preferred Stock, Company Stock Options and Company Preferred Warrants outstanding immediately prior to the Effective Time). The Stockholders' Representative may, in all questions arising under this Agreement, rely on the advice of counsel and for anything done, omitted or suffered in good faith by the Stockholders' Representative in accordance with such advice, the Stockholders' Representative shall not be liable to the Stockholders or the Escrow Agent or any other person. In no event shall the Stockholders' Representative be liable hereunder or in connection herewith for (i) any indirect, punitive, special or consequential damages, or (ii) any amounts other than those that are satisfied out of the Reimbursement Fund or, to the extent provided for herein, the Escrow Fund. The Escrow Agent shall from time to time sell such amount of the Escrow Shares as necessary to pay such Stockholders' Representative's costs and expenses, to the extent required by this **Section 6.2(c)**.

(d) Access to Information. The Stockholders' Representative shall have reasonable access to information of and concerning any Indemnity Claim and which is in the possession, custody or control of CIENA and the reasonable assistance of CIENA's officers and employees for purposes of performing the Stockholders' Representative's duties under this Agreement or the Escrow Agreement and exercising its rights under this Agreement and the Escrow Agreement, including for the purpose of evaluating any Indemnity Claim against the Escrow Shares by CIENA; provided that the Stockholders' Representative shall treat confidentially and not, except in connection with enforcing its rights or the rights of the Stockholders hereunder or under this Agreement and the Escrow Agreement, disclose any nonpublic information from or concerning any Indemnity Claim to anyone (except to the Stockholders' Representative's attorneys, accountants or other advisers, to Stockholders, to the arbitrators appointed to resolve disputes pursuant to this Agreement, and on a need-to-know basis to other individuals who agree to keep such information confidential).

(e) Reasonable Reliance. In the performance of his duties hereunder, the Stockholders' Representative shall be entitled to rely upon any document or instrument reasonably believed by him to be genuine, accurate as to content and signed by any Stockholder or CIENA. The Stockholders' Representative may assume that any person purporting to give any notice in accordance with the provisions hereof has been duly authorized to do so.

(f) Attorney-in-Fact.

(i) The Stockholders' Representative is hereby appointed and constituted the true and lawful attorney-in-fact of each Stockholder, with full power in his, her or its name and on his, her or its behalf to act according to the terms of this Agreement and the Escrow Agreement in the absolute discretion of the Stockholders' Representative; and in general to do all things and to perform all acts including, without limitation, executing and delivering the Escrow Agreement and any other

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agreements, certificates, receipts, instructions, notices or instruments contemplated by or deemed advisable in connection with the Escrow Agreement.

(ii) This power of attorney and all authority hereby conferred is granted and shall be irrevocable and shall not be terminated by any act of any Stockholder, by operation of law, whether by such Stockholder's death, disability protective supervision or any other event. Without limitation to the foregoing, this power of attorney is to ensure the performance of a special obligation and, accordingly, each Stockholder hereby renounces its, his or her right to renounce this power of attorney unilaterally any time before the end of the Escrow Period (as such term is defined in the Escrow Agreement).

(iii) Each Stockholder hereby waives any and all defenses which may be available to contest, negate or disaffirm the action of the Stockholders' Representative taken in good faith under the Escrow Agreement.

(iv) Notwithstanding the power of attorney granted in this **Section 6.3**, no agreement, instrument, acknowledgement or other act or document shall be ineffective by reason only of the Stockholders having signed or given such directly instead of the Stockholders' Representative.

(g) Liability. If the Stockholders' Representative is required by the terms of the Escrow Agreement to determine the occurrence of any event or contingency, the Stockholders' Representative shall, in making such determination, be liable to the Stockholders only for his proven bad faith as determined in light of all the circumstances, including the time and facilities available to him in the ordinary conduct of business. In determining the occurrence of any such event or contingency, the Stockholders' Representative may request from any of the Stockholders or any other person such reasonable additional evidence as the Stockholders' Representative in his sole discretion may deem necessary to determine any fact relating to the occurrence of such event or contingency, and may at any time inquire of and consult with others, including any of the Stockholders, and the Stockholders' Representative shall not be liable to any Stockholder for any damages resulting from his delay in acting hereunder pending his receipt and examination of additional evidence requested by him.

(h) Orders. The Stockholders' Representative is authorized, in his sole discretion, to comply with final, nonappealable orders or decisions issued or process entered by any court of competent jurisdiction or arbitrator with respect to the Escrow Fund or the Reimbursement Fund. If any portion of the Escrow Fund, including without limitation any Escrow Shares, or the Reimbursement Fund is disbursed to the Stockholders' Representative and is at any time attached, garnished or levied upon under any court order, or in case the payment, assignment, transfer, conveyance or delivery of any such property shall be stayed or enjoined by any court order, or in case any order, judgment or decree shall be made or entered by any court affecting such property or any part thereof, then and in any such event, the Stockholders' Representative is authorized, in his sole discretion, but in good faith, to rely upon and comply with any such order, writ, judgment or decree which he is advised by legal counsel selected by him is binding upon him without the need for appeal or other action; and if the Stockholders' Representative complies with any such order, writ, judgment or decree, he shall not be liable to any Stockholder or to any other Person by reason of such compliance even though such order, writ, judgment or decree may be subsequently reversed, modified, annulled, set aside or vacated.

(i) Removal of Stockholders' Representative; Authority of Successor Stockholders' Representative. Stockholders who in the aggregate hold at least a majority of the Stockholders' interest in the Escrow Fund shall have the right at any time during the term of the Escrow Agreement to remove the then-acting Stockholders' Representative and to appoint a successor Stockholders' Representative; provided, however, that neither such removal of the then-acting Stockholders' Representative nor such appointment of a successor Stockholders' Representative shall be effective until the delivery to the Escrow Agent of executed counterparts of a writing signed by each such Stockholder with respect to such removal and appointment, together with an acknowledgment signed by the successor Stockholders' Representative appointed in such writing that he or she accepts the responsibility of successor Stockholders' Representative and agrees to perform and be bound by all of the provisions of

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this Agreement applicable to the Stockholders' Representative. Each successor Stockholders' Representative shall have all of the power, authority, rights and privileges conferred by this Agreement upon the original Stockholders' Representative, and the term "Stockholders' Representative" as used herein and in the Escrow Agreement shall be deemed to include any interim or successor Stockholders' Representative.

(j) Expenses of the Stockholders' Representative. The Stockholders' Representative shall be entitled to withdraw cash amounts held in the Reimbursement Fund (or, as provided for in the Escrow Agreement, from the Escrow Fund) in reimbursement for out-of-pocket fees and expenses (including legal, accounting and other advisors' fees and expenses, if applicable) incurred by the Stockholders' Representative in performing under this Agreement and the Escrow Agreement. The Stockholders (i) shall have no claim or cause of action against, may not assert any claim against, and shall indemnify and hold harmless the Stockholders' Representative and each of its Affiliates and any of their respective partners, directors, officers, employees, agents, stockholders, consultants, attorneys, accountants, advisors, brokers, representatives or controlling persons, as provided for in **Section 6.3(c)** above; and (ii) shall pay to the Stockholders' Representative, promptly upon request, such Stockholder's pro rata share of any amounts paid by the Stockholders' Representative on behalf of the Stockholders and all costs and expenses (including legal, accounting and other advisors' fees and expenses, if applicable) incurred by the Stockholders' Representative in connection with the protection, defense or enforcement of any rights under this Agreement or the Escrow Agreement to the extent such costs, expenses and other amounts exceed the amount available to the Stockholders' Representative in the Reimbursement Fund.

(k) Irrevocable Appointment. The appointment of the Stockholders' Representative hereunder is irrevocable and any action taken by the Stockholders' Representative pursuant to the authority granted in this **Section 6.3** shall be effective and absolutely binding on the Company and each stockholder thereof notwithstanding any contrary action of, or direction from, the Company or any Stockholder, except for actions taken by the Stockholders' Representative which are in bad faith.

(l) CIENA's Reliance. CIENA shall not be obliged to inquire into the authority of the Stockholders' Representative, and CIENA shall be fully protected in dealing with the Stockholders' Representative in good faith.

(m) Binding Appointment. The provisions of this Agreement, including without limitation **Article VI** hereof, shall be binding upon each Stockholder and the executors, heirs, legal representatives and successors of each Stockholder, and any references in this Agreement to a Stockholder or the Stockholders shall mean and include the successors to the Stockholders' rights hereunder, whether pursuant to testamentary disposition, the laws of descent and distribution or otherwise.

SECTION 6.4. Defense of Third Party Claims.

With respect to any claims or demands by third parties as to which CIENA may seek indemnification hereunder ("Legal Proceeding"), whenever CIENA will have received a written notice that such a claim or demand has been asserted or threatened, CIENA will promptly notify the Stockholders' Representative of such claim or demand and of the facts within CIENA's knowledge that relate thereto within a reasonable time after receiving such written notice. The Stockholders' Representative will then have the right to defend, contest, negotiate or settle any such claim or demand through counsel of his own selection (who shall be reasonably acceptable to CIENA), at the Stockholders' own cost and expense, which costs and expenses will be payable out of the Reimbursement Fund and the Escrow Fund as provided for in the Escrow Agreement and CIENA shall cooperate with and assist the Stockholders' Representative in the defense of such claim or demand. Notwithstanding the preceding sentence, the Stockholders' Representative will not settle, compromise, or offer to settle or compromise any such claim or demand without the prior written consent of CIENA, which consent will not be unreasonably withheld. If the Stockholders' Representative gives notice to CIENA within twenty Business Days after CIENA has notified the Stockholders' Representative that any such claim or demand has been made in writing, that the Stockholders' Representative elects to have CIENA defend, contest, negotiate, or settle any such claim or

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demand, then CIENA will have the right to contest and/or settle any such claim or demand and the Stockholders' Representative shall cooperate with and assist CIENA in the defense of such claim or demand, *provided, however*, that CIENA will not settle, compromise, or offer to settle or compromise any such claim or demand without the prior written consent (which may include a general or limited consent) of the Stockholders' Representative, which consent will not be unreasonably withheld. In the event that the Stockholders' Representative has consented to any settlement, the Stockholders shall have no power or authority to object under any provision of this Agreement to the amount of such settlement.

SECTION 6.5. Maximum Payments; Remedy.

Notwithstanding anything to the contrary herein, the existence of this Article and of the rights and restrictions set forth herein do not limit any legal remedy against the parties hereto for claims based on fraud. No Stockholder shall have any right to contribution from the Company for any claim made by CIENA with respect to any Loss claimed by CIENA after the Effective Time.

ARTICLE VII

GENERAL; TERMINATION

SECTION 7.1. Expenses.

Regardless of whether or not the transactions contemplated hereby have been consummated at the Closing, each party hereto shall pay its own expenses incidental to the preparation of this Agreement, the carrying out of the provisions of this Agreement and the consummation of the transactions contemplated hereby.

SECTION 7.2. Press Releases.

The Company shall not issue any press release or otherwise make public any information with respect to this Agreement nor the transactions contemplated hereby, prior to the Closing, without the prior written consent of CIENA. The parties shall issue a joint initial press release announcing the execution of this Agreement as may be mutually agreed.

SECTION 7.3. Contents of Agreement; Parties in Interest; Etc.

This Agreement and the agreements referred to or contemplated herein and the letter agreement dated June 11, 2002, concerning confidentiality (the "Confidentiality Agreement") set forth the entire understanding of the parties hereto with respect to the transactions contemplated hereby, and, except as set forth in this Agreement, such other agreements and the Exhibits hereto and the Confidentiality Agreement, there are no representations or warranties, express or implied, made by any party to this Agreement with respect to the subject matter of this Agreement and the Confidentiality Agreement. Except for the matters set forth in the Confidentiality Agreement, any and all previous agreements and understandings between or among the parties regarding the subject matter hereof, whether written or oral, are superseded by this Agreement and the agreements referred to or contemplated herein.

SECTION 7.4. Assignment and Binding Effect.

This Agreement may not be assigned by either party hereto without the prior written consent of the other party; provided, that CIENA may assign its rights and obligations under this Agreement to any directly or indirectly wholly-owned Subsidiary of CIENA, upon written notice to the Company if the assignee shall assume the obligations of CIENA hereunder and CIENA shall remain liable for its obligations hereunder. All the terms and provisions of this Agreement shall be binding upon and inure to the benefit of and be enforceable by the respective successors and assigns of the parties hereto.

SECTION 7.5. Termination.

(a) Termination by Mutual Consent. This Agreement may be terminated and the Merger may be abandoned at any time prior to the Effective Time, whether before or after the approval by Stockholders of the Company referred to in **Section 5.1(a)**, by mutual written consent of the Company and CIENA.

(b) Termination by Either CIENA or the Company. This Agreement may be terminated and the Merger may be abandoned at any time prior to the Effective Time by action of the Board of Directors of either CIENA or the Company if (i) the Merger shall not have been consummated by August 15, 2003, whether such date is before or after the date of approval by the Stockholders of the Company (the "Termination Date"), provided, however, that CIENA may, by notice to the Company given on or prior to two business days prior to August 15, 2003, extend the Termination Date to October 15, 2003 (the "Termination Extension Period") if CIENA provides at least \$7.5 million in subordinated bridge financing to the Company having customary terms, including an interest rate of prime plus 200 basis points (with interest cumulating and added to principal on maturity or conversion) and providing that such bridge financing will convert into equity on terms equivalent to the next bona fide private equity financing round of the Company; (ii) the approval of the Company's stockholders required by **Section 5.1(a)** shall not have been obtained at a meeting duly convened therefor or at any adjournment or postponement thereof; or (iii) any Order permanently restraining, enjoining or otherwise prohibiting consummation of the Merger shall become final and non-appealable; provided, that the right to terminate this Agreement pursuant to clause (i) or (ii) above shall not be available to any party that has breached its obligations under this Agreement in any manner that shall have caused the occurrence of the failure of the Merger to be consummated or the stockholder approval to be obtained.

(c) Termination by the Company. This Agreement may be terminated and the Merger may be abandoned at any time prior to the receipt of the approval of the Company's Stockholders required by **Section 5.1(a)**, by action of the Board of Directors of the Company:

(i) if (A) the Company is not in material breach of any of the terms of this Agreement, (B) the Board of Directors of the Company authorizes the Company, subject to complying with the terms of this Agreement, to enter into a binding written agreement concerning a transaction that constitutes a Superior Proposal and the Company notifies CIENA in writing that it intends to enter into such an agreement, attaching the most current version of such agreement to such notice if available or, if not available, including all material terms and conditions of such agreement in the notice, (C) CIENA does not make, within two Business Days of receipt of the Company's written notification of its intention to enter into a binding agreement for a Superior Proposal, an offer that the Board of Directors of the Company determines, in good faith after consultation with its outside legal counsel and its financial advisors, is at least as favorable to the stockholders of the Company as the Superior Proposal, and (D) the Company prior to such termination pays to CIENA in immediately available funds the fees required to be paid pursuant to **Section 7.5(e)**. The Company agrees (1) that it will not enter into a binding agreement referred to in clause (B) above until at least the third Business Day after it has provided the notice to CIENA required thereby and (2) to notify CIENA promptly if its intention to enter into a written agreement referred to in its notification shall change at any time after giving such notification; or

(ii) if it is not in material breach of its obligations under the Agreement and there is a breach by CIENA of any material representation, warranty, covenant or agreement contained in this Agreement and such breach has not been cured within ten (10) days after written notice thereof to CIENA, or such breach cannot be cured, and would cause a condition set forth in **Section 5.3** to be incapable of being satisfied.

(d) Termination by CIENA. This Agreement may be terminated and the Merger may be abandoned at any time prior to the Effective Time, whether before or after the receipt of the approval of the Company's Stockholders required by **Section 5.1(a)**, by written notice given to the Company by CIENA

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(i) if the Company or its Board of Directors shall have (A) withdrawn, modified or amended in any respect adverse to CIENA its recommendation of the adoption of this Agreement or failed to reconfirm its recommendation of this Agreement or the Merger within three Business Days after a written request by CIENA to do so (“Change in the Board Recommendation”), or (B) recommended or entered into an agreement with respect to, or consummated, any Acquisition Proposal from a person other than CIENA or any of its Affiliates; or

(ii) if it is not in material breach of its obligations under the Agreement and there is a breach by the Company of any material representation, warranty, covenant or agreement contained in this Agreement and such breach has not been cured within ten (10) days after written notice thereof to the Company or such breach cannot be cured and would cause a condition set forth in **Section 5.2** to be incapable of being satisfied.

(e) Effect of Termination and Abandonment.

(i) In the event of termination of this Agreement and the abandonment of the Merger pursuant to this **Section 7.5**, this Agreement (other than as set forth in this **Section 7.5(e)**) shall become void and of no effect with no liability on the part of any party hereto (or of any of its directors, officers, employees, agents, legal and financial advisors or other representatives); provided, however, except as otherwise provided herein, no such termination shall relieve any party hereto of any liability or damages resulting from any willful breach of this Agreement.

(ii) In the event (a) this Agreement is terminated or abandoned by CIENA other than pursuant to **Section 7.5(d)**, (b) this Agreement is terminated or abandoned by the Company pursuant to **Section 7.5(b)** or **7.5(c)(ii)** or (c) this Agreement is terminated or abandoned by either party as a result of the failure of the condition set forth in **Section 5.1(b)** to be satisfied (i) the Reseller Agreement between the Company and CIENA dated September 17, 2002, (ii) the Letter Agreement between the Company, CIENA and MultiWave Investments LLC, a wholly owned subsidiary of CIENA dated September 18, 2002 (the “Side Letter”), and (iii) those certain Stockholder Option Agreements dated on or about September 17, 2002, executed by certain holders of the Company’s capital stock in favor of CIENA shall all be terminated simultaneously with the termination of this Agreement and without further action by any party.

(iii) In the event that this Agreement is terminated (A) by the Company pursuant to **Section 7.5(c)(i)** or (B) by CIENA pursuant to **Section 7.5(d)(i)**, then the Company shall (1) promptly, but in no event later than the earlier of the date of such termination or date of entrance into an agreement concerning an Acquisition Proposal or such earlier time as required by this Agreement, pay to CIENA a termination fee of \$5.1 million payable by wire transfer of same day funds and (2) in no event later than two business days after CIENA shall have requested payment of its charges and expenses incurred in connection with the transactions contemplated hereby, pay to CIENA the amount of such charges and expenses up to a maximum of \$500,000 payable by wire transfer of same day funds.

(iv) In the event that this Agreement is terminated pursuant to **Section 7.5(b)(ii)** and at or prior to the time of the Company Stockholders’ Meeting any Person shall have made an Acquisition Proposal to the Company or any of its stockholders or shall have publicly announced an intention (whether or not conditional) to make an Acquisition Proposal with respect to the Company (the “Triggering Proposal”), if within 9 months of such termination the Company enters into an agreement concerning a transaction with the person that made that Triggering Proposal, the Company shall (A) at the time of entering into such agreement, shall pay to CIENA the termination fee of \$5.1 million payable by wire transfer of same day funds and (B) in no event later than two business days after CIENA shall have requested payment of its charges and expenses incurred in connection with the transactions contemplated hereby, pay to CIENA the amount of such charges and expenses incurred in connection with the transactions contemplated hereby up to a maximum of \$500,000 payable by wire transfer of same day funds.

(v) The Company and CIENA each acknowledge that the agreements contained in **Sections 7.5(e)(ii), (iii) and (iv)** are an integral part of the transactions contemplated by this Agreement, and that, without these agreements, the Company and CIENA would not enter into this Agreement; accordingly, if the Company fails to promptly pay the amounts due pursuant to this Section, and, in order to obtain such payment, CIENA commences a suit which results in a judgment against the Company for the fees set forth in this **Section 7.5**, the Company shall pay to CIENA its costs and expenses (including attorneys' fees) in connection with such suit, together with interest from the date of termination of this Agreement on the amounts owed at the prime rate of Wachovia Bank, N.A. in effect from time to time during such period plus two percent.

SECTION 7.6. Definitions.

As used in this Agreement the terms set forth below shall have the following meanings:

(a) "*Affiliate*" of a Person means any other Person who directly or indirectly through one or more intermediaries controls, is controlled by or is under common control with such Person. "Control" means the possession of the power, directly or indirectly, to direct or cause the direction of the management and policies of a Person whether through the ownership of voting securities, by contract or otherwise.

(b) "*Applicable Foreign Competition Laws*" means Laws of any foreign governmental body that are designed to or intended to prohibit, restrict or regulate actions having the purpose or effect of monopolization, lessening of competition or restraint of trade and are applicable to the Merger.

(c) "*Assets*" means assets of every kind and everything that is or may be available for the payment of liabilities (whether inchoate, tangible or intangible), including, without limitation, real and personal property but excluding Intellectual Property Rights.

(d) "*Business Day*" means a day other than Saturday or Sunday or a day on which banks are required or authorized to close in the State of Maryland or Delaware or the Commonwealth of Massachusetts.

(e) "*CIENA Material Adverse Effect*" means a material adverse effect on the business, financial condition, Assets, liabilities or results of operations of CIENA and its Subsidiaries, taken as a whole; provided, however, that none of the following shall be deemed in themselves, either alone or in combination, to constitute, and none of the following shall be taken into account in determining whether there has been or will be, a CIENA Material Adverse Effect: (a) any failure by CIENA to meet internal projections or forecasts or published revenue or earnings predictions for any period ending (or for which revenues or earnings are released) on or after the date of this Agreement; (b) any adverse change, effect, event, occurrence, state of facts or development to the extent attributable to the announcement or pendency of the Merger (including any cancellations of or delays in customer orders, any reduction in sales, any disruption in supplier, distributor, partner or similar relationships or any loss of employees); (c) any adverse change, effect, event, occurrence, state of facts or development attributable to conditions affecting the industries in which CIENA participates, the U.S. economy as a whole or foreign economies in any locations where CIENA has material operations or sales or suppliers or customers; or (d) any adverse change, effect, event, occurrence, state of facts or development resulting from or relating to compliance with the terms of, or the taking of any action required by, this Agreement.

(f) "*Code*" means the Internal Revenue Code of 1986, as amended.

(g) "*Company Material Adverse Effect*" means a material adverse effect on the business, financial condition, Assets, liabilities or results of operations of the Company; provided, however, that none of the following shall be deemed in themselves, either alone or in combination, to constitute, and none of the following shall be taken into account in determining whether there has been or will be, a Company Material Adverse Effect: (a) any failure by the Company to meet internal projections of forecasts; (b) any adverse change, effect, event, occurrence, state of facts or development to the extent attributable to the announcement or pendency of the Merger (including any cancellations of or delays in customer orders, any reduction in sales, any disruption in supplier, distributor, partner or similar relationships or any loss of

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employees); (c) any adverse change, effect, event, occurrence, state of facts or development attributable to conditions affecting the industries in which Company participates, the U.S. economy as a whole or foreign economies in any locations where Company has material operations or sales or suppliers or customers; or (d) any adverse change, effect, event, occurrence, state of facts or development resulting from or relating to compliance with the terms of, or the taking of any action required by, this Agreement.

(h) “*Encumbrances*” means Liens, security interests, deeds of trust, encroachments, reservations, orders of Governmental Entities, decrees, judgments, contract rights, claims or equity of any kind.

(i) “*Environmental Laws*” means all applicable federal, state, local or foreign laws, rules and regulations, orders, decrees, judgments, permits, filings and licenses relating (i) to protection and clean-up of the environment and activities or conditions related thereto, including those relating to the generation, handling, disposal, transportation or release of Hazardous Substances and (ii) the health or safety of employees in the workplace environment, all as amended from time to time, and shall also include any common law theory based on nuisance, trespass, negligence or other tortious conduct.

(j) “*ERISA*” means the Employee Retirement Income Security Act of 1974, as amended, and all Laws promulgated pursuant thereto or in connection therewith.

(k) “*Exchange Agent*” means a bank or trust company designated as the exchange agent by CIENA (which designation shall be reasonably acceptable to the Stockholders’ Representative).

(l) “*Exchange Ratios*” means the respective exchange ratios set forth in **Section 1.5(c)**.

(m) “*Governmental Entity*” means any United States or other national, state, municipal or local government, domestic or foreign, any subdivision, agency, entity, commission or authority thereof, or any quasi-governmental or private body exercising any regulatory, taxing, importing or other governmental or quasi-governmental authority.

(n) “*Hazardous Substances*” means any and all hazardous and toxic substances, wastes or materials, any pollutants, contaminants, or dangerous materials (including, but not limited to, polychlorinated biphenyls, PCBs, friable asbestos, volatile and semi-volatile organic compounds, oil, petroleum products and fractions, and any materials which include hazardous constituents or become hazardous, toxic, or dangerous when their composition or state is changed), or any other similar substances or materials which are included under or regulated by any Environmental Laws.

(o) “*holders*” means, with respect to any Person entitled to receive any portion of the Merger Consideration distributable in accordance with **Article I** hereof, such holders on and as of the Effective Time and their respective successors by operation of law, heirs, executors, administrators and legal representatives.

(p) “*Initial Merger*” means the merger of Merger Sub with and into the Company pursuant to the Initial Merger Agreement.

(q) “*Initial Merger Agreement*” means the Agreement and Plan of Merger between the Company and Merger Sub dated the date hereof and attached hereto as **Schedule 7.6(q)**.

(r) “*Knowledge of the Company*” or “*Company’s Knowledge*” means the actual knowledge of the Company’s Chief Executive Officer or Chief Financial Officer.

(s) “*Laws*” means all foreign, federal, state and local statutes, laws, ordinances, regulations, rules, resolutions, orders, determinations, writs, injunctions, awards (including, without limitation, awards of any arbitrator), judgments and decrees applicable to the specified persons or entities.

(t) “*Liens*” means any mortgage, pledge, lien, security interest, conditional or installment sale agreement, encumbrance, charge or other claims of third parties of any kind.

(u) “*Ordinary Course of Business*” means all actions taken by a Person if such action is consistent with the past practices of such Person and is taken in the ordinary course of the normal day-to-day operations of such Person.

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(v) “*Permitted Encumbrances*” means (i) Liens for Taxes not yet due or which are being contested in good faith by appropriate proceedings and for which adequate reserves have been established in accordance with applicable generally accepted accounting principles; (ii) such minor encumbrances, easements or reservations of, or rights of others for, sewers, electric lines, telegraph and telephone lines and other similar purposes, or zoning restrictions as to the use of real properties, which do not materially interfere with the use, occupation and enjoyment of the property subject to the Lien by and in connection with the applicable business; (iii) Liens incurred in the Ordinary Course of Business in connection with workers’ compensation, unemployment insurance and other types of social security; and (iv) Liens in favor of customs authorities arising as a matter of law to secure payment of customs duties in connection with the importation of goods to the extent accrued on the relevant Financial Statements.

(w) “*Person*” means any individual, corporation, partnership, limited partnership, limited liability company, trust, association or entity or government agency or authority.

(x) “*Subsidiary*” of a Person means any corporation, partnership, joint venture or other entity in which such person (a) owns, directly or indirectly, 50% or more of the outstanding voting securities or equity interests or (b) is a general partner.

(y) “*Tax*” (and, with correlative meaning, “*Taxes*” and “*Taxable*”) means any federal, state, local or foreign net income, gross income, gross receipts, windfall profit, severance, property, production, sales, use, license, excise, franchise, employment, payroll, withholding, alternative or add-on minimum, ad valorem, value-added, transfer, stamp, or environmental tax, or any other tax, custom, duty, governmental fee or other like assessment or charge of any kind whatsoever, together with any interest or penalty, addition to tax or additional amount imposed by any taxing governmental entity.

(z) “*Tax Return*” means any return, report or similar statement required to be filed with respect to any Tax (including any attached schedules), including, without limitation, any information return, claim for refund, amended return or declaration of estimated Tax.

SECTION 7.7. Notices.

Any notice, request, demand, waiver, consent, approval, or other communication which is required or permitted to be given to any party hereunder shall be in writing and shall be deemed given only if delivered to the party personally or sent to the party by facsimile transmission (promptly followed by a hard-copy delivered in accordance with this **Section 7.8**) or by registered or certified mail (return receipt requested), with postage and registration or certification fees thereon prepaid, addressed to the party at its address set forth below:

If to CIENA:

CIENA Corporation
1201 Winterson Road
Linthicum, Maryland 21090
Attention: General Counsel

with a copy to:

Hogan & Hartson L.L.P.
111 South Calvert Street, 16th Floor
Baltimore, Maryland 21202
Attention: Michael J. Silver

If to the Company:

WaveSmith Networks, Inc.
35 Nagog Park
Acton, MA 01720
Attention: Chief Financial Officer

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with a copy to:

Testa, Hurwitz & Thibault, LLP
125 High Street
Boston, MA 02110-2704
Attention: Kathy A. Fields

or to such other address or Person as any party may have specified in a notice duly given to the other party as provided herein. Such notice, request, demand, waiver, consent, approval or other communication will be deemed to have been given as of the date so delivered, telegraphed or mailed.

SECTION 7.8. Amendment.

This Agreement may be amended, modified or supplemented at any time prior to the Effective Time by mutual agreement of the respective Boards of Directors of the Company and CIENA, except as provided in Section 251(d) of the DGCL. Any amendment, modification or revision of this Agreement and any waiver of compliance or consent with respect hereto shall be effective only if in a written instrument executed by the parties hereto.

SECTION 7.9. Governing Law.

This Agreement shall be governed by and interpreted and enforced in accordance with the laws of the State of Delaware as applied to contracts made and fully performed in such state.

SECTION 7.10. No Benefit to Others.

The representations, warranties, covenants and agreements contained in this Agreement are for the sole benefit of the parties hereto, and their respective successors and assigns, and they shall not be construed as conferring, and are not intended to confer, any rights on any other Person except as provided in **Articles I, IV and VI**.

SECTION 7.11. Severability.

If any term or other provision of this Agreement is determined to be invalid, illegal or incapable of being enforced by any rule of law or public policy, all other terms and provisions of the Agreement shall remain in full force and effect. Upon such determination, the parties hereto shall negotiate in good faith to modify this Agreement so as to give effect to the original intent of the parties to the fullest extent permitted by applicable law.

SECTION 7.12. Section Headings.

All section headings are for convenience only and shall in no way modify or restrict any of the terms or provisions hereof.

SECTION 7.13. Schedules and Exhibits.

All Schedules and Exhibits referred to herein are intended to be and hereby are specifically made a part of this Agreement.

SECTION 7.14. Extensions.

At any time prior to the Effective Time, CIENA, on the one hand, and the Company on the other may by corporate action, extend the time for compliance by or waive performance of any representation, warranty, condition or obligation of the other party subject to the provisions of **Section 7.8** regarding the manner of waiver.

SECTION 7.15. Counterparts.

This Agreement may be executed in two or more counterparts, each of which shall be deemed an original, and the Company and CIENA may become a party hereto by executing a counterpart hereof. This Agreement and any counterpart so executed shall be deemed to be one and the same instrument.

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IN WITNESS WHEREOF, the parties hereto, intending to be legally bound hereby, have duly executed this Agreement and Plan of Merger as of the date first above written.

CIENA CORPORATION

By: /s/ GARY B. SMITH

Name: Gary B. Smith

Title: President and Chief Executive Officer

WAVESMITH NETWORKS, INC.

By: /s/ THOMAS M. BURKARDT

Name: Thomas M. Burkardt

Title: Chief Executive Officer, President and Chairman

GLOSSARY OF DEFINED TERMS

<i>DEFINED TERM</i>	<i>LOCATION OF DEFINITION</i>
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Affiliate	Section 7.6
Aggregate Share Consideration	Section 1.5
Agreement	Preamble
Applicable Foreign Competition Laws	Section 7.6
Assets	Section 7.6
Assumed Option	Section 4.10
Balance Sheet Date	Section 2.6
Board Recommendation	Section 4.6
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Certificates	Section 1.8
Change in the Board Recommendation	Section 7.5
CIENA	Preamble
CIENA Benefit Plan	Section 4.13
CIENA Certificate	Section 1.2
CIENA Charter Documents	Section 3.2
CIENA Common Stock	Section 1.5
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Company Material Adverse Effect	Section 7.6
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Company Requisite Vote	Section 2.4
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Company Stock Options	Section 4.9
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EXHIBIT A

Form of Stockholder Agreement

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Form of Escrow Agreement

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DELAWARE GENERAL CORPORATION LAW

SECTION 262

§ 262 Appraisal rights.

(a) Any stockholder of a corporation of this State who holds shares of stock on the date of the making of a demand pursuant to subsection (d) of this section with respect to such shares, who continuously holds such shares through the effective date of the merger or consolidation, who has otherwise complied with subsection (d) of this section and who has neither voted in favor of the merger or consolidation nor consented thereto in writing pursuant to § 228 of this title shall be entitled to an appraisal by the Court of Chancery of the fair value of the stockholder's shares of stock under the circumstances described in subsections (b) and (c) of this section. As used in this section, the word "stockholder" means a holder of record of stock in a stock corporation and also a member of record of a nonstock corporation; the words "stock" and "share" mean and include what is ordinarily meant by those words and also membership or membership interest of a member of a nonstock corporation; and the words "depository receipt" mean a receipt or other instrument issued by a depository representing an interest in one or more shares, or fractions thereof, solely of stock of a corporation, which stock is deposited with the depository.

(b) Appraisal rights shall be available for the shares of any class or series of stock of a constituent corporation in a merger or consolidation to be effected pursuant to § 251 (other than a merger effected pursuant to § 251(g) of this title), § 252, § 254, § 257, § 258, § 263 or § 264 of this title:

(1) Provided, however, that no appraisal rights under this section shall be available for the shares of any class or series of stock, which stock, or depository receipts in respect thereof, at the record date fixed to determine the stockholders entitled to receive notice of and to vote at the meeting of stockholders to act upon the agreement of merger or consolidation, were either (i) listed on a national securities exchange or designated as a national market system security on an interdealer quotation system by the National Association of Securities Dealers, Inc. or (ii) held of record by more than 2,000 holders; and further provided that no appraisal rights shall be available for any shares of stock of the constituent corporation surviving a merger if the merger did not require for its approval the vote of the stockholders of the surviving corporation as provided in subsection (f) of § 251 of this title.

(2) Notwithstanding paragraph (1) of this subsection, appraisal rights under this section shall be available for the shares of any class or series of stock of a constituent corporation if the holders thereof are required by the terms of an agreement of merger or consolidation pursuant to §§ 251, 252, 254, 257, 258, 263 and 264 of this title to accept for such stock anything except:

- a. Shares of stock of the corporation surviving or resulting from such merger or consolidation, or depository receipts in respect thereof;
- b. Shares of stock of any other corporation, or depository receipts in respect thereof, which shares of stock (or depository receipts in respect thereof) or depository receipts at the effective date of the merger or consolidation will be either listed on a national securities exchange or designated as a national market system security on an interdealer quotation system by the National Association of Securities Dealers, Inc. or held of record by more than 2,000 holders;
- c. Cash in lieu of fractional shares or fractional depository receipts described in the foregoing subparagraphs a. and b. of this paragraph; or
- d. Any combination of the shares of stock, depository receipts and cash in lieu of fractional shares or fractional depository receipts described in the foregoing subparagraphs a., b. and c. of this paragraph.

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(3) In the event all of the stock of a subsidiary Delaware corporation party to a merger effected under § 253 of this title is not owned by the parent corporation immediately prior to the merger, appraisal rights shall be available for the shares of the subsidiary Delaware corporation.

(c) Any corporation may provide in its certificate of incorporation that appraisal rights under this section shall be available for the shares of any class or series of its stock as a result of an amendment to its certificate of incorporation, any merger or consolidation in which the corporation is a constituent corporation or the sale of all or substantially all of the assets of the corporation. If the certificate of incorporation contains such a provision, the procedures of this section, including those set forth in subsections (d) and (e) of this section, shall apply as nearly as is practicable.

(d) Appraisal rights shall be perfected as follows:

(1) If a proposed merger or consolidation for which appraisal rights are provided under this section is to be submitted for approval at a meeting of stockholders, the corporation, not less than 20 days prior to the meeting, shall notify each of its stockholders who was such on the record date for such meeting with respect to shares for which appraisal rights are available pursuant to subsection (b) or (c) hereof that appraisal rights are available for any or all of the shares of the constituent corporations, and shall include in such notice a copy of this section. Each stockholder electing to demand the appraisal of such stockholder's shares shall deliver to the corporation, before the taking of the vote on the merger or consolidation, a written demand for appraisal of such stockholder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such stockholder's shares. A proxy or vote against the merger or consolidation shall not constitute such a demand. A stockholder electing to take such action must do so by a separate written demand as herein provided. Within 10 days after the effective date of such merger or consolidation, the surviving or resulting corporation shall notify each stockholder of each constituent corporation who has complied with this subsection and has not voted in favor of or consented to the merger or consolidation of the date that the merger or consolidation has become effective; or

(2) If the merger or consolidation was approved pursuant to § 228 or § 253 of this title, then, either a constituent corporation before the effective date of the merger or consolidation, or the surviving or resulting corporation within ten days thereafter, shall notify each of the holders of any class or series of stock of such constituent corporation who are entitled to appraisal rights of the approval of the merger or consolidation and that appraisal rights are available for any or all shares of such class or series of stock of such constituent corporation, and shall include in such notice a copy of this section. Such notice may, and, if given on or after the effective date of the merger or consolidation, shall, also notify such stockholders of the effective date of the merger or consolidation. Any stockholder entitled to appraisal rights may, within 20 days after the date of mailing of such notice, demand in writing from the surviving or resulting corporation the appraisal of such holder's shares. Such demand will be sufficient if it reasonably informs the corporation of the identity of the stockholder and that the stockholder intends thereby to demand the appraisal of such holder's shares. If such notice did not notify stockholders of the effective date of the merger or consolidation, either (i) each such constituent corporation shall send a second notice before the effective date of the merger or consolidation notifying each of the holders of any class or series of stock of such constituent corporation that are entitled to appraisal rights of the effective date of the merger or consolidation or (ii) the surviving or resulting corporation shall send such a second notice to all such holders on or within 10 days after such effective date; provided, however, that if such second notice is sent more than 20 days following the sending of the first notice, such second notice need only be sent to each stockholder who is entitled to appraisal rights and who has demanded appraisal of such holder's shares in accordance with this subsection. An affidavit of the secretary or assistant secretary or of the transfer agent of the corporation that is required to give either notice that such notice has been given shall, in the absence of fraud, be prima facie evidence of the facts stated

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therein. For purposes of determining the stockholders entitled to receive either notice, each constituent corporation may fix, in advance, a record date that shall be not more than 10 days prior to the date the notice is given, provided, that if the notice is given on or after the effective date of the merger or consolidation, the record date shall be such effective date. If no record date is fixed and the notice is given prior to the effective date, the record date shall be the close of business on the day next preceding the day on which the notice is given.

(e) Within 120 days after the effective date of the merger or consolidation, the surviving or resulting corporation or any stockholder who has complied with subsections (a) and (d) hereof and who is otherwise entitled to appraisal rights, may file a petition in the Court of Chancery demanding a determination of the value of the stock of all such stockholders. Notwithstanding the foregoing, at any time within 60 days after the effective date of the merger or consolidation, any stockholder shall have the right to withdraw such stockholder's demand for appraisal and to accept the terms offered upon the merger or consolidation. Within 120 days after the effective date of the merger or consolidation, any stockholder who has complied with the requirements of subsections (a) and (d) hereof, upon written request, shall be entitled to receive from the corporation surviving the merger or resulting from the consolidation a statement setting forth the aggregate number of shares not voted in favor of the merger or consolidation and with respect to which demands for appraisal have been received and the aggregate number of holders of such shares. Such written statement shall be mailed to the stockholder within 10 days after such stockholder's written request for such a statement is received by the surviving or resulting corporation or within 10 days after expiration of the period for delivery of demands for appraisal under subsection (d) hereof, whichever is later.

(f) Upon the filing of any such petition by a stockholder, service of a copy thereof shall be made upon the surviving or resulting corporation, which shall within 20 days after such service file in the office of the Register in Chancery in which the petition was filed a duly verified list containing the names and addresses of all stockholders who have demanded payment for their shares and with whom agreements as to the value of their shares have not been reached by the surviving or resulting corporation. If the petition shall be filed by the surviving or resulting corporation, the petition shall be accompanied by such a duly verified list. The Register in Chancery, if so ordered by the Court, shall give notice of the time and place fixed for the hearing of such petition by registered or certified mail to the surviving or resulting corporation and to the stockholders shown on the list at the addresses therein stated. Such notice shall also be given by 1 or more publications at least 1 week before the day of the hearing, in a newspaper of general circulation published in the City of Wilmington, Delaware or such publication as the Court deems advisable. The forms of the notices by mail and by publication shall be approved by the Court, and the costs thereof shall be borne by the surviving or resulting corporation.

(g) At the hearing on such petition, the Court shall determine the stockholders who have complied with this section and who have become entitled to appraisal rights. The Court may require the stockholders who have demanded an appraisal for their shares and who hold stock represented by certificates to submit their certificates of stock to the Register in Chancery for notation thereon of the pendency of the appraisal proceedings; and if any stockholder fails to comply with such direction, the Court may dismiss the proceedings as to such stockholder.

(h) After determining the stockholders entitled to an appraisal, the Court shall appraise the shares, determining their fair value exclusive of any element of value arising from the accomplishment or expectation of the merger or consolidation, together with a fair rate of interest, if any, to be paid upon the amount determined to be the fair value. In determining such fair value, the Court shall take into account all relevant factors. In determining the fair rate of interest, the Court may consider all relevant factors, including the rate of interest which the surviving or resulting corporation would have had to pay to borrow money during the pendency of the proceeding. Upon application by the surviving or resulting corporation or by any stockholder entitled to participate in the appraisal proceeding, the Court may, in its discretion, permit discovery or other pretrial proceedings and may proceed to trial upon the appraisal prior to the final determination of the stockholder entitled to an appraisal. Any stockholder whose name appears on the list filed by the surviving or resulting corporation pursuant to subsection (f) of this section and who has

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submitted such stockholder's certificates of stock to the Register in Chancery, if such is required, may participate fully in all proceedings until it is finally determined that such stockholder is not entitled to appraisal rights under this section.

(i) The Court shall direct the payment of the fair value of the shares, together with interest, if any, by the surviving or resulting corporation to the stockholders entitled thereto. Interest may be simple or compound, as the Court may direct. Payment shall be so made to each such stockholder, in the case of holders of uncertificated stock forthwith, and the case of holders of shares represented by certificates upon the surrender to the corporation of the certificates representing such stock. The Court's decree may be enforced as other decrees in the Court of Chancery may be enforced, whether such surviving or resulting corporation be a corporation of this State or of any state.

(j) The costs of the proceeding may be determined by the Court and taxed upon the parties as the Court deems equitable in the circumstances. Upon application of a stockholder, the Court may order all or a portion of the expenses incurred by any stockholder in connection with the appraisal proceeding, including, without limitation, reasonable attorney's fees and the fees and expenses of experts, to be charged pro rata against the value of all the shares entitled to an appraisal.

(k) From and after the effective date of the merger or consolidation, no stockholder who has demanded appraisal rights as provided in subsection (d) of this section shall be entitled to vote such stock for any purpose or to receive payment of dividends or other distributions on the stock (except dividends or other distributions payable to stockholders of record at a date which is prior to the effective date of the merger or consolidation); provided, however, that if no petition for an appraisal shall be filed within the time provided in subsection (e) of this section, or if such stockholder shall deliver to the surviving or resulting corporation a written withdrawal of such stockholder's demand for an appraisal and an acceptance of the merger or consolidation, either within 60 days after the effective date of the merger or consolidation as provided in subsection (e) of this section or thereafter with the written approval of the corporation, then the right of such stockholder to an appraisal shall cease. Notwithstanding the foregoing, no appraisal proceeding in the Court of Chancery shall be dismissed as to any stockholder without the approval of the Court, and such approval may be conditioned upon such terms as the Court deems just.

(l) The shares of the surviving or resulting corporation to which the shares of such objecting stockholders would have been converted had they assented to the merger or consolidation shall have the status of authorized and unissued shares of the surviving or resulting corporation.

STOCKHOLDER AGREEMENT

STOCKHOLDER AGREEMENT, dated as of April 9, 2003 (this “Agreement”), by the undersigned stockholder (the “Stockholder”) of WaveSmith Networks, Inc., a Delaware corporation (the “Company”), for the benefit of CIENA Corporation, a Delaware corporation (“CIENA”).

RECITALS

WHEREAS, CIENA and the Company are entering into an Agreement and Plan of Merger dated as of April 9, 2003 (the “Merger Agreement”) whereby, upon the terms and subject to the conditions stated therein, the Company will be merged with and into CIENA (the “Merger”). Under the terms of the Merger, each share of capital stock of the Company (“Company Shares”) not owned by CIENA will, subject to the terms and conditions of the Merger Agreement, be converted into shares of Common Stock, \$0.01 par value per share of CIENA (“CIENA Common Stock”);

WHEREAS, the Stockholder owns of record and/or holds (a) stock options, convertible securities or warrants (whether or not vested) to acquire shares of the Company’s capital stock and (b) shares of the Company’s capital stock, in each case in that number and class of shares of the Company’s capital stock appearing on Schedule A hereto (such options, convertible securities, warrants and/or shares of the Company’s capital stock, together with any other such options, warrants and/or shares of capital stock of the Company acquired by such Stockholder after the date hereof and during the term of this Option, being collectively referred to herein as the “Subject Shares”); and

WHEREAS, as a condition to its willingness to enter into the Merger Agreement, CIENA has required that the Stockholder agree, and in order to induce CIENA to enter into the Merger Agreement, the Stockholder has agreed, to enter into this Agreement.

NOW, THEREFORE, in consideration of the promises and the mutual covenants and agreements set forth herein, the Stockholder agrees as follows:

1. *Grant of Option.* The Stockholder hereby grants CIENA an irrevocable option (the “Option”, and together with all other options granted pursuant to Option Agreements (as defined herein) the “Options”) to purchase the Subject Shares on the terms and subject to the conditions set forth below:

(a) *Exercise.* At any time prior to the termination of the Option in accordance with the terms hereof, CIENA (or a wholly owned subsidiary of CIENA designated by CIENA) may exercise the Option in accordance with the terms of this Agreement, in whole and not in part if, and only if, on or after the date hereof (i) the Merger Agreement has been terminated in accordance with its terms by the Company or by CIENA pursuant to Section 7.5(d) of the Merger Agreement, or (ii) there is a breach by the Stockholder of the covenants in **Section 4** of this Agreement (any such event, a “Trigger Event”). The Stockholder shall notify CIENA promptly in writing of the occurrence of any Trigger Event of which it is aware; provided, however, that notice shall not be a condition to the right of CIENA to exercise the Option.

(b) *Exercise Procedure.* In the event CIENA wishes to exercise the Option, CIENA shall deliver to the Stockholder a written notice (an “Exercise Notice”). Provided that the conditions to closing set forth in Section 1(f) hereof have been satisfied or waived, CIENA shall, upon delivery of the Exercise Notice and tender of the applicable aggregate Exercise Price (as defined below), to the Stockholder in accordance with Section 1(g) immediately thereafter be deemed to be the holder of record of the Subject Shares, notwithstanding that the stock transfer books of the Company may be closed or that certificates representing the Subject Shares may not theretofore have been delivered to CIENA. The closing of the purchase of the Subject Shares (a “Closing”) shall occur at the Company’s offices in Massachusetts, on a date and at a time designated by CIENA in a notice

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delivered at least two (2) business days prior to the date of the Closing, and shall occur no later than fifteen (15) days after the Exercise Notice is delivered.

(c) *Termination of the Option.* The Option shall terminate, unless earlier exercised, upon the earliest of: (i) the date that Merger Agreement is terminated by CIENA other than pursuant to Section 7.5(d) of the Merger Agreement, (ii) the date the Merger Agreement is terminated or abandoned by the Company pursuant to Section 7.5(b) (unless, in the case of a termination by the Company under Section 7.5(b)(ii), the Stockholder has breached its covenants in Section 4 of this Agreement) or Section 7.5(c)(ii) of the Merger Agreement; (iii) the Merger Agreement is terminated or abandoned by either party as a result of the failure of the condition set forth in Section 5.1(b) of the Merger Agreement to be satisfied; or (iv) six months following the termination of the Merger Agreement. Notwithstanding the foregoing, if the Option cannot be exercised by reason of any applicable judgment, decree, order, law or regulation, the Option shall remain exercisable and shall not terminate until the earlier of (x) the date on which such impediment shall become final and not subject to appeal, (y) 5:00 p.m. New York City Time, on the tenth (10th) business day after such impediment shall have been removed, or (z) March 31, 2005. Notwithstanding the termination of the Option, CIENA shall be entitled to purchase the Subject Shares in accordance with the terms of this Option with respect to which CIENA had exercised the Option prior to such termination.

(d) *Contemporaneous Exercise.* In the event CIENA determines to exercise the Option, CIENA hereby covenants and agrees that it will contemporaneously exercise options to purchase all shares of the Company's capital stock under agreements of each other stockholder of the Company who has entered into a stockholder agreement with CIENA that is substantially identical to this Agreement in connection with the Merger Agreement (collectively, the "Option Agreements").

(e) *Exercise Price.*

(i) *Payable at Closing.* The purchase price for each Subject Share purchased pursuant to the Option (the "Exercise Price") shall be equal to a dollar amount calculated pursuant to Section 1.5 of the Merger Agreement, assuming that (a) the Company has issued all shares of Company Common Stock and Company Common Stock Equivalents (as those terms are defined in the Merger Agreement) that it is permitted to issue without CIENA's consent under the Merger Agreement, (b) the New Company Certificate (as defined in the Merger Agreement) had been adopted and (c) the Company Outstanding Shares had been calculated as if the Effective Time is the date hereof, provided, that in the case of any Subject Share constituting an option or warrant, the Exercise Price otherwise payable hereunder in respect of such Subject Share shall be reduced by the amount of the exercise price payable pursuant to the terms of such option or warrant upon full exercise thereof in accordance with its terms.

(f) *Conditions to Closing.* The obligation of the Stockholder to sell the Subject Shares to CIENA hereunder is subject to the conditions that (i) all waiting periods, if any, under the HSR Act applicable to the transactions contemplated hereunder shall have expired or have been terminated; (ii) all consents, approvals, orders or authorizations of, or registrations, declarations or filings with, any federal, state or local administrative agency or commission or other federal, state or local governmental authority or instrumentality, if any, or the compliance by the Stockholder or CIENA, as the case may be, with any of the provisions thereof, required in connection with the sale of the Subject Shares by the Stockholder and the acquisition of the Subject Shares by CIENA hereunder shall have been obtained or made, as the case may be and (iii) no preliminary or permanent injunction or other order by any court of competent jurisdiction prohibiting or otherwise restraining such sale shall be in effect.

(g) *Closing.* At any Closing, (i) the Stockholder shall deliver to CIENA a certificate or certificates evidencing the Subject Shares being purchased, duly endorsed in blank, or with appropriate stock powers, duly executed in blank, in proper form for transfer, with the signature of the Stockholder thereon guaranteed, and with all applicable taxes paid or provided for; and (ii) CIENA

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shall deliver to the Stockholder a bank check or wire transfer in immediately available funds equal to the aggregate Exercise Price for the Subject Shares.

2. *Representations and Warranties of the Stockholder.* The Stockholder hereby represents and warrants to CIENA as follows:

(a) *Organization; Authority; Execution and Delivery; Enforceability.* The Stockholder (i) is, if not a natural person, duly organized, validly existing and in good standing under the laws of its jurisdiction of organization, and (ii) has the requisite corporate, company, partnership or other power and authority to execute and deliver this Agreement, to consummate the transactions contemplated hereby and to comply with the terms hereof. The execution and delivery by the Stockholder, the consummation by the Stockholder of the transactions contemplated hereby and compliance by the Stockholder with the provisions hereof have been duly authorized by all necessary corporate, company, partnership or other action on the part of the Stockholder and no other corporate, company, partnership or other proceedings on the part of the Stockholder are necessary to authorize this Agreement, to consummate the transactions contemplated hereby or to comply with the provisions hereof. This Agreement has been duly executed and delivered by the Stockholder and constitutes a valid and binding obligation of the Stockholder and, assuming this Agreement constitutes a valid and binding obligation of CIENA, is enforceable against the Stockholder in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other laws affecting the rights and remedies of creditors generally and general principles of equity (whether considered in a proceeding in equity or at law). The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby and compliance with the provisions hereof do not and will not conflict with, or result in any violation or breach of, or default (with or without notice or lapse of time, or both) under any provision of (i) any certificate of incorporation or by-laws, partnership agreement or limited liability company agreement (or similar organizational documents) of the Stockholder, (ii) any material contract to which the Stockholder is a party or any of the properties or assets of the Stockholder is subject or (iii) subject to the governmental filings and other matters referred to in the following sentence, any (A) statute, law, ordinance, rule or regulation or (B) judgment, order or decree, in each case, applicable to the Stockholder or its properties or assets, other than, in the case of clauses (ii) and (iii), any such conflicts, violations, breaches, defaults, rights, losses, liens or entitlements that individually or in the aggregate could not reasonably be expected to impair in any material respect the ability of the Stockholder to perform its obligations under this Agreement or prevent or materially impede or delay the consummation of any of the transactions contemplated by this Agreement. No consent, approval, order or authorization of, or registration, declaration or filing with, any Governmental Entity is required by or with respect to the Stockholder in connection with the execution and delivery of this Agreement by such Stockholder, the consummation by the Stockholder of the transactions contemplated hereby or the compliance by the Stockholder with the provisions hereof, except for (1) filings under the Hart-Scott-Rodino Act and any other applicable competition, merger control, antitrust or similar law or regulation, and (2) such other consents, approvals, orders, authorizations, registrations, declarations and filings the failure of which to be obtained or made individually or in the aggregate could not reasonably be expected to impair in any material respect the ability of the Stockholder to perform its obligations under this Agreement or prevent or materially impede or delay the consummation of any of the transactions contemplated hereby.

(b) *The Subject Shares.* (i) The Stockholder is the record and beneficial owner of, and has good and clear title to, the Subject Shares set forth opposite its name on Schedule A hereto, free and clear of any Liens except as set forth on Schedule A. As of the date hereof, other than as set forth on Schedule A hereto, the Stockholder does not own (of record or beneficially) any shares of capital stock of the Company, and the Stockholder does not own (of record or beneficially) any options, warrants, rights or other similar instruments to acquire any capital stock or other voting securities of the Company. Except as set forth on Schedule A, the Stockholder has the sole right to Transfer (as defined in **Section 4(b)**) and direct the voting of the Subject Shares, and none of such Subject

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Shares is subject to any voting trust or other agreement, arrangement or restriction with respect to the Transfer or the voting of the Subject Shares, except as set forth in **Sections 1 and 4** of this Agreement or the Company's Stockholders Agreement (the provisions of which has been effectively amended or waived on or prior to the date hereof to permit the carrying out of the transactions contemplated hereby).

(ii) In the event CIENA exercises its Option pursuant to **Section 1**, upon delivery of the Subject Shares covered thereby and payment of the aggregate Exercise Price therefor as contemplated in **Section 1**, CIENA will be a "protected purchaser" of the Subject Shares (as defined in Section 8-303 of the Uniform Commercial Code) and will acquire a valid "security entitlement" (within the meaning of Section 8-501 of the Uniform Commercial Code), and no action based on an "adverse claim" (as defined in Section 8-102 of the Uniform Commercial Code) may be asserted against CIENA with respect to such security entitlement (assuming CIENA is without notice of any such adverse claim).

3. *Representations and Warranties of CIENA.* CIENA hereby represents and warrants to the Stockholder as follows:

(a) *Organization; Authority; Execution and Delivery; Enforceability.* CIENA (i) is duly incorporated, validly existing and in good standing under the laws of the State of Delaware and (ii) has all requisite corporate power and authority to execute and deliver this Agreement, to consummate the transactions contemplated hereby and to comply with the terms hereof. The execution and delivery of this Agreement by CIENA, the consummation by CIENA of the transactions contemplated hereby and compliance by CIENA with the provisions hereof have been duly authorized by all necessary corporate action on the part of CIENA and no other corporate proceedings on the part of CIENA are necessary to authorize this Agreement, to consummate the transactions contemplated hereby or to comply with the provisions hereof. This Agreement has been duly executed and delivered by CIENA and, assuming due execution by the Stockholder, constitutes a valid and binding obligation of CIENA enforceable against CIENA in accordance with its terms, except as enforceability may be limited by bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and other laws affecting the rights and remedies of creditors generally and general principles of equity (whether considered in a proceeding in equity or at law). The execution and delivery of this Agreement, the consummation of the transactions contemplated hereby and compliance with the provisions hereof do not and will not conflict with, or result in any violation or breach of, or default (with or without notice or lapse of time, or both) under any provision of (i) the Amended and Restated Certificate of Incorporation or Amended and Restated By-laws of CIENA, (ii) any contract to which CIENA is a party or any of its properties or assets is subject or (iii) subject to the governmental filings and other matters referred to in the following sentence, any (A) statute, law, ordinance, rule or regulation or (B) judgment, order or decree, in each case, applicable to CIENA or its properties or assets, other than, in the case of clauses (ii) and (iii), any such conflicts, violations, breaches, defaults, rights, losses, Liens or entitlements that individually or in the aggregate could not reasonably be expected to impair in any material respect the ability of CIENA to perform its obligations under this Agreement or prevent or materially delay the consummation of any of the transactions contemplated by this Agreement. No consent, approval, order or authorization of, or registration, declaration or filing with, any Governmental Entity is required by or with respect to CIENA in connection with the execution and delivery of this Agreement by CIENA, the consummation by CIENA of the transactions contemplated hereby or compliance by CIENA with the provisions hereof, except for (1) filings under the Hart-Scott-Rodino Act and any other applicable competition, merger control, antitrust or similar law or regulation, (2) filings with the SEC of such reports under the Exchange Act as may be required in connection with this Agreement and the transactions contemplated hereby and (3) such other consents, approvals, orders, authorizations, registrations, declarations and filings the failure of which to be obtained or made individually or in the aggregate could not reasonably be expected to impair in any

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material respect the ability of CIENA to perform its obligations under this Agreement or prevent or materially delay the consummation of any of the transactions contemplated hereby.

(b) *Investment Representations of CIENA.* CIENA represents, warrants, and covenants to the Stockholder as follows (except as contemplated by this Agreement and the transactions contemplated thereby):

(i) CIENA does not now have, and as of any Closing will not have, any present plan or intention to sell, transfer, exchange, pledge or otherwise dispose of, or to effect any other transaction with respect to the Subject Shares;

(ii) CIENA understands that any sale of the Subject Shares hereunder is intended to be exempt from registration, and that no registration statement relating to the sale of the Subject Shares in connection with this Agreement has been or will be filed with the SEC or any state securities commission;

(iii) CIENA intends to acquire the Subject Shares solely for its own account, for investment purposes only and not with a view to the resale or distribution thereof;

(iv) CIENA agrees not to sell, transfer, exchange, pledge or otherwise dispose of, or make any offer or agreement relating to the Subject Shares and/or any option, right or other interest with respect to the Subject Shares that CIENA may acquire, unless: (A) counsel representing CIENA, which counsel is reasonably satisfactory to the Company and the Company's legal counsel, shall have advised the Company in a written opinion letter satisfactory to the Company and the Company's legal counsel, and upon which the Company and the Company's legal counsel may rely, that no registration under the Securities Act would be required in connection with the proposed sale, transfer, exchange, pledge or other disposition, and (B) all transferees (and other subsequent transferees) who receive the Subject Shares agree to be bound by the investment and other restrictions to which CIENA was subject;

(v) CIENA is an "accredited investor" as defined in Rule 501 of Regulation D under the Securities Act, has the capacity to protect its interests in connection with this Agreement, and has such knowledge and experience in financial, tax and business matters to be capable of evaluating the merits and risks of an investment in the Subject Shares and in protecting its interests in connection with the investment and, in CIENA's judgment, has obtained sufficient information from the Company to evaluate the merits and risks of an investment in the Subject Shares;

(vi) CIENA acknowledges that (A) it has conducted its own investigation and review of the business and affairs of the Company, (B) it has not relied on any representations or warranties of the Company concerning the business and affairs of the Company or an investment in the Subject Shares other than as set forth in the Merger Agreement, (C) it has had the opportunity to ask questions of and receive information and answers from the Company concerning matters pertaining to an investment in the Subject Shares, and (D) it has been given the opportunity to verify the information provided to it in order for CIENA to evaluate the merits and risks of an investment in the Subject Shares, and all such questions have been answered and all such information has been provided to the full satisfaction of CIENA;

(vii) CIENA further acknowledges, represents, agrees and is aware that the representations, warranties, agreements, undertakings and acknowledgments made by CIENA in this Agreement are made with the intent that they be relied upon by such Stockholder and the Company in determining the suitability of CIENA as an investor in the Subject Shares; and

(viii) CIENA undertakes to notify the Stockholder reasonably promptly of any change in any representation, warranty or other information relating to CIENA set forth in this subsection (b).

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4. *Covenants of Stockholder.* Until the earlier of termination of this Agreement or termination of the Merger Agreement (except for Section 4(b) which shall survive until termination of this Agreement), Stockholder agrees as follows:

(a) At any meeting of stockholders of the Company or at any adjournment thereof or in any other circumstances upon which the Stockholder's vote, consent or other approval is sought, the Stockholder shall vote (or cause to be voted) the Subject Shares (i) in favor of the Merger and each of the terms of the Merger Agreement, (ii) against any proposal, amendment or agreement that would in any manner impede, frustrate, prevent or nullify the Merger Agreement, the Merger, this Agreement or change in any manner the voting rights of any class of capital stock of the Company, and (iii) against any Acquisition Proposal (as defined in the Merger Agreement);

(b) Other than pursuant to this Agreement, the Stockholder agrees not to (i) sell, transfer, pledge, assign or otherwise dispose of (including by gift) (collectively, "Transfer"), or enter into any contract, option or other arrangement (including any profit-sharing arrangement) with respect to the Transfer of the Subject Shares to any person or (ii) enter into any voting arrangement, whether by proxy, voting agreement or otherwise, in relation to the Subject Shares, and agrees not to commit or agree to take any of the foregoing actions; provided, however, that these restrictions shall not apply to a Transfer in connection with the closing of an Acquisition Proposal (as defined in the Merger Agreement) to the extent CIENA has not exercised its rights under this Agreement prior to the closing of such Acquisition Proposal (as defined in the Merger Agreement). Notwithstanding anything to the contrary contained herein, the Stockholder is permitted to Transfer the Subject Shares to an "accredited investor" as defined in Rule 501 of Regulation D under the Securities Act that is an affiliate of the stockholder provided that such transferee agrees in writing with the Stockholder and CIENA to be bound by the terms of this Agreement and acknowledges by written notice to CIENA that it understands and accepts its obligations under this Agreement to deliver the Subject Shares to CIENA upon exercise of the Option granted hereunder pursuant to the terms and conditions hereof;

(c) The Stockholder shall not, nor shall the Stockholder permit any of its affiliates, directors, officers, employees, investment bankers, attorneys or other advisors or representative of the Stockholder to (i) directly or indirectly solicit, initiate or knowingly encourage the submission of, any Acquisition Proposal or (ii) directly or indirectly participate in any discussions or negotiations regarding, or furnish to any person any information with respect to, or take any other action to facilitate any inquiries or the making of any proposal that constitutes or may reasonably be expected to lead to, Acquisition Proposal; and

(d) The Stockholder shall use commercially reasonable efforts to take, or cause to be taken, all actions, and to do, or cause to be done, and to assist and cooperate with CIENA in doing, all things necessary, proper or advisable to support and to consummate and make effective, in the most expeditious manner practicable, the Merger and the other transactions contemplated by the Merger Agreement.

5. *Termination.* Except as set forth below, this Agreement shall terminate on the earlier of the time when the Option expires under **Section 1(c)** or such time as the parties hereto may mutually agree. In the event of the termination of this Agreement by mutual agreement of the parties pursuant to this **Section 5**, except as set forth herein, this Agreement shall forthwith become null and void, there shall be no liability on the part of any of the parties, and except as set forth in this **Section 5** all rights and obligations of each party hereto shall cease; provided, however, that no such termination of this Agreement shall relieve any party hereto from any liability for any willful and material breach of any provision of this Agreement prior to termination.

6. *Further Assurances.* The Stockholder will, from time to time, execute and deliver, or cause to be executed and delivered, such additional or further consents, documents and other instruments as CIENA may reasonably request for the purpose of effectively carrying out the transactions contemplated by this Agreement in accordance with its terms.

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7. *Successors, Assigns and Transferees Bound.* (a) The Stockholder agrees that this Agreement and the obligations hereunder shall attach to the Subject Shares from the date hereof through the termination of this Agreement and shall be binding upon any person or entity to which legal or beneficial ownership of the Subject Shares shall pass, whether by operation of law or otherwise, including the Stockholder's heirs, guardians, administrators or successors, and the Stockholder further agrees to take all actions necessary to effectuate the foregoing. The Stockholder agrees that each certificate representing the Subject Shares shall be inscribed with the legend required by **Section 7(b)**. Subject to the expiration or termination of this Option, in the event of any stock split, stock dividend, reclassification, merger, reorganization, recapitalization or other change in the capital structure of the Company affecting the capital stock of the Company, the number of Subject Shares shall be adjusted appropriately. Subject to the expiration or termination of this Option, in the event of any change in the Company's capital stock by reason of stock dividends, stock splits, mergers, recapitalizations, combinations, exchange of shares or the like, the type and number of shares or securities subject to the Option, and the purchase price per share provided in **Section 1(e)** hereof, shall be adjusted appropriately, and proper provision shall be made in the agreements governing such transaction so that CIENA shall receive, upon exercise of the Option, the number and class of shares or other securities or property that CIENA would have received in respect of the Company's capital stock if the Option had been exercised immediately prior to such event or the record date therefor, as applicable. In addition, in the event of any other acquisition of additional shares of capital stock of the Company or other voting securities of the Company convertible to or exercisable for shares of the Company's capital stock by the Stockholder (including through the exercise of any warrants, stock options or similar instruments), the number of Subject Shares listed on Schedule A hereto shall be increased appropriately. This Agreement and the representations, warranties, covenants, agreements and obligations hereunder shall attach to any additional shares of capital stock of the Company or other voting securities of the Company convertible to or exercisable for shares of the Company's capital stock as may be issued to or acquired by the Stockholder directly or indirectly (including through the exercise of any warrants, stock options or similar instruments).

(b) The Stockholder shall request that the Company cause the certificated Subject Shares to have a legend placed conspicuously on such certificate to the following effect:

"The shares of common stock evidenced by this certificate are subject to a Stockholder Agreement dated April 9, 2003, entered into by the record owner of such shares and CIENA Corporation."

The Stockholder shall cause a counterpart of this Agreement to be deposited with the Company at its principal place of business or registered office where it shall be subject to the same right of examination by a stockholder of the Company, in person or by agent or attorney, as are the books and records of the Company.

8. *Remedies.* The Stockholder acknowledges that money damages would be both incalculable and an insufficient remedy for any breach of this Agreement by it, and that any such breach would cause CIENA irreparable harm. Accordingly, the Stockholder agrees that in the event of any breach or threatened breach of this Agreement, CIENA, in addition to any other remedies at law or in equity it may have, shall be entitled, to seek equitable relief, including injunctive relief and specific performance.

9. *Severability.* The invalidity or unenforceability of any provision of this Agreement in any jurisdiction shall not affect the validity or enforceability of any other provision of this Agreement in such jurisdiction, or the validity or enforceability of any provision of this Agreement in any other jurisdiction.

10. *Amendment.* This Agreement may be amended only by means of a written instrument executed and delivered by the Stockholder and CIENA.

11. *Governing Law.* This Agreement shall be governed by, and construed in accordance with, the laws of the State of Delaware, regardless of the laws that might otherwise govern under applicable principles of conflicts of laws thereof.

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12. *Counterparts.* For the convenience of the parties, this Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

13. *No Limitation on Actions of the Stockholder as Director.* In the event the Stockholder is a director of the Company, notwithstanding anything to the contrary in this Agreement, nothing in this Agreement is intended or shall be construed to require the Stockholder to take or in any way limit any action that the Stockholder may take to discharge the Stockholder's fiduciary duties as a director of the Company.

14. *Integration.* The parties recognize that they have previously entered into a Stockholder Option Agreement dated as of September 17, 2002 (the "Prior Agreement"). This Agreement is intended to supersede all prior agreements and understandings of the parties with respect to the subject matter hereof, except that, unless any provisions of the Prior Agreement (as modified by the Merger Agreement) are nullified by or inconsistent with the provisions of this Agreement (in which event this Agreement shall control) the Prior Agreement is not intended to be superseded or amended hereby.

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IN WITNESS WHEREOF, Stockholder has caused this Agreement to be executed as of the date first above written.

By: _____
Name: _____
Title: _____

Accepted and Agreed to as of the date set forth above:

CIENA CORPORATION

By: _____
Name: _____
Title: _____

SCHEDULE A

	Number and Class of Subject Shares
Name and Address of Stockholder	Owned of Record or Pursuant to Vested or Unvested Options, Warrants or Convertible Securities
	_____ shares
	<u>N/A</u> stock options, warrants or convertible securities

Escrow Agreement

THIS ESCROW AGREEMENT (the “Agreement”) is made and dated as of _____, 2003 by and among **CIENA CORPORATION**, a Delaware corporation (“CIENA”), **WAVESMITH NETWORKS, INC.**, a Delaware corporation (the “Company”), State Street Bank and Trust Company, N.A., as Escrow Agent (the “Escrow Agent”), and Michael Feinstein, acting by virtue of the Agreement and Plan of Merger dated as of April 9, 2003 (the “Merger Agreement”) as the attorney-in-fact and Representative of the Stockholders of the Company (the “Stockholders’ Representative”).

WITNESSETH:

WHEREAS, CIENA and the Company have entered into the Merger Agreement, providing for the merger of the Company with and into CIENA, and in connection with which the Stockholders of the Company shall receive as consideration a number of shares of Common Stock of CIENA (the “CIENA Common Stock”) as set forth in the Merger Agreement;

WHEREAS, pursuant to the Merger Agreement, CIENA and the Company have agreed that the rights of indemnification under Article VI of the Merger Agreement shall survive the consummation of the transactions contemplated by the Merger Agreement for a period of one year, and shall be secured, pursuant to this Agreement, by certain shares of CIENA Common Stock (together with any accumulations thereto as provided herein, the “Escrow Shares”), to be registered in the name of the Escrow Agent, as escrow agent hereunder, and deposited in escrow with the Escrow Agent;

WHEREAS, pursuant to the Merger Agreement, the Stockholders’ Representative is entitled to full reimbursement for out-of-pocket fees and expenses and other obligations of or incurred by the Stockholders’ Representative in connection with the Merger Agreement and this Agreement, which reimbursement shall be satisfied out of the Escrow Shares and the proceeds from certain shares of CIENA Common Stock (together with any accumulations thereto as provided herein, the “Reimbursement Shares”), to be registered in the name of the Escrow Agent, as escrow agent hereunder, and deposited in escrow with the Escrow Agent;

WHEREAS, the Escrow Agent is willing to act in the capacity of Escrow Agent hereunder subject to, and upon the terms and conditions of this Agreement;

WHEREAS, pursuant to the Merger Agreement, the Stockholders’ Representative has been appointed as the Stockholders’ attorney-in-fact and authorized and empowered to act, for and on behalf of any or all of the Stockholders (with full power of substitution in the premises) in connection with the indemnity provisions of the Merger Agreement, this Escrow Agreement, and such other matters as are reasonably necessary for the consummation of the transactions contemplated hereby and thereby; and

WHEREAS, capitalized terms used and not defined herein have the meanings assigned to such terms in the Merger Agreement.

NOW, THEREFORE, in consideration of the promises, covenants and agreements set forth in this Agreement and of other good and valuable consideration, the receipt and legal sufficiency of which they hereby acknowledge, and intending to be legally bound hereby, and as an inducement for the execution

and delivery of the Merger Agreement, CIENA, the Company, the Escrow Agent and the Stockholders' Representative hereby agree as follows:

ARTICLE I

DESIGNATION OF ESCROW AGENT AND CAPITAL SHARES
SUBJECT TO ESCROW

1.1 Designation of Escrow Agent. CIENA and the Company hereby mutually designate and appoint State Street Bank and Trust Company, N.A., a national banking association, having an office and place of business located at 61 Broadway, New York, New York 10006, as Escrow Agent for the purposes set forth herein. The Escrow Agent hereby accepts such appointment and agrees to act in furtherance of the provisions of the Merger Agreement, but only upon the terms and conditions provided in this Agreement.

1.2 Capital Stock Subject to Escrow. In accordance with Section 6.2 of the Merger Agreement, upon execution of this Agreement and subject to compliance by the Company with the provisions of the Merger Agreement, CIENA shall on _____, 2003 issue and deliver, or cause to be delivered, on behalf of the Company Shareholders to the Escrow Agent one or more stock certificates (the "Escrow Certificates"), each of which shall be registered in the name of the Escrow Agent as escrow agent hereunder evidencing the Escrow Amount. The Escrow Agent shall hold and distribute the Escrow Certificates and Escrow Shares in accordance with the terms hereof.

1.3 Value of Escrow Shares. For all purposes pursuant to this Agreement, including without limitation the distribution of Escrow Shares, the value of each Escrow Share shall be equal to the Per Share Price.

1.4 Powers of Stockholders' Representative. Pursuant to the Merger Agreement, Michael Feinstein has irrevocably been appointed as the Stockholders' Representative to act as the true and lawful agent of the Stockholders and attorney-in-fact with respect to all matters arising in connection with this Agreement, including but not limited to the power and authority on behalf of each Stockholder (other than in his or her own right) to do any one or all of the following:

- (i) Receive all notices or documents given or to be given to any of the Stockholders by CIENA pursuant hereto or to the Merger Agreement or in connection herewith or therewith and to receive and accept service of legal process in connection with any suit or proceeding arising under this Agreement or the Escrow Agreement;
- (ii) Deliver to CIENA at the Closing all certificates and documents to be delivered to CIENA by any of the Stockholders pursuant to the Merger Agreement, together with any other certificates and documents executed by any of the Stockholders and deposited with the Stockholders' Representative for such purpose;
- (iii) Engage counsel, and such accountants and other advisors for any of the Stockholders and incur such other expenses on behalf of any of the Stockholders in connection with this Agreement or the Merger Agreement and the transactions contemplated hereby or thereby as the Stockholders' Representative may in its sole discretion deem appropriate; and
- (iv) Take such action on behalf of any of the Stockholders as the Stockholders' Representative may in its sole discretion deem appropriate in respect of:
 - (A) waiving any inaccuracies in the representations or warranties of CIENA contained in this Agreement or in any document delivered by CIENA pursuant hereto;
 - (B) waiving the fulfillment of any of the conditions precedent to the Company's obligations hereunder or pursuant to the Merger Agreement;
 - (C) taking such other action as the Stockholders' Representative or any of the Stockholders is authorized to take under this Agreement or the Merger Agreement;

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(D) receiving all documents or certificates and making all determinations, on behalf of any of the Stockholders, required under this Agreement or the Merger Agreement;

(E) all such other matters as the Stockholders' Representative may in its sole discretion deem necessary or appropriate to consummate this Agreement or the Merger Agreement and the transactions contemplated hereby and thereby; and

(F) all such action as may be necessary after the Closing Date to carry out any of the transactions contemplated by this Agreement, including, without limitation, the defense and/or settlement of any claims for which indemnification is sought pursuant to Article VI of the Merger Agreement and any waiver of any obligation of CIENA or the Surviving Company.

All actions, decisions and instructions of the Stockholders' Representative shall be conclusive and binding upon all of the Stockholders and no Stockholder nor any other Person shall have any claim or cause of action against the Stockholders' Representative, and the Stockholders' Representative shall have no liability to any Stockholder or any other Person, for any action taken, decision made or instruction given by the Stockholders' Representative in connection with the Escrow Agreement or this Agreement, except in the case of his own gross negligence or willful misconduct.

ARTICLE II

TREATMENT OF ACCUMULATIONS TO ESCROW SHARES

2.1 Escrow Period; Distribution Upon Termination of Escrow Periods. Subject to the following requirements, the Escrow Fund shall be in existence immediately following the Effective Time and shall terminate on the first anniversary of that date, , 2004 (the "Escrow Period"); provided, however, that the Escrow Period shall not terminate with respect to any amount which, in the reasonable judgment of CIENA, is necessary to satisfy any Losses incurred by CIENA (or properly accrued in accordance with GAAP applied on a consistent basis for a Loss that CIENA reasonably believes it will have to pay with respect to a third-party claim of which CIENA or the Company has received notice prior to the termination of the Escrow Period) and specified in any Officer's Certificate (as defined below) delivered to the Escrow Agent prior to termination of such Escrow Period with respect to facts and circumstances existing prior to the termination of such Escrow Period. The Escrow Agent shall promptly deliver to the Exchange Agent for distribution to the Stockholders, and the Escrow Period shall terminate with respect to, the remaining portion of the Escrow Fund not required to satisfy such claims following the termination of the Escrow Period (less the amount of any out-of-pocket fees and expenses and other obligations to (or anticipated obligations to) or obligations incurred or anticipated to be incurred by the Stockholders' Representative in connection with the Merger Agreement and this Agreement, and not previously paid to the Stockholders' Representative out of the Reimbursement Fund (as defined below), and for which the Stockholders' Representative has provided notice to the Escrow Agent prior to such distribution). The number of Escrow Shares to be released to each Stockholder shall be rounded down to the next whole share to avoid the release of fractional shares. As soon as all such claims have been resolved and obligations have been satisfied, the Escrow Agent shall deliver to the Stockholders all portions of the Escrow Fund not required to satisfy such claims (less the amount of any out-of-pocket fees and expenses and other obligations to (or anticipated obligations to) or obligations incurred or anticipated to be incurred by the Stockholders' Representative in connection with the Merger Agreement and this Agreement, and not previously paid to the Stockholders' Representative out of the Reimbursement Fund, and for which the Stockholders' Representative has provided notice to the Escrow Agent prior to such distribution). Any amounts withheld from Stockholders of any distribution of the Escrow Fund (or any portion thereof) to satisfy anticipated out-of-pocket fees and expenses and other obligations of or to the Stockholders' Representative shall be paid to the Stockholders' Representative or the Stockholders in accordance with the written instruction of the Stockholders' Representative to the Escrow Agent.

2.2 Protection of Escrow Fund.

(a) The Escrow Agent shall hold and safeguard the Escrow Fund during the Escrow Period, shall treat such fund as a trust fund for the benefit of the Stockholders in accordance with the terms of this Agreement and not as the property of CIENA, and shall hold and dispose of the Escrow Fund only in accordance with the terms hereof.

(b) Any shares of CIENA Common Stock or other equity securities issued or distributed by CIENA (including shares issued upon a stock split) (“New Shares”) in respect of CIENA Common Stock in the Escrow Fund which have not been released from the Escrow Fund shall be added to the Escrow Fund and become a part thereof. New Shares issued in respect of shares of CIENA Common Stock which have been released from the Escrow Fund shall not be added to the Escrow Fund but shall be distributed to the record holders thereof. Cash dividends, if any, on CIENA Common Stock shall not be added to the Escrow Fund but shall be distributed to the Stockholders in proportion to their respective original contributions to the Escrow Fund.

(c) Each Stockholder shall have voting rights and the right to distributions of cash dividends with respect to the Escrow Shares contributed to the Escrow Fund by such Stockholder (and on any voting securities added to the Escrow Fund in respect of such shares of CIENA Common Stock). As the record holder of such shares, the Escrow Agent shall vote such shares in accordance with the instructions of the Stockholders having the beneficial interest therein and shall ensure that copies of all proxy solicitation materials are promptly delivered to such Stockholders.

2.3 Additional Property Subject to Escrow. If at any time after the date hereof and prior to the distribution of the Escrow Shares any of the Stockholders shall become entitled to receive or shall receive in connection with the Escrow Shares any (i) non-taxable distribution of securities of CIENA or of any other entity including, without limitation, any certificate in connection with any increase or reduction of capital, reclassification, recapitalization, merger, business combination, consolidation, sale of assets, stock split-up or spin-off; or (ii) any non-taxable distribution of stock options, warrants or rights, whether as an addition to or in substitution of or exchange for any of the Escrow Shares; or (iii) non-taxable stock dividend or other non-taxable distribution payable in securities or property of any description, all of the shares of capital stock, or other property resulting from any such distribution, stock option, warrant, right or stock dividend shall be deemed to be Escrow Shares and shall be subject to the terms hereof to the same extent as the original Escrow Shares. Any cash dividends and any taxable stock dividends paid with respect to the Escrow Shares shall be paid to the Stockholders in accordance with their respective proportionate interests in the Escrow Shares and any taxable stock dividends. Each of the Stockholders shall recognize as income on a current basis all of the cash dividends which such Stockholder is entitled to receive and for any non-cash dividend and any other non-taxable distribution shall, through the Stockholders’ Representative, execute stock powers or other appropriate instruments of transfer for all shares, options, warrants or rights as required for transfer.

2.4 Retained Voting and Other Rights. The Escrow Agent shall hold the Escrow Shares and any additional property acquired with respect thereto pursuant to Section 2.3 above in safekeeping and dispose thereof only in accordance with the terms of this Agreement. The Escrow Agent may treat the Stockholders’ Representative as the duly authorized agent and representative of the Stockholders with respect to any additional property related to the Escrow Shares. The Escrow Agent shall hold the Escrow Shares in accordance with each Stockholder’s proportionate interest in the Escrow Shares and shall (to the extent legally permissible) vote the Escrow Shares in accordance with the written instructions of the Stockholder for whose account such Escrow Shares are held.

ARTICLE III

**DISTRIBUTION OF ESCROW SHARES UPON TERMINATION
OF THE AGREEMENT**

3.1 Third-Party Claims. In the event CIENA becomes aware of an event which CIENA reasonably believes may result in a demand against the Escrow Fund, CIENA shall notify the Stockholders' Representative of such claim. The Stockholders' Representative will then have the right to defend, contest, negotiate or settle any such claim or demand through counsel of his own selection (who shall be reasonably acceptable to CIENA), at the Stockholders' own cost and expense, which costs and expenses will be payable out of the Reimbursement Fund and the Escrow Fund and CIENA shall cooperate with and assist the Stockholders' Representative in the defense of such claim or demand. Notwithstanding the preceding sentence, the Stockholders' Representative will not settle, compromise, or offer to settle or compromise any such claim or demand without the prior written consent of CIENA, which consent will not be unreasonably withheld. Upon receipt by the Escrow Agent of a written instrument that is executed by the Stockholders' Representative and that instructs the Escrow Agent as to the disbursement of some or all of the Reimbursement Fund (or, to the extent the Reimbursement Fund is insufficient to satisfy such costs and expenses, from the Escrow Fund), the Escrow Agent shall within two (2) business days of such instruction disburse to the Stockholders' Representative the amount so instructed in such written instrument whereupon the then current Reimbursement Fund balance or Escrow Fund balance, as applicable, shall be reduced by such amount. If the Stockholders' Representative gives notice to CIENA, that the Stockholders' Representative elects to have CIENA defend, contest, negotiate, or settle any such claim or demand, then CIENA will have the right to contest and/or settle any such claim or demand and the Stockholders' Representative shall cooperate with and assist CIENA in the defense of such claim or demand, *provided, however*, that CIENA will not settle, compromise, or offer to settle or compromise any such claim or demand without the prior written consent (which may include a general or limited consent) of the Stockholders' Representative, which consent will not be unreasonably withheld. Notwithstanding the foregoing, any conflict or ambiguity between this [Section 3.1](#) and the terms of the Merger Agreement will be determined in favor of the provisions set forth in the Merger Agreement. In the event that the Stockholders' Representative has consented to any settlement, the Stockholders shall have no power or authority to object under any provision of this Agreement to the amount of such settlement.

3.2 Claims Upon Escrow Fund.

(a) Upon receipt by the Escrow Agent at any time on or before the last day of the Escrow Period of a certificate signed by any officer of CIENA (an "Officer's Certificate"): (A) stating that CIENA (i) has incurred a Loss for which CIENA is entitled to indemnification under the Merger Agreement, or (ii) has properly accrued (or reasonably anticipates that it will have to accrue) in accordance with GAAP applied on a consistent basis, for a Loss that CIENA reasonably believes it will have to pay with respect to a third-party claim of which CIENA or the Company has received notice prior to the termination of the Escrow Period, and (B) specifying in reasonable detail the matter for which it claims entitlement for indemnification and/or the individual items of Losses included in the amount so stated, the date each such item was paid or properly accrued or the basis for such anticipated accrual, and the nature of the misrepresentation, breach of warranty or covenant to which such item is related, the Escrow Agent shall deliver to CIENA, as promptly as practicable, but subject to [Section 3.3](#) below, an amount equal to the Escrow Payment (as defined below) in the manner set forth in the immediately following sentence; provided, however, that in the event of a third party claim that is the subject of the demand on the Escrow Fund, no Escrow Payment shall be delivered until the claim is settled or adjudicated unless the Stockholders Representative and CIENA otherwise agree. The Escrow Agent shall allocate any amount of Loss it is required to reimburse to CIENA in accordance with this Agreement based on the number of shares of CIENA Common Stock held in the Escrow Fund for the benefit of each Stockholder (each of which shall be valued at the Assumed Value in accordance with [Section 1.3](#) hereof). Any Escrow Shares used to satisfy an Escrow Payment and delivered to CIENA out of the Escrow Fund shall (i) reduce each such

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Stockholder's interest in the Escrow Fund in the form of CIENA Common Stock in proportion to such Stockholder's respective original contributions to the Escrow Fund and (ii) consist of vested and unvested Escrow Shares ratably in proportion to the amount of vested and unvested shares held in the Escrow Fund with respect to such Stockholder at the time of such delivery. Notwithstanding anything herein to the contrary, the Escrow Agent shall rely conclusively on the Officer's Certificate and shall have no responsibility to determine whether the information set forth therein is accurate or correct, or whether the claim has been specified in reasonable detail.

(b) "Escrow Payment" shall mean, at CIENA's election, either (i) such number of Escrow Shares out of the Escrow Fund (each of which shall be valued at the Assumed Value in accordance with Section 1.3 hereof) with an aggregate value equal to the Losses for which the Escrow Payment is being made, rounded up to the next whole share to avoid the release of fractional shares (the "Payment Shares"), or (ii) the proceeds from the sale of such Payment Shares by the Escrow Agent on behalf of each Stockholder's account; provided, however that in no event shall the Escrow Payment exceed the number of Escrow Shares (or proceeds from the sale of the Escrow Shares) in the Escrow Fund at the time of such Escrow Payment.

3.3 Notification of Stockholders' Representative. At the time of delivery of any Officer's Certificate to the Escrow Agent, a duplicate copy of such certificate shall be delivered to the Stockholders' Representative (with proof of such delivery to the Escrow Agent (which proof of delivery may consist of a photocopy of the registered or certified mail or overnight courier receipt of the signed receipt if delivered by hand)(the "Proof of Delivery")), and for a period of thirty (30) days after such delivery, the Escrow Agent shall make no delivery to CIENA of any Escrow Payment unless the Escrow Agent shall have received written authorization from the Stockholders' Representative to make such delivery. After the expiration of thirty (30) days following the Escrow Agent's receipt of the Officer's Certificate, the Escrow Agent shall make delivery of the Escrow Payment; provided, however, that no such payment or delivery may be made if the Stockholders' Representative shall object in a written statement to the claim made in the Officer's Certificate, and such statement shall have been delivered to the Escrow Agent prior to the expiration of such thirty (30) day period. The Escrow Agent shall have no responsibility to determine whether a copy of the Officer's Certificate was delivered to the Stockholders' Representative other than confirming it has received the Proof of Delivery from CIENA.

3.4 Resolution of Conflicts; Arbitration.

(a) In case the Stockholders' Representative shall object in writing to any claim or claims made in any Officer's Certificate, the Stockholders' Representative and CIENA shall attempt in good faith to agree upon the rights of the respective parties with respect to each of such claims. If the Stockholders' Representative and CIENA should so agree, a memorandum setting forth such agreement shall be prepared and signed by both parties and shall be furnished to the Escrow Agent in accordance with the terms thereof.

(b) If no such agreement can be reached after good faith negotiation, either CIENA or the Stockholders' Representative may demand arbitration of the matter unless the amount of the claim or Loss is at issue in pending litigation with a third party, in which event arbitration shall not be commenced until such amount is ascertained or both parties agree to arbitration; and in either such event the matter shall be settled by arbitration conducted by one arbitrator mutually agreeable to CIENA and the Stockholders' Representative. In the event that within forty-five (45) days after submission of any dispute to arbitration, CIENA and the Stockholders' Representative cannot mutually agree on one arbitrator, CIENA and the Stockholders' Representative shall each select one arbitrator, and the two arbitrators so selected shall select a third arbitrator. The arbitrator or arbitrators, as the case may be, shall set a limited time period and establish procedures designed to reduce the cost and time for discovery while allowing the parties an opportunity, adequate in the sole judgment of the arbitrator or majority of the three arbitrators, as the case may be, to discover relevant information from the opposing parties about the subject matter of the dispute. The arbitrator or a majority of the three arbitrators, as the case may be, shall rule upon motions to compel or limit

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discovery and shall have the authority to impose sanctions, including attorneys' fees and costs, to the same extent as a competent court of law or equity, should the arbitrators or a majority of the three arbitrators, as the case may be, determine that discovery was sought without substantial justification or that discovery was refused or objected to without substantial justification. The decision of the arbitrator or a majority of the three arbitrators, as the case may be, as to the validity and amount of any claim in such Officer's Certificate shall be binding and conclusive upon the parties to this Agreement. Such decision shall be written and shall be supported by written findings of fact and conclusions which shall set forth the award, judgment, decree or order awarded by the arbitrator(s).

(c) Judgment upon any award rendered by the arbitrator(s) may be entered in any court having jurisdiction. Any such arbitration shall be held in Baltimore, Maryland, under the rules then in effect of the American Arbitration Association. The arbitrator(s) shall determine how all expenses relating to the arbitration shall be paid, including without limitation, the respective expenses of each party, the fees of each arbitrator and the administrative fee of the American Arbitration Association.

ARTICLE IV

ESCROW AGENT

4.1 Escrow Agent's Duties.

(a) The Escrow Agent (i) shall be obligated only for the performance of such duties as are specifically set forth herein, and as set forth in any additional written escrow instructions which the Escrow Agent may receive after the date of this Agreement which are signed by an officer of CIENA and the Stockholders' Representative, and shall have no duty to exercise any greater degree of care with respect to the Escrow Fund than it would for its own property and this Agreement shall not be deemed to create a fiduciary duty between the parties under state or federal law, (ii) may rely and shall be protected in relying or refraining from acting on any instrument reasonably believed to be genuine and to have been signed or presented by the proper party or parties, and (iii) shall not be obligated to take any legal or other action hereunder which might in its judgment involve or cause it to incur any expense or liability unless it shall have been provided with acceptable indemnification. The Escrow Agent may rely on the Stockholders' Representative as the exclusive agent of the Stockholders under this Agreement and the Merger Agreement and shall incur no liability to any party with respect to any action taken or suffered by it in good faith in reliance thereon. The Escrow Agent shall not be liable for any act done or omitted hereunder as Escrow Agent while acting in good faith and in the exercise of reasonable judgment, and any act done or omitted pursuant to the advice of counsel shall be conclusive evidence of such good faith. The Escrow Agent is not a party to nor shall be liable for any of the agreements referred to or described herein (including, without limitation, the Merger Agreement).

(b) The Escrow Agent is hereby expressly authorized to disregard any and all warnings given by any of the parties hereto or by any other person, and is hereby expressly authorized to comply with and obey any final non-appealable orders, judgments or decrees of any court or of the arbitrator(s). In case the Escrow Agent obeys or complies with any such order, judgment or decree of any court or of the arbitration panel, the Escrow Agent shall not be liable to any of the parties hereto or to any other person by reason of such compliance, notwithstanding any such order, judgment or decree being subsequently reversed, modified, annulled, set aside, vacated or found to have been entered without jurisdiction.

(c) The Escrow Agent shall not be liable in any respect on account of the identity, authority or rights of the parties executing or delivering or purporting to execute or deliver this Agreement or any documents or papers deposited or called for hereunder.

(d) The Escrow Agent shall not be liable for the expiration of any rights under any statute of limitations with respect to this Agreement or any documents deposited with the Escrow Agent.

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(e) In performing any duties under the Agreement, the Escrow Agent shall not be liable to any party for damages, losses, or expenses, except for negligence or willful misconduct on the part of the Escrow Agent. The Escrow Agent shall not incur any such liability for any action taken or omitted in reliance upon any instrument, including any written statement or affidavit provided for in this Agreement that the Escrow Agent shall in good faith believe to be genuine, nor will the Escrow Agent be liable or responsible for forgeries, fraud, impersonations, or determining the scope of any representative authority. In addition, the Escrow Agent may consult with legal counsel in connection with Escrow Agent's duties under this Agreement and shall be fully protected in any act taken, suffered, or permitted by him/her in good faith in accordance with the advice of counsel. The Escrow Agent is not responsible for determining and verifying the authority of any person acting or purporting to act on behalf of any party to this Agreement, provided such determination or verification is in good faith.

(f) If any controversy arises between the parties to this Agreement, or with any other party, concerning the subject matter of this Agreement, its terms or conditions, the Escrow Agent will not be required to resolve the controversy or to take any action regarding it. The Escrow Agent may hold all documents and Escrow Shares and may wait for settlement of any such controversy by final appropriate legal proceedings or other means as, in the Escrow Agent's discretion, the Escrow Agent may reasonably require, despite what may be set forth elsewhere in this Agreement. In such event, the Escrow Agent will not be liable for any damages. Furthermore, the Escrow Agent may at its option, file an action of interpleader requiring the parties to answer and litigate any claims and rights among themselves. The Escrow Agent is authorized to deposit with the clerk of the court all documents and Escrow Shares held in escrow, except all costs, expenses, charges and reasonable attorney's fees incurred by the Escrow Agent due to the interpleader action and which the parties jointly and severally agree to pay. Upon initiating such action, the Escrow Agent shall be fully released and discharged of and from all obligations and liability by the terms of this Agreement.

(g) The parties and their respective successors and assigns agree jointly and severally to indemnify and hold Escrow Agent harmless against any and all losses, claims, damages, liabilities, and expenses, including reasonable costs of investigation, counsel fees, including allocated costs of in-house counsel and disbursements that may be imposed on Escrow Agent or incurred by Escrow Agent in connection with the performance of his/her duties under this Agreement, including but not limited to any litigation or arbitration arising from this Agreement or involving its subject matter other than arising out of its negligence or willful misconduct.

(h) The Escrow Agent may resign at any time upon giving at least thirty (30) days written notice to the parties; provided, however, that no such resignation shall become effective until the appointment of a successor escrow agent which shall be accomplished as follows: the parties shall use their best efforts to mutually agree on a successor escrow agent within thirty (30) days after receiving such notice. If the parties fail to agree upon a successor escrow agent within such time, the Escrow Agent shall have the right to appoint a successor escrow agent authorized to do business in the State of Delaware or the Escrow Agent may apply to a court of competent jurisdiction for appointment of a successor escrow agent. The successor escrow agent shall execute and deliver an instrument accepting such appointment and it shall, without further acts, be vested with all the estates, properties, rights, powers, and duties of the predecessor escrow agent as if originally named as Escrow Agent. Upon appointment of a successor escrow agent, the Escrow Agent shall be discharged from any further duties and liability under this Agreement.

4.2 Fees. All fees of the Escrow Agent for performance of its duties hereunder shall be paid by CIENA in accordance with the fee schedule of the Escrow Agent attached hereto, which schedule may be subject to change hereafter on an annual basis subject to CIENA's prior approval. It is understood that the fees and usual charges agreed upon for services of the Escrow Agent shall be considered compensation for ordinary services as contemplated by this Agreement. In the event that the conditions of this Agreement are not promptly fulfilled, or if the Escrow Agent renders any service not provided for in this Agreement, or if the parties request a substantial modification of its terms, or if any controversy arises, or

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if the Escrow Agent is made a party to, or intervenes in, any litigation or arbitration pertaining to the Escrow Fund or its subject matter, the Escrow Agent shall be reasonably compensated for such extraordinary services and reimbursed for all costs, attorney's fees, including allocated costs of in-house counsel, and expenses occasioned by such default, delay, controversy or litigation or arbitration.

4.3 Consequential Damages. Subject to the provisions of Section 4.1(c) hereof, in no event shall the Escrow Agent be liable for special, indirect or consequential loss or damage of any kind whatsoever (including but not limited to lost profits), even if the Escrow Agent has been advised of the likelihood of such loss or damage and regardless of the form of action.

4.4 Successor Escrow Agents. Any corporation into which the Escrow Agent in its individual capacity may be merged or converted or with which it may be consolidated, or any corporation resulting from any merger, conversion or consolidation to which the Escrow Agent in its individual capacity shall be a party, or any corporation to which substantially all the corporate trust business of the Escrow Agent in its individual capacity may be transferred, shall be the Escrow Agent under this Escrow Agreement without further act.

ARTICLE V

THE STOCKHOLDERS' REPRESENTATIVE

5.1 Stockholders' Representative Powers and Authority. The Stockholders' Representative shall have full power and authority to represent all of the Stockholders and their successors with respect to all matters arising under this Agreement and the Merger Agreement and all actions taken by the Stockholders' Representative hereunder and thereunder shall be binding upon all such Stockholders and their successors as if expressly confirmed and ratified in writing by each of them and no Stockholder shall have the right to object, dissent, protest or otherwise contest the same. The Stockholders' Representative shall take any and all actions which he believes are necessary or appropriate under this Agreement and the Merger Agreement for and on behalf of the Stockholders, as fully as if the Stockholders were acting on their own behalf, including, without limitation, executing this Agreement as Stockholders' Representative, giving and receiving any notice or instruction permitted or required under this Agreement or the Merger Agreement by the Stockholders' Representative or any Stockholder, interpreting all of the terms and provisions of this Agreement and the Merger Agreement, authorizing payments to be made with respect hereto or thereto, obtaining reimbursement as provided for herein for all out-of-pocket fees and expenses and other obligations of or incurred by the Stockholders' Representative in connection with this Agreement and the Merger Agreement, defending all indemnity claims against the Stockholders pursuant to Section 6.2 of the Merger Agreement (an "Indemnity Claim"), consenting to, compromising or settling all Indemnity Claims, conducting negotiations with CIENA and its agents regarding such claims, dealing with CIENA and the Escrow Agent under this Agreement and the Merger Agreement with respect to all matters arising under this Agreement and the Merger Agreement, taking any and all other actions specified in or contemplated by this Agreement and the Merger Agreement, and engaging counsel, accountants or other Stockholders' Representatives in connection with the foregoing matters. Without limiting the generality of the foregoing, the Stockholders' Representative shall have full power and authority to interpret all the terms and provisions of this Agreement and the Merger Agreement and to consent to any amendment hereof or thereof on behalf of all such Stockholders and such successors. Notwithstanding the foregoing, each Stockholder shall have the right to exercise any voting rights appertaining to the Escrow Shares.

5.2 Indemnification of Stockholders' Representative. The Stockholders' Representative shall incur no liability to the Stockholders or the Escrow Agent or any other person with respect to any action taken or suffered by it in reliance upon any note, direction, instruction, consent, statement or other documents reasonably believed by the Stockholders' Representative to be genuinely and duly authorized by at least a majority in interest of the Stockholders (or the successors or assigns thereto), nor for other action or inaction taken or omitted in good faith in connection herewith or with the Merger Agreement, in any case except for liability to the Stockholders for its own gross negligence or willful misconduct. The

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Stockholders' Representative shall be indemnified for and shall be held harmless against any loss, liability or expense incurred without gross negligence or willful misconduct on the part of the Stockholders' Representative arising out of or in connection with its performance under this Agreement and the Merger Agreement. This indemnification shall survive the termination of this Agreement. The costs of such indemnification (including the costs and expenses of enforcing this right of indemnification) shall be paid from the principal portion of the Reimbursement Fund (or, to the extent the Reimbursement Fund is insufficient to satisfy such costs and expenses, from the Escrow Fund). For all purposes hereunder, a majority in interest of the Stockholders shall be determined on the basis of each Stockholder's ownership of Company Common Stock immediately prior to the Effective Time (assuming the exercise or conversion of all Company Preferred Stock, Company Stock Options and Company Preferred Warrants outstanding immediately prior to the Effective Time). The Stockholders' Representative may, in all questions arising under this Agreement, rely on the advice of counsel and for anything done, omitted or suffered in good faith by the Stockholders' Representative in accordance with such advice, the Stockholders' Representative shall not be liable to the Stockholders or the Escrow Agent or any other person. In no event shall the Stockholders' Representative be liable hereunder or in connection herewith for (i) any indirect, punitive, special or consequential damages, or (ii) any amounts other than those that are satisfied out of the Reimbursement Fund or, to the extent provided for herein, the Escrow Fund. The Escrow Agent shall from time to time sell such amount of the Escrow Shares as necessary to pay such Stockholders' Representative's costs and expenses, to the extent required by this Section 5.2.

5.3 Access to Information. The Stockholders' Representative shall have reasonable access to information of and concerning any Indemnity Claim and which is in the possession, custody or control of the Company and the reasonable assistance of the Company's officers and employees for purposes of performing the Stockholders' Representative's duties under this Agreement or the Merger Agreement and exercising its rights under this Agreement and the Merger Agreement, including for the purpose of evaluating any Indemnity Claim against the Escrow Shares by CIENA; provided that the Stockholders' Representative shall treat confidentially and not disclose any nonpublic information from or concerning any Indemnity Claim to anyone (except to the Stockholders' Representative's attorneys, accountants and other advisers, to Stockholders, to the arbitrators appointed to resolve disputes pursuant to this Agreement, and on a need-to-know basis to other individuals who agree to keep such information confidential).

5.4 Reasonable Reliance. In the performance of his duties hereunder, the Stockholders' Representative shall be entitled to rely upon any document or instrument reasonably believed by him to be genuine, accurate as to content and signed by any Stockholder or CIENA. The Stockholders' Representative may assume that any person purporting to give any notice in accordance with the provisions hereof has been duly authorized to do so.

5.5 Attorney-in-Fact.

(a) The Stockholders' Representative is hereby appointed and constituted the true and lawful attorney-in-fact of each Stockholder, with full power in his, her or its name and on his, her or its behalf to act according to the terms of this Agreement and the Merger Agreement in the absolute discretion of the Stockholders' Representative; and in general to do all things and to perform all acts including, without limitation, executing and delivering this Agreement and any other agreements, certificates, receipts, instructions, notices or instruments contemplated by or deemed advisable in connection with this Agreement.

(b) This power of attorney and all authority hereby conferred is granted and shall be irrevocable and shall not be terminated by any act of any Stockholder, by operation of law, whether by such Stockholder's death, disability protective supervision or any other event. Without limitation to the foregoing, this power of attorney is to ensure the performance of a special obligation and, accordingly, each Stockholder hereby renounces its, his or her right to renounce this power of attorney unilaterally any time before the end of the Escrow Period.

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(c) Each Stockholder hereby waives any and all defenses which may be available to contest, negate or disaffirm the action of the Stockholders' Representative taken in good faith under this Agreement.

(d) Notwithstanding the power of attorney granted in this Article V, no agreement, instrument, acknowledgement or other act or document shall be ineffective by reason only of the Stockholders having signed or given such directly instead of the Stockholders' Representative.

5.6 Liability. If the Stockholders' Representative is required by the terms of this Agreement to determine the occurrence of any event or contingency, the Stockholders' Representative shall, in making such determination, be liable to the Stockholders only for his proven gross negligence or willful misconduct as determined in light of all the circumstances, including the time and facilities available to him in the ordinary conduct of business. In determining the occurrence of any such event or contingency, the Stockholders' Representative may request from any of the Stockholders or any other person such reasonable additional evidence as the Stockholders' Representative in his sole discretion may deem necessary to determine any fact relating to the occurrence of such event or contingency, and may at any time inquire of and consult with others, including any of the Stockholders, and the Stockholders' Representative shall not be liable to any Stockholder for any damages resulting from his delay in acting hereunder pending his receipt and examination of additional evidence requested by him.

5.7 Orders. The Stockholders' Representative is authorized, in his sole discretion, to comply with final, nonappealable orders or decisions issued or process entered by any court of competent jurisdiction or arbitrator with respect to the Escrow Shares. If any portion of the Escrow Shares is disbursed to the Stockholders' Representative and is at any time attached, garnished or levied upon under any court order, or in case the payment, assignment, transfer, conveyance or delivery of any such property shall be stayed or enjoined by any court order, or in case any order, judgment or decree shall be made or entered by any court affecting such property or any part thereof, then and in any such event, the Stockholders' Representative is authorized, in his sole discretion, but in good faith, to rely upon and comply with any such order, writ, judgment or decree which he is advised by legal counsel selected by him is binding upon him without the need for appeal or other action; and if the Stockholders' Representative complies with any such order, writ, judgment or decree, he shall not be liable to any Stockholder or to any other Person by reason of such compliance even though such order, writ, judgment or decree may be subsequently reversed, modified, annulled, set aside or vacated.

5.8 Removal of Stockholders' Representative; Authority of Successor Stockholders' Representative. Stockholders who in the aggregate hold at least a majority of the Stockholders' interest in the Escrow Fund shall have the right at any time during the term of the Escrow Agreement to remove the then-acting Stockholders' Representative and to appoint a successor Stockholders' Representative; provided, however, that neither such removal of the then acting Stockholders' Representative nor such appointment of a successor Stockholders' Representative shall be effective until the delivery to the Escrow Agent of executed counterparts of a writing signed by each such Stockholder with respect to such removal and appointment, together with an acknowledgment signed by the successor Stockholders' Representative appointed in such writing that he or she accepts the responsibility of successor Stockholders' Representative and agrees to perform and be bound by all of the provisions of this Agreement applicable to the Stockholders' Representative. Each successor Stockholders' Representative shall have all of the power, authority, rights and privileges conferred by this Agreement upon the original Stockholders' Representative, and the term "Stockholders' Representative" as used herein and in the Escrow Agreement shall be deemed to include any interim or successor Stockholders' Representative.

5.9 Reimbursement Fund.

(a) Deposit of Reimbursement Shares. In accordance with Section 6.2 of the Merger Agreement, upon execution of this Agreement and subject to compliance by the Company with the provisions of the Merger Agreement, CIENA shall on _____, 2003 issue and deliver, or cause to be delivered, on behalf of the Company Stockholders to the Escrow Agent one or more stock certificates (the "Reimbursement Certificates") having an aggregate Assumed Value equal to

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\$250,000, each of which shall be registered in the name of the Escrow Agent, as escrow agent hereunder, evidencing the Reimbursement Amount (as defined in the Merger Agreement). The Escrow Agent shall hold and distribute the Reimbursement Certificates and Reimbursement Shares in accordance with the terms hereof.

(b) Sale of Reimbursement Shares. Upon receiving instruction from the Stockholders' Representative, the Escrow Agent shall sell on the open market any or all of the Reimbursement Shares and hold the proceeds from such sale (the "Reimbursement Proceeds") in the Reimbursement Fund (as defined below). For purposes of this Agreement, the term "Reimbursement Fund" shall mean the Reimbursement Shares until sold in accordance with this Section 5.9(b) and thereafter the Reimbursement Proceeds, together with any interest or other income earned thereon or distributions received in respect thereof.

(c) Reimbursement Fund. Pursuant to Section 6.3 of the Merger Agreement and this Article V, the Stockholders' Representative is entitled to full reimbursement for out-of-pocket fees and expenses and other obligations of or incurred by the Stockholders' Representative in connection with the Merger Agreement and this Agreement. The Reimbursement Fund shall be used to reimburse the Stockholders' Representative for out-of-pocket fees and expenses and to pay other obligations to or of the Stockholders' Representative, or shall (to the extent not previously distributed to the Stockholders' Representative as provided for above) be distributed to the Stockholders at such time as the Escrow Fund is fully and finally distributed in accordance with the terms of this Agreement. In the event the Reimbursement Fund is unavailable or insufficient to satisfy in full the out-of-pocket fees and expenses of and other obligations to or of the Stockholders' Representative, then the Stockholders' Representative shall be entitled to reimbursement for such out-of-pocket fees and expenses and other obligations to or of the Stockholders' Representative out of the Escrow Fund.

(d) Treatment of the Reimbursement Fund. The Escrow Agent shall hold and safeguard the Reimbursement Fund during the Escrow Period, shall treat the Reimbursement Fund as a trust fund for the benefit of the Stockholders and the Stockholders' Representative in accordance with the terms of this Agreement and not as the property of CIENA, and shall hold and dispose of the Reimbursement Fund only in accordance with the terms hereof.

(e) Investment of Reimbursement Fund. The Escrow Agent shall invest the Reimbursement Proceeds in the Escrow Agent's "Insured Money Market Fund" (IMMA). Earnings received from the investment of the Reimbursement Proceeds shall be held in the Reimbursement Fund in accordance with the terms of this Agreement. The Escrow Agent shall have no liability for any investment losses, including without limitation any market loss on any investment liquidated prior to maturity in order to make a payment required hereunder.

(f) Disbursement of the Reimbursement Fund. The Escrow Agent shall disburse the Reimbursement Fund only in accordance with a written instrument delivered to the Escrow Agent that is executed by the Stockholders' Representative and that instructs the Escrow Agent as to the disbursement of some or all of the Reimbursement Fund. Upon receipt by the Escrow Agent of a written instrument that is executed by the Stockholders' Representative and that instructs the Escrow Agent as to the disbursement of some or all of the Reimbursement Fund, the Escrow Agent shall within two (2) business days of such instruction disburse to the Stockholders' Representative the amount so instructed in such written instrument whereupon the then current Reimbursement Fund balance shall be reduced by such amount. In the event the Reimbursement Fund is unavailable or insufficient to satisfy in full the out-of-pocket fees and expenses of and other obligations to or of the Stockholders' Representative, then upon receipt by the Escrow Agent of a written instrument that is executed by the Stockholders' Representative and that instructs the Escrow Agent as to the disbursement of some or all of the Escrow Fund in satisfaction of the out-of-pocket fees and expenses of and other obligations to or of the Stockholders' Representative, the Escrow Agent shall within two (2) business days of such instruction disburse to the Stockholders' Representative the amount so

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instructed in such written instrument whereupon the then current Escrow Fund balance shall be reduced by such amount.

(g) **Distribution of Earnings; Tax Reporting.** Any interest or income earned on the Reimbursement Proceeds (or any cash dividends or taxable stock dividends paid with respect to the Reimbursement Shares) shall be paid to the Stockholders at least annually in accordance with their respective proportionate interests in the Reimbursement Fund. For tax reporting purposes, all interest or other income earned from the investment of the Reimbursement Proceeds (and all cash dividends or taxable stock dividends earned in respect of the Reimbursement Shares) in any tax year shall, to the extent such interest or other income is distributed by the Escrow Agent to any person or entity pursuant to the terms of this Agreement during such tax year, be reported as allocated to such person or entity.

ARTICLE VI

MISCELLANEOUS

6.1 Successors and Assigns. This Agreement shall be binding upon and shall inure to the benefit of Stockholders (by and through the Stockholders' Representative), CIENA and the Escrow Agent, and their respective successors and assigns, whether so expressed or not.

6.2 Waiver of Consent. No failure or delay on the part of any party hereto in exercising any power or right hereunder shall operate as a waiver thereof, nor shall any single or partial exercise of any such right or power, or any abandonment or discontinuance of steps to enforce such a right or power, preclude any other or further exercise thereof or the exercise of any other right or power. The rights and remedies of the parties hereunder are cumulative and not exclusive of any rights or remedies which they would otherwise have. No modification or waiver of any provision of this Agreement, nor consent to any departure by any party therefrom, shall in any event be effective unless the same shall be in writing, and then such waiver or consent shall be effective only in the specific instance and for the purpose for which given. No notice to or demand on any party in any case shall entitle such party to any other or further notice or demand in similar or other circumstances.

6.3 Captions. The Article and Section captions used herein are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement.

6.4 Notices. Any notice or other communication required or permitted hereunder shall be sufficiently given if delivered in person or sent by telex, telecopy or by registered or certified mail or by recognized overnight courier, postage prepaid, addressed as follows:

If to CIENA, to:

CIENA Corporation
1201 Winterson Road
Linthicum, Maryland 21090
Attention: General Counsel
Telecopy: (410) 865-8931

with a copy to its counsel:

Hogan & Hartson L.L.P.

111 South Calvert Street, 16th Floor
Baltimore, Maryland 21202
Attention: Michael J. Silver
Telecopy: (410) 659-2741

if to the Company, to:

WaveSmith Networks Inc.

35 Nagog Park

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Acton, MA 01720
Attention : Chief Financial Officer

with a copy to its counsel:

Testa, Hurwitz, Thibault, LLP

125 High Street
Boston, MA 02110
Attention: Kathy A. Fields
Telecopy: (617) 248-7100

if to the Escrow Agent, to:

State Street Bank and Trust Company, N.A.

61 Broadway, 15th Floor
New York, New York 10006
Attention: Ward Spooner, Vice President
Telecopy:
(212) 612-3201

if to the Stockholders' Representative, to:

with a copy to its counsel:

Ropes & Gray

One International Place
Boston, MA 02110
Attention: Gregory E. Moore
Telecopy: (617) 951-7000

Such notice or communication shall be deemed to have been given as of the date so delivered, sent by telecopies, telex or mailed.

6.5 Counterparts. This Agreement may be executed in two or more counterparts, all of which shall be considered one and the same agreement and each of which shall be deemed an original.

6.6 Governing Law. The interpretation and construction of this Agreement, and all matters relating thereto, shall be governed by the laws of the State of Delaware, without regard to the choice of law provisions thereof. Except as set forth in [Section 3.4\(c\)](#) with respect to any arbitration commenced pursuant to [Section 3.4](#), the non-prevailing party in any dispute arising hereunder shall bear and pay the costs and expenses (including without limitation reasonable attorneys' fees and expenses) incurred by the prevailing party or parties in connection with resolving such dispute.

6.7 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction or other authority to be invalid, void, unenforceable or against its regulatory policy, the remainder of the terms, provisions, covenants and restrictions of this Agreement shall remain in full force and effect and shall in no way be affected, impaired or invalidated.

6.8 Amendments and Waivers. The provisions of this Agreement, including the provisions of this sentence, may not be amended, modified or supplemented, and waivers or consents to departures from the provisions hereof may not be given without the written consent of CIENA, the Stockholders' Representative and the Escrow Agent, and any amendment or waiver hereunder shall be effective and binding upon all Stockholders if signed by the Stockholders' Representative.

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IN WITNESS WHEREOF, CIENA, the Company and the Escrow Agent have caused their corporate names to be hereunto subscribed by their respective officers thereunto duly authorized, and the Stockholders' Representative has executed this Agreement, all as of the day and year first above written.

CIENA CORPORATION

By: _____

WAVESMITH NETWORKS, INC.

By: _____

Name: _____

Title: _____

STOCKHOLDERS' REPRESENTATIVE:

Michael Feinstein

**STATE STREET BANK AND TRUST
COMPANY, N.A.**

Authorized Officer

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 20. Indemnification of Directors and Officers

Under Section 145 of the DGCL, a corporation may indemnify its directors, officers, employees and agents and its former directors, officers, employees and agents and those who serve, at the corporation's request, in such capacities with another enterprise, against expenses (including attorneys' fees), as well as judgments, fines and settlements in nonderivative lawsuits, actually and reasonably incurred in connection with the defense of any action, suit or proceeding in which they or any of them were or are made parties or are threatened to be made parties by reason of their serving or having served in such capacity. The DGCL provides, however, that such person must have acted in good faith and in a manner such person reasonably believed to be in (or not opposed to) the best interests of the corporation and, in the case of a criminal action, such person must have had no reasonable cause to believe his or her conduct was unlawful. In addition, the DGCL does not permit indemnification in an action or suit by or in the right of the corporation, where such person has been adjudged liable to the corporation, unless, and only to the extent that, a court determines that such person fairly and reasonably is entitled to indemnity for costs the court deems proper in light of liability adjudication. Indemnity is mandatory to the extent a claim, issue or matter has been successfully defended.

The Third Restated Certificate of Incorporation of CIENA (the "CIENA Certificate") contains provisions that provide that no director of CIENA shall be liable for breach of fiduciary duty as a director, except for: (1) any breach of the directors' duty of loyalty to CIENA or its stockholders; (2) acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of the law; (3) liability under Section 174 of the DGCL; or (4) any transaction from which the director derived an improper personal benefit. The CIENA Certificate contains provisions that further provide for the indemnification of directors and officers to the fullest extent permitted by the DGCL. Under the bylaws of CIENA, CIENA is required to advance expenses incurred by an officer or director in defending any such action if the director or officer undertakes to repay such amount if it is determined that the director or officer is not entitled to indemnification. In addition, CIENA has entered into indemnity agreements with each of its directors pursuant to which CIENA has agreed to indemnify the directors as permitted by the DGCL. CIENA has obtained directors and officers liability insurance against certain liabilities, including liabilities under the Securities Act.

Item 21. Exhibits and Financial Statement Schedules

(a) Exhibits

INDEX TO EXHIBITS

2.1	Merger Agreement (filed herewith)
5.1	Hogan & Hartson L.L.P. Opinion*
8.1	Hogan & Hartson L.L.P. Tax Opinion *
8.2	Testa, Hurwitz & Thibault, LLP Tax Opinion*
23.1	Consent of PricewaterhouseCoopers LLP (filed herewith)
23.2	Consent of Deloitte & Touche LLP (filed herewith)
23.3	Consent of KPMG LLP (filed herewith)
23.4	Consent of Hogan & Hartson L.L.P. *
23.5	Consent of Testa, Hurwitz & Thibault, LLP *
99.1	Form of Proxy Card for WaveSmith Stockholders (filed herewith)

* to be filed by amendment

Item 22. Undertakings

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, 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, the registrant will, unless in the opinion of its 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 to respond to requests for information that is incorporated by reference into the prospectus pursuant to Item 4, 10(b), 11 or 13 of this form, within one business day of receipt of such request, and to send the incorporated documents by first class mail or other equally prompt means. This includes information contained in documents filed subsequent to the effective date of this Registration Statement through the date of responding to the request.

The undersigned registrant hereby undertakes to supply by means of a post-effective amendment all information concerning a transaction, and the company being acquired involved therein, that was not the subject of and included in the registration statement when it became effective.

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent

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no more than 20 percent change in the maximum aggregate offering price set forth in the “Calculation of Registration Fee” table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in this Registration Statement.

provided, however, that paragraphs (1)(i) and (1)(ii) do not apply if the registration statement is on Form S-3, Form S-8 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment 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.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant’s annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan’s annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement 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.

The undersigned registrant hereby undertakes as follows: that prior to any public reoffering of the securities registered hereunder through the use of a prospectus which is a part of this registration statement, by any person or party who is deemed to be an underwriter within the meaning of Rule 145(c), the issuer undertakes that such reoffering prospectus will contain the information called for by the applicable registration form with respect to reofferings by persons who may be deemed underwriters, in addition to the information called for by the other items of the applicable form.

The registrant undertakes that every prospectus: (i) that is filed pursuant to the immediately preceding paragraph, or (ii) that purports to meet the requirements of Section 10(a)(3) of the Act and is used in connection with an offering of securities subject to Rule 415, will be filed as a part of an amendment to the registration statement and will not be used until such amendment is effective, and that, for purposes of determining any liability under the Securities Act of 1933, each such post-effective amendment 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, CIENA has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Linthicum, Maryland, on this 29th day of April, 2003.

CIENA CORPORATION

/s/ GARY B. SMITH

Gary B. Smith
President, Chief Executive Officer
and Director

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Gary B. Smith, Joseph R. Chinnici and Russell B. Stevenson, Jr., and each of them, his or her true and lawful attorney-in-fact and agents, with full power of substitution and resubstitution, from such person and in each person's name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to the Registration Statement, any Registration Statement relating to this Registration Statement under Rule 462 and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, full power and authority to do and perform each and every act and thing requisite and necessary to be done as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the date indicated.

By: /s/ PATRICK H. NETTLES, PH.D.

Patrick H. Nettles, Ph.D.
Executive Chairman of the
Board of Directors

/s/ GARY B. SMITH

Gary B. Smith
President, Chief Executive Officer
and Director
(Principal Executive Officer)

/s/ JOSEPH R. CHINNICI

Joseph R. Chinnici
Sr. Vice President, Finance and Chief
Financial Officer
(Principal Financial Officer)

/s/ ANDREW C. PETRIK

Andrew C. Petrik
Vice President, Controller and Treasurer
(Principal Accounting Officer)

/s/ STEPHEN P. BRADLEY

Stephen P. Bradley
Director

/s/ HARVEY B. CASH

Harvey B. Cash
Director

/s/ DON H. DAVIS, JR.

Don H. Davis, Jr.
Director

/s/ JOHN R. DILLON

John R. Dillon
Director

/s/ LAWTON W. FITT

Lawton W. Fitt
Director

/s/ JUDITH M. O'BRIEN

Judith M. O'Brien
Director

/s/ GERALD H. TAYLOR

Gerald H. Taylor
Director

INDEX TO EXHIBITS

2.1	Merger Agreement (filed herewith)
5.1	Hogan & Hartson L.L.P. Opinion*
8.1	Hogan & Hartson L.L.P. Tax Opinion*
8.2	Testa, Hurwitz & Thibault, LLP Tax Opinion*
23.1	Consent of PricewaterhouseCoopers LLP (filed herewith)
23.2	Consent of Deloitte & Touche LLP (filed herewith)
23.3	Consent of KPMG LLP (filed herewith)
23.4	Consent of Hogan & Hartson L.L.P.*
23.5	Consent of Testa, Hurwitz & Thibault, LLP*
99.1	Form of Proxy Card for WaveSmith Stockholders (filed herewith)

* to be filed by amendment

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in this Registration Statement on Form S-4 of CIENA Corporation of our report dated December 10, 2002 relating to the financial statements, which appears in CIENA Corporation's Annual Report on Form 10-K for the year ended October 31, 2002. We also consent to the references to us under the headings "Experts" and "Summary Selected Consolidated Historical Financial Data of CIENA" in such Registration Statement.

PricewaterhouseCoopers LLP

McLean, VA
April 25, 2003

INDEPENDENT AUDITORS' CONSENT

We consent to the incorporation by reference in this Registration Statement on Form S-4 of CIENA Corporation of our report dated February 12, 2001 (March 29, 2001 as to the second paragraph of Note 1) relating to the financial statements of Cyras Systems, Inc. included in CIENA Corporation's Form 8-K filed on April 2, 2001, and to the reference to us under the heading "Experts" in the Prospectus, which is part of this Registration Statement.

Deloitte & Touche LLP

San Jose, California
April 23, 2003

CONSENT OF KPMG LLP

The Board of Directors
CIENA Corporation:

We consent to the incorporation herein by reference of our report dated January 31, 2002, except Note 17, which is as of February 20, 2002, relating to the consolidated balance sheets of ONI Systems Corp. as of December 31, 2001 and 2000, and the related consolidated statements of operations, stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2001, which report appears in the December 31, 2001 annual report on Form 10-K of ONI Systems Corp. and to the reference to our firm under the heading "Experts" in the prospectus.

KPMG LLP

Mountain View, California
April 24, 2003

EXHIBIT 99.1

Form of Proxy Card for WaveSmith Stockholders

WAVESMITH NETWORKS, INC.

Proxy for Special Meeting of Stockholders
to be held on _____, 2003

The undersigned, having received notice of a Special Meeting of Stockholders of WaveSmith, Inc. (the "Company") and revoking all prior proxies, hereby appoints Thomas Burkardt and Gregg Savage, and each of them, attorneys of the undersigned (with full power of substitution in them and each of them) for and in the name of the undersigned to attend the Special Meeting of Stockholders of the Company to be held at the offices of Testa, Hurwitz & Thibault, LLP, 125 High Street, Boston, Massachusetts, at [9:00 a.m.] local time on _____, 2003, and any adjournments of that meeting, and to vote and act upon the following matters in respect of all shares of stock of the Company of each and every class which the undersigned is entitled to vote or act upon, with all powers the undersigned would possess if personally present:

1. To adopt the Agreement and Plan of Merger, dated as of April 9, 2003 by and between the Company, and CIENA Corporation, a Delaware corporation to approve the merger and the transactions contemplated by the merger agreement.

FOR

AGAINST

ABSTAIN

2. To grant discretionary authority to vote in favor of any postponements or adjournments of the meeting, if necessary.

FOR

AGAINST

ABSTAIN

3. Upon, or with regard to, any other matters which may properly come before the meeting or any adjournments thereof.

* * * * *

Unless otherwise expressly provided hereon, this proxy shall be deemed to apply to shares of each class and series which the undersigned has the right to vote and shall be voted either as a separate class or series and/or with all other classes or series of capital stock of the Company as provided for by the Company's Third Amended and Restated Certificate of Incorporation.

YOU MAY REVOKE YOUR PROXY IN THE MANNER DESCRIBED IN THE ACCOMPANYING PROXY STATEMENT/PROSPECTUS AT ANY TIME BEFORE IT HAS BEEN VOTED AT THE SPECIAL MEETING OF STOCKHOLDERS OF THE COMPANY. ANY STOCKHOLDER ATTENDING THE SPECIAL MEETING MAY VOTE IN PERSON EVEN IF HE OR SHE HAS RETURNED A PROXY.

Attendance of the undersigned at the meeting or any adjournment of that meeting will not be deemed to revoke this proxy unless the undersigned shall affirmatively indicate at such meeting the intention of the undersigned to vote his shares in person. If the undersigned holds any of the shares of the Company in a joint capacity, this proxy is signed by the undersigned in such capacity as well as individually.

THE SHARES REPRESENTED BY THIS PROXY WILL BE VOTED AS DIRECTED OR, IF NO DIRECTION IS GIVEN, WILL BE VOTED **FOR** THE PROPOSALS IN ITEMS 1, 2 AND 3 AND SHALL BE VOTED AT THE DISCRETION OF THE PROXY HOLDER FOR ANY PROPOSAL BROUGHT BEFORE THE MEETING UNDER ITEM 4.

Date: _____, 2003

Signature(s): _____

Please Print Name: _____

Name Listed on Stock Certificate (if different from above): _____

If this Proxy applies to less than all shares of each class and series which the undersigned has the right to vote please indicate as to which shares of which class or series this proxy does not apply:

Please date this Proxy and sign exactly as your name(s) appear(s) on your stock certificate(s). A separate Proxy is required for each stockholder. Stock held jointly, in trust or otherwise is deemed to be held by a different stockholder than stock held in one's individual capacity. If you need additional proxies, please contact Jolie M. Siegel of Testa, Hurwitz & Thibault, LLP at (617) 310-8456. When signing as attorney, agent, executor, administrator, trustee, guardian or corporate officer, please give your full title as such.

**PLEASE SIGN AND MAIL THIS PROXY IN THE ENCLOSED ENVELOPE
AS SOON AS POSSIBLE AND IN NO EVENT LATER THAN ____ __, 2003**

I/We will attend the meeting. Yes ___ No ___