TC00-013

DOCKET NO. _____

In the Matter of IN THE MATTER OF THE APPLICATION OF PATHNET, INC. FOR A CERTIFICATE OF AUTHORITY TO PROVIDE TELECOMMUNICATIONS SERVICES IN SOUTH DAKOTA

## Public Utilities Commission of the State of South Dakota

| DATE | MEMORANDA |
|---|---|
| 2/15 00 | Filed and Docketed; |
| 2/17 00 | Affidavit Filed; |
| 3/13 00 | Revised Tariff Pages |
| 4/14 00 | Surety Bond; |
| 4/21 00 | Corrected Surety Bond; |
| 4/25 00 | Order Granting COA; |
| 4/28 00 | Docket Closed. |

TC00-018

COVINGTON & BURLING

1201 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004-2401
TEL 202 662 6000
FAX 202 662 6291
WWW.COV.COM

WASHINGTON, DC
NEW YORK
LONDON
BRUSSELS
SAN FRANCISCO

MARY NEWCOMER WILLIAMS
TEL 202 662 5244
FAX 202 778 5244
MWILLIAMS@COV.COM

February 15, 2000

VIA FEDERAL EXPRESS
Mr. William Bullard
Executive Director
South Dakota Public Utilities Commission
500 E. Capitol Avenue
Pierre, SD 57501-5070

RECEIVED
FEB 16 2000
SOUTH DAKOTA PUBLIC
UTILITIES COMMISSION

Re: **Application of Pathnet, Inc.**
**for a Certificate of Authority to Provide Interexchange Service**

Dear Mr. Bullard:

Submitted herewith for filing, on behalf of Pathnet, Inc. ("Pathnet"), are an original and ten (10) copies of an Application for a Certificate of Authority to Provide Interexchange Service in the State of South Dakota. Also enclosed is a check in the amount of $250.00 in payment of the application fee. Under separate cover, Pathnet is also filing an Application for a Certificate of Authority to Provide Local Exchange Telecommunications Services in South Dakota.

Enclosed is an additional copy of this letter. Please stamp the additional copy and return it to me in the enclosed stamped, self-addressed envelope as an acknowledgement of receipt.

Please direct any questions to the undersigned or to:

Gerard J. Waldron
Covington & Burling
1201 Pennsylvania Avenue N.W.
Washington, D.C. 20004-2401
(202) 662-5360 (tel.)
(202) 778-5360 (fax)

Respectfully submitted,

Mary Newcomer Williams
*Attorney for Pathnet, Inc.*

Enclosures

TC00-01
RECEIVED
FEB 16 2000
SOUTH DAKOTA PUBLIC
UTILITIES COMMISSION

BEFORE THE
PUBLIC UTILITIES COMMISSION OF THE STATE OF SOUTH DAKOTA

| | |
|---|---|
| In the Matter of<br><br>Application of Pathnet, Inc. For A Certificate of Authority to Provide Interexchange Service | Application No. _____ |

# APPLICATION OF PATHNET, INC. FOR A CERTIFICATE OF AUTHORITY TO PROVIDE INTEREXCHANGE SERVICE

Pathnet, Inc. ("Applicant"), by its attorneys and pursuant to South Dakota regulation 20:10:24:02, hereby submits this Application to the South Dakota Public Utilities Commission (the "Commission") for a Certificate of Authority to provide Interexchange Telecommunications Services throughout the State of South Dakota. In support of its Application, Applicant provides the following information:

(1) Applicant's Name, Address and Telephone Number

Pathnet, Inc.
1015 31st Street, N.W.
Washington D.C. 20007
Voice: (202) 625-7284
Fax: (202) 625-7369
Email: legal@pathnet.net

(2) Name Under Which Pathnet Will Provide Interexchange Service in South Dakota

Applicant will provide telecommunications services in South Dakota under the name Pathnet, Inc.

(3) Corporate Information

(3) Certificate of Incorporation and Certificate of Authority:

Applicant is a Delaware Corporation that was formed on August 25, 1995. A copy of Applicant's certificate of incorporation, as amended, is attached hereto as Exhibit A. A copy of

Applicant's certificate of authority to transact business in South Dakota is attached hereto as **Exhibit B.**

(b) **Principal Office Location and Registered Agent Information:**

Applicant does not maintain a principal office in South Dakota. Applicant's registered agent in South Dakota is:

Corporation Service Company
503 South Pierre St.
Pierre, South Dakota 57501

(c) **Shareholders Owning 20% or More Interest :**

The only shareholder that owns 20% or more of the interest in Applicant is:

**Spectrum Equity Investors (20.10%)**
One International Place, 29th Floor
Boston, MA 02110.

(4) **Partnership Information**

Applicant is not a partnership.

(5) **Description of Telecommunications Services Applicant Will Offer**

Applicant intends to offer point-to-point private line services ranging from DS-0 to OC-n, using TDM technology. Applicant further plans to offer TDM-based special access services. Applicant also plans to offer data services, including digital subscriber line (xDSL) services. Applicant intends to offer these private line, special access and data services primarily to other carriers and to Internet service providers. Applicant further plans to offer exchange services in which it will provide link and extended link (including transport) services connecting other telecommunications providers' switches to their end-users.

(6) **Means by Which Applicant will Provide Services**

Applicant will provide the proposed services both through its own facilities and by leasing or purchasing facilities from other facilities-based telecommunications providers.

Applicant will own the following types of equipment and facilities: fiber optic cables, optronics equipment, microwave radio systems, multiplexors, digital cross connect equipment, D-SLAM equipment (some of which will be installed in ILEC central office collocation facilities), customer premise equipment. POP facilities, fiber optic and microwave shelters, batteries, generators, converters, chargers and HVAC support systems.

(7) Service Area

Applicant will offer services throughout the area that exactly corresponds to the geographic boundary of the State of South Dakota.

(8) Financial and Tariff Information

A copy of Applicant's most recent Form 10-K Annual Report filed with the Securities and Exchange Commission is attached hereto as Exhibit C. Applicant is a privately held corporation that does not produce a report to stockholders.

A copy of Applicant's most recent Form 10-Q, which contains a balance sheet, income statement and cash flow statement for the quarter ending September 30, 1999, is attached hereto as Exhibit D.

A copy of Applicant's tariff with the terms and conditions of service is attached hereto as Exhibit E.

(9) Applicant's Representatives; Customer Service Information

Applicant's designated representative for responding to inquiries concerning this Application and other regulatory matters is:

Gerard J. Waldron, Esq.
Covington & Burling
1201 Pennsylvania Avenue, N.W.
Washington D.C. 20004-2401
Telephone: (202) 662-5360
Fax: (202) 778-5360
Email: gwaldron@cov.com

Applicant's designated representative for responding to inquiries regarding consumer complaints is:

William C. Cotta
Vice President
Pathnet, Inc.
1015 31st Street N.W.
Washington D.C. 20007
Telephone: (202) 625-7284
(877) PATHNOC
Fax: (202) 625-7369
Email: wcotta@pathnet.net

Applicant will bill its customers on a monthly basis. Applicant will include on all bills a toll free telephone number for customer complaints about billing or repair. Applicant will provide at least one customer service representative per every 2,500 customers during normal business hours.

(10) Information Regarding Registration or Certification in Other States

Applicant plans to file applications to provide competitive telecommunications service in each of the lower 48 states and the District of Columbia. To date, Applicant is authorized to provide competitive telecommunications services in the States of Colorado, Florida, Idaho, Indiana, Iowa, Michigan, Minnesota, Montana, Nebraska, Oregon, Texas and Wisconsin. Applicant has filed for and is awaiting authorization to provide telecommunications services in the following states: Arkansas, Illinois, Kentucky, Louisiana, North Dakota, Ohio, and Wyoming.

Applicant has not been denied Registration or Certification in any State. Applicant is in Good Standing with the appropriate regulatory agency in each State in which it is registered.

(11) Marketing Information

Applicant is a carrier's carrier providing high quality, low-cost, digital telecommunications services to under-served and second- and third-tier markets. Applicant is still in the process of refining its business and marketing plan with respect to the State of South Dakota. Once Applicant has finalized its marketing plan, Applicant will provide the Commission with a complete description of how Applicant intends to market its interexchange services, its target market, whether it will engage in multilevel marketing, and copies of any company brochures that will be used to assist in sale of the services.

(12) Cost Support for Rates Shown in Applicant's Tariff for All Noncompetitive or Emerging Competitive Services

Because the services Applicant plans to provide are competitive services, Applicant has not provided cost support for the rates shown in its tariff.

(13) Federal Tax Identification Number:

Applicant's Federal Tax Identification Number is 52-1941838.

(14) Number and Nature of Complaints Filed Against Applicant with any State or Federal Commission Regarding Unauthorized Switching of a Customer's Telecommunications Provider and Charging Customers for Services that have not been Ordered

There have been no such complaints filed against the Applicant with any state or federal Commission.

(15) Request for Waiver of Rules Believed to be Inapplicable

Applicant requests a waiver of the requirement to provide cost support for the rates shown in its tariff because the services Applicant plans to provide are competitive and are available from other telecommunications providers in the State of South Dakota.

(16) **Other Information Requested by the Commission to Demonstrate Applicant's Technical and Managerial Capabilities to Provide the Proposed Interexchange Services.**

A description of Applicant's technical and managerial qualifications is attached hereto as Exhibit F. Applicant will answer any questions and provide any additional information requested by the Commission concerning Applicant's technical and managerial capabilities to provide the proposed interexchange telecommunications services.

WHEREFORE, Pathnet, Inc. prays that the Public Utilities Commission of the State of South Dakota grant it a Certificate of Authority to Provide Interexchange Telecommunications Service throughout the State of South Dakota.

Respectfully submitted this 15th day of February, 2000.

Respectfully submitted,

Gerard J. Waldron, Esq.
Covington & Burling
1201 Pennsylvania Avenue NW
Washington, D.C. 20004-2401
(202) 662-5360 (v)
(202) 778-5360 (f)
*Attorney for Pathnet, Inc.*

APPLICATION OF PATHNET, INC.
FOR A CERTIFICATE OF AUTHORITY
TO PROVIDE INTEREXCHANGE SERVICE
IN SOUTH DAKOTA

# EXHIBITS

## INDEX TO EXHIBITS

| | |
|---|---|
| Exhibit A | Articles of Incorporation |
| Exhibit B | Certificate of Authority to Transact Business |
| Exhibit C | SEC Form 10-K (Dec. 31, 1998) |
| Exhibit D | SEC Form 10-Q (Sept. 30, 1999) |
| Exhibit E | Proposed Tariff |
| Exhibit F | Technical and Managerial Qualifications |

# EXHIBIT A

## Articles of Incorporation

State of Delaware

# Office of the Secretary of State



I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "PATHNET, INC.", FILED IN THIS OFFICE ON THE EIGHTH DAY OF DECEMBER, A.D. 1998, AT 9 O'CLOCK A.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

Edward J. Freel, Secretary of State

2539940 8100

981417651

AUTHENTICATION:

DATE:

NEXT

DOCUMENT (S)

BEST IMAGE

POSSIBLE

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:00 AM 12/08/1998
981470391 – 2533940

CERTIFICATE OF AMENDMENT
OF
RESTATED CERTIFICATE OF INCORPORATION
OF
PATHNET, INC.

*Adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware*

We, William R. Sandberg, V. Vice President, Finance and Corporate Development, and Michael A. Lubin, Vice President, General Counsel and Secretary, of Pathnet, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), DO HEREBY CERTIFY as follows:

FIRST: The Restated Certificate of Incorporation of the Corporation is hereby amended by deleting the current Section 10 thereof in its entirety and renumbering Section 11 as new Section 10.

SECOND: This Amendment has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed by William R. Sandberg, V. Vice President, Finance and Corporate Development, and attested to by Michael A. Lubin, Vice President, General Counsel and Secretary, on this 8th day of December, 1998.

PATHNET, INC.

By: _____
William R. Sandberg, V
Vice President,
Finance and Corporate Development

ATTEST:

By: _____
Michael A. Lubin
Vice President,
General Counsel and Secretary

# CERTIFICATE OF AMENDMENT
# OF
# RESTATED CERTIFICATE OF INCORPORATION
# OF
# PATHNET, INC.

*Adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware*

We, William R. Smedberg, V, Vice President, Finance and Corporate Development, and Michael A. Lubin, Vice President, General Counsel and Secretary, of Pathnet, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), DO HEREBY CERTIFY as follows:

FIRST: The Restated Certificate of Incorporation of the Corporation is hereby amended by deleting the current Section 10 thereof it in its entirety and renumbering Section 11 as new Section 10.

SECOND: This Amendment has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed by William R. Smedberg, V, Vice President, Finance and Corporate Development, and attested to by Michael A. Lubin, Vice President, General Counsel and Secretary, on this 8th day of December, 1998.

PATHNET, INC.

By: _____
William R. Smedberg, V
Vice President,
Finance and Corporate Development

ATTEST:

By: _____
Michael A. Lubin
Vice President,
General Counsel and Secretary

*State of Delaware*

*Office of the Secretary of State* PAGE 1

I, EDWARD J. FREEL, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE RESTATED CERTIFICATE OF "PATHNET, INC.", FILED IN THIS OFFICE ON THE TWELFTH DAY OF AUGUST, A.D. 1998, AT 9 O'CLOCK A.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

Edward J. Freel, Secretary of State

2531640 8100

AUTHENTICATION: 9250269

STATE OF DELAWARE
SECRETARY OF STATE
DIVISION OF CORPORATIONS
FILED 09:00 AM 08/12/1998
981216829 – 1939940

# AMENDED AND RESTATED CERTIFICATE OF INCORPORATION

OF

# PATHNET, INC.

Pathnet, Inc., a corporation duly incorporated under the laws of the State of Delaware, hereby certifies as follows:

FIRST: The name of the corporation is Pathnet, Inc. (the "Corporation"). The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on 25th day of August, 1995, under the name PathNet, Inc.

SECOND: This Amended and Restated Certificate of Incorporation has been duly adopted in accordance with Sections 242 and 245 of the Delaware General Corporation Law (the "General Corporation Law").

THIRD: This Amended and Restated Certificate of Incorporation hereby restates, integrates and amends the Certificate of Incorporation, as amended, of the Corporation as follows:

1. Name. The name of the corporation is PATHNET, INC. (the "Corporation").

2. Address; Registered Office and Agent. The address of the Corporation's registered office is 1013 Centre Road, Wilmington, New Castle County, Delaware 19805. The name of its registered agent at such address is The Prentice-Hall Corporation System, Inc.

3. Purpose. The purpose of the Corporation is to engage in, carry on and conduct any lawful act or activity for which corporations may be organized under the General Corporation Law.

4. Number of Shares. The total number of shares of stock that the Corporation shall have authority to issue is 75,470,595, divided as follows: 10,000,000 shares of Preferred Stock, par value of $0.01 per share (the "Preferred Stock"), 1,000,000 shares of Series A Convertible Preferred Stock, par value of $0.01 per share (the "Series A Preferred Stock"), 1,651,046 shares of Series B Convertible Preferred Stock, par value of $0.01 per share (the "Series B Preferred Stock"), 2,819,549 shares of Series C Convertible Preferred Stock, par value of $0.01 per share (the "Series C Preferred Stock," and together with the Series A Preferred Stock and the Series B Preferred Stock, the "Series Preferred Stock"); and 60,000,000 shares of Common Stock, par value of $0.01 per share (the "Common Stock").

5. Designation of Classes; Relative Rights, Etc. The designation, relative rights, preferences and limitations of the shares of each class are as follows:

5.1 Preferred Stock. The shares of Preferred Stock may be issued from time to time in one or more series of any number of shares, provided that the aggregate number of shares issued and not canceled of any and all such series shall not exceed the total number of shares of Preferred Stock hereinabove authorized, and with such powers, preferences and rights and qualifications, limitations or restrictions thereof, and such distinctive serial designations, all as shall hereafter be stated and expressed in the resolution or resolutions providing for the issue of such shares of Preferred Stock from time to time adopted by the Board of Directors of the Corporation (the "Board of Directors") pursuant to authority so to do which is hereby vested in the Board of Directors. Each series of shares of Preferred Stock (a) may have such voting rights or powers, full or limited, or may be without voting rights or powers; (b) may be subject to redemption at such time or times and at such prices; (c) may be entitled to receive dividends (which may be cumulative or non-cumulative) at such rate or rates, on such conditions and at such times, and payable in preference to, or in such relation to, the dividends payable on any other class or classes or series of stock; (d) may have such rights upon the voluntary or involuntary liquidation, winding up or dissolution of, or upon any distribution of the assets of, the Corporation; (e) may be made convertible into or exchangeable for, shares of any other class or classes or of any other series of the same or any other class or classes of stock of the Corporation at such price or prices or at such rates of exchange and with such adjustments; (f) may be entitled to the benefit of a sinking fund to be applied to the purchase or redemption of shares of such series in such amount or amounts; (g) may be entitled to the benefit of conditions and restrictions upon the creation of indebtedness of the Corporation or any subsidiary, upon the issue of any additional shares (including additional shares of such series or of any other series) and upon the payment of dividends or the making of other distributions on, and the purchase, redemption or other acquisition by the Corporation or any subsidiary of, any outstanding shares of the Corporation and (h) may have such other relative, participating, optional or other special rights, qualifications, limitations or restrictions thereof, all as shall be stated in such resolution or resolutions providing for the issue of such shares of Preferred Stock. Any of the voting powers, designations, preferences, rights and qualifications, limitations or restrictions of any such series of Preferred Stock may be made dependent upon facts ascertainable outside of the resolution or resolutions providing for the issue of such Preferred Stock adopted by the Board of Directors pursuant to the authority vested in it by this Section 5.1, provided that the manner in which such facts shall operate upon the voting powers, designations, preferences, rights and qualifications, limitations or restrictions of such series of Preferred Stock is clearly and expressly set forth in the resolution or resolutions providing for the issue of such Preferred Stock. The term "facts" as used in the next preceding sentence shall have the meaning given to it in Section 151(a) of the General Corporation Law. Shares of Preferred Stock of any series that have been redeemed (whether through the operation of a sinking fund or otherwise) or that if

convertible or exchangeable, have been converted into or exchanged for shares of any other class or classes shall have the status of authorized and unissued shares of Preferred Stock undesignated as to series and may be reissued as a part of the series of which they were originally a part or as part of a new series of shares of Preferred Stock to be created by resolution or resolutions of the Board of Directors or as part of any other series of shares of Preferred Stock, all subject to the conditions or restrictions on issuance set forth in the resolution or resolutions adopted by the Board of Directors providing for the issue of any series of shares of Preferred Stock.

5.2 Common Stock. Subject to the provisions of any applicable law or of the Bylaws of the Corporation, as from time to time amended (the "Bylaws"), with respect to the closing of the transfer books or the fixing of a record date for the determination of stockholders entitled to vote and except as otherwise provided herein with respect to any shares of Series Preferred Stock, by law or by the resolution or resolutions providing for the issue of any series of shares of Preferred Stock, the holders of outstanding shares of Common Stock shall exclusively possess voting power for the election of directors and for all other purposes, each holder of record of shares of Common Stock being entitled to one vote for each share of Common Stock standing in his or her name on the books of the Corporation. Except as otherwise provided herein with respect to any shares of Series Preferred Stock or by the resolution or resolutions providing for the issue of any series of shares of Preferred Stock, the holders of shares of Common Stock shall be entitled, to the exclusion of the holders of shares of Preferred Stock of any and all series, to receive such dividends as from time to time may be declared by the Board of Directors. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, after payment shall have been made to the holders of shares of any Series Preferred Stock and any Preferred Stock of the full amount to which they shall be entitled pursuant to this Amended and Restated Certificate of Incorporation or the resolution or resolutions providing for the issue of any series of shares of Preferred Stock, the holders of shares of Common Stock shall be entitled, to the exclusion of the holders of shares of Series Preferred Stock and Preferred Stock of any and all series, to share, ratably according to the number of shares of Common Stock held by them, in all remaining assets of the Corporation available for distribution to its stockholders.

5.3 Series Preferred Stock.

5.3.1 Shares.

(a) Authorized Shares. The Corporation shall have authority to issue Five Million Four Hundred Seventy Thousand Five Hundred Ninety-Five (5,470,595) shares of Series Preferred Stock, of which One Million (1,000,000) shares shall be designated the Series A Preferred Stock, One Million Six Hundred Fifty One Thousand Forty Six (1,651,046) shares shall be designated the Series B Preferred Stock and Two Million Eight Hundred Nineteen Thousand Five

Hundred Forty-Nine (2,819,549) shares shall be designated as the Series C Preferred Stock.

(b) Dividends. The holders of the Series Preferred Stock shall be entitled to receive, out of funds legally available therefor, dividends (other than dividends paid in additional shares of Common Stock) in preference to and at the same rate as dividends are paid with respect to the Common Stock (treating each share of Series Preferred Stock as being equal to the number of shares of Common Stock into which each such share of Series Preferred Stock could be converted pursuant to the provisions of Section 5.3.4 hereof, with such number determined as of the record date for the determination of holders of Common Stock entitled to receive such dividend).

5.3.3 Liquidation, Dissolution or Winding Up.

(a) Distributions to Holders of Series Preferred Stock. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, the Series A Preferred Stock, the Series B Preferred Stock and the Series C Preferred Stock shall rank on a parity with each other and shall rank prior to the Common Stock or any class of stock ranking junior to the Series Preferred Stock. Upon such liquidation, holders of each share of Series Preferred Stock outstanding shall be entitled to be paid, out of the assets of the Corporation available for distribution to stockholders and before any payment shall be made to the holders of any class of Common Stock or of any stock ranking on liquidation junior to the Series Preferred Stock, an amount in cash equal to the original purchase price paid by such holder for each such share of Series Preferred Stock held (appropriately adjusted for stock splits, stock dividends and the like) plus any declared but unpaid dividends thereon. If upon any liquidation, dissolution or winding up of the Corporation, the assets to be distributed to the holders of the Series Preferred Stock under the foregoing sentence shall be insufficient to permit payment to such stockholders of the full preferential amounts aforesaid, then all of the assets of the Corporation available for distribution to such holders under such sentence shall be distributed among the holders of Series Preferred Stock, pro rata in accordance with the total amount of preference which would have been payable to such holders if funds had been available to pay the full preference under the previous sentence. After such payment shall have been made in full to such holders of Series Preferred Stock, or funds necessary for such payment shall have been set aside by the Corporation in trust for the account of such holders so as to be available for such payment, the holders of the outstanding shares of Common Stock and any class of stock ranking junior to the Series Preferred Stock shall share ratably in the distribution of the remaining assets and funds of the Corporation available for distribution to shareholders.

(b) Deemed Liquidations. In the case of (i) a consolidation or merger of the Corporation (other than a consolidation or merger upon

consummation of which the holders of voting securities of the Corporation immediately prior to such transaction, continue to own directly or indirectly not less than a majority of the voting power of the surviving corporation) or a sale of all or substantially all of the assets of the Corporation or other similar transaction and (ii) either receipt by the Corporation of (x) consideration less than the equivalent of $1.00 per share (appropriately adjusted for stock splits, stock dividends and the like) of Series A Preferred Stock plus any declared but unpaid dividends, (y) consideration less than the equivalent of $3.28 per share (appropriately adjusted for stock splits, stock dividends and the like) of Series B Preferred Stock plus any declared but unpaid dividends, or (z) consideration less than the equivalent of $10.64 per share (appropriately adjusted for stock splits, stock dividends and the like) of Series C Preferred Stock plus any declared but unpaid dividends, such event shall be regarded, at the option of the holders of a majority of the then outstanding shares of Series Preferred Stock, as a liquidation, dissolution or winding up of the affairs of the Corporation within the meaning of this Section 5.3.2.

Notwithstanding the foregoing, each holder of Series Preferred Stock shall have the right to elect the benefits of the provisions of Section 5.3.4(b) hereof in lieu of receiving payment in liquidation, dissolution or winding up of the Corporation pursuant to this Section 5.3.2(b). For purposes of this Section 5.3.2 and Section 5.3.6 hereof, a sale of substantially all of the assets of the Corporation shall mean (x) the sale or other disposition other than in the ordinary course of business of more than 50% of such assets, as determined by reference to either (A) the book value or (B) the fair market value, of such assets, or (y) any issuance of Common Stock by the Corporation or transfer of Common Stock by the holder thereof to any person or persons acting in concert or a group of affiliated persons, which issuance or transfer results in such person or persons or group holding in the aggregate more than 50% of the issued and outstanding Common Stock after giving effect to such issuance or transfer.

(c) Non-Cash Distributions. In the event of a liquidation, dissolution or winding up of the Corporation resulting in the availability of assets other than cash for distribution to the holders of the Series Preferred Stock, the holders of the Series Preferred Stock shall be entitled to a distribution of cash and/or assets equal in value to the liquidation preferences and other distribution rights stated in Section 5.3.2(a) and Section 5.3.2(b) hereof. In the event that such distribution to the holders of the Series Preferred Stock shall include any assets other than cash, the following provisions shall govern. The Board of Directors shall first determine the value of such assets for such purposes, and shall notify all holders of shares of Series Preferred Stock of such determination. The value of such assets for purposes of the distribution under this Section 5.3.2(c) shall be the value as determined by the Board of Directors in good faith and with due care, unless the holders of a majority of the outstanding shares of Series Preferred Stock shall object thereto in writing within 15 days after the date of such notice. In the event of such objection, the valuation of such assets for purposes of such distribution shall be

determined by an arbitrator selected by the objecting stockholders and the Board of Directors, or in the event a single arbitrator cannot be agreed upon within 10 days after the written objection sent by the objecting stockholders in accordance with the previous sentence, the valuation of such assets shall be determined by arbitration in which (i) the objecting stockholders shall name in their notice of objection one arbitrator, (ii) the Board of Directors shall name a second arbitrator within 15 days from the receipt of such notice, (iii) the two arbitrators thus selected shall select a third arbitrator within 14 days thereafter, and (iv) the three arbitrators thus selected shall determine the valuation of such assets within 15 days thereafter for purposes of such distribution by majority vote. The costs of such arbitration shall be borne by the Corporation or by the holders of the Series Preferred Stock (on a pro rata basis out of the assets otherwise distributable to them) as follows: (i) if the valuation as determined by the arbitrators is greater than 95% of the valuation as determined by the Board of Directors, the holders of the Series Preferred Stock shall pay the costs of the arbitration, and (ii) otherwise, the Corporation shall bear the costs of the arbitration.

5.3.3 Voting Rights.

(a) General. Except as otherwise expressly provided herein or as required by law, the holder of each share of the Series Preferred Stock shall be entitled to vote on any matters presented to the holders of the Common Stock. Each share of Series Preferred Stock shall entitle the holder thereof to such number of votes per share as shall equal the number of shares of Common Stock into which such share of Series Preferred Stock is convertible in accordance with the terms of Section 5.3.4 hereof at the record date for the determination of stockholders entitled to vote on such matter or, if no record date is established, at the date such vote is taken or any written consent of stockholders is solicited. Except as otherwise expressly provided herein (including, without limitation, the provisions of Section 5.3.6 hereof) or as required by law, the holders of shares of Series Preferred Stock and the Common Stock shall vote together as a single class on any matters presented to the holders of the Common Stock.

(b) Board of Directors.

(i) Investor Directors. The holders of the Series A Preferred Stock shall be entitled to vote as a class separately from all other shares of stock of the Corporation in any vote for the election of directors of the Corporation, and shall be entitled to elect by such class vote two directors (the "Series A Investor Directors"), one of which Series A Investor Director to be designated by Spectrum Equity Investors, L.P. ("Spectrum") for so long as it owns shares of Series A Preferred Stock and thereafter by the holders of a majority of the issued and outstanding shares of Series A Preferred Stock, and the other to be designated by New Enterprise Associates VI, Limited Partnership or its affiliates (collectively, "NEA VI") for so long as it owns shares of Series A Preferred Stock

and thereafter by the holders of a majority of the issued and outstanding shares of Series A Preferred Stock. The holders of the Series B Preferred Stock shall be entitled to vote as a class separately from all other classes of stock of the Corporation in any vote for the election of directors of the Corporation, and shall be entitled to elect by such class vote one director (the "Series B Investor Director") to be designated by Grotech Capital Group IV, LLC ("Grotech IV") for so long as it owns shares of Series B Preferred Stock and thereafter by the holders of a majority of the issued and outstanding shares of Series B Preferred Stock. The holders of the Series C Preferred Stock shall be entitled to vote as a class separately from all other classes of stock of the Corporation in any vote for the election of directors of the Corporation, and shall be entitled to elect by such class vote one director (the "Series C Investor Director") to be designated by the holders of a majority of the issued and outstanding shares of Series C Preferred Stock; provided, however, that if the holders of a majority of the issued and outstanding shares of Series C Preferred Stock designate for election as the Series C Investor Director an individual who is not a partner or associate of a Series C Investor or an entity under substantially the same management as a Series C Investor, such designee shall be elected as a director only with the vote of a majority of the Common Stock Directors and Investor Directors, voting together. Initially, the Series C Investor Director will be designated by Toronto Dominion Capital (U.S.A.), Inc. In no event shall the Series C Investor Director be (i) a partner or associate of Spectrum or an entity under substantially the same management as Spectrum for so long as Spectrum has designation rights under this Section 5.3.3(a), (ii) a partner or associate of NBA VI or an entity under substantially the same management as NBA VI for so long as NBA VI has designation rights under this Section 5.3.3(a), and (iii) a partner or associate of Grotech IV or an entity under substantially the same management as Grotech IV for so long as Grotech IV has designation rights under this Section 5.3.3(a).

(ii) Common Stock Directors. For so long as any Series Preferred Stock remains outstanding, the holders of Common Stock shall be entitled to vote as a class separately from all other classes in any vote for the election of directors of the Corporation, and shall be entitled to elect by such class vote two directors (the "Common Stock Directors").

(iii) Appointment of Chief Executive Officer/Officer Director. Upon the nomination or resignation of the Chief Executive Officer of the Corporation, the Corporation will select and hire a successor Chief Executive Officer (and any successor thereto) by the affirmative vote of a majority of the Common Stock Directors, the Series A Investor Director, the Series B Investor Director and the Series C Investor Director, voting together. The Chief Executive Officer (and any replacement or successor Chief Executive Officer) as so selected and hired shall be elected to the Corporation's Board of Directors by the holders of the Series Preferred Stock and the Common Stock voting together as a single class (the "Officer Director"). David Schaeffer may serve as Chief Executive Officer of the

Corporation in the discretion of the Board of Directors, but in no event shall David Schaeffer be elected as the Officer Director.

(iv) Removal of Directors. The removal of any director of the Corporation shall be as set forth in the Bylaws of the Corporation.

(c) Special Voting Rights. The holders of the Series Preferred Stock shall be entitled to the special voting rights set forth in Section 5.3.6 hereof.

5.3.4 Conversion. The holders of the Series Preferred Stock shall have the following conversion rights:

(a) Right to Convert. Subject to and in compliance with the provisions of this Section 5.3.4, any shares of the Series Preferred Stock may, at any time or from time to time at the option of the holder, be converted into fully-paid and non-assessable shares of Common Stock. The number of shares of Common Stock to which a holder of the Series Preferred Stock shall be entitled upon conversion shall be the product obtained by multiplying the Applicable Conversion Rate (determined as provided in Section 5.3.4(c)) by the number of shares of Series Preferred Stock being converted.

(b) Automatic Conversion.

(i) Each share of the Series Preferred Stock outstanding shall automatically be converted into the number of shares of Common Stock into which such shares are convertible upon application of the then effective Applicable Conversion Rate (determined as provided in Section 5.3.4(c)) immediately upon the closing of an underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, or under such other applicable securities regulations covering the offer and sale of capital stock of the Corporation (other than a registration relating solely to Rule 145 under such Act (or any successor thereto) or to an employee benefit plan of the Corporation) (i) immediately prior to the consummation of which, the Corporation is valued (based on the per-share price paid in such public offering, but without regard to any proceeds to be received by the Company in connection with such offering) at greater than $50,000,000, (ii) in which the gross proceeds received by the Corporation exceed $30,000,000, and (iii) in which the Corporation uses a nationally recognized underwriter approved by holders of a majority in interest of the Series Preferred Stock (a "Qualified Public Offering").

(ii) Upon the occurrence of an event specified in Section 5.3.4(b)(i), the outstanding shares of Series Preferred Stock shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the

Corporation or its transfer agent; provided, however, that the Corporation shall not be obligated to issue certificates evidencing such shares of the Common Stock unless certificates evidencing such shares of the Series Preferred Stock being converted are either delivered to the Corporation or any transfer agent, as hereinafter provided, or the holder notifies the Corporation or any transfer agent, as hereinafter provided, that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection therewith.

Upon the occurrence of the automatic conversion of all of the outstanding Series Preferred Stock, the holders of the Series Preferred Stock shall surrender the certificates representing such shares at the office of the Corporation or of any transfer agent for the Common Stock. Thereupon, there shall be issued and delivered to each such holder, promptly at such office and in his name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of shares of Common Stock into which the shares of the Series Preferred Stock surrendered were convertible on the date on which such automatic conversion occurred and cash as provided in Section 5.3.4(f) below in respect of any fraction of a share of Common Stock issuable upon such automatic conversion.

(c) Applicable Conversion Rate. The conversion rate in effect at any time for the applicable series of Series Preferred Stock (the "Applicable Conversion Rate") shall equal the quotient obtained by dividing $1.00 in the case of Series A Preferred Stock, $3.28 in the case of Series B Preferred Stock or $10.64 in the case of the Series C Preferred Stock by the Applicable Conversion Value, calculated as hereinafter provided.

(d) Applicable Conversion Value. The Applicable Conversion Value in effect initially, and until first adjusted in accordance with Section 5.3.4(e) or Section 5.3.4(f) hereof, shall be $1.00 in the case of Series A Preferred Stock, $3.28 in the case of Series B Preferred Stock and $10.64 in the case of the Series C Preferred Stock.

(e) Adjustment for Common Stock Dividends, Subdivisions and Combinations of Common Stock, Etc. Upon the happening of any of the following: (i) the issuance of additional shares of Common Stock of any class as a dividend or other distribution of outstanding Common Stock, (ii) the subdivision of outstanding shares of Common Stock of any class into a greater number of shares of Common Stock, or (iii) the combination of outstanding shares of Common Stock of any class into a smaller number of shares of Common Stock (each an "Extraordinary Common Stock Event"), the Applicable Conversion Value shall, simultaneously with the happening of such Extraordinary Common Stock Event, be adjusted by dividing the then effective Applicable Conversion Value by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding (excluding treasury stock) immediately after such Extraordinary Common Stock Event and the

denominator of which shall be the number of shares of Common Stock outstanding (excluding treasury stock) immediately prior to such Extraordinary Common Stock Event, and the quotient so obtained shall thereafter be the Applicable Conversion Value. The Applicable Conversion Value, as so adjusted, shall be readjusted in the same manner upon the happening of any successive Extraordinary Common Stock Event or Events.

(f) Adjustments for Dilutive Issues.

(i) Except as provided in Section 5.3.4(e) above or for Excluded Shares (as defined below), if the Corporation shall issue any additional shares of Common Stock of any class for no consideration or at a price per share less than the Applicable Conversion Value in effect for each applicable series of Series Preferred Stock immediately prior to such issuance or sale, then in each such case such Applicable Conversion Value shall be reduced to such lower price.

For purposes of this Section 5.3.4(f), "Excluded Shares" shall mean (i) shares issued or delivered from treasury or stock options (and shares of Common Stock issued upon the exercise thereof) granted by the Corporation, with the approval of the Board of Directors, to directors, officers, employees, agents or consultants of the Corporation for up to an aggregate of 1,328,212 shares of the Common Stock (as adjusted for stock splits, stock dividends and the like); (ii) warrants to purchase shares of Common Stock (and any shares of Common Stock issued upon the exercise thereof) issued by the Corporation in connection with the Corporation's offering of units, each such unit consisting of $1,000 principal amount at maturity of Senior Notes due 2008 (the "Notes") of the Corporation and warrants to purchase shares of Common Stock; and (iii) warrants to purchase shares of Common Stock (and any shares of Common Stock issued upon the exercise thereof) issued by the Corporation in connection with the credit facilities among the Corporation and/or its subsidiaries, its equipment vendors and certain other senior lenders.

For purposes of this Section 5.3.4(f), if a part or all of the consideration received by the Corporation in connection with the issuance of shares of the Common Stock or the issuance of any of the securities described below in paragraph (ii) of this Section 5.3.4(f) consists of property other than cash, such consideration shall be deemed to have the same value as is determined by the Corporation's Board of Directors with respect to receipt of such property so long as such determination was made reasonably and in good faith, and shall otherwise be deemed to have a value equal to its fair market value.

(ii) For the purpose of this Section 5.3.4(f), the issuance of any warrants, options or other subscription or purchase rights with respect to shares of Common Stock of any class and the issuance of any securities convertible into shares of Common Stock of any class (or the issuance of any

warrants, options or any rights with respect to such convertible securities) shall be deemed an issuance at such time of such Common Stock if the Net Consideration Per Share which may be received by the Corporation for such Common Stock (as hereinafter determined) shall be less than the Applicable Conversion Value at the time of such issuance and, except as hereinafter provided, an adjustment in the Applicable Conversion Value shall be made upon each such issuance in the manner provided in paragraph (i) of this Section 5.3.4(f) as if such Common Stock were issued at such Net Consideration Per Share. No adjustment of the Applicable Conversion Value shall be made under this Section 5.3.4(f) upon the issuance of any additional shares of Common Stock which are issued pursuant to the exercise of any warrants, options or other subscription or purchase rights or pursuant to the exercise of any conversion or exchange rights in any convertible securities if any adjustment shall previously have been made upon the issuance of such warrants, options or other rights. Any adjustment of the Applicable Conversion Value with respect to this paragraph (ii) of this Section 5.3.4(f) shall be disregarded if, as and when the rights to acquire shares of Common Stock upon exercise or conversion of the warrants, options, rights or convertible securities which gave rise to such adjustment expire or are canceled without having been exercised, so that the Applicable Conversion Value effective immediately upon such cancellation or expiration shall be equal to the Applicable Conversion Value in effect immediately prior to the time of the issuance of the expired or canceled warrants, options, rights or convertible securities, with such additional adjustments as would have been made to the Applicable Conversion Value had the expired or canceled warrants, options, rights or convertible securities not been issued; provided, however, that no such readjustment of the Applicable Conversion Value shall have the effect of increasing the Applicable Conversion Value to an amount which exceeds the lower of (x) the Applicable Conversion Value on the original adjustment date, or (y) the Applicable Conversion Value that would have resulted from any issuance of any additional shares of Common Stock pursuant to such warrants, options, rights or convertible securities between the original adjustment date and such readjustment date. In the event that the terms of any warrants, options, other subscription or purchase rights or convertible securities previously issued by the Corporation are changed (whether by their terms or by any other means) so as to change the Net Consideration Per Share payable with respect thereto (whether or not the issuance of such warrants, options, rights or convertible securities originally gave rise to an adjustment of the Applicable Conversion Value), the Applicable Conversion Value shall be recomputed as of the date of such change, as that the Applicable Conversion Value effective immediately upon such change shall be equal to the Applicable Conversion Value in effect at the time of the issuance of the warrants, options, rights or convertible securities subject to such change, adjusted for the issuance thereof in accordance with the terms thereof after giving effect to such change, and with such additional adjustments as would have been made to the Applicable Conversion Value had the warrants, options, rights or convertible securities been issued on such changed terms. For purposes of this paragraph (ii), the Net Consideration Per Share which may be received by the Corporation shall be determined as follows:

(A) The Net Consideration Per Share shall mean the amount equal to the total amount of consideration, if any, received by the Corporation for the issuance of such warrants, options, rights or convertible securities, plus the minimum amount of consideration, if any, payable to the Corporation upon exercise or conversion thereof, divided by the aggregate number of shares of Common Stock that would be issued if all such warrants, options, subscriptions, or other purchase rights or convertible securities were exercised or converted at such net consideration per share.

(B) The Net Consideration Per Share which may be received by the Corporation shall be determined in each instance as of the date of issuance of warrants, options, rights or convertible securities without giving effect to any possible future price adjustments or rate adjustments which may be applicable with respect to such warrants, options, rights or convertible securities and which are contingent upon future events; provided that in the case of an adjustment to be made as a result of a change in terms of such warrants, options, rights or convertible securities, the Net Consideration Per Share shall be determined as of the date of such change.

(g) Adjustments for Reclassification. If the Common Stock issuable upon the conversion of the Series Preferred Stock shall be changed into the same or different number of shares of any class or classes of stock, whether by reclassification or otherwise (other than an Extraordinary Common Stock Event, or a reorganization, merger, consolidation or sale of assets provided for elsewhere in this Section 5.3.4), then and in each such event the holder of each share of Series Preferred Stock shall have the right thereafter to convert such share into the kind and amount of shares of stock and other securities and property receivable upon such reorganization, reclassification or other change by holders of the number of shares of Common Stock into which such shares of Series Preferred Stock might have been converted immediately prior to such reorganization, reclassification or change, all subject to further adjustment as provided herein. Without limiting the generality of the foregoing, the Applicable Conversion Rate, as defined in this Section 5.3.4, in respect of such other shares or securities so receivable upon conversion of shares of Series Preferred Stock shall thereafter be adjusted, and shall be subject to further adjustment from time to time, in a manner and on terms as nearly equivalent as practicable to the provisions with respect to Common Stock contained in this Section 5.3.4, and the remaining provisions hereof with respect to the Common Stock shall apply on like or similar terms to any such other shares or securities.

(h) Adjustments for Reorganizations. If at any time or from time to time there shall be a capital reorganization of the Common Stock (other than a subdivision, combination, reclassification or exchange of shares provided for elsewhere in this Section 5.3.4) or a merger or consolidation of the Corporation with or into another corporation or the sale of all or substantially all of the Corporation's properties and assets to any other person, then, as a part of and as a

condition to the effectiveness of such reorganization, merger, consolidation or sale, lawful and adequate provision shall be made so that if the Corporation is not the surviving corporation, the Series Preferred Stock shall be converted into preferred stock of the surviving corporation having equivalent preferences, rights and privileges except that in lieu of being able to convert into shares of Common Stock of the Corporation or the successor corporation the holders of the Series Preferred Stock (including any such preferred stock issued upon conversion of the Series Preferred Stock) shall thereafter be entitled to receive upon conversion of the Series Preferred Stock (including any such preferred stock issued upon conversion of the Series Preferred Stock) the number of shares of stock or other securities or property of the Corporation or of the successor corporation resulting from such merger or consolidation or sale, to which a holder of the number of shares of Common Stock deliverable upon conversion of the Series Preferred Stock immediately prior to the capital reorganization, merger, consolidation or sale would have been entitled on such capital reorganization, merger, consolidation, or sale. In any such case, appropriate provisions shall be made with respect to the rights of the holders of the Series Preferred Stock (including any such preferred stock issued upon conversion of the Series Preferred Stock) after the reorganization, merger, consolidation or sale to the end that the provisions of this Section 5.3.4 (including, without limitation, provisions for adjustment of the Applicable Conversion Value and the number of shares purchasable upon conversion of the Series Preferred Stock or such preferred stock) shall thereafter be applicable, as nearly as may be, with respect to any shares of stock, securities or assets to be deliverable thereafter upon the conversion of the Series Preferred Stock or such preferred stock.

Each holder of Series Preferred Stock upon the occurrence of a capital reorganization, merger or consolidation of the Corporation or the sale of all or substantially all of its assets and properties as such events are more fully set forth in the first paragraph of this Section 5.3.4(b), shall have the option of electing treatment of its shares of Series Preferred Stock under either this Section 5.3.4(b) or Section 5.3.2(b) hereof, and except as otherwise provided in said Section 5.3.2(b), notice of which election shall be submitted in writing to the Corporation at its principal offices no later than 10 days before the effective date of such event, provided that any such notice shall be effective if given not later than 15 days after the date of the Corporation's notice pursuant to Section 5.3.8, with respect to such event.

(i) Certificate as to Adjustments. In each case of an adjustment or readjustment of the Applicable Conversion Rate, the Corporation will promptly furnish each holder of Series Preferred Stock with a certificate, prepared by the chief financial officer of the Corporation, showing such adjustment or readjustment, and setting in detail the facts upon which such adjustment or readjustment is based.

(i) Mechanics of Conversion. To exercise its conversion privilege, a holder of Series Preferred Stock shall surrender the certificate or certificates representing the shares being converted to the Corporation at its principal office, and shall give written notice to the Corporation at that office that such holder elects to convert such shares. Such notice shall also state the name or names (with address or addresses) in which the certificate or certificates for shares of Common Stock issuable upon such conversion shall be issued. The certificate or certificates for shares of Series Preferred Stock surrendered for conversion shall be accompanied by proper assignment thereof to the Corporation or in blank. The date when such written notice is received by the Corporation together with the certificate or certificates representing the shares of Series Preferred Stock being converted, shall be the "Conversion Date." As promptly as practicable after the Conversion Date, the Corporation shall issue and shall deliver to the holder of the shares of Series Preferred Stock being converted, a certificate or certificates in such denominations as it may request in writing for the number of full shares of Common Stock issuable upon the conversion of such shares of Series Preferred Stock in accordance with the provisions of this Section 5.3.4 and cash as provided in Section 5.3.4(b) below in respect of any fraction of a share of Common Stock issuable upon such conversion. Such conversion shall be deemed to have been effected immediately prior to the close of business on the Conversion Date, and at such time the rights of the holder as holder of the converted shares of Series Preferred Stock shall cease and the person or persons in whose name or names any certificate or certificates for shares of Common Stock shall be issuable upon such conversion shall be deemed to have become the holder or holders of record of shares of Common Stock represented thereby.

(ii) Fractional Shares. No fractional shares of Common Stock or scrip representing fractional shares shall be issued upon conversion of Series Preferred Stock. Instead of any fractional shares of Common Stock that would otherwise be issuable upon conversion of Series Preferred Stock, the Corporation shall pay to the holder of the shares of Series Preferred Stock that were converted a cash adjustment in respect of such fraction in an amount equal to the same fraction of the market price per share of the Common Stock (as determined in a manner prescribed in good faith by the Board of Directors) at the close of business on the Conversion Date.

(iii) Partial Conversion. In the event some but not all of the shares of Series Preferred Stock represented by a certificate or certificates surrendered by a holder are converted, the Corporation shall execute and deliver to or on the order of the holder, at the expense of the Corporation, a new certificate representing the number of shares of Series Preferred Stock which were not converted.

(iv) Reservation of Common Stock. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of

the Series Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Series Preferred Stock, and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Series Preferred Stock, the Corporation shall take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose.

5.3.5 Redemption.

(a) Optional Redemption.

(i) Optional Redemption of Series A Preferred Stock and Series B Preferred Stock. In the event that there shall not have occurred a closing of a Qualified Public Offering (as defined in Section 5.3.4(b) hereof) prior to December 23, 2000, at the election of any holder of shares of Series A Preferred Stock or any holder of Series B Preferred Stock outstanding as of December 24, 2000, the Corporation shall redeem all (but not part) of the shares of Series A Preferred Stock and Series B Preferred Stock then held by such holder. Payment of the Series A Redemption Price (as defined below) to the holders of Series A Preferred Stock and the Series B Redemption Price (as defined below) to the holders of shares of Series B Preferred Stock, shall be made by the Corporation on January 23, 2001, for a cash price equal to the original purchase price paid by such holders for each share of Series A Preferred Stock and Series B Preferred Stock outstanding, adjusted for any stock split, combination or stock distribution or stock dividends with respect to such shares (the "Series A Redemption Price" and the "Series B Redemption Price," respectively). On or prior to December 24, 2000, the Corporation shall give written notice (the "Series A and Series B Redemption Notice") by mail, postage prepaid, to the holders of the then outstanding shares of Series A Preferred Stock and Series B Preferred Stock at the address of each such holder appearing on the books of the Corporation or given by such holder to the Corporation for the purpose of notice. Such notice shall set forth the Series A Redemption Price and the Series B Redemption Price, as the case may be, and shall further state that any holder of shares of Series A Preferred Stock or Series B Preferred Stock who intends to request redemption of its Series A Preferred Stock or Series B Preferred Stock, respectively, pursuant to this Section 5.3.5(a) must give written notice to the Corporation of its request for redemption on or before January 11, 2001. On or after January 11, 2001, each holder of shares of Series A Preferred Stock and Series B Preferred Stock who requested that such holder's shares of Series A Preferred Stock and Series B Preferred Stock be so redeemed, shall surrender the certificate or certificates evidencing such shares to the Corporation. In the case of any certificate or certificates which have been lost, stolen or destroyed, the holder of such certificate or certificates shall make and deliver an affidavit of that fact to the Corporation without the necessity of giving the Corporation a bond.

(ii) Mandatory Redemption of Series A Preferred Stock and Series B Preferred Stock. If after sending the Series A and Series B Redemption Notice, the Corporation receives requests for redemption on or prior to January 11, 2001 from the holders of at least sixty-seven percent (67%) of the Series A Preferred Stock and Series B Preferred Stock taken together, it shall give written notice by mail, postage prepaid, to the holders of Series A Preferred Stock and Series B Preferred Stock that all shares of the Series A Preferred Stock and Series B Preferred Stock then outstanding will be redeemed on January 23, 2001 (the "Series A and Series B Redemption Date") for a per share cash price equal to the Series A Redemption Price and the Series B Redemption Price, as the case may be. The notice shall further call upon such holders to surrender to the Corporation on or before the Series A and Series B Redemption Date at the place designated in the notice such holder's certificate or certificates representing the shares to be redeemed. On or after the Series A and Series B Redemption Date, each holder of shares of Series A Preferred Stock and Series B Preferred Stock called for redemption shall surrender the certificate or certificates evidencing such shares to the Corporation. In the case of any certificate or certificates which have been lost, stolen or destroyed, the holder of such certificate or certificates shall make and deliver an affidavit of that fact to the Corporation without the necessity of giving the Corporation a bond.

(iii) Optional Redemption of Series C Preferred Stock. In the event there shall not have occurred a closing of a Qualified Public Offering (as defined in Section 5.3.4(b) hereof) prior to November 3, 2001, at the election of each holder of shares of Series C Preferred Stock outstanding as of November 4, 2001, the Corporation shall redeem all (but not part) of the shares of Series C Preferred Stock then held by such holder. Payment of the applicable Series C Redemption Price (as defined below) to the holders of Series C Preferred Stock shall be made by the Corporation on December 3, 2001, for a cash price equal to the original purchase price paid by such holders for each share of Series C Preferred Stock outstanding, adjusted for any stock split, combined consolidation or stock distribution or stock dividends with respect to such shares (the "Series C Redemption Price"). On or prior to November 4, 2001, the Corporation shall give written notice (the "Series C Redemption Notice") by mail, postage prepaid, to the holders of the then outstanding shares of Series C Preferred Stock at the address of each such holder appearing on the books of the Corporation or given by each holder to the Corporation for the purpose of notice. The Series C Redemption Notice shall set forth the Series C Redemption Price and shall further state that any holder of shares of Series C Preferred Stock who intends to request redemption of the Series C Preferred Stock pursuant to this Section 5.3.2(a) must give written notice to the Corporation of its request for redemption on or before November 21, 2001. On or after December 3, 2001, each holder of shares of Series C Preferred Stock who requested that such holder's shares of Series C Preferred Stock be so redeemed, shall surrender the certificate or certificates evidencing such shares to the Corporation. In the case of any certificate or certificates which have been lost, stolen or destroyed,

the holder of such certificate or certificates shall make and deliver an affidavit of that fact to the Corporation without the necessity of giving the Corporation a bond.

(iv) Mandatory Redemption of Series C Preferred Stock. If after sending the Series C Redemption Notice, the Corporation receives requests for redemption on or prior to November 21, 2001 from the holders of at least sixty-seven percent (67%) of the Series C Preferred Stock, it shall give written notice by mail, postage prepaid, to the holders of Series C Preferred Stock that all shares of Series C Preferred Stock then outstanding will be redeemed on December 3, 2001 (the "Series C Redemption Date") for a per share cash price equal to the Series C Redemption Price. The notice shall further call upon such holders to surrender to the Corporation on or before the Series C Redemption Date at the place designated in the notice such holder's certificate or certificates representing the shares to be redeemed on or after the Series C Redemption Date, each holder of shares of Series C Preferred Stock called for redemption shall surrender the certificate or certificates evidencing such shares to the Corporation. In the case of any certificate or certificates which have been lost, stolen or destroyed, the holder of such certificate or certificates shall make and deliver an affidavit of that fact to the Corporation without the necessity of giving the Corporation a bond.

(v) Extension of Redemption Dates. Notwithstanding the foregoing clauses (i) through (iv), in the event any Indebtedness under the Notes remains outstanding, the holders of shares of Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock shall not have the right to require the Corporation to redeem any of such shares until ninety (90) days after the later of (x) the date on which such Notes shall be indefeasibly paid in full and (y) the applicable Redemption Date.

(b) Termination of Rights. From and after the Series A and Series B Redemption Date or the Series C Redemption Date (each a "Redemption Date"), as the case may be, unless there shall have been a default in payment or tender by the Corporation of the Series A Redemption Price and the Series B Redemption Price or the Series C Redemption Price (each a "Redemption Price"), as the case may be, all rights of the holders with respect to such redeemed shares of the Series Preferred Stock (except the right to receive the applicable Redemption Price upon surrender of their certificate) shall cease and such shares shall not thereafter be transferred on the books of the Corporation or be deemed to be outstanding for any purpose whatsoever.

(c) Insufficient Funds. If the funds of the Corporation legally available for redemption of shares of the Series Preferred Stock on the applicable Redemption Date are insufficient to redeem the total number of shares of Series A Preferred Stock and Series B Preferred Stock or Series C Preferred Stock, as the case may be, on such Redemption Date, the Corporation will use its best efforts to engage in a recapitalization or the sale of its business or businesses to

generate sufficient funds to redeem all of the shares of the Series A Preferred Stock and Series B Preferred Stock or the Series C Preferred Stock, as the case may be. The Corporation shall use those funds which are legally available to redeem the maximum possible number of such shares ratably among the holders of such shares to be redeemed. At any time thereafter when additional funds of the Corporation are legally available for the redemption of shares of the Series Preferred Stock, such funds will immediately be used to redeem the balance of the shares which the Corporation has become obligated to redeem on the applicable Redemption Date but which it has not redeemed at the applicable Redemption Price. If any shares of the Series Preferred Stock are not redeemed for the foregoing reason or because the Corporation otherwise failed to pay or under to pay the aggregate applicable Redemption Price on all outstanding shares of Series Preferred Stock, all shares which have not been redeemed shall remain outstanding and entitled to all the rights and preferences provided herein, and the Corporation shall pay interest on the applicable Redemption Price for the unredeemed portion at an aggregate per annum rate equal to the greater of (i) twelve percent (12%) or (ii) the Base Rate or any similar lending rate announced from time to time by The First National Bank of Boston or any successor entity plus five percent (5%), increased, in each case, by one percent (1%) at the end of each calendar quarter thereafter. All provisions hereof are hereby expressly limited so that in no contingency or event whatsoever shall the amount paid or agreed to be paid to the holders of the Series Preferred Stock exceed the maximum amount which the holder is permitted to receive under applicable law. If fulfillment of any provision hereof shall involve exceeding such amount, then the obligation to be fulfilled shall automatically be reduced to the limit of such maximum amount. As used herein, the term "applicable law" shall mean the law in effect as of the date hereof, provided, however, that in the event that there is a change in the law which results in a higher permissible rate of interest, then these provisions shall be governed by such new law as of its effective date.

5.3.6 Restrictions and Limitations. The Corporation shall not without the affirmative vote or written consent of the holders of a majority of the then outstanding shares of the Series Preferred Stock:

(i) Redeem, purchase or otherwise acquire for value (or pay into or set aside for a sinking fund for such purpose), any share or shares of Series Preferred Stock other than pursuant to Section 5.3.5 hereof;

(ii) Redeem, purchase or otherwise acquire for value (or pay into or set aside for a sinking fund for such purpose) any of the Common Stock of any class or any other capital stock of the Corporation other than the Series Preferred Stock or any of the Corporation's options, warrants or convertible or exchangeable securities, except that these provisions will not prohibit the Corporation from repurchasing or redeeming any shares of capital stock from individuals and entities who have entered into stockholder agreements, stock option agreements, restricted stock agreements or other similar agreements with the Corporation in each case

approved by a majority of the Series A Investor Director, Series B Investor Director and Series C Investor Director under which the Corporation has the option to repurchase such shares upon the occurrence of certain events, including the termination of employment and involuntary transfers by operation of law (and their permitted transferees); provided, however, that any such agreement between such individual and the Corporation under which the Corporation has such options to repurchase, must be approved by the affirmative vote or written consent of the holders of a majority of the then outstanding Series Preferred Stock before such agreement is executed by the Corporation;

(iii) Authorize or issue, or obligate itself to issue, any other debt or equity security, other than as provided in that certain Investment and Shareholder's Agreement, by and among the Corporation and the Investors named therein, dated as of October 31, 1997 (the "Investment Agreement");

(iv) Increase or decrease (other than by conversion as permitted hereby) the total number of authorized shares of Series Preferred Stock;

(v) Pay or declare any dividend or distribution on any of its capital stock;

(vi) Authorize any merger, consolidation of the Corporation with or into any other company or entity, or authorize the reorganization or sale of the Corporation or the sale of substantially all of the assets of the Corporation;

(vii) Amend the charter documents of the Corporation or amend the Bylaws of the Corporation in any manner that adversely affects the preferences, powers, rights or privileges of the holders of Series Preferred Stock;

(viii) Authorize any reclassification or recapitalization of the outstanding capital stock of the Corporation;

(ix) Approve the annual operating budget of the Corporation;

(x) Change the composition or compensation of management of the Corporation except as provided in the Investment Agreement; or

(xi) Incur, create, assume, become or be liable in any manner with respect to, or permit to exist, any new or additional indebtedness or liability in excess of $50,000, except as provided in the Investment Agreement.

5.1.7 No Reissuance of Series Preferred Stock. No share or shares of the Series Preferred Stock acquired by the Corporation by reason of

redemption, purchase, conversion or otherwise shall be returned, and all such shares shall be canceled, retired, and eliminated from the shares which the Corporation shall be authorized to issue. The Corporation may from time to time take such appropriate corporate action as may be necessary to reduce the authorized number of shares of the Series Preferred Stock accordingly.

5.3.8 *Notices of Record Date.* In the event (i) the Corporation establishes a record date to determine the holders of any class of securities who are entitled to receive any dividend or other distribution, or (ii) there occurs any capital reorganization of the Corporation, any reclassification or recapitalization of the capital stock of the Corporation, any merger or consolidation of the Corporation, or any transfer of all or substantially all of the assets of the Corporation to any other company, or any other entity or person, or any voluntary or involuntary dissolution, liquidation or winding up of the Corporation, the Corporation shall mail to each holder of Series Preferred Stock at least 20 days prior to the record date specified therein, a notice specifying (a) the date of such record date for the purpose of such dividend or distribution and a description of such dividend or distribution, (b) the date on which any such reorganization, reclassification, transfer, consolidation, merger, dissolution, liquidation or winding up is expected to become effective, and (c) the time, if any, that is to be fixed, as to when the holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable upon such reorganization, reclassification, transfer, consolidation, merger, dissolution, liquidation or winding up.

5.3.9 *Other Rights.* Except as otherwise provided in this Amended and Restated Certificate of Incorporation shares of each series of the Series Preferred Stock and shares of Common Stock shall be identical in all respects (each share of Series Preferred Stock having equivalent rights to the number of shares of Common Stock into which it is then convertible), shall have the same powers, preferences and rights, without preference of any such class or share over any other such class or share, and shall be treated as a single class of stock for all purposes.

5.3.10 *Ranking.* Each series of Series Preferred Stock shall rank on a parity with the other series of Series Preferred Stock as to the distribution of assets on liquidation, dissolution and winding up of the Corporation. The Series Preferred Stock shall rank senior to the Common Stock as to the distribution of assets on liquidation, dissolution and winding up of the Corporation.

5.3.11 *Miscellaneous.*

(a) All notices referred to herein shall be in writing, and all notices hereunder shall be deemed to have been given, upon the earlier of delivery thereof by hand delivery, by courier, or by standard form of telecommunication, addressed: (i) if to the Corporation, to its principal executive

office (Attention: President) and to the transfer agent, if any, for the Series Preferred Stock or other agent of the Corporation designated as permitted hereby or (ii) if to any holder of the Series Preferred Stock or Common Stock, as the case may be, to such holder at the address of such holder as listed in the stock record books of the Corporation (which may include the records of any transfer agent for the Series Preferred Stock or Common Stock, as the case may be) or (iii) to such other address as the Corporation or any such holder, as the case may be, shall have designated by notice similarly given.

(b) The Corporation shall pay any and all stock transfer and documentary stamp taxes that may be payable in respect of any issuance or delivery of shares of Series Preferred Stock or shares of Common Stock or other securities issued on account of Series Preferred Stock pursuant hereto or certificates representing such shares or securities. The Corporation shall not, however, be required to pay any such tax which may be payable in respect of any transfer involved in the issuance or delivery of shares of Series Preferred Stock or Common Stock or other securities in a name other than that in which the shares of Series Preferred Stock with respect to which such shares or other securities are issued or delivered were registered, or in respect of any payment to any person with respect to any such shares or securities other than a payment to the registered holder thereof, and shall not be required to make any such issuance, delivery or payment unless and until the person otherwise entitled to such issuance, delivery or payment has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax has been paid or is not payable.

(c) The Corporation may appoint, and from time to time discharge and change, a transfer agent of the Series Preferred Stock. Upon any such appointment or discharge of a transfer agent, the Corporation shall send notice thereof by hand delivery, by courier, by standard form of telecommunication or by first class mail (postage prepaid), to each holder of record of the Series Preferred Stock.

5.4 Subject to the provisions of this Amended and Restated Certificate of Incorporation and except as otherwise provided by law, the stock of the Corporation, regardless of class, may be issued for such consideration and for such corporate purposes as the Board of Directors may from time to time determine.

6. Compromise, Arrangement or Reorganization. Whenever a compromise or arrangement is proposed between this Corporation and its creditors or any class of them and/or between this Corporation and its stockholders or any class of them, any court of equitable jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof or on the application of any receiver or receivers appointed for this Corporation under the provisions of Section 291 of the General Corporation Law or on the application of trustees in dissolution or of any receiver or receivers appointed

for this Corporation under the provisions of Section 279 of General Corporation Law order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, agree to any compromise or arrangement and to any reorganization of this Corporation as a consequence of such compromise or arrangement, the said compromise or arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors or class of creditors, and/or on all stockholders or class of stockholders of this Corporation, as the case may be, and also on this Corporation.

7. Limitation of Liability. No director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (a) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (b) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) under Section 174 of the General Corporation Law or (d) for any transaction from which the director derived any improper personal benefits. If the General Corporation Law is hereafter amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law, as so amended.

Any repeal or modification of the foregoing paragraph by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification.

8. Indemnification.

8.1 Indemnity Undertaking. To the extent not prohibited by law, the Corporation shall indemnify any person (an "Eligible Person") who is or was made, or threatened to be made, a party to any threatened, pending or completed action, suit or proceeding (a "Proceeding"), whether civil, criminal, administrative or investigative, including, without limitation, an action by or in the right of the Corporation to procure a judgment in its favor, by reason of the fact that such person, or a person of whom such person is the legal representative, is or was a Director or officer of the Corporation, or, while a Director or officer of the Corporation, is or was serving, at the request of the Corporation, as a director or officer of any other corporation or in a capacity with comparable authority or responsibilities for any partnership, joint venture, trust, employee benefit plan or other enterprise (an "Other Entity"), against judgments, fines, penalties, excise taxes, amounts paid in settlement and costs, charges and expenses (including attorneys' fees, disbursements and other charges).

8.2 Payment of Expenses. The Corporation shall, from time to time pay to an Eligible Person the funds necessary for payment of expenses, including attorneys' fees and disbursements, incurred by or on behalf of such Eligible Person in connection with any Proceeding, as such expenses are incurred in advance of the final disposition of such Proceeding; provided, however, that, if required by the General Corporation Law, such expenses incurred by or on behalf of such Eligible Person may be paid in advance of the final disposition of a Proceeding only upon receipt by the Corporation of an undertaking, by or on behalf of such Eligible Person, to repay any such amount so advanced if it shall ultimately be determined by final judicial decision from which there is no further right of appeal that such Eligible Person is not entitled to be indemnified for such expenses.

8.3 Certain Exclusions. Section 8.1 and 8.2 shall not include any Proceeding commenced by any Eligible Person without the advance approval of the Board of Directors.

8.4 Binding Effect. The provisions of this Section 8 shall be a contract between the Corporation, on the one hand, and each Eligible Person, on the other hand, pursuant to which the Corporation and each such Eligible Person intend to be, and shall be, legally bound. No repeal or modification of this Section 8 shall affect any rights or obligations with respect to any state of facts then or theretofore existing or any proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

8.5 Procedural Rights. The rights to indemnification and payment of expenses provided by, or granted pursuant to, this Section 8 shall be enforceable by an Eligible Person entitled to such indemnification or payment of expenses in any court of competent jurisdiction. The burden of proving that such indemnification or payment of expenses is not appropriate shall be on the Corporation. Neither the failure of the Corporation (including the disinterested Directors on its Board of Directors, a committee of such disinterested Directors, the Corporation's independent legal counsel and its stockholders) to have made a determination prior to the commencement of such action that such indemnification or payment of expenses is proper in the circumstances, nor an actual determination by the Corporation (including the disinterested Directors on its Board of Directors, a committee of such disinterested Directors, the Corporation's independent legal counsel and its stockholders) that such person is not entitled to such indemnification or payment of expenses shall constitute a defense to the action or create a presumption that such person is not so entitled. Notwithstanding anything to the contrary in Section 8.3, such Eligible Person shall also be indemnified for any expenses incurred in connection with successfully establishing his or her right to such indemnification or payment of expenses, in whole or in part, in any such proceeding.

8.6 Persons Serving at Corporation's Request. Any Director or officer of the Corporation serving (a) as a director or officer of another corporation

of which a majority of the shares entitled to vote in the election of its directors is held, directly or indirectly, by the Corporation or (b) any employee benefit plan of the Corporation or any corporation referred to in clause (a) shall be deemed to be doing so at the request of the Corporation.

6.7 Election of Applicable Law. Any person entitled to be indemnified or to payment of expenses as a matter of right pursuant to this Section 6 may elect to have the right to indemnification or payment of expenses interpreted on the basis of the applicable law in effect at the time of the occurrence of the event or events giving rise to the applicable Proceeding, to the extent permitted by law, or on the basis of the applicable law in effect at the time such indemnification or payment of expenses is sought. Such election shall be made, by a notice in writing to the Corporation, at the time indemnification or payment of expenses is sought; provided, however, that if no such notice is given, the right to indemnification or payment of expenses shall be determined by the law in effect at the time indemnification or payment of expenses is sought.

6.8 Rights Not Exclusive. The rights to indemnification and reimbursement or advancement of expenses provided by, or granted pursuant to, this Section 6 shall not be deemed exclusive of any other rights to which a person seeking indemnification or reimbursement or advancement of expenses may have or hereafter be entitled under any statute, this Restated Certificate of Incorporation, the By-laws, any agreement, any vote of stockholders or disinterested Directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding such office.

6.9 Continuation of Benefits. The rights to indemnification and reimbursement or advancement of expenses provided by, or granted pursuant to, this Section 6 shall continue as to a person who has ceased to be a Director or officer (or other person indemnified hereunder) and shall inure to the benefit of the executors, administrators, legatees and distributees of such person.

6.10 Insurance. The Corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of an Other Entity, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the provisions of this Section 6 or under Section 145 of the General Corporation Law or any other provision of law.

9. Directors. This Section is inserted for the management of the business and for the conduct of the affairs of the Corporation and it is expressly

provided that it is intended to be in furtherance of and not in limitation or exclusion of the powers conferred by applicable law.

9.1 Number, Election, and Terms of Office of Board of Directors. The business of the Corporation shall be managed by a Board of Directors consisting of not less than three or more than 15 members. The exact number of directors within the minimum and maximum limitations specified in the preceding sentence shall be fixed from time to time by resolution adopted by a majority of the entire Board of Directors then in office, whether or not present at a meeting. Directors need not be stockholders of the Corporation. The directors shall be divided into three classes of approximately equal size with the term of office of the first class to expire at the first annual meeting of stockholders of the Corporation next following the end of the Corporation's fiscal year ending December 31, 1998, the term of office of the second class to expire at the first annual meeting of stockholders of the Corporation next following the end of the Corporation's fiscal year ending December 31, 1999 and the term of office of the third class to expire at the annual meeting of stockholders of the Corporation next following the end of the Corporation's fiscal year ending December 31, 2000. At each annual meeting of stockholders following such initial election as specified above, directors elected to succeed those directors whose term expire shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election.

Notwithstanding the foregoing, whenever, pursuant to the provisions of Section 5.1 of this Amended and Restated Certificate of Incorporation, the holders of any one or more series of Preferred Stock shall have the right, voting separately as a series or together with holders of other such series, to elect Directors at an annual or special meeting of stockholders, the election, term of office, filling of vacancies, and other features of such directorships shall be governed by the terms of this Amended and Restated Certificate of Incorporation and any certificate of designation applicable thereto.

During any period when the holders of any series of Preferred Stock have the right to elect additional Directors as provided for or fixed pursuant to the provisions of this Amended and Restated Certificate of Incorporation or any certificate of designation related thereto, then upon commencement and for the duration of the period during which such right continues: (i) the then otherwise total authorized number of Directors of the Corporation shall automatically be increased by such specified number of Directors, and the holders of such Preferred Stock shall be entitled to elect the additional Directors so provided for or fixed pursuant to said provisions, and (ii) each such additional Director shall serve until such Director's successor shall have been duly elected and qualified, or until such Director's right to hold such office terminates pursuant to said provisions, whichever occurs earlier, subject to such Director's earlier death, disqualification, resignation or removal. Except as otherwise provided by the Board in the resolution or resolutions establishing such series, whenever the holders of any series of Preferred Stock having such right

to elect additional Directors are divested of such right pursuant to the provisions of such stock, the terms of office of all such additional Directors elected by the holders of such stock, or elected to fill any vacancies resulting from the death, resignation, disqualification or removal of such additional Directors, shall forthwith terminate and the total and authorized number of Directors of the Corporation shall be reduced accordingly.

9.2 Terms. Notwithstanding any provisions to the contrary contained herein, (i) each director shall hold office until his or her successor is elected and qualified, or until the earlier of such director's death, resignation or removal and (ii) the term of any director who is also an officer of the Corporation shall terminate if he or she ceases to be an officer of the Corporation.

9.3 Newly Created Directorships and Vacancies. Subject to the rights of the holders of any series of Preferred Stock then outstanding, newly created directorships resulting from any increase in the authorized number of directors or any vacancies in the Board of Directors resulting from death, resignation, retirement, disqualification, removal from office or other cause shall be filled by a majority vote of the remaining directors then in office although less than a quorum, or by a sole remaining director and directors so chosen shall hold office for a term expiring at the annual meeting of stockholders at which the term of the class to which they have been elected expires or, in each case, until their respective successors are duly elected and qualified. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director. When any director shall give notice of resignation effective at a future date, the Board of Directors may fill such vacancy to take effect when such resignation shall become effective. In the event of a vacancy in the Board of Directors, the remaining Directors, except as otherwise provided by law, may exercise the powers of the full Board of Directors until the vacancy is filled.

9.4 Removal of Directors. Any one or more or all of the directors may be removed, at any time, but only for cause by the stockholders having at least a majority in voting power of the then issued and outstanding shares of capital stock of the Corporation.

10. Action by Stockholders. Notwithstanding the provisions of Section 228 of the General Corporation Law (or any successor statute), any action required or permitted by the General Corporation Law to be taken at any annual or special meeting of stockholders of the Corporation may be taken only at such an annual or special meeting of stockholders and cannot be taken by written consent without a meeting. At any annual meeting or special meeting of stockholders of the Corporation, only such business shall be conducted as shall have been brought before such meeting in the manner provided by the By-laws.

11. Adoption, Amendment and/or Repeal of Bylaws. The Board of Directors may from time to time adopt, amend or repeal the Bylaws; provided, however, that any Bylaws adopted or amended by the Board of Directors may be amended or repealed, and any Bylaws may be adopted, by a vote of the stockholders having at least two-thirds of the voting power of the then issued and outstanding shares of capital stock of the Corporation.

IN WITNESS WHEREOF, the undersigned has executed this Restated Certificate of Incorporation this 10th day of August, 1998.

PATHNET, INC.

By: Richard A. Fallon
Richard A. Fallon
President and Chief Executive Officer

ATTEST:

By: Michael A. Davis
Michael A. Davis
Vice President, General Counsel and Secretary

EXHIBIT B

Certificate of Authority to Transact Business as a Foreign Corporation

# State of South Dakota

## OFFICE OF THE SECRETARY OF STATE

## CERTIFICATE OF GOOD STANDING

## FOREIGN CORPORATION

I, Joyce Hazeltine, Secretary of State of the State of South Dakota, do hereby certify that PATHNET, INC. (DE) was authorized to transact business in this state on July 9, 1998.

I, further certify that said corporation has complied with the South Dakota law governing foreign corporations transacting business in this state, and so far as the records of this office show, said corporation is in good standing in this State at the date hereof and duly authorized to transact business in the State of South Dakota. This certificate is not to be construed as an endorsement, recommendation or notice of approval of the corporation's financial condition or business activities and practices. Such information is not available from this office.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the Great Seal of the State of South Dakota, at Pierre, the Capital, this August 14, 1998.

JOYCE HAZELTINE
Secretary of State

EXHIBIT C

SEC Form 10-K
(Dec. 31, 1998)

UNITED STATES

# SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# FORM 10-K

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 1998

OR

[_] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(D) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from to

Commission File No. 333-33467

## Pathnet, Inc.

(Exact name of registrant as specified in its charter)

| | |
|---|---|
| Delaware | 52-1941838 |
| (State or other jurisdiction of incorporation or organization) | (I.R.S. Employer Identification No.) |
| 1015 31st Street, N.W. Washington, DC | 20007 |
| (Address of principal executive offices) | (Zip Code) |

(202) 625-7284

(Registrant's telephone number, including area code)

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

None

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

None

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

Yes [X] No [ ]

As of March 12, 1999 there were 2,903,334 shares of the Issuer's common stock, par value $.01 per share, outstanding.

DOCUMENTS INCORPORATED BY REFERENCE

None

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Certain statements in this Report, in future filings by the Company with the Securities and Exchange Commission, in the Company's press releases and in oral statements made by or with the approval of an authorized executive officer of the Company constitute forward-looking statements, including statements which can be identified by the use of forward-looking terminology such as "believes," "anticipates," "expects," "may," "will," or "should" or the negative of such terminology or other variations on such terminology or comparable terminology, or by discussions of strategies that involve risks and uncertainties. All statements other than statements of historical facts in this Report, including, without limitation, such statements under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," regarding the Company or any of the transactions described in this Report or the timing, financing, strategies and effects of such transaction, are forward-looking statements. Although the Company believes that the expectations reflected in such forward-looking statements are reasonable, it can give no assurance that such expectations will prove to be correct. Important factors that could cause actual results to differ materially from expectations include, without limitation, those described in conjunction with the forward-looking statements in this Report, as well as the amount of capital needed to deploy the Company's network, the Company's substantial leverage and its need to service its indebtedness, the restrictions imposed by the Company's current and possible future financing arrangements, the ability of the Company to successfully manage the cost-effective and timely completion of its network and its ability to attract and retain customers for its products and services, the ability of the Company to implement its newly expanded business plan, the ability of the Company to retain and attract relationships with the incumbent owners of the telecommunications assets with which the Company expects to build its network, the ability of the Company to obtain and maintain rights-of-way for the deployment of its network, the Company's ability to retain and attract key management and other personnel as well as the Company's ability to manage the rapid expansion of its business and operations, the Company's ability to compete in the highly competitive telecommunications industry in terms of price, service, reliability and technology, the Company's dependence on the reliability of its network equipment, its reliance on key suppliers of network equipment and the risk that its technology will become obsolete or otherwise not economically viable; and the Company's ability to conduct its business in a regulated environment. See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Risk Factors." The Company does not intend to update these forward-looking statements.

PART I

ITEM 1. BUSINESS

THE COMPANY

Partner, Inc. ("Partner" or the "Company") was founded in 1995 and is a leading "carrier's carrier" providing high-quality, low-cost, digital telecommunications capacity to under-served and second- and third-tier U.S. markets. The Company's strategy is to partner with owners of telecommunications assets, including utility, pipeline and railroad companies ("Incumbents"), to upgrade and aggregate existing infrastructure to a state-of-the-art SONET network. The Company currently has approximately 2,000 route miles of completed network, approximately 5,000 route miles of network under construction and approximately 10,000 route miles of network under contract. The Company originally focused its network development efforts on wireless telecommunications technology

However, as a result of customer demand and market opportunity, the Company expanded the scope of its original wireless network to include fiber optic technology as part of the Company's overall digital telecommunications network. As a result, the Company no longer limits the development of its strategic network relationships to incumbents with wireless assets. The Company's expanded product line will enable it to deliver high bandwidth services as well as dark and dim fiber to inter-exchange carriers ("IXCs"), local exchange carriers, Internet service providers ("ISPs"), Regional Bell Operating Companies ("RBOCs"), cellular operators and resellers (collectively, "Telecom Service Providers"). The bandwidth and dark and dim fiber available on selected routes resulting from deployment of Pathnet's integrated network is intended to enable these Telecom Service Providers to (i) deliver advanced services to areas that are currently under-served by digital networks, (ii) aggregate traffic from cities in second- and third-tier markets and (iii) obtain dedicated network services in such markets. In addition, upon obtaining the requisite rights-of-way and other required permits and licenses, the Company will be able to offer customized builds to such Telecom Service Providers.

The Company has held meetings with over 300 potential strategic partners who own telecommunications assets. As of December 31, 1998, nine of these entities have entered into ten binding agreements relating to the initial design and construction of approximately 10,000 route miles of digital network. Eight of these binding agreements are long-term Fixed Point Microwave Services Agreements ("FPM Agreements") with affiliates of Burlington Northern Santa Fe Railroad, Enron, Idaho Power Company, Northeast Missouri Electric Cooperative, Northern Indiana Public Service Company, Texaco and with two affiliates of KN Energy. The ninth agreement is a binding term sheet with American Tower Corporation, which controls certain telecommunications assets including certain assets divested by CSX Railroad, ARCO Pipeline and MCI WorldCom, Inc. ("MCI") to enable the Company to utilize tower assets and other facilities. The tenth agreement is a tower lease agreement with Titan Towers. In addition to developing its wireless and fiber network to serve under-served and second- and third-tier markets by forming long-term relationships with strategic partners, the Company may pursue opportunities to acquire or deploy complementary telecommunications assets or technologies and to serve other markets. See "Risk Factors -- Risks of Completing the Company's Network, Market Acceptance."

## PRODUCTS AND SERVICES

The Company offers dedicated private line access for voice, data and video transmission in DS-1, DS-3 and OC-3 increments on the wireless portion of its network and will offer larger increments of dedicated private line access on the fiber portion of its network. In addition to bandwidth services, the Company plans to offer dark and dim fiber to customers. Management believes this flexibility together with the scope of the Company's integrated wireless and fiber network will appeal to a broad variety of customers.

The Company also offers telecommunications project management, provisioning services and other customer services. The Company expects to employ a state-of-the-art operating support system capable of supporting on-line order entry and remote circuit provisioning. The Company also expects to employ information systems that permit customers to monitor network quality using benchmarks such as network uptime, mean time to repair, installation intervals, timeliness of billing and network operating center ("NOC") responsiveness. The Company expects that its state-of-the-art "NOC" will permit pro-

access service monitoring and system management on a 24 hours per day, seven days per week basis. The Company expects to combine network management, billing and customer care on an integrated platform to offer its customers a single point of contact.

## DEVELOPMENT OF THE COMPANY'S NETWORK

The Company is in various stages of evaluating and negotiating several agreements and arrangements relating to the deployment of its network, including, but not limited to, agreements to obtain rights-of-way, co-development and other partnering arrangements. There can be no assurance, however, that any of such potential relationships will result in binding agreements or that any of the transactions currently being evaluated will be consummated. See "Risk Factors--Risks of Completing the Company's Network; Market Acceptance."

## EQUIPMENT SUPPLY AGREEMENTS

Pursuant to a Master Agreement entered into by the Company and NEC America, Inc. and its affiliates ("NEC") on August 8, 1997, as amended, the Company agreed to purchase from NEC by December 31, 2002 a total of $200 million worth of certain equipment, services and licensed software to be used by the Company in its network under pricing and payment terms that the Company believes are favorable based on the prices of comparable products in other markets. However, in the event the Company fails to purchase all of such equipment, NEC has reserved the right to withdraw such favorable pricing levels. NEC warrants the equipment against defects for three years and has agreed promptly to repair or replace defective equipment. NEC will also maintain for the Company's benefit, a stock of critical spare parts for up to 15 years. The Company's agreement with NEC provides for fixed prices during the first three years of its term. In addition, pursuant to a Purchase Agreement between Andrew Corporation ("Andrew") and the Company, the Company agreed exclusively to recommend to the Incumbents certain products manufactured by Andrew, and Andrew agreed to sell such products to Incumbents and the Company for a three-year period, renewable for two additional one-year periods at the option of the Company. The Company's agreement with Andrew generally provides for discounted pricing based on projected order volume.

Pursuant to a supply agreement entered into by the Company and Lucent Technologies ("Lucent") on December 18, 1998, the Company agreed that Lucent would be the Company's exclusive supplier of fiber optic cable for its nationwide, voice and data network. The agreement is initially valued at $440 million and could grow up to $2.1 billion over the life of the seven-year agreement. As part of the supply agreement, Lucent will provide a broad level of support, including fiber optic equipment, network planning and design and technical and marketing support. Certain material terms of the Company's agreements with Lucent are currently under review by Lucent and the Company. There can be no assurance that the transactions contemplated by this supply agreement will be consummated or consummated on the terms and conditions described above. Lucent has also agreed to provide equipment financing in connection with this supply agreement. See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital Resources" and "Risk Factors - Reliance on Lucent - Lucent Agreements."

## INTELLECTUAL PROPERTY

The Company uses the name "Pathnet" as its primary business name and service mark and has registered that name with the United States Patent and Trademark Office. On February 26, 1998, the Company filed an application to register its service mark "A NETWORK OF OPPORTUNITIES" in the United States Patent and Trademark Office for communications services, namely establishing and operating a network through the use of fiber optic and high capacity digital radio equipment. Registration of such service mark is expected by the end of 1999. The Company reasonably believes that the application will mature to registration, but there can be no assurance that such registration will actually be issued.

The Company relies upon a combination of licenses, confidentiality agreements and other contractual covenants to establish and protect its technology and other intellectual property rights. These rights are critical to certain aspects of the design, deployment and operation of the Company's network. The Company currently has no patents or patent applications pending. There can be no assurance that the steps taken by the Company will be adequate to prevent misappropriation of its technology or other intellectual property. In addition, the Company depends on the use of intellectual property of others, including the hardware and software used to construct, operate and maintain its network. Although the Company believes that its business as currently conducted does not infringe on the valid proprietary rights of others, there can be no assurance that third parties will not assert infringement claims against the Company or that, in the event of an unfavorable ruling on such claim, a license or similar agreement to utilize technology relied upon by the Company in the conduct of its business will be available to the Company on reasonable terms. The Company's equipment supply contracts with Lucent, NEC and Andrew provide for indemnification by the supplier to the Company for intellectual property infringement claims regarding the suppliers' equipment. In the case of the agreement with Andrew, however, such indemnification is limited to the purchase price paid for the particular equipment.

## CUSTOMERS AND SALES AND MARKETING STRATEGY

The Company primarily targets Telecom Service Providers as well as smaller carriers and large end-users. The Company's marketing focus is to: (i) offer capacity to fill gaps in its customers' networks, including dedicated network through the sale of dark fiber; (ii) provide alternative capacity to incumbent local exchange carriers ("ILECs"); and (iii) capture demand from Telecom Service Providers for the Company's products, including bandwidth services, as a lower cost provider. The Company markets its network to major IXCs such as AT&T Corp. ("AT&T"), MCI and Sprint Corporation ("Sprint") to satisfy their expanding network requirements. The Company expects that it will be well positioned to provide capacity to meet demand in diverse geographic areas.

The Company believes there will be significant opportunities to market its capacity to RBOCs when they commence long distance service outside of their current service areas. The Company also plans to market the Company's network to RBOCs or other ILECs for use within their own service areas. The Company believes ILECs will be attracted to the Company's ability to provide supplemental capacity on a leased basis, permitting them to conserve capital and providing a low-cost redundancy alternative. The Company believes its network will allow RBOCs and ILECs to focus on larger cities while providing small communities within their service areas with broadband connectivity.

The Company expects that mobile wireless operators will be attracted to the Company's ability to provide back haul capacity from service sites (cell sites) that connect its mobile switches with backbone transport capacity. The Company also intends to market its capacity to competitive access providers and competitive local exchange carriers ("CLECs") who can utilize the Company's network to interconnect various service areas on an intra-LATA and inter-LATA basis. Additionally the Company will market capacity to ISPs to facilitate the creation of additional points of presence ("POPs") for local dial-up connectivity to the ISPs' customer base, thereby eliminating the ISPs' dependence on IXCs for capacity.

As of December 31, 1998, the Company was providing commercial telecommunications service to three customers with several additional customers awaiting installation. As the Company continues to deploy its nationwide network and expand its products and services to include dark and dim fiber as well as high bandwidth services, the Company expects that its customer base will materially grow. Although the Company currently derives some revenue from the sale of bandwidth services, the majority of the Company's revenues to date have been derived from construction management and advisory services. For a statement of the Company's revenue and operating results for each of the three years ended December 31, 1998, 1997 and 1996, see "Consolidated Statement of Operations."

## COMPETITION

The telecommunications industry is highly competitive. In particular, price competition in the carrier's carrier market has generally been intense and is expected to increase. The Company competes and expects to compete with numerous competitors who have substantially greater financial and technical resources, long-standing relationships with their customers and potential to subsidize competitive services from less competitive service revenues and from federal universal service subsidies. Such competitors may be operators of existing or newly deployed wireline or wireless telecommunications networks. The Company will also face intense competition due to an increased supply of telecommunications capacity, the effects of deregulation and the development of new technologies, including technologies that will increase the capacity of existing networks.

The Company anticipates that prices for its carrier's carrier services will continue to decline over the next several years. The Company is aware that certain long distance carriers are expanding their capacity and believes that other long distance carriers, as well as potential new entrants to the industry, are constructing new long distance transmission networks in the United States. If industry capacity expansion results in capacity that exceeds overall demand along the Company's routes, severe additional pricing pressure could develop. As a result the Company could face dramatic and substantial price reductions. Such pricing pressure could have a material adverse effect on the business, financial condition and results of operations of the Company. See "Risk Factors Competition; Pricing Pressures."

While the Company generally will not compete with Telecom Service Providers for end-user customers, the Company may compete, on certain routes, as a carrier's carrier with long distance carriers such as AT&T, MCI and Sprint and operators of fiber optic systems such as IXC Communications, Inc., The Williams Companies Inc., Qwest Communications International Inc. and Level 3 Communications, Inc., who would otherwise be the Company's customers in under-served and second- and third-tier markets. The Company will also face competition increasingly in the long haul market from local exchange carriers, regional network providers, resellers, satellite carriers, public utilities and cable companies. In particular, certain ILECs and CLECs are allowed to provide inter-LATA long distance

services. Furthermore, RBOCs will be allowed to provide inter-LATA long distance services within their regions after meeting certain regulatory requirements intended to foster opportunities for local telephone competition. Certain RBOCs have requested regulatory approval to provide inter-LATA data services within their regions. The RBOCs already have extensive fiber optic cable, switching, and other network facilities in the respective regions that can be used for long distance services after a waiting period. In addition, other new competitors may build additional fiber capacity in the geographic areas served and to be served by the Company. See "Risk Factors--Competition; Pricing Pressures."

Furthermore, although the Company believes its strategy will provide it with a cost advantage, there can be no assurance that technological developments will not result in competitors achieving even greater cost efficiency and therefore a competitive advantage. See "Risk Factors -- Risk of Rapid Technological Changes."

A continuing trend toward business combinations and strategic alliances in the telecommunications industry may create stronger competitors to the Company, as the resulting firms and alliances are likely to have significant technological, marketing and financing resources greater than those available to the Company. See "Risk Factors -- Competition; Pricing Pressures."

## EMPLOYEES

As of December 31, 1998, the Company had 144 employees, none of whom was represented by a union or covered by a collective bargaining agreement. The Company believes that its relationship with its employees is good. In connection with the construction and maintenance of its network and the conduct of its other operations, the Company uses third party contractors, some of whose employees may be represented by unions or covered by collective bargaining agreements.

## ITEM 2. PROPERTIES

As part of its network, the Company holds leasehold interests or licenses in the land, towers, shelters and other facilities located at each Incumbent's sites at which the Company has an agreement and will have indefeasible rights to use, leasehold and other real estate interests pursuant to its agreements with independent tower companies, owners of rights-of-way and other owners of telecommunications assets. The Company expects to lease, license and obtain additional real estate rights to additional facilities from Incumbents, owners of rights-of-way and other owners of telecommunications assets in connection with the planned expansion of its digital network.

The Company leases its corporate headquarters space in Washington, D.C. from 6715 Kenilworth Avenue General Partnership, a general partnership of which David Schaeffer, a director of the Company, is General Partner (the "Kenilworth Partnership"), pursuant to a Lease Agreement between the Company and the Kenilworth Partnership, dated as of August 9, 1997 (the "Headquarters Lease"). The Headquarters Lease expires on August 31, 1999 and can be renewed at the option of the Company for two additional one-year periods on the same terms and conditions. See "Certain Relationships and Related Transactions--Lease from the Kenilworth Partnership." The Company also leases office space in Richardson, Texas; Lewiston, Texas; and Independence, Kansas pursuant to leases that expire in 2003, 2001 and 2000, respectively.

The Company believes that all of its properties are well maintained.

## ITEM 3. LEGAL PROCEEDINGS

Other than licensing and other regulatory proceedings described under "Risk Factors--Regulation," the Company is not currently a party to any legal proceedings which, individually or in the aggregate, the Company believes will have a material adverse effect on the Company's financial condition, results of operations and cash flows.

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

During the fourth quarter of the fiscal year covered by this Annual Report on Form 10-K, the Company held a special meeting of the Stockholders on October 29, 1998. At such meeting, the following matters were approved by holders of the Company's common stock, par value $.01 per share (the "Common Stock"), Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series C Convertible Preferred Stock (collectively the "Stockholders") voting together as a single class, by the votes indicated below:

(i) Approval of several agreements and arrangements made in the ordinary course of the Company's business: For 17,115,081 Against: 0 Abstain: 1,651,992.

(iii) Approval of the hiring certain new employees: For 17,115,081 Against: 0 Abstain: 1,651,992.

On December 2, 1998, the Company held a special meeting of the Stockholders where the following matters were approved by the Stockholders, voting together as a single class, by the votes indicated below:

(ii) Approval of a loan agreement with KN Energy: For 14,671,900, Against: 0, Abstain: 4,095,173.

(iii) Approval of a three-way transaction with KN Energy, American Tower Corporation and the Company. For 14,671,900, Against: 0, Abstain: 4,095,173.

(iv) Approval of a Tower Lease Agreement with Titan Towers. For 11,771,900, Against: 2,900,000, Abstain: 4,095,173.

(iv) Approval of a fleet leasing arrangement for automobile rentals. For 14,671,900, Against: 0, Abstain: 4,095,173.

(v) Approval of the grant of stock option awards to certain employees of the Company. For 14,399,344, Against: 0, Abstain: 4,367,729.

(vi) Approval of certain amendments to the Company's Certificate of Incorporation and Amended and Restated Bylaws of the Corporation. For 11,499,344, Against:2,900,000, Abstain: 4,367,729. See Exhibits 3.1 and 3.2 attached to this Report.

On December 7, 1998, the Company solicited written consents from the holders of its Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series C Convertible Preferred

Stock (collectively, the "Preferred Stockholders") to (i) approve certain authorized signatories for the transfer and withdrawal of the Company's funds and (ii) to approve the payment of an invoice for legal services. Effective December 7, 1998, the Company received written consents approving such proposals from Preferred Stockholders representing 10,720,610 votes with Preferred Stockholders representing 5,144,105 votes abstaining.

On December 18, 1998, the Company solicited written consents from the Preferred Stockholders to approve the supply agreement between the Company and Lucent and related Commitment Letter by and between the Company and Lucent signed on December 14, 1998 (the "Commitment Letter") setting forth the proposed terms of equipment financing by Lucent. See "Business -- Equipment Supply Agreements." Effective December 18, 1998, the Company received written consents approving such proposals from Preferred Stockholders representing 13,309,853 votes with Preferred Stockholders representing 2,554,862 votes abstaining.

PART II

## ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

The Company has authorized 60,000,000 shares of Common Stock for which there is no established public trading market. As of March 12, 1999, there were 3 record holders of the Company's Common Stock. As of December 31, 1998, stock option awards to purchase 2,855,883 shares of Common Stock were outstanding.

Pointnet has not paid any cash dividends on its Common Stock in the past and does not anticipate paying any cash dividends on its Common Stock in the foreseeable future. Further, the terms of the Indenture by and between the Company and The Bank of New York, dated April 8, 1998 (the "Indenture") relating to the Company's 12 1/4% Senior Notes due 2008 restrict the ability of the Company to pay dividends on the Common Stock, as described in Management's Discussion and Analysis of Financial Condition and Results of Operations, as well as in Note 11 to the Company's Financial Statements included in Item 14 elsewhere in this Annual Report on Form 10-K.

## ITEM 6. SELECTED CONSOLIDATED FINANCIAL DATA

The following consolidated balance sheet data as of December 31, 1997 and 1998 and statement of operations data for the twelve months ended December 31, 1996, 1997 and 1998 and the period August 25, 1995 (date of inception) to December 31, 1998, have been derived from the Company's financial statements and the notes thereto, included elsewhere in this Annual Report on Form 10-K, which have been audited by PricewaterhouseCoopers LLP, independent accountants, as stated in their report included herein. Such summary statement of operations and balance sheet data should be read in conjunction with such audited financial statements and the notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations." The following consolidated balance sheet data as of December 31, 1995 and 1996 and statements of operations data for the period August 25, 1995 (date of inception) to December 31, 1998 have been derived from the Company's audited financial statements which are not included in this Annual Report on Form 10-K, which have been audited by PricewaterhouseCoopers LLP.

| | Period from August 25, 1995 (date of inception) to December 31, 1995 | Year Ended December 31, 1996 | 1997 | 1998 | Period from August 25, 1995 (date of inception) to December 31, 1998 |
|---|---|---|---|---|---|
| Statement of Operation Data: | | | | | |
| Revenue | $-- | $1,000 | $162,500 | $1,583,539 | $1,747,039 |
| Operating expenses: | | | | | |
| Cost of revenue | -- | -- | -- | 7,547,620 | 7,547,620 |
| Selling, general and administrative | 429,087 | 1,333,294 | 4,247,101 | 9,615,807 | 15,625,349 |
| Depreciation expense | 352 | 9,024 | 46,642 | 232,813 | 288,831 |
| Total operating expenses | 429,439 | 1,342,318 | 4,293,743 | 17,896,300 | 23,961,800 |
| Net operating loss | (429,439) | (1,341,318) | (4,131,243) | (16,312,761) | (22,214,761) |
| Interest expense (a) | -- | (415,357) | -- | (32,572,454) | (32,987,811) |
| Interest income | 2,613 | 13,040 | 159,343 | 13,040,240 | 14,115,236 |
| Write off of initial public offering costs | -- | -- | -- | (1,354,534) | (1,354,534) |
| Other income (expense), net | -- | -- | (5,500) | 2,913 | (2,587) |
| Net loss | $(426,826) | $(1,743,635) | $(3,977,400) | $(36,296,596) | $(42,444,457) |
| Basic and diluted loss per common share | $(0.15) | $(0.60) | $(1.37) | $(12.51) | $(14.63) |
| Weighted average number of common shares outstanding | 2,900,000 | 2,900,000 | 2,900,000 | 2,902,029 | 2,900,605 |
| Balance Sheet Data: | | | | | |
| Cash, cash equivalents and marketable securities (excluding marketable securities pledged as collateral) | $82,973 | $2,318,037 | $7,831,384 | $227,117,417 | |
| Property and equipment, net | 8,551 | 46,180 | 7,207,094 | 47,971,336 | |
| Total assets | 91,524 | 2,365,912 | 16,097,688 | 365,414,129 | |
| Total liabilities | 17,350 | 145,016 | 5,892,918 | 366,492,370 | |
| Convertible preferred stock | 500,000 | 4,008,367 | 15,969,641 | 35,969,639 | |
| Stockholders' equity (deficit) | $(425,826) | $(1,787,471) | $(5,764,871) | (37,047,880) | |

(a) The 1996 expense relates to the beneficial conversion feature of a loan at December 31, 1996.

## ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

### OVERVIEW

The Company is a leading carrier's carrier providing high-quality, low-cost, digital telecommunications capacity to under-served and second- and third-tier U.S. markets.

The Company's business commenced on August 25, 1995 and has been funded primarily through equity investments by the Company's stockholders and a private placement (the "Debt Offering") in April 1998 of 350,000 units (the "Units"), consisting of 12 1/4% Senior Notes (the "Restricted Notes") and warrants (the "Warrants") to purchase shares of Common Stock. On October 2, 1998, the Company completed an exchange (the "Exchange Offer") of all outstanding Restricted Notes for $350,000,000 aggregate principal amount of 12 1/4% Senior Notes due 2008 which have been registered under the

Securities Act of 1933, as amended (the "Registered Notes"). The Restricted Notes and the Registered Notes are collectively referred to herein as the Senior Notes.

Due to Pathnet's focus to date on developing its network, the majority of its revenues reflect certain consulting and project management services in connection with the design, development and construction of digital microwave infrastructure. The remaining portion of its revenues has resulted from the sale of bandwidth services along its network. The Company has also been engaged in the acquisition of telecommunications network equipment, the development of operating systems, the design and construction of the NOC, capital raising and the hiring of management and other key personnel. The Company has experienced significant operating and net losses and negative operating cash flow to date and expects to continue to experience operating and net losses and negative operating cash flow until such time as it is able to generate revenue sufficient to cover its operating expenses. See "Risk Factors - Substantial Leverage; Ability to Service Debt; Restrictive Covenants."

## NETWORK-RELATED COSTS

The limited, incremental cost of operating and maintaining the wireless portion of Pathnet's network, as well as the financial support of Incumbents who will be responsible for a significant portion of such operating and maintenance costs, are expected to enable the Company to enjoy operating leverage with respect to the wireless portion of Pathnet's network. The Company expects to maintain similar operating leverage with respect to the fiber portion of its network through the use of co-development and partnering arrangements; however, there can be no assurance that the Company will be able to achieve these operating efficiencies through the use of these arrangements. The Company's primary network operating costs are expected to be the costs of maintenance, provisioning of new circuits, interconnection and operation of the NOC. See "Risk Factors - Risks of Completing the Company's Network; Market Acceptance; Risks Related to Expansion in Strategy; Need to Obtain and Maintain Rights of Way; Risks Relating to Interconnection."

## COST OF OPERATIONS

Pathnet will incur costs common to all telecommunications providers, including customer service and technical support, information systems, billing and collections, general management and overhead expenses. As a facilities-based carrier's carrier, the Company will differ from non-facilities-based Telecom Service Providers in the scope and complexity of systems supporting its business and network. The Company anticipates that the vast majority of its customers will be Telecom Service Providers purchasing wholesale private line transport capacity across multiple portions of the Company's network. As such, the Company believes that it will be able to maintain a relatively low ratio of overhead expenses to revenues compared to other Telecom Service Providers.

Sales and Marketing Costs. To attract and retain customers for the Company's digital network, the Company has built a sales team that includes a direct national accounts sales force, a regional sales force and a sales force dedicated to alternate channels. In addition, the Company is assembling a centralized marketing organization to focus on product development, market analysis and pricing strategies, as well as customer communications, public relations, and branding.

Administration Costs. The Company's general and administrative costs will include expenses typical of other telecommunications service providers, including infrastructure costs, customer care,

billing, corporate administration and human resources. The Company expects that these costs will grow significantly as it expands operations. See "Risk Factors - Significant Capital Requirements; Uncertainty of Additional Financing."

## DEPRECIATION AND AMORTIZATION

Depreciation of the completed communications network commences when the network equipment is ready for its intended use and is computed using the straight-line method with estimated useful lives of network assets ranging between three to ten years. Depreciation of the office and computer equipment and furniture and fixtures is computed using the straight-line method, generally over three to five years, based upon estimated useful lives commencing when the assets are available for service. Leasehold improvements are amortized over the lesser of the useful lives of the assets or the lease term. Expenditures for maintenance and repairs are expensed as incurred.

## CAPITAL EXPENDITURES

The Company's principal capital requirements for deployment of its wireless network include the costs of tower enhancement, site preparation work, base digital wireless equipment and incremental digital wireless equipment. The Company's goal is to leverage the assets of Incumbents to (i) reduce the capital costs associated with developing long haul, digital network capacity as compared to so-called "green field" network expansion and (ii) improve the Company's speed to market due to the elimination of site preparation activities, including local permitting, power connection, securing road access and rights-of-way and tower construction. The actual allocation of costs between the Company and each Incumbent has varied with each of the Company's agreements with Incumbents executed to date and is expected to vary, perhaps significantly, in the future on a case-by-case basis.

The primary capital costs of deploying the Company's fiber network will include the costs of fiber, rights-of-way, installation and construction work and optronics equipment used in regeneration facilities and to "light" the fiber. The portion of these capital costs that will be borne by the Company, or that will be defrayed by consummating dark fiber sales of any fiber network segment will be determined on a case-by-case basis as the Company evaluates and enters into co-development and other partnering arrangements to deploy its nationwide digital network.

## BUSINESS DEVELOPMENT, CAPITAL EXPENDITURES AND ACQUISITIONS

From inception through December 31, 1998, expenditures for property, plant and equipment, including construction in progress, totaled $45.5 million. In addition, the Company incurred significant other costs and expenses in the development of its business and has recorded cumulative losses from inception through December 31, 1998 of $42.4 million. See "Risk Factors--Limited History of Operations; Operating Losses and Negative Cash Flow."

## LIQUIDITY AND CAPITAL RESOURCES

The Company expects to continue to generate cash primarily from external financing and, as its network matures, from operating activities. The Company's primary uses of cash will be to fund capital expenditures, working capital and operations. Deployment of the Company's digital network and expansion of the Company's operations and services will require significant capital expenditures. Capital

expenditures, which are used primarily for enhanced development and construction of its network, implementing the Company's sales and marketing strategy and constructing and improving the Company's NOC.

During the period from August 1995 through June 1997, the Company raised an aggregate of $6 million through the issuance and sale of its Series A Convertible Preferred Stock and Series B Convertible Preferred Stock in a series of private placements. See "Certain Relationships and Related Transactions - Series A Purchase Transactions" and -- "Series B Purchase Agreement" and Note 9 to the Company's Consolidated Financial Statements that appear elsewhere in this Annual Report on Form 10-K.

On October 31, 1997, the Company consummated a private offering of 939,850 shares of Series C Convertible Preferred Stock for approximately $10 million, less issuance costs of $38,780. On April 8, 1998, the Company consummated an additional private offering of 1,879,699 shares of Series C Convertible Preferred Stock for an aggregate purchase price of approximately $20.0 million, bringing the total investment by the Company's private equity investors to $36.0 million.

On April 8, 1998, the Company completed the Debt Offering resulting in net proceeds to the Company of approximately $339.5 million, after reduction for offering costs of approximately $10.5 million. In addition to the Senior Notes, as part of the Debt Offering, the Company issued Warrants to purchase an aggregate of 1,116,500 shares of Common Stock. The Company used approximately $84.1 million of the net proceeds of the Debt Offering to purchase securities (the "Pledged Securities") in an amount sufficient to provide for payment in full of the interest due on the Senior Notes through April 15, 2000. The Pledged Securities have been pledged as security for repayment of the Senior Notes. The Company made its first interest payment of approximately $22.3 million on October 15, 1998. The Indenture relating to the Senior Notes contains provisions restricting, among other things, the incurrence of additional indebtedness, the payment of dividends and the making of restricted payments, the sale of assets and the creation of liens.

On September 2, 1998, the Company commenced the Exchange Offer to exchange all outstanding Restricted Notes for Registered Notes. The terms of the Registered Notes are identical in all material respects to the terms of the Restricted Notes, except that the Registered Notes have been registered under the Securities Act of 1933 and are generally freely transferable by holders thereof and are issued without any covenant upon the Company regarding registration under the Securities Act of 1933. The Exchange Offer expired on October 2, 1998 and all outstanding Restricted Notes were exchanged for Registered Notes.

The net proceeds from the issuance of the Units (after purchasing the Pledged Securities) and the issuance and sale of the Series C Convertible Preferred Stock are being used for capital expenditures, working capital and general corporate purposes, including the funding of operating losses.

On May 8, 1998, the Company filed a registration statement under the Securities Act of 1933 with the Securities and Exchange Commission relating to a proposed initial public offering of the Company's Common Stock (the "Initial Public Offering"). On August 13, 1998, the Company announced that it would postpone the Initial Public Offering due to general weakness in the capital markets. The timing and size of any future initial public offering of the Company's Common Stock are dependent on market conditions and there can be no assurance that the Initial Public Offering will be completed.

As of December 31, 1998, the Company had capital commitments of approximately $28 million relating to telecommunications transmission equipment. It is anticipated that these will be met with the current resources of the Company.

As of December 31, 1998, the Company had approximately $227 million available for the funding of future operations. The Company anticipates these resources are sufficient to fund the implementation of the Company's business plan into 2000. After such time, the Company is expected to be required to procure additional financing which may include commercial bank borrowings, additional vendor financing or the sale or issuance of equity or debt securities. There can be no assurance the Company will be successful in raising sufficient capital or in obtaining such financing on terms acceptable to the Company. See "Risk Factors - Significant Capital Requirements; Uncertainty of Additional Financing."

Pursuant to the Commitment Letter in connection with the supply agreement between Lucent and the Company, Lucent may provide financing of up to approximately $400 million for fiber purchases for the construction of the Company's network and may provide or arrange financing for future phases of such network. Under the terms of the Commitment Letter, the total amount of financing provided by Lucent will not exceed $1 billion of the $2.1 billion potential value of the supply agreement. Certain material terms of the Company's agreements with Lucent, including the terms of the Commitment Letter, are currently under review by Lucent and the Company. There can be no assurance that the transactions, including the financing contemplated by Commitment Letter, will be consummated or consummated on the terms described above. In addition, the Company may require additional capital in the future to fund operating deficits and net losses and for potential strategic alliances, joint ventures and acquisitions. See "Risk Factors Significant Capital Requirements; Uncertainty of Additional Financing."

Because the Company's cost of rolling out its network and operating its business, as well as its revenues, will depend on a variety of factors including, among other things, the ability of the Company to meet its roll-out schedules, its ability to negotiate favorable prices for purchases of network equipment, the number of customers and the services they purchase, regulatory changes and changes in technology), actual costs and revenues will vary from expected amounts, possibly to a material degree, and such variations are likely to affect the Company's future capital requirements. Accordingly, there can be no assurance that the Company's actual capital requirements will not exceed the anticipated amounts described above.

## RESULTS OF OPERATIONS

### COMPARISON OF YEAR ENDED DECEMBER 31, 1998 WITH YEAR ENDED DECEMBER 31, 1997

During the twelve months ended December 31, 1998, the Company continued to develop relationships with Incumbents, buildout its network and develop its infrastructure, including hiring key management personnel. The Company also began marketing and sales efforts, and hired Mr. Bennis to develop and execute its sales efforts and marketing plan.

#### REVENUE

Substantially all of the Company's revenues for the year ended December 31, 1998 consisted of fees received in connection with services provided to Incumbents, including analysis of existing facilities and system performance, advisory services relating to PCS relocation matters, and turnkey network

construction management services. The Company expects substantially all future revenue to be generated from the sale of telecommunications services. For the year ended December 31, 1998, the Company generated revenues of approximately $1.6 million, approximately $1.4 million (90.6%) of which were attributable to fees received in connection with the continued performance of construction management services primarily from one customer, and approximately $165,000 (10.4%) were attributable to the sale of telecommunications capacity. For the year ended December 31, 1997, the Company generated revenues of approximately $162,500 derived from construction management and advisory services.

## OPERATING EXPENSES

For the year ended December 31, 1998 and 1997, the Company incurred operating expenses of approximately $17.9 million and $4.3 million, respectively. The increase is primarily as a result of the increased activity in the buildout of the Company's network and additional staff costs incurred as part the development of the Company's infrastructure. The Company expects selling, general and administrative expenses to continue to increase as additional staff is added in all functional areas, particularly in sales and marketing. Cost of revenue reflects direct costs associated with performance of construction management services and costs incurred in connection with the provision of telecommunications services. Cost of revenue reflects direct costs associated with performance of construction management services and costs incurred for telecommunications services such as network operations, network interconnections and provisioning of capacity for customers. These costs include salaries and other employee expenses of the new employees hired during the second quarter to staff the NOC, costs for leased telecommunications capacity used to monitor the network, maintenance fees paid to incumbents and other overhead expenses.

## INTEREST EXPENSE

Interest expense for the year ended December 31, 1998 was approximately $32.6 million. Interest expense primarily represents interest on the Senior Notes issued in April 1998 together with financing costs associated with obtaining debt financing arrangements and the amortization expense related to bond issuance costs in respect of the Senior Notes. The Company did not incur an interest expense during 1997.

## INTEREST INCOME

Interest income for the year ended December 31, 1998 and 1997 was approximately $13.9 million and $159,300, respectively. This increase primarily represents interest earned on the proceeds of the Senior Notes issued in April 1998.

## INITIAL PUBLIC OFFERING COSTS

During the third quarter of 1998, the Company recorded a one-time write off of costs of approximately $1.3 million, associated with the postponed Initial Public Offering of the Company's Common Stock. These costs consisted primarily of legal and accounting fees, printing costs, and Securities and Exchange Commission and Nasdaq Stock Market fees.

COMPARISON OF YEAR ENDED DECEMBER 31, 1997 WITH YEAR ENDED DECEMBER 31, 1996

During the year ended December 31, 1997, the Company initiated construction on the first segment of its network, and additional engineer and management personnel were recruited, including Mr. Jalkut. The Company's principal activity through the third quarter of 1996 involved introduction of its business plan to Incumbents. As the Company began to enter into formal relationships with Incumbents in 1996, additio engineering, legal, and financial personnel were recruited to support the increased workflow and to negotiate Incumbent contracts.

REVENUE

In establishing relationships with Incumbents, the Company acted as a provider of services for transitioning the Incumbents from the old network systems onto the Company's network. These services included analysis of existing facilities and system performanc advisory services relating to PCS relocation matters, and turnkey network construction management. Revenues for the year ende December 31, 1997 consisted of $100,000 derived from construction management services and $62,500 from PCS relocation advisor services as compared with revenues for the year ended December 31, 1996 of $1,000 generated from PCS relocation advisory services.

OPERATING EXPENSES

For the year ended December 31, 1997, the Company incurred operating expenses of approximately $4.3 million compared to operating expenses of $1.3 million for the year ended December 31, 1996. This increase was directly related to an increase in selling, general and administrative expenses as the Company expanded its engineering, technical, legal, finance, and general management personnel in connection with the continued signing of new Incumbent agreements and the ongoing construction of the Company's network.

YEAR 2000

The Year 2000 issue exists because many computer systems and software applications use two digits rather than four digits to designate an applicable year. As a result, the systems and applications may not properly recognize the Year 2000, or process data that includes that date, potentially causing data miscalculations or inaccuracies or operational malfunctions or failures.

In the fourth quarter of 1998, the Company began a corporate-wide program to ready its technology systems and non-technology systems and software applications for the Year 2000. The Company's objective is to target Year 2000 compliance for all of its systems, including network and customer interfacing systems. Due to the development stage status of the Company, few legacy systems or applications exist. However, the Company is identifying all of its systems and applications that may need to be modified or reprogrammed in order to achieve Year 2000 compliance.

As part of its Year 2000 plan, the Company is seeking confirmation from its communications equipment vendors and other suppliers, financial institutions and customers that their systems will be Year 2000 compliant. There can be no assurance that the systems of companies with which the Company does business will be Year 2000 compliant. If the vendors important to the Company fail to provide needed products and services, the Company's network buildout and operations could be affected and thereby have a material adverse effect on the Company's results of operations, liquidity and financial condition. Moreover, to the extent that significant customers are not Year 2000 compliant and that

affects their network needs, the Company's sales could be lower than otherwise anticipated.

The Company does not believe its expenditures to implement its Year 2000 strategy will be material. Because its existing systems are relatively new, it does not expect that it will have to replace any of its systems. To the extent it would have to replace a significant portion of its technology systems, its expenditures could have material adverse effect on the Company. The Company has hired an outside consultant to assist it with its Year 2000 compliance, but the Company has relied primarily on its existing employees to develop and implement its Year 2000 compliance strategy. As a result, its expenditures to ensure Year 2000 compliance have not been material to date. The Company expects to continue to use existing employees for the significant part of its Year 2000 compliance efforts in the future.

The Company does not currently have a contingency plan in the event that it or its suppliers or customers are not Year 2000 compliant. However, the Company expects to develop a contingency plan to deal with potential Year 2000 related business interruptions.

## RISK FACTORS

### LIMITED HISTORY OF OPERATIONS; OPERATING LOSSES AND NEGATIVE CASH FLOW

The Company was formed in August 1995 to begin development of its digital network. As of December 31, 1998, the Company had completed approximately 2,000 route miles of network, an additional approximately 5,000 route miles of network are under construction and approximately 10,000 route miles of network are under contract. In addition, the Company was only providing commercial telecommunications service to three customers with several additional customers awaiting installation. There can be no assurance that the Company will enter into any additional contracts with Incumbents or other owners of telecommunications assets to obtain rights-of-way or rights to sites, towers and other assets for the construction of additional network or with customers for the purchase and sale of bandwidth services or dark or dim fiber. As a result of development and operating expenses, the Company has incurred significant operating and net losses to date. The Company's operations have resulted in cumulative net losses of $42.4 million and cumulative net losses before interest income (expense) and income tax benefit of $23.6 million from inception in 1995 through December 31, 1998.

The Company expects to incur significant operating losses, to generate negative cash flows from operating activities and to invest substantial funds to construct its digital network during the next several years. There can be no assurance that the Company will achieve or sustain profitability or generate sufficient positive cash flow to meet its debt service obligations, capital expenditure requirements or working capital requirements.

### SUBSTANTIAL LEVERAGE; ABILITY TO SERVICE DEBT; RESTRICTIVE COVENANTS

The Company is highly leveraged. As of December 31, 1998, the Company had $346.2 million of indebtedness outstanding. The Company will likely incur substantial additional indebtedness (including secured indebtedness) for the development of its network and other capital and operating requirements. The level of the Company's indebtedness could adversely affect the Company in a number of ways. For example, (i) the ability of the Company to obtain necessary financing in the future for working capital, capital expenditures, debt service requirements or other purposes may be limited; (ii) the Company's level of indebtedness could limit its flexibility in planning for, or reacting to, changes

to its business, and the Company will be more highly leveraged than some of its competitors, which may place it at a competitive disadvantage. The Company's degree of indebtedness may make it more vulnerable to a downturn in its business or the economy generally or limit the ability of its existing and future indebtedness restrict or may restrict the payment of dividends by the Company, and (iv) a substantial portion of the Company's cash flow from operations must be dedicated to the payment of principal and interest on its indebtedness and will not be available for other purposes.

The Indenture relating to the Senior Notes and certain of the Company's agreements with Incumbents contain, or will contain, restrictions on the Company and its subsidiaries that will affect, and in certain cases significantly limit or prohibit, among other things, the ability of the Company and its subsidiaries to create liens, make investments, pay dividends and make certain other restricted payments, issue stock of subsidiaries, consolidate, merge, sell assets and incur additional indebtedness. There can be no assurance that such covenants and restrictions will not adversely affect the Company's ability to finance its future operations or capital needs or to engage in other business activities that may be in the interest of the Company.

In addition, any future indebtedness incurred by the Company or its subsidiaries is likely to impose similar restrictions. Failure by the Company or its subsidiaries to comply with these restrictions could lead to a default under the terms of the Senior Notes or the Company's other indebtedness. Notwithstanding the ability of the Company to meet its debt service obligations. In the event of such a default, the holders of such indebtedness would elect to declare all such indebtedness due and payable, together with accrued and unpaid interest. In such event, a significant portion of the Company's indebtedness may become immediately due and payable, and there can be no assurance that the Company would be able to make such payments or borrow sufficient funds from alternative sources to make any such payments. Even if additional financing could be obtained, there can be no assurance that it would be on terms that would be acceptable to the Company.

The successful implementation of the Company's strategy, including expanding its digital network and obtaining and retaining a sufficient number of customers, and significant and sustained growth in the Company's cash flow, will be necessary for the Company to meet its debt service requirements. The Company does not currently, and there can be no assurance that the Company will be able to, generate sufficient cash flows to meet its debt service obligations. If the Company is unable to generate sufficient cash flows or otherwise obtain funds necessary to make required payments, or if the Company otherwise fails to comply with the various covenants under the terms of its existing or future indebtedness, it could trigger a default under the terms thereof, which would permit the holders of such indebtedness to accelerate the maturity of such indebtedness and could cause defaults under other indebtedness of the Company. The ability of the Company to meet its obligations will be dependent upon the future performance of the Company, which will be subject to prevailing economic conditions and to financial, business, regulatory and other factors.

## SIGNIFICANT CAPITAL REQUIREMENTS; UNCERTAINTY OF ADDITIONAL FINANCING

Deployment of the Company's network and expansion of the Company's operations and services will require significant capital expenditures, primarily for continued development and construction of its network and implementation of the Company's sales and marketing strategy. The Company will need to seek additional financing to fund capital expenditures and working capital to expand its network further. The Company may also require additional capital for activities complementary to its currently

The actual amount of the Company's future capital requirements will depend upon many factors, including the costs of network deployment in each of its markets, the speed of the development of the Company's network, the extent of competition and pricing of telecommunications services in its markets, other strategic opportunities pursued by the Company and the acceptance of the Company's services. Accordingly, there can be no assurance that the actual amount of the Company's financing needs will not exceed, perhaps significantly, the current estimates.

There can be no assurance that the Company will be successful in raising additional capital or on terms that it will consider acceptable, that the terms of such indebtedness or other capital will not impair the Company's ability to develop its business or that all available capital will be sufficient to service its indebtedness. Sources of additional capital may include equipment financing facilities and public and private equity and debt financing. Failure to raise sufficient funds may require the Company to modify, delay or abandon some of its planned future expansion or expenditures, which could have a material adverse effect on the Company's business, financial condition and results of operations.

## RISKS OF COMPLETING THE COMPANY'S NETWORK; MARKET ACCEPTANCE

The Company's ability to achieve its strategic objectives will depend in large part upon the successful, timely and cost-effective completion of its network, as well as on selling a substantial amount of its products, including bandwidth services. The successful completion of the Company's network may be affected by a variety of factors, uncertainties and contingencies, many of which are beyond the Company's control. The Company has gained experience in budgeting and scheduling as it has completed segments of its network, and although the Company believes that its cost estimates and buildout schedules relating to the currently planned portions of its network are reasonable, only approximately 2,000 route miles under contract have been completed as of December 31, 1998. There can be no assurance that the Company's network will be completed as planned at the cost and within the time frame currently estimated, if at all. In addition, although the Company recently began providing commercial telecommunications service to three customers with several additional customers awaiting installation, there can be no assurances that the Company will attract additional purchasers of its products, including bandwidth services.

The successful and timely construction of the Company's network will depend upon, among other things, the Company's ability to (i) obtain substantial amounts of additional capital and financing at reasonable cost and on satisfactory terms and conditions, (ii) manage effectively and efficiently the construction of its network, (iii) enter into agreements with Incumbents and other owners of telecommunications assets that will enable the Company to leverage the assets of Incumbents and of other owners of telecommunications assets, (iv) access markets and enter into customer contracts to sell bandwidth services and other products on its network, (v) integrate successfully such networks and associated rights acquired in connection with the development of the Company's network, including cost-effective interconnections, (vi) obtain necessary Federal Communication Commission ("FCC") licenses and other approvals and (vii) obtain adequate rights-of-way and other property rights necessary to install and operate the fiber portions of the Company's network. Successful construction of the Company's network also will depend upon the timely performance by third party contractors of their obligations. There can be no assurance that the Company will achieve any or all of these objectives. Any failure by the Company to accomplish these objectives may have a material adverse affect on the

The development of the Company's network and the expansion of the Company's business may involve acquisitions of telecommunications businesses and assets or implementation of other technologies either in lieu of or as a supplement to the network contemplated by the Company's current business plan. In addition, the Company may enter into relationships with Telecom Service Providers or other entities to manage existing assets or to deploy alternative telecommunications technologies. Furthermore, the Company may seek to serve markets which are not under-served or second- or third-tier and which may present differing market risks (including as to pricing and competition). If pursued, these opportunities could require additional financing, impose additional risks (such as increased or different competition, additional regulatory burdens and network economics different from those described elsewhere herein) and could divert the resources and management time of the Company. There can be no assurance that any such opportunity, if pursued, could be successfully integrated into the Company's operations or that any such opportunity would perform as expected. Furthermore, as the Company builds out its network, there can be no assurance that the Company will enter into agreements with the best-suited Incumbents or such other owners of telecommunications assets, as the case may be. Moreover, there can be no assurance that the resulting network will match or be responsive to the demand for telecommunications capacity or will maximize the possible revenues to be earned by the Company. There can be no assurance the Company will be able to develop and expand its business and enter new markets as currently planned. Failure of the Company to implement its expansion and growth strategy successfully could have a material adverse effect on the Company's business, financial condition and results of operations.

### RISKS RELATED TO EXPANSION IN STRATEGY.

On February 5, 1998, the Company announced it had expanded its business strategy to include construction and deployment of digital networks using both wireless and fiber optic technologies. The Company has limited experience in designing and budgeting, deploying, operating and maintaining a fiber network. In addition, the Company could encounter customers with preferences in employing one technology over another. There can be no assurance the Company will effectively design and budget, deploy, operate or maintain such facilities or that it will be able to address such potential customer preferences. Further, there can be no assurance that the fiber network deployed by the Company will provide the expected functionality.

To the extent that the Company enters into co-development or other partnering arrangements where the Company's partner has primary responsibility for key network development matters such as perfecting rights-of-way or project management, there can be no assurance that such partners will perform such tasks adequately or that any failures in such performance will not adversely effect the Company's financial condition, business or results of operations.

### DEPENDENCE ON RELATIONSHIP WITH INCUMBENTS; RIGHTS OF INCUMBENTS TO CERTAIN ASSETS

There can be no assurance that existing long-term relationships with the Company's Incumbents will be maintained or that additional long-term relationships will result on terms acceptable to the Company, or at all. If the Company is not successful in negotiating such agreements, its ability to deploy its network would be adversely affected.

The Company expects to rely significantly on its Incumbents for the maintenance and provisioning of circuits on the wireless portion of its network. The Company has entered into maintenance agreements with six Incumbents and expects to enter into agreements with additional Incumbents pursuant to which, among other things, the Company will pay the Incumbent a monthly maintenance fee and a provisioning services fee in exchange for such Incumbent providing maintenance and provisioning services for that portion of the Company's network that primarily resides along such Incumbent's system. Failure by the Company to enter successfully into similar agreements with other Incumbents or the cancellation or non-renewal of any of such existing agreements could have a material adverse effect on the Company's business. To the extent the Company is unable to establish similar arrangements in new markets with additional Incumbents or establish replacement arrangements on systems where a maintenance agreement with a particular Incumbent is canceled or not renewed, the Company may be required to maintain its network and provision circuits on its network through establishment of its own maintenance and provisioning workforce or by outsourcing maintenance and provisioning to a third party. The Company's operating costs under these conditions may increase.

NEED TO OBTAIN AND MAINTAIN RIGHTS-OF-WAY.

The Company expects to obtain easements, rights-of-way, franchises and licenses from various private parties, ILECs, utilities, railroads, long distance companies, state highway authorities, local governments and transit authorities in order to construct and maintain its fiber optic network. If the Company were to acquire right-of-way directly from a governmental authority, it would be directly affected by state and local law. To the extent that the Company obtains rights-of-way from others, it would be indirectly affected by state and local law. There is a possibility that disputes may arise with

the licensing authority or a competitor, the result of which may favor a competitor of the Company. Such disputes could impose legal and administrative costs on the Company, including out-of-pocket expenses and lost market opportunity because of delays. Further, the Company may be subject to franchise fees imposed by state and local governments. In addition, the Company may require pole attachment agreements with utilities and ILECs to operate existing and future networks, and there can be no assurance that such agreements will be obtained on reasonable terms.

There can be no assurance that the Company will be able to obtain and maintain the additional rights and permits needed to build its fiber optic network and otherwise implement its business plan on acceptable terms. The failure to enter into and maintain required arrangements for the Company's network could have a material adverse effect on the Company's business, financial condition and results of operations. There can be no assurance that, once obtained, the Company will continue to have access to existing rights-of-way and franchises after the expiration of such agreements. If a franchise, license or lease agreement were terminated and the Company were forced to remove or abandon a significant portion of its network, such termination could have a material adverse effect on the Company.

MANAGEMENT OF GROWTH AND RISKS ASSOCIATED WITH POSSIBLE ACQUISITIONS, STRATEGIC ALLIANCES AND JOINT VENTURES.

The Company's expanded business plan may, if successfully implemented, result in rapid expansion of its operations. Rapid expansion of the Company's operations may place a significant strain on the Company's management, financial and other resources. The Company's ability to manage future growth, should it occur, will depend upon its ability to monitor operations, control costs, maintain regulatory compliance, maintain effective quality controls and expand significantly the Company's internal management, technical, information and accounting systems and to attract and retain additional qualified personnel. Furthermore, as the Company's business develops and expands, the Company will need additional facilities for its growing workforce. There can be no assurance that the Company will successfully implement and maintain such operational and financial systems or successfully obtain, integrate and utilize the employees and management, operational and financial resources necessary to manage a developing and expanding business in an evolving and increasingly competitive industry which is subject to regulatory change. Any failure to expand these areas and to implement and improve such systems, procedures and controls in an efficient manner at a pace consistent with the growth of the Company's business could have a material adverse effect on the business, financial condition and results of operations of the Company.

The Company believes that a part of its future growth may come from the formation of strategic alliances with other telecommunications companies, designed to assist and accelerate the building of the Company's digital network to provide services to customers of the Company which are complementary to those provided by the Company. The Company intends to pursue joint ventures with, or acquisitions of, companies that have an existing network infrastructure or customer base in order to increase the Company's penetration of its markets or accelerate entry into new markets. Limitations under the Indenture may significantly limit the Company's ability to make acquisitions and to incur indebtedness in connection with acquisitions. Such transactions commonly involve certain risks, including, among others, the difficulty of assimilating the acquired operations and personnel; the potential disruption of the Company's ongoing business and diversion of resources and management time; the possible inability of management to maintain uniform standards, controls, procedures and policies; the risks of entering

which the Company has little or no direct prior experience, and the potential impairment of relationships with employees or customers as a result of changes in ownership. There can be no assurance that any acquisition or joint venture will be made, that the Company will be able to obtain additional financing needed to finance such acquisitions and joint ventures and, if any acquisitions are so made, that the acquired business will be successfully integrated into the Company's operations or that the acquired business will perform as expected. The Company has no definitive agreement with respect to any acquisition, although it has had discussions with other companies and will continue to assess opportunities on an ongoing basis.

## DEPENDENCE ON KEY PERSONNEL; NEED FOR ADDITIONAL PERSONNEL

The success of the Company will depend to a significant extent upon the abilities and continued efforts of its senior management, particularly members of its senior management team, including Richard A. Jalkut, President and Chief Executive Officer, Kevin D. Thomas, Executive Vice President serving as President of the Company's Communications Services Division, William R. Smedberg, V, Executive Vice President, Corporate Development, and Michael L. Brooks, Vice President of Network Development. Other than its Employment Agreement with Richard A. Jalkut, the Company does not have any employment agreements with, nor does the Company maintain "key man" insurance on, these employees. The loss of the services of any such individuals could have a material adverse effect on the Company's business, financial condition and results of operations. The success of the Company will also depend, in part, upon the Company's ability to identify, hire and retain additional key management personnel, including the senior management, who are also being sought by other businesses. Competition for qualified personnel in the telecommunications industry is intense. The inability to identify, hire and retain such personnel could have a material adverse effect on the Company's results of operations.

## COMPETITION; PRICING PRESSURES

The telecommunications industry is highly competitive. In particular, price competition in the carrier's carrier market has generally been intense and is expected to increase. The Company competes and expects to compete with numerous competitors who have substantially greater financial and technical resources, long-standing relationships with their customers and potential to subsidize competitive services from less competitive service revenues and from federal universal service subsidies. Such competitors may be operators of existing or newly deployed wireless or wireless telecommunications networks. The Company will also face intense competition due to an increased supply of telecommunications capacity, the effects of deregulation and the development of new technologies, including technologies that will increase the capacity of existing networks. See "Business - Competition."

## RELIANCE ON EQUIPMENT SUPPLIERS FOR THE WIRELESS PORTION OF THE COMPANY'S NETWORK

The Company currently purchases most of its telecommunications equipment pursuant to an agreement with NEC from whom the Company has agreed to purchase $20M worth of equipment by December 31, 2002 and has entered into an equipment purchase agreement with Andrew. Any interruption or interruption in supply from other supplier or any increase in prices for such equipment could have a disruptive effect on the Company. Currently NEC and Northern Telecom Ltd. are the only

manufacturers of SONET radios that are compatible with the Company's proposed system design and reliability standards relating to the wireless portion of its network, although Harris Corporation and Alcatel Alsthom Compagnie Generale d'Electricite SA are in the process of developing and testing similar and compatible products. Further, the Company does not manufacture, nor does it have the capability to manufacture, any of the telecommunications equipment used on its network. As a result, the failure of the Company to procure sufficient equipment at reasonable prices and in a timely manner could adversely affect the Company's successful deployment of its network and results of operations.

RELIANCE ON LUCENT; LUCENT AGREEMENTS.

The Company and Lucent have entered into a supply agreement under which Lucent will provide and will deploy personnel to assist in, among other things, the design and marketing of the Company's network. Any failure or inability by Lucent to perform these functions could cause delays or additional costs in providing services to customers and building out the Company's network in specific markets. Any such failure could materially and adversely affect the Company's financial condition, business and results of operations.

The Company and Lucent have entered into the Commitment Letter which is contingent upon various conditions, including the execution of a definitive financing agreement, compliance with financial covenants, completion of due diligence and the absence of any material adverse change in the Company. There can be no assurance that a definitive agreement will be executed with respect to the financing contemplated by the Commitment Letter or that the financing contemplated by the Commitment Letter will be consummated. Any failure to consummate the financing contemplated by the Commitment Letter could materially and adversely effect the Company's financial condition, business and results of operations.

TECHNICAL LIMITATIONS OF THE WIRELESS NETWORK

The Company will not be able to offer route diversity until such time as it has completed a substantial portion of its mature network. In addition, the wireless portion of the Company's network requires a direct line of sight between two antennae (each such interval comprising a "path") which is subject to distance limitations, freespace fade, multipath fade and rain attenuation. In order to meet industry standards for reliability, the maximum length of a single path similar to those being designed by the Company is generally limited to 40 miles and, as a result, intermediate sites in the form of back-to-back terminals or repeaters are required to permit digital wireless transmission beyond this limit based on the climate and topographic conditions of each path. In the absence of a direct line of sight, additional sites may be required to circumvent obstacles, such as tall buildings in urban areas or mountains in rural areas. Topographic conditions of a path and climate can cause reflections of signals from the ground, which can affect the transmission quality of digital wireless services. In addition, in areas of heavy rainfall, the intensity of rainfall and the size of the raindrops can affect the transmission quality of digital wireless services. Paths in these areas are engineered for shorter distances to maintain transmission quality and can employ diversity, frequency diversity, adaptive power control and forward error correction to minimize transmission errors. The use of additional sites and shorter paths to overcome obstructions, multipath fade or rain attenuation will increase the Company's capital costs. While these increased costs may not be significant in all cases, such costs may render digital wireless services uneconomical in certain circumstances.

Due to line of sight limitations, the Company currently installs its antennae on towers, the rooftops of buildings or other tall structures. Line of sight and distance limitations generally do not present problems because Incumbents have already selected, developed and constructed unobstructed transmission sites. In certain instances, however, the additional frequencies required for the excess capacity to be installed by the Company may not be available from Incumbents' existing sites. In these instances, the Company generally expects to use other developed sites already owned or leased by such Incumbent. In some instances, however, the Company has encountered, and may in the future encounter, line of sight, frequency blockage and distance limitations that cannot be solved economically. While the effect on the financial condition and results of operations of the Company resulting from such cases has been minimal to date, there can be no assurance that such limitations will not be encountered more frequently as the Company expands its network. Such limitations may have a material adverse effect on the Company's future development costs and results of operations. In addition, the current lack of compression applications for wireless technology limits the Company's ability to increase capacity on the wireless portion of its network without significant capital expenditures for additional equipment.

## RISKS RELATING TO INTERCONNECTION

In order to obtain the necessary access to install its radios, antennae and other equipment required for interconnection of the Company's network to the public switched telephone network or to POPs of the Company's customers, the Company must acquire the necessary rights and enter into the arrangements to secure such interconnections and deploy and operate such interconnection equipment. There can be no assurance that the Company will succeed in obtaining the rights necessary to secure such interconnections and to deploy its interconnection equipment in its market areas on acceptable terms, if at all, or that delays in or terms for obtaining such rights will not have a material adverse effect on the Company's development or results of operations.

## DEPENDENCE ON INFORMATION AND PROCESSING SYSTEMS

Sophisticated information and processing systems are vital to the Company's growth and its ability to monitor network performance, provision customer orders for telecommunications capacity, bill customers accurately, provide high-quality customer service and achieve operating efficiencies. As the Company grows, any inability to operate its billing and information and processing systems, or to upgrade internal systems and procedures as necessary, could have a material adverse impact on the Company's ability to reach its objectives, or on its business, financial condition and results of operations.

## RISK OF RAPID TECHNOLOGICAL CHANGES

The telecommunications industry is subject to rapid and significant changes in technology. Although the Company has expanded its business plan to include fiber optic technologies, which may diversify the Company's exposure to the risk of such technological changes, their effect on the business of the Company cannot be predicted. There can be no assurance that (i) the Company's network will not be economically or technically outmoded by technology or services now existing or developed and implemented in the future, (ii) the Company will have sufficient resources to develop or acquire new technologies or to introduce new services capable of competing with future technologies or service offerings or (iii) the cost of the equipment used on its network will decline as rapidly as that of competitive alternatives. The occurrence of any of the foregoing events may have a material adverse

effect on the operations of the Company.

## REGULATION

RISKS RELATING TO REGULATION OF WIRELESS NETWORK. The Company's arrangements with Incumbents contemplate that the wireless portion of the Company's digital network will provide, largely "common carrier fixed point-to-point microwave" telecommunications services under Part 101 ("Part 101") of the rules of the FCC, which services are subject to regulation by federal, state and local governmental agencies. Changes in existing federal, state or local laws and regulations, including those relating to the provision of Part 101 telecommunications services, any failure or significant delay in obtaining (or complying with the terms of) necessary licenses, permits or renewals, or any expansion of the Company's business that subjects the Company to additional regulatory requirements could have a material adverse effect on the Company's business, financial condition, and results of operations.

FCC LICENSE REQUIREMENTS. Prior to applying to the FCC for authorization to use portions of the 6 GHz band, the Company must coordinate its use of the frequency with any existing licensees, permittees, and applicants in the same area whose facilities could be subject to interference as a result of the Company's proposed use of the spectrum. There can be no assurance in any particular case that the Company will not encounter other entities and proposed uses of the desired spectrum that would interfere with the Company's planned use, and that the Company will be able to coordinate successfully such usage with such entities. In addition, as part of the requirements of obtaining a Part 101 license, the FCC requires the Company to demonstrate the site owner's compliance with the reporting, notification and technical requirements of the Federal Aviation Administration ("FAA") with respect to the construction, installation, location, lighting and painting of transmitter towers and antennae such as those to be used by the Company in the operation of its network. Furthermore, in order to obtain the Part 101 licenses necessary for the operation of its network, the Company, and in some cases Incumbents, must file applications with the FCC for such licenses and demonstrate compliance with routine technical and legal qualification to be an FCC licensee. The Company must also obtain FCC authorization before transferring control of any of its licenses or making certain modifications to a licensed facility. There can be no assurance that the Company or any Incumbent who desires to be the licensee with respect to its portion of the Company's network will obtain all of the licenses or approvals necessary for the operation of the Company's business, the transfer of any license, or the modification of any facility, or that the FCC will not impose burdensome conditions or limitations on any such license or approval.

RISKS RELATING TO REGULATION OF FIBER NETWORK. Pursuant to the interconnection provisions of the Telecommunications Act of 1996 (the "1996 Telecom Act"), the FCC identified a minimum list of unbundled network elements that ILECs must make available to other telecommunications carriers. The FCC declined to include incumbent ILECs' dark fiber in this list, finding that it did not have adequate information to determine whether dark fiber qualifies as a network element. The FCC indicated that is would continue to review or revise its rules regarding unbundled network elements as necessary. State commissions, however, have the authority to impose additional unbundling requirements so long as the requirements are consistent with the 1996 Telecom Act and the FCC's requirements, which could include requiring incumbent ILECs to unbundle their dark fiber.

In the recent Supreme Court decision regarding the FCC's interconnection and unbundling rules,

the Supreme Court vacated the FCC's rule establishing the list of unbundled network elements. The Supreme Court found that the FCC had misinterpreted the terms of the 1996 Telecom Act regarding an incumbent ILEC's duty to provide network elements in a reasonable fashion. The Supreme Court found that the FCC had given telecommunications carriers blanket access to unbundled network elements. The statute however limits telecommunications carriers' access to network elements to those that are "necessary" or to those where failure to have access would "impair" the ability of the telecommunications carrier" to provide services it seeks to offer. The FCC plans to commence a rulemaking proceeding to adopt new requirements regarding unbundled network elements that properly consider the "necessary and impair" standard in the 1996 Telecom Act.

A decision by the FCC or states to require unbundling of incumbent ILECs' dark fiber could increase the supply of dark fiber and decrease demand for the Company's dark fiber, and thereby have an adverse effect on the Company' business, financial condition and results of operations.

GENERAL

PROVISION OF COMMON AND PRIVATE CARRIER SERVICES. The Company is currently offering, and expects to offer in the future, its services on a private carrier basis. The Company's private carrier services are essentially unregulated, while any common carrier offerings would be subject to additional regulations and reporting requirements including payment of additional fees and compliance with additional rules and regulations including that any such services must be offered pursuant to filed tariffs and non-discriminatory terms, rules and practices. There can be no assurance that the FCC will not find that some or all of the private carrier services offered by the Company are in fact common carrier services, and thus subject to such additional regulations and reporting requirements including the non-discrimination and tariff filing requirements imposed on common carriers, in which case the Company may be required to pay additional fees or adjust, modify or cease provision of certain of its services in order to comply with any such regulations, including offering such services on the same terms and conditions to all of those seeking such services, and pursuant to rates made public in tariff filings at the FCC.

FOREIGN OWNERSHIP. As the licensee of facilities designated for common carriage, the Company is subject to Section 310(b)(4) of the Communications Act of 1934, as amended (the "Communications Act"), which by its terms restricts the holding company of an FCC common carrier licensee (the Company is such a holding company, because it expects to hold all FCC licenses indirectly, through subsidiaries) to a maximum of 25% foreign ownership and/or voting control. The FCC has determined that it will authorize a higher level of foreign ownership (up to 100%) on a streamlined basis where the indirect foreign investment in the common carrier licensee is by citizens of, or companies organized under the laws of World Trade Organization ("WTO") member countries. Where the foreign ownership is by citizens or corporations of non-WTO nations, FCC authorization to exceed the 25% limitation must be obtained on a non-streamlined basis and the licensee must meet a more demanding public interest showing. The Company is presently within the 25% foreign ownership limitation. In connection with any future financings, the Company will have to monitor foreign investment to ensure that its foreign ownership does not exceed the 25% limitation. If it appeared that foreign ownership of the Company was coming close to exceeding this benchmark, the Company would have to obtain FCC authorization prior to exceeding the 25% limitation. In addition, if any incumbent elects to be the licensee on the portion of the Company's network relating to its system, such incumbent would also be subject to such

[illegible] of such subsidiaries, and that such Incumbent had more than 25% foreign ownership, the Incumbent would have to seek authorization from the FCC to exceed the 25% limitation or it would have to reduce its foreign ownership.

In the event that an Incumbent were to choose to hold the relevant Part 101 license itself, and not through a holding company, that Incumbent would be subject to Section 310(b)(3) of the Communications Act, which limits direct foreign ownership of FCC licenses to 20%. The FCC does not have discretion to waive this limitation. If an Incumbent exceeded the 20% limitation it would be required to reduce its foreign ownership in order to obtain or retain its Part 101 license.

STATE AND LOCAL REGULATION. Although the Company expects to provide most of its services on an interstate basis, in those instances where the Company provides service on an intrastate basis, the Company may be required to obtain a certification to operate from state utility commissions in certain of the states where such intrastate services are provided, and may be required to file tariffs covering such intrastate services. In addition, the Company may be required to obtain authorizations from or notify such states with respect to certain transfers or issuances of capital stock of the Company. The Company does not expect any such state or local requirements to be burdensome; however, there can be no assurance that the Company will obtain all of the necessary state and local approvals and consents or that the failure to obtain such approvals and consents will not have a material adverse effect on the Company's business, financial condition and results of operations. In addition, there can be no assurance that state or local authorities will not impose burdensome taxes, requirements or conditions on the Incumbent or the Company.

## INVESTMENT COMPANY ACT CONSIDERATIONS

The Company has substantial cash, cash equivalents and short-term investments. The Company has invested and intends to invest the proceeds of its financing activities so as to preserve capital by investing primarily in short-term instruments consistent with prudent cash management and not primarily for the purpose of achieving investment returns. Investment in securities primarily for the purpose of achieving investment returns could result in the Company being treated as an "investment company" under the Investment Company Act of 1940 (the "1940 Act"). The 1940 Act requires the registration of, and imposes various substantive restrictions on, investment companies that are, or hold themselves out as being, engaged primarily, or propose to engage primarily in, the business of investing, reinvesting or trading in securities, or that fail certain statistical tests regarding the composition of assets and sources of income and are not primarily engaged in businesses other than investing, reinvesting, owning, holding or trading securities.

The Company believes that it is primarily engaged in a business other than investing, reinvesting, owning, holding or trading securities and, therefore, is not an investment company within the meaning of the 1940 Act. If the Company were required to register as an investment company under the 1940 Act, it would become subject to substantial regulation with respect to its capital structure, management, operations, transactions with affiliated persons (as defined in the 1940 Act) and other matters. Application of the provisions of the 1940 Act to the Company would have a material adverse effect on the Company's business, financial condition and results of operations.

## ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not applicable

## ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Company's financial statements and supplementary data, together with the report of the independent accountants, are included or incorporated by reference elsewhere herein. Reference is made to the "Index to Financial Statements" following the signature pages hereto.

## ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

PART III

ITEM 10. DIRECTORS AND EXECUTIVE OFFICERS OF THE REGISTRANT

Executive Officers

The table below sets forth certain information concerning the directors and executive officers of the Company. Directors of the Company are elected at the annual meeting of stockholders. Executive officers of the Company generally are appointed at the Board of Directors' first meeting after each annual meeting of stockholders.

| NAME | AGE | POSITION(S) WITH COMPANY |
|---|---|---|
| Richard A. Jalkut (1) | 54 | President, Chief Executive Officer and Director |
| Kevin J. Bennis | 45 | Executive Vice President, and President, Communications Services Division |
| William R. Smedberg, V | 37 | Executive Vice President, Corporate Development, Treasurer and Assistant Secretary |
| Michael A. Cohn | 49 | Vice President, General Counsel and Secretary |
| Michael L. Brooks | 55 | Vice President, Network Development |
| David Schaeffer (1) | 42 | Director |
| Peter J. Harris (2) | 47 | Director |
| Kevin J. Maroni (2)(3) | 36 | Director |
| Patrick J. Keeley (3) | 43 | Director |
| Richard K. Price (2)(3) | 41 | Director |
| Stephen A. Rensselaer | 32 | Director |

(1) Member of Contract Committee.

(2) Member of Compensation Committee.

(3) Member of Audit Committee.

Set forth below is the background of each of the Company's executive officers and directors.

RICHARD A. JALKUT has served as President, Chief Executive Officer and director of the Company since August 1997. Mr. Jalkut has over 30 years of telecommunications experience. From 1995 to August 1997, he served as President and Group Executive of NYNEX Telecommunications Group, where he was responsible for all activities of the NYNEX Telecommunications Group, an organization with over 60,000 employees. Prior to that, Mr. Jalkut served as President and Chief Executive Officer of New York Telephone Co. Inc., the predecessor company to NYNEX Telecommunications Group, from 1991 until 1995. Mr. Jalkut currently serves as a member of the Board of Directors of Marine Midland Bank, a commercial bank, Ikon Office Solutions, Inc., a company engaged in wholesale and retail office equipment, and Home Wireless Networks, a start-up company developing a wireless product for home and business premises.

KEVIN J. BENNIS has served as Executive Vice President, serving as President of the Company's Communications Services Division since February 1998. From 1996 until he joined the

Previously, Mr. Bennis served as President of Frontier Communications, a privately-owned telecommunications company, where he was responsible for [illegible] operations and customer service activities of 2,500 employees. Prior to that, Mr. Bennis served in various positions for 13 years at MCI, including as President of MCI's Integrated Client Services Division from 1995 to 1996, as President and Chief Operating Officer of MCI and Telecommunications, MCI's joint venture with Bancomer in Mexico, from 1994 to 1995, and as Senior Vice President of Marketing from 1992 to 1993.

MELANIE R. SMEDBERG. Ms. Smedberg joined the Company initially as a consultant in 1996, served as Vice President, Finance and Corporate Development from January 1997 to February 1999 and assumed the position of Executive Vice President, Corporate Development in March 1999. Prior to joining the Company, Ms. Smedberg served in various financial and planning positions at the James River Corporation of Virginia, Inc. ("James River") and its successors. In particular, she served as Director, Strategic Planning and Corporate Development for Jamont, a European consumer products joint venture among Nokia Oy, Montedison S.p.A. and James River, from 1991 to 1996, where she was responsible for Jamont's corporate finance, strategic planning and corporate development. Prior to that, Ms. Smedberg worked in the defense industry as a consultant and engineer for TRW, Inc.

MICHAEL A. LUBIN has served as Vice President, General Counsel and Secretary of the Company since its inception in August 1995. Prior to joining the Company, Mr. Lubin was an attorney-at-law at Michael A. Lubin, P.C., a law firm which he founded in 1985. Mr. Lubin has experience in telecommunications matters, copyright and intellectual property matters, corporate and commercial law, construction claims adjudication and trial work. Earlier he served as a Federal prosecutor with the Fraud Section, Criminal Division, United States Department of Justice.

MICHAEL L. BROOKS has served as Vice President, Network Development of the Company since June 1996. Mr. Brooks has extensive experience in voice and data communications. From 1992 through May 1996, Mr. Brooks served as Vice President, Engineering for Ikon, Inc., [illegible] system design and technical support for telecommunication systems and support facilities. From 1982 to 1992, Mr. Brooks worked for Qwest Microwave Communications, a predecessor of Qwest, where he directed the initial construction of a 2,500-mile digital network.

DAVID SCHAEFFER founded the Company in August 1995 and has been a director of the Company since its inception. Mr. Schaeffer served as Chairman of the Board and Treasurer of the Company from August 1997 to February 1999, and served as President, Chief Executive Officer and Treasurer of the Company from August 1995 until August 1997. From 1986 to the present, Mr. Schaeffer has also served as President and Chief Executive Officer of Empire Leasing, Inc., a specialized mobile radio licensee and operator. In addition, Mr. Schaeffer founded and, since 1992, has served as President and Chief Executive Officer of Mercury Message Paging, Inc., a paging company which operates networks in Washington, D.C., Baltimore and Philadelphia.

PETER J. BARRIS has been a director of the Company since August 1995. Since 1992, Mr. Barris has been a partner, and, in 1994, was appointed a General Partner of New Enterprise Associates, a firm that manages venture capital investments. Mr. Barris is also a member of the Board of Directors of Mobius Management Systems, Inc. and peOrder.com, Inc., each of which are quoted on the Nasdaq National Market.

KEVIN J. MARONI has been a director of the Company since August 1995. Since 1994, Mr. Maroni has been a principal, and, in 1995, was appointed as a General Partner of Spectrum Equity

Investors, L.P., which manages private equity funds focused on growth capital for telecommunications companies. From 1992 to 1995, he served as Manager, Finance and Development at Time Warner Telecommunications, where he was involved in corporate development projects. Mr. Marom served as a consultant at Harvard Management Company from 1990 to 1992, where he worked in the private equity group. Mr. Marom is also currently on the board of directors of several private companies and CTC Communications Corp., an integrated communications provider that is quoted on the Nasdaq National Market.

PATRICK J. KERINS has been a director of the Company since July 1997. Mr. Kerins has served as Managing Director of Grotech Capital Group, which is engaged in venture capital and other private equity investments, since March 1997. From 1987 to March 1997, he worked in the investment banking division of Alex. Brown & Sons, Incorporated, including serving as Managing Director beginning in January 1994. Mr. Kerins is also a member of the Board of Directors of CDnow, Inc., an online retailer of compact discs and other music-related products, which is quoted on the Nasdaq National Market.

RICHARD R. PRINS has been a director of the Company since 1995. Since 1996, Mr. Prins has served as Senior Vice President of Ferris Baker Watts Incorporated, where he heads the technology and communication practice in the investment banking division. From 1985 to 1996, he was Senior Vice President and Managing Director in the investment banking division of Crestar Financial Corporation. Mr. Prins is currently a director of Startec Global Communications Corporation, a communications company that is quoted on the Nasdaq National Market.

STEPHEN A. REINSTADTLER has been a director of the Company since October 1997. Mr. Reinstadtler has served as Vice President and Director at Toronto Dominion Capital (U.S.A.) Inc., where he has been involved in private equity and mezzanine debt investments, since August 1995. From April 1994 to July 1995, he served as Manager at The Toronto-Dominion Bank, where he was involved in commercial lending activities to the telecommunications industry. From August 1992 to April 1994, Mr. Reinstadtler also served as Associate at Kansallis-Osake-Pankki, where he was involved in commercial lending activities to the telecommunications industry.

## DIRECTOR COMPENSATION

Mr. Prins, a director of the Company, was granted options to purchase 70,131 shares of Common Stock in 1995. See "Security Ownership of Certain Beneficial Owners and Management." Directors of the Company are currently neither compensated nor reimbursed for their out-of-pocket expenses incurred in connection with attendance at meetings of, and other activities relating to serving on, the Board of Directors and any committees thereof. The Company may consider additional compensation arrangements for its directors from time to time.

## LIMITATION OF LIABILITY AND INDEMNIFICATION

The Restated Certificate of Incorporation of the Company limits, to the fullest extent permitted by law, the liability of directors to the Company and its stockholders for monetary damages for breach of directors' fiduciary duty. This provision is intended to afford the Company's directors benefit of the Delaware General Corporation Law (the "DGCL"), which provides that directors of Delaware corporations may be relieved of monetary liability for breach of their fiduciary duty of care, except under

certain circumstances. This limitation of liability does not extend to (including any breach of a director's duty of loyalty, acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, violations of the DGCL regarding the improper payment of dividends or any transaction from which the director derived any improper personal benefit. In addition, the Certificate of Incorporation of the Company provides that the Company will indemnify its directors and officers to the fullest extent authorized or permitted by law.

## ITEM 11. EXECUTIVE COMPENSATION

The following table sets forth certain information concerning the cash and non-cash compensation earned by or awarded to the Chief Executive Officer and the four other most highly compensated executive officers of the Company (the "Named Executive Officers") for services rendered in all capacities in each of the years ended December 31, 1998 and 1997.

| Name And Principal Position | Year | Annual Compensation * Salary | Bonus | Other Compensation | Long - Term Compensation Securities Underlying Options Granted |
|---|---|---|---|---|---|
| Richard A. Julkut<br>President and Chief Executive Officer | 1998 | $400,000 | $-- | $40,289(1) | -- |
| | 1997 | 166,154(2) | -- | 9,857(3) | 858,754 |
| David Schaeffer<br>Chairman of the Board and Treasurer | 1998 | 300,000 | -- | -- | -- |
| | 1997 | 216,923(4) | -- | -- | 430,413 |
| Kevin L. Behnke<br>Executive Vice President and President Communications Services | 1998 | 246,353(5) | -- | 185,602(6) | 382,500 |
| | 1997 | | -- | -- | -- |
| Michael A. Culpo<br>Vice President, General Counsel and Secretary | 1998 | 136,840 | 5,000 | -- | 15,000 |
| | 1997 | 136,115 | -- | -- | -- |
| Michael L. Brooks<br>Vice President, Network Operations | 1998 | 192,000 | 38,780 | -- | 85,732 |
| | 1997 | 103,077 | | -- | -- |

* Except as stated herein, none of the above Named Executive Officers received perquisites or other personal benefits in excess of the lesser of $50,000 or 10% of such individual's salary plus annual bonus.

(1) Consists of $16,277 for club dues; $7,756 for lodging, $11,685 for airfare; and $4,571 for other transportation.

(2) Mr. Julkut commenced employment with the Company in August 1997, and was compensated at a rate of $400,000 per annum in 1997.

(3) Reimbursement for travel expenses.

(4) Mr. Schaeffer's salary increased to $300,000 per annum from $150,000 per annum in August 1997.

(5) Mr. Behnke joined the Company in February 1998.

(6) Consists of $88,093 in residence settlement charges in Georgia; $99,319 in residence settlement charges in Virginia; $22,780 in other moving expenses; and $15,410 in rent.

## STOCK OPTION GRANTS AND EXERCISES

The following table sets forth the aggregate number of stock options granted to each of the Named Executive Officers during the fiscal year ended December 31, 1998. Stock options are exercisable to purchase Common Stock of the Company.

### OPTION GRANTS IN LAST FISCAL YEAR

| | Number of Securities Underlying Options Granted | Percent of Total Options Granted to Employees in Fiscal Year | Exercise Price $/Share | Expiration Date | Potential Realizable Value at Assumed Annual Rate of Stock Price Appreciation for the Option Term 0% | 5% | 10% |
|---|---|---|---|---|---|---|---|
| Richard A. Jalkut | -- | -- | $-- | -- | $-- | $-- | $-- |
| David Schaeffer | -- | -- | -- | -- | -- | -- | -- |
| Kevin J. Bermis | 362,500(3) | 32.74% | 1.13 | 3.24.2008 | 1,475,375 | 2,960,841 | 4,479,580 |
| | 20,000(3) | 1.81% | 5.20 | 12.2.2008 | -- | 65,405 | 165,749 |
| Michael A. Lubin | 15,000(3) | 1.35% | 5.20 | 12.2.2008 | -- | 49,054 | 124,312 |
| Michael L. Brooks | 70,732(2) | 6.39% | 1.13 | 3.24.2008 | 287,879 | 519,191 | 878,567 |
| | 15,000(2) | 1.35% | 5.20 | 12.2.2008 | -- | 49,054 | 124,312 |

(1) The information disclosed assumes, solely for purposes of demonstrating potential realizable value of the stock options, that the fair market value per share of Common Stock was $5.20 per share (the fair market value per share of Common Stock approved by the Board of Directors in connection with stock option awards granted on December 2, 1998 and January 26, 1999, which awards had an exercise price equal to the fair market value per share on the date of grant) as of December 31, 1998 and increases at the rate indicated during the option term. See Note 10 to the financial statements included elsewhere in this Report.

(2) The options vest ratably over a three year period. The option may be transferred only by will or by the laws of descent and distribution. Upon a change of control of the Company and termination of optionee's employment without cause, the options that would otherwise become vested within one year will be deemed vested immediately before such optionee's termination.

(3) The options vest ratably over a four year period. The option may be transferred only by will or by the laws of descent and distribution. Upon a change of control of the Company and termination of optionee's employment without cause, the options that would otherwise become vested within one year will be deemed vested immediately before such optionee's termination.

Option Exercises and Fiscal Year-End Option Values

None of the Named Executive Officers exercised any options during the fiscal year ended December 31, 1998. The following table sets forth as of December 31, 1998, the aggregate number of options held by each of the Named Executive Officers.

## FISCAL YEAR-END OPTION VALUES

| Name | Number of Securities Underlying Unexercised Options at December 31, 1998 | | Value of Unexercised In-the-Money Options (Note (1)) | |
|---|---|---|---|---|
| | Exercisable | Unexercisable | Exercisable | Unexercisable |
| Richard A. Jalkut | 286,251 | 572,503 | $1,165,042 | $2,330,083 |
| David Schaeffer | -- | 430,413 (2) | -- | 658,582 |
| Lloyd A. Lubin | 141,465 | 15,000 | 731,374 | -- |
| Scott A. Bonnie | 90,625 | 291,875 | 368,844 | 1,396,531 |
| Michael E. Brehm | 35,300 | 50,300 | 143,980 | 143,980 |

(1) Based on an assumed market price of the Common Stock of $5.20 per share.

(2) One-half of Mr. Schaeffer's options, or 215,206, would vest on January 1, 1999, at an exercise price of $3.67 per share, in the event that certain performance criteria related to 1998 earnings have been met. The Board of Directors is currently reviewing whether these criteria were met. See Note 10 to the Company's Consolidated Financial Statements that appear elsewhere in this Annual Report on Form 10-K.

## JALKUT EMPLOYMENT AGREEMENT

The Employment Agreement among the Company and Richard Jalkut (the "Jalkut Employment Agreement") took effect on August 4, 1997 and expires on August 4, 2000. The Jalkut Employment Agreement will renew automatically for successive one-year terms unless terminated by either party. Under the Jalkut Employment Agreement, Mr. Jalkut is entitled to an annual base salary of $400,000, subject to increase at the discretion of the Company. In addition, Mr. Jalkut is entitled to participate in the Company's benefit plans on the same basis as other salaried employees of the Company and on the same basis as other senior executives of the Company and is entitled to reimbursement up to a total of $50,000 per year for certain expenses (including an apartment in the Washington D.C. area, club memberships and the expenses incurred by Mr. Jalkut commuting between his Washington D.C. and New York residences.

In addition, pursuant to the Jalkut Employment Agreement, on August 4, 1997 Mr. Jalkut received nonqualified stock options on 858,754 shares of Common Stock at an exercise price of $3.13 per share. Such options will vest ratably over three years. Under the Jalkut Employment Agreement, upon the election of Mr. Jalkut within 10 business days after the date of termination of Mr. Jalkut's employment with the Company, the Company will be required to pay, subject to the terms of the Indenture, to Mr. Jalkut the aggregate Fair Value (as defined in the Non-qualified Option Agreement by and between the Company and Mr. Jalkut dated August 4, 1997) of the options then vested or held by Mr. Jalkut on the date of such termination of employment with the Company.

The Jalkut Employment Agreement (other than certain restrictive covenants of Mr. Jalkut that are described below and an obligation of the Company to pay severance for one year following the termination of Mr. Jalkut's employment with the Company) may be terminated (i) by the Company (a) without cause by giving 60 days' prior written notice or (b) for cause upon the Board of Directors' confirmation that Mr. Jalkut has failed to cure the grounds for termination within 30 days of notice thereof and (ii) by Mr. Jalkut (a) without cause by giving 180 days' prior written notice and (b) immediately upon a "Constructive Termination" (as defined below). The Jalkut Employment Agreement prohibits disclosure by Mr. Jalkut of any of the Company's confidential information at any time. In

addition, while he is employed by the Company and for two years thereafter, Mr. Jalkut is prohibited from engaging or participating in competitive businesses and from soliciting any Company employee to be employed elsewhere. The Company has granted Mr. Jalkut registration rights with respect to the shares he will receive upon exercise of his options. "Constructive Termination" is defined in the Jalkut Employment Agreement to mean the occurrence, without Mr. Jalkut's prior written consent, of one or more of the following events: (1) a reduction in Mr. Jalkut's then current annual base salary or the termination or material reduction of any employee benefit or perquisite enjoyed by him, other than as part of an across-the-board reduction applicable to all executive officers of the Company; (2) the failure to elect or reelect Mr. Jalkut to the position of chief executive officer or removal of him from such position; (3) a material diminution in Mr. Jalkut's duties or the assignment to Mr. Jalkut of duties which are materially inconsistent with his duties of which materially impair Mr. Jalkut's ability to function as the chief executive officer of the Company; (4) the failure to continue Mr. Jalkut's participation in any incentive compensation plan unless a plan providing a substantially similar opportunity is substituted, or under certain other limited circumstances; or (5) the relocation of the Company's principal office.

## OTHER AGREEMENTS

Messrs. Schaeffer, Lubin, Brooks, Bennis and Smedberg each have entered into Employee Agreements Regarding Non-Disclosure, Assignment of Inventions and Non-Competition with the Company in which such persons agreed (i) not to disclose any of the Company's confidential and proprietary information to third parties, (ii) to assign all work products to the Company as "works for hire," and (iii) not to compete against the Company for a two-year period following the termination of the respective person's employment with the Company.

In exchange for the non-compete covenant and a restriction on soliciting any employee of the Company to be employed elsewhere, the Company has agreed to pay Mr. Bennis a severance payment in the aggregate amount of $275,000 paid over one year if his employment with the Company is terminated for any reason.

## ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information concerning beneficial ownership of the capital stock of the Company as of December 31, 1998 by (i) each person known by the Company to be the beneficial owner of more than five percent of the outstanding capital stock of the Company, (ii) each director of the Company, (iii) each of the Named Executive Officers and (iv) all directors and Named Executive Officers of the Company as a group. Unless otherwise indicated, each of the stockholders listed below has sole voting and investment power with respect to the shares shown as beneficially owned by them.

| Name and Address | Common Stock | Series A Preferred | | Series B Preferred | | Series C Preferred | |
|---|---|---|---|---|---|---|---|
| | | Shares(2) | Percentage | Shares(2) | Percentage | Shares(2) | Percentage |
| Spectrum Equity Investors, L.P. (6) | -- | 1,276,000 | 44.0% | 1,134,175 | 23.7% | 1,263,466 | 16.7% |
| Spectrum Equity Investors II, L.P. (6) | -- | -- | -- | -- | -- | 1,363,400 | 18.7% |
| New Enterprise Associates VI, Limited Partnership (7) | -- | 522,000 | 18.0% | 685,014 | 14.3% | 1,374,061 | 18.8% |
| Onset Enterprise Associates II, L.P. (8) | -- | 522,000 | 18.0% | 463,976 | 9.7% | 817,672 | 11.0% |
| Onset Enterprise Associates III, L.P. (8) | -- | -- | -- | -- | -- | 272,553 | 3.3% |
| Corman Foundation Incorporated (9) | -- | 90,668 | 3.3% | 85,924 | 1.7% | -- | -- |
| J&J Investment Funds VIII, Inc. (JAI Value Fund) (10) | -- | 290,000 | 10.0% | 125,143 | 2.6% | -- | -- |
| Thomas Dominarich (11) | -- | 145,000 | 5.0% | 62,573 | 1.3% | -- | -- |
| PBR Technology Venture Partners L.P. (12) | -- | -- | -- | -- | -- | 272,556 | 3.3% |
| Toronto Dominion Capital (USA) Inc. (13) | -- | -- | -- | 884,146 | 18.5% | 1,006,500 | 12.3% |
| Oxbeck Partners IV, L.P. (14) | -- | -- | -- | 884,146 | 18.5% | 1,006,500 | 12.3% |
| Utech Climate Challenge Fund, L.P. (15) | -- | -- | -- | 442,076 | 9.2% | 136,276 | 1.7% |
| Utility Competitive Advantage Fund, LLC (15) | -- | -- | -- | -- | -- | 366,980 | 4.5% |
| David Schaeffer (16) | 2,900,000 | -- | -- | -- | -- | -- | -- |
| Richard A. Jalkut | -- | -- | -- | -- | -- | -- | -- |
| Kevin J. Maroni (17) | -- | -- | -- | -- | -- | -- | -- |
| Peter J. Barris (18) | -- | -- | -- | -- | -- | -- | -- |
| Patrick J. Kerins (19) | -- | -- | -- | -- | -- | -- | -- |
| Stephen A. Ramsdorfer (20) | -- | -- | -- | -- | -- | -- | -- |
| Michael A. Lubin | -- | -- | -- | -- | -- | -- | -- |
| Kevin Bermes | -- | -- | -- | -- | -- | -- | -- |
| Michael L. Brooks | -- | -- | -- | -- | -- | -- | -- |
| Richard K. Fros | -- | -- | -- | -- | -- | -- | -- |
| All Directors and Named Executive Officers as a Group | 2,900,000 | -- | -- | -- | -- | -- | -- |

| Name and Address | Beneficial Ownership of Common Stock (1) | | | Percentage on a Diluted Basis (5) |
|---|---|---|---|---|
| | Stock Options(3) | Total Shares | Percentage (4) | |
| Spectrum Equity Investors, L.P. (6) | -- | 3,773,581 | 56.5% | 19.2% |
| Spectrum Equity Investors II, L.P. (6) | -- | 1,363,400 | 31.7% | 6.9% |
| New Enterprise Associates VI, Limited Partnership (7) | -- | 2,581,065 | 47.1% | 13.9% |
| Onset Enterprise Associates II, L.P. (8) | -- | 1,803,648 | 38.3% | 9.2% |
| Onset Enterprise Associates III, L.P. (8) | -- | 272,553 | 8.6% | 1.4% |
| Corman Foundation Incorporated (9) | -- | 182,592 | 5.0% | 0.9% |
| J&J Investment Funds VIII, Inc. (JAI Value Fund) (10) | -- | 415,143 | 12.5% | 2.1% |
| Thomas Dominarich (11) | -- | 207,573 | 6.7% | 1.0% |
| PBR Technology Venture Partners L.P. (12) | -- | 272,556 | 8.6% | 1.4% |
| Toronto Dominion Capital (USA) Inc. (13) | -- | 1,890,646 | 39.4% | 9.6% |
| Oxbeck Partners IV, L.P. (14) | -- | 1,890,646 | 39.4% | 9.6% |
| Utech Climate Challenge Fund, L.P. (15) | -- | 578,352 | 16.6% | 2.9% |
| Utility Competitive Advantage Fund, LLC (15) | -- | 366,980 | 11.5% | 1.8% |
| David Schaeffer (16) | -- | 2,900,000 | 99.0% | 14.7% |
| Richard A. Jalkut | 296,251 | 280,251 | 9.0% | 1.4% |
| Kevin J. Maroni (17) | -- | -- | -- | -- |
| Peter J. Barris (18) | -- | -- | -- | -- |

| | | | | |
|---|---|---|---|---|
| Patrick J. Ramsey (19) | -- | -- | -- | -- |
| Stephen A. Reitmeier (20) | -- | -- | -- | -- |
| Michael A. Leibig | 141,485 | 141,485 | 4.6% | 0.7% |
| Kevin Berns | -- | -- | -- | -- |
| Michael L. Brooks | 35,366 | 35,366 | 1.2% | 0.2% |
| Richard K. Prins | 70,731 | 70,731 | 2.4% | 0.4% |
| All Directors and Named Executive Officers as a Group | 528,853 | 3,433,033 | 99.9% | 17.4% |

(4) Consists of the sum of the shares of Common Stock owned and shares of Common Stock issuable upon the exercise of the options and upon the conversion of the Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series C Convertible Preferred Stock that are exercisable or convertible within 60 days after December 31, 1998.

(5) The shares represent the product of a stock split and the numbers shown here are rounded to the whole number in accordance with the provisions of the Company's Certificate of Incorporation and stock option plans.

(6) Options exercisable within 60 days after December 31, 1998.

(4) The percentage of beneficial ownership as to each person, entity or group assume the exercise or conversions of all outstanding options, warrants and convertible securities held by such person, entity or group which are exercisable or convertible within 60 days as of December 31, 1998, but not the exercise or conversion of options, warrants and convertible securities held by other holders (whether or not exercisable or convertible within 60 days after December 31, 1998.)

(5) As a percentage of the sum of the post split and rounded Common Stock, Series A Convertible Preferred Stock, Series B Convertible Preferred Stock, Series C Convertible Preferred Stock and options granted and exercisable within 60 days after December 31, 1998. As of December 31, 1998, 915,765 options granted by the Company were exercisable.

(6) The address for Spectrum Equity Investors, L.P. and Spectrum Equity Investors II, L.P. is One International Place, Boston, MA 02110.

(7) The address of New Enterprise Associates VI, Limited Partnership is 1119 Saint Paul Street, Baltimore, MD 21202.

(8) The address for Onset Enterprise Associates II, L.P. and Onset Enterprise Associates III, L.P. is 8911 Capital of Texas Highway, Austin, TX 78759.

(9) The address for Corman Foundation Incorporation is 100 Brookwood Road, Atmore, AL 36502.

(10) The address for IAI Investment Funds VIII, Inc. (IAI Value Fund) is 3700 First Bank Place, Minneapolis, MN 55440.

(11) The address for Thomas Dorrenbach is 104 Benevolent Street, Providence, RI 02906.

(12) The address for FBR Technology Venture Partners L.P. is 1001 19th Street North, Arlington, VA 22209.

(13) The address for Toronto Dominion Capital (USA) Inc. is 31 West 52nd Street, New York, NY 10019.

(14) The address for Grotech Partners IV, L.P. is 9690 Deereco Road, Timonium, MD 21093.

(15) The address for Utech Climate Challenge Fund, L.P. and Utility Competitive Advantage Fund, L.L.C. is c/o Arete Ventures, Two Wisconsin Circle, Chevy Chase, MD 20815.

(16) One-half of Mr. Schaeffer's options, or 215,206, would vest on January 1, 1999, at an exercise price of $3.67 per share, in the event that certain performance criteria related to 1998 earnings have been met. The Board of Directors is currently reviewing whether these criteria were met. See Note 10 to the Company's Consolidated Financial Statements that appear elsewhere in this Annual Report on Form 10-K. In the event that the Board of Directors determines that these stock options have vested, Mr. Schaeffer's percentage held on a diluted basis would be 15.7%.

(17) Mr. Marston, who is a limited partner of the general partner of Spectrum and a general partner of the general partner of Spectrum Equity Investors II, L.P., disclaims beneficial ownership of the shares owned by Spectrum Equity Investors, L.P. and Spectrum Equity Investors II, L.P.

(18) Mr. Barris, who is general partner of the general partner of New Enterprise Associates VI, Limited Partnership, disclaims beneficial ownership of the shares owned by New Enterprise Associates VI, Limited Partnership.

(19) Mr. Kerins, Managing Director of the general partner of Grotech Partners IV, L.P., disclaims beneficial ownership of the shares owned by Grotech Partners IV, L.P.

(20) Mr. Reinsdorfer, Vice President and Director of Toronto Dominion Capital (U.S.A.) Inc., disclaims beneficial ownership of the shares owned by Toronto Dominion Capital (U.S.A.) Inc.

## ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

### SERIES A PURCHASE AGREEMENT

Pursuant to an Investment and Stockholders' Agreement, dated as of August 28, 1995 (the "Series A Purchase Agreement"), by and among the Company and Spectrum Equity Investors, L.P., New Enterprise Associates VI, Limited Partnership, Onset Enterprise Associates II, L.P., IAI Investment Funds VIII, Inc., Thomas Domencich, Dennis R. Patrick and the Corman Foundation Incorporated, (together, the "Series A Purchasers") and David Schaeffer, the Series A Purchasers made their initial investments in the Company. The Series A Purchasers (i) agreed, subject to the satisfaction of certain conditions, to purchase in the aggregate 1,000,000 shares of Series A Convertible Preferred Stock for an aggregate purchase price of $1.0 million, (ii) purchased 500,000 shares of such 1,000,000 shares of Series A Convertible Preferred Stock for an aggregate purchase price of $500,000 and (iii) agreed to make available to the Company, under certain circumstances, bridge loans in an aggregate principal amount of $500,000 (the "Bridge Loan Commitment"). Pursuant to Amendment No. 1 to the Investment and Stockholders' Agreement, dated as of February 8, 1996, the Series A Purchasers purchased the remaining 500,000 shares of Series A Convertible Preferred Stock for an aggregate purchase price of $500,000. Pursuant to Amendment No. 2 to the Investment and Stockholders' Agreement dated as of August 2, 1996, the Series A Purchasers, among other things, increased the amount of the Bridge Loan Commitment to an aggregate principal amount of $700,000 and advanced such amount to the Company, such loans being evidenced by bridge loan notes (collectively, the "Bridge Loan Notes"). The Bridge Loan Notes carried an interest rate of 12% per annum and were due and payable in full on the earlier to occur of the first anniversary of the issuance of the Bridge Loan Notes or the closing date of the Company's next equity financing. The Bridge Loan Notes were to be convertible into any future equity security issued by the Company at 75% of the price to be paid for such security by other investors. In addition, the Series A Purchasers agreed to make available to the Company, upon the occurrence of certain events, additional bridge loans in an aggregate principal amount of $300,000 (the "Additional Bridge Loan Commitment").

### SERIES B PURCHASE AGREEMENT

The Company, each of the Series A Purchasers and several additional purchasers (together, the "Series B Purchasers") and Mr. Schaeffer entered into an Investment and Stockholders' Agreement, dated as of December 23, 1996 (the "Series B Purchase Agreement"), pursuant to which, among other things, the Series B Purchasers agreed to acquire in the aggregate 1,651,046 shares of Series B Convertible Preferred Stock for an aggregate purchase price of $5.0 million. Of these amounts, 609,756 shares of Series B Convertible Preferred Stock were purchased on December 23, 1996, for an aggregate purchase price of $2.0 million. In addition, the $700,000 principal amount of Bridge Loan Notes, plus $33,367 of accrued interest, were converted into 306,242 shares of Series B Convertible Preferred Stock. At the same time, the Series A Purchasers paid $300,000 representing the committed but undrawn portion of the Additional Bridge Loan Commitment to the Company for the sale of 125,292 shares of Series B Convertible Preferred Stock. The Series B Purchasers purchased the remaining 609,756 shares of Series B Convertible Preferred Stock subject to the Series B Purchase Agreement for $2.0 million on June 18, 1997. See Note 9 to the financial statements included elsewhere in this Report.

## SERIES C PURCHASE AGREEMENT

The Company, the Series A Purchasers, the Series B Purchasers and one additional purchaser (together the "Series C Purchasers") and Mr. Schaeffer entered into the Investment and Stockholders' Agreement, dated October 31, 1997, as amended (the "Investment and Stockholders' Agreement") pursuant to which, among other things, the Series C Purchasers agreed to acquire 2,819,549 shares of Series C Convertible Preferred Stock for an aggregate purchase price of $30.0 million. The Series C Purchasers purchased 939,850 shares of Series C Convertible Preferred Stock for an aggregate purchase price of $10.0 million on October 31, 1997, and purchased an additional 1,879,699 shares of Series C Convertible Preferred Stock for an aggregate purchase price of $20.0 million simultaneously with the closing of the Debt Offering. In connection with the Investment and Stockholders' Agreement, the Company, the holders of Preferred Stock (collectively, the "Investors") and Mr. Schaeffer agreed to amend and restate, in part, the Series A Purchase Agreement and the Series B Purchase Agreement. These amendments restated the provisions of such agreements relating to affirmative and negative covenants, transfer restrictions, rights to purchase and registration rights. These sections of each of the Series A Purchase Agreement, the amendments thereto, and the Series B Purchase Agreement were similar in all material respects. In order to remove any doubt as to this fact, to simplify matters and for convenience to have in one agreement the material provisions that survive the purchase and sale of the Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series C Convertible Preferred Stock (collectively, the "Series Preferred Stock") and the closing of an initial public offering, the aforementioned sections were amended and restated in the Investment and Stockholders' Agreement. See "--Investment and Stockholders' Agreement."

## TERMS OF THE SERIES PREFERRED STOCK

Each share of Series Preferred Stock will automatically be converted into Common Stock immediately upon the closing of a qualified public offering of capital stock of the Company. A qualified public offering is defined as: (i) the Company is valued on a pre-money basis at greater than $50,000,000, (ii) the gross proceeds received by the Company exceed $20,000,000, and (iii) the Company uses a nationally recognized underwriter approved by holders of a majority interest of the Series Preferred Stock. As of December 31, 1998, the Series Preferred Stock was convertible into an aggregate of 15,604,715 shares of Common Stock.

Each share of Series Preferred Stock entitles its holder to a number of votes equal to the number of shares of Common Stock into which such share of Series Preferred Stock is convertible. With respect to the Board of Directors of the Company, prior to the completion of a qualified public offering (i) the holders of Series A Convertible Preferred Stock are entitled to vote separately as a class to elect two directors of the Company (the "Series A Investor Directors"), (ii) the holders of Series B Convertible Preferred Stock are entitled to vote separately as a class to elect one director (the "Series B Investor Director"), (iii) the holders of the Series C Convertible Preferred Stock are entitled to vote separately as a class to elect one director (the "Series C Investor Director"), (iv) the holders of the Common Stock are entitled to vote separately as a class to elect two directors (the "Common Stock Directors"), (v) the chief executive officer (the "CEO") of the Company is appointed by the affirmative vote of the Common Stock Directors and the Series A Investor Directors, Series B Investor Director and Series C Investor Director, voting together, and (vi) the CEO will be elected to the Board of Directors of the Company by the holders of Common Stock and Series Preferred Stock, voting together.

The holders of the Series Preferred Stock are entitled to receive dividends in preference to and at the same rate as dividends are paid with respect to the Common Stock. In the event of any liquidation, dissolution, winding up or deemed liquidation of the Company, whether voluntary or involuntary, each holder of a share of Series Preferred Stock outstanding is entitled to be paid before any payment may be made to the holders of any class of Common Stock or any stock ranking on liquidation junior to the Series Preferred Stock, an amount, in cash, equal to the original purchase price paid by such holder, appropriately adjusted for stock splits, stock dividends and the like, plus any declared but unpaid dividends.

The Series A Convertible Preferred Stock, Series B Convertible Preferred Stock and Series C Convertible Preferred Stock A, Series B and Series C Preferred Stock were $1,500,000, $5,033,367, and $30,000,052, respectively, as of December 31, 1998. In the event the assets of the Company are insufficient to pay liquidation preference amounts, all of the assets available for distribution shall be distributed to each holder of Series Preferred Stock pro rata in proportion to the number of shares of Series Preferred Stock held by such holder.

Shares of the Series Preferred Stock may be converted at any time, at the option of the holder, into shares of Common Stock. The number of shares of Voting Common Stock to be received upon conversion is subject to adjustment in the event of stock dividends and subdivisions, certain combinations of Common Stock, and issuances of Common Stock and of securities convertible into Common Stock that have a dilutive effect. As of December 31, 1998, each share of Series Preferred Stock was convertible into 2.9 shares of Common Stock.

## INVESTMENT AND STOCKHOLDERS' AGREEMENT

Pursuant to the terms of the Investment and Stockholders' Agreement, the Investors and Mr. Jaikut are entitled to certain registration rights with respect to securities of the Company. On any three occasions at the option of the holders, the holders of a majority of the securities registrable under the terms of the Investment and Stockholders' Agreement ("Registrable Securities") may require the Company to effect a registration under the Securities Act of 1933 of their Registrable Securities, subject to the Company's right to defer such registration for a period of up to 90 days. In addition, if the Company proposes to register securities under the Securities Act of 1933 (other than a registration relating either to the sale of securities to employees pursuant to a stock option, stock purchase or similar plan or a transaction under Rule 145 of the Securities Act), then any of the holders of Registrable Securities have the right (subject to certain cut-back limitations) to request that the Company register such holder's Registrable Securities. All registration expenses of the Investors (exclusive of underwriting discount and commissions) up to $50,000 per offering will be borne by the Company. The Company has agreed to indemnify the investors against certain liabilities in connection with any registration effected pursuant to the foregoing terms, including liabilities arising under the Securities Act.

## LEASE FROM THE KENILWORTH PARTNERSHIP

The Company has entered into the Headquarters Lease for approximately 10,195 square feet of office space from the Kenilworth Partnership, a general partnership of which David Schaeffer, a director of the Company, is general partner. The rental rate is approximately $20 per square foot, plus fees to cover the Company's proportional share of real estate taxes and insurance premiums relating to the

building. The Headquarters Lease terminates on August 31, 1999 and may be renewed at the option of the Company for two additional one-year periods on the same terms and conditions. Rent paid to the Kenilworth Partnership during the year ended December 31, 1998, was approximately $282,000. Management believes that the terms and conditions of the Headquarters Lease are at least as favorable to the Company as those which the Company could have received from an unaffiliated third party.

PART IV

ITEM 14. EXHIBITS, FINANCIAL STATEMENT SCHEDULES AND REPORTS ON FORM 8-K

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

(1) Financial Statements

Consolidated Balance Sheets as of December 31, 1998 and 1997

Consolidated Statements of Operations for the years ended December 31, 1998, 1997 and 1996, and for the period August 25, 1995 (date of inception) to December 31, 1998

Consolidated Statements of Comprehensive Loss for the years ended December 31, 1998, 1997 and 1996, and for the period August 25, 1995 (date of inception) to December 31, 1998

Consolidated Statements of Cash Flows for the years ended December 31, 1998, 1997 and 1996, and for the period August 25, 1995 (date of inception) to December 31, 1998

Consolidated Statement of Stockholders' Equity (Deficit) for the years ended December 31, 1998, 1997 and 1996, and for the period August 25, 1995 (date of inception) to December 31, 1998

Notes to Consolidated Financial Statements

(2) Financial Statement Schedules

All schedules are omitted because they are not applicable or not required or because the required information is incorporated herein by reference or included in the financial statements or notes thereto included elsewhere in this report.

(b) Reports on Form 8-K

On October 6, 1998, the Company filed a report on Form 8-K providing information under Items 5 and 7. The Report, dated October 6, 1998 announced the expansion of the Company's management team to include three new additions to its national sales force.

(c) Exhibits

The following exhibits are filed as a part of this Annual Report on Form 10-K:

| EXHIBIT NUMBER | DESCRIPTION OF DOCUMENT |
|---|---|
| 3.1(1) | Amended and Restated Certificate of Incorporation of the Company and Certificate of Amendment to such Certificate of Incorporation. |
| 3.2(1) | Amended and Restated Bylaws of the Company |
| 4.1+ | Indenture between the Company and The Bank of New York, as trustee, dated April 8, 1998. |
| 4.2++ | Pledge Agreement by and among the Company, The Bank of New York as |

Trustee, and The Bank of New York, as securities intermediary, dated April 8, 1998

| | |
|---|---|
| 4.3** | Form of New Note |
| 4.4~ | Form of Existing Note (included in Exhibit 4.1) |
| 10.1* | Master Agreement by and between the Company and NEC America, Inc., dated August 8, 1997, as amended by Amendment No. 1, dated November 9, 1997 and Amendment No. 2, dated April 2, 1998 |
| 10.1.1* | Amendment No. 3, dated May 4, 1998 to Master Agreement by and between the Company and NEC America, Inc. |
| 10.1.2* | Amendment No. 4 dated July 10, 1998 to Master Agreement by and between the Company and NEC America, Inc. |
| 10.1.3(1) | Amendment No. 5, dated November 20, 1998 to Master Agreement by and between the Company and NEC America, Inc. |
| 10.2(2)* | Employment Agreement by and between the Company and Richard A. Jalkut, dated August 4, 1997, as amended by Amendment to Employment Agreement, dated April 6, 1998 |
| 10.3(2)* | Non-Disclosure, Assignment of Inventions and Non-Competition Agreement by and between the Company and Kevin Bennis, dated February 2, 1998 |
| 10.4(2)* | Patinet, Inc. 1995 Stock Option Plan |
| 10.5(2)* | Patinet, Inc. 1997 Stock Incentive Plan, as amended by Amendment No. 1 to 1997 Stock Incentive Plan |
| 10.6* | Notes Registration Rights Agreement by and among the Company and Merrill Lynch & Co., Merrill Lynch, Pierce, Fenner & Smith Incorporated, Bear, Stearns & Co. Inc., TD Securities (USA) Inc. and Salomon Brothers Inc (collectively, the "Initial Purchasers"), dated April 8, 1998 |
| 10.7* | Warrant Agreement by and between the Company and The Bank of New York, as warrant agent, dated April 8, 1998 |
| 10.8* | Warrant Registration Rights Agreement by and among the Company, Spectrum Equity Investors, L.P., New Enterprise Associates VI, Limited Partnership, Onset Enterprise Associates II, L.P., FBR Technology Venture Partners, L.P., Toronto Dominion Capital (U.S.A.) Inc., Grotech Partners IV, L.P., Richard A. Jalkut, David Schaffer and the Initial Purchasers, dated April 8, 1998 |
| 10.9** | Investment and Stockholders Agreement, dated as of October 31, 1997 (the "Investment and Stockholders Agreement"), by and among the Company and certain stockholders of the Company |
| 10.9.1** | Consent, Waiver and Amendment, dated as of March 19, 1998, relating to the Investment and Stockholders Agreement |

| | |
|---|---|
| 10.9.2** | Amendment No. 1 to the Investment and Stockholders' Agreement, dated as of April 1, 1998. |
| 10.10* | Lease Agreement, by and between 6715 Kenilworth Avenue General Partnership and the Company, dated August 9, 1997, as amended by Amendment to Lease, dated March 5, 1998. |
| 10.10.1* | Second Amendment to Lease, dated June 1, 1998. |
| 10.10.2(1) | Third Amendment to Lease, dated September 1, 1998. |
| 10.11(2)* | Non-Qualified Stock Option Agreement by and between the Company and Richard A. Jalkut, dated August 4, 1997. |
| 10.12(2)* | Non-Qualified Stock Option Agreement by and between the Company and David Schaeffer, dated October 31, 1997. |
| 21.1(1) | Subsidiaries of the Company. |
| 27.1(1) | Financial Data Schedule for the year ended December 31, 1998. |

* Incorporated by reference to Exhibit 10.19 to the Company's Registration Statement on Form S-1 (Registration No. 333-52247) filed by the Company with the Securities and Exchange Commission on May 8, 1998.

** Incorporated by reference to Exhibit 10.20 to the Company's Registration Statement on Form S-1 (Registration No. 333-52247) filed by the Company with the Securities and Exchange Commission on May 8, 1998.

*** Incorporated by reference to the corresponding exhibit to the Company's Registration Statement on Form S-1 (Registration No. 333-52247) filed by the Company with the Securities and Exchange Commission on May 8, 1998, as amended by Amendment No. 1 to such Registration Statement filed with the Securities and Exchange Commission on July 16, 1998, as further amended by Amendment No. 2 to such Registration Statement filed with the Securities and Exchange Commission on July 27, 1998, and as further amended by Amendment No. 3 to such Registration Statement filed with the Securities and Exchange Commission on August 10, 1998.

**** Incorporated by reference to the corresponding exhibit to the Company's Registration Statement on Form S-4 (Registration No. 333-53467) filed by the Company with the Securities and Exchange Commission on May 22, 1998, as amended by Amendment No. 1 to such Registration Statement.

(1) Filed herewith.

(2) Constitutes management contract or compensatory arrangement.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, in the District of Columbia on this 16th day of March 1999.

PATHNET, INC.

By: /s/ Michael A. Lubin

Name: Michael A. Lubin
Title: Vice President, General Counsel And Secretary

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

| SIGNATURE | TITLE | DATE |
|---|---|---|
| /s/ Richard A. Jalkut<br>Richard A. Jalkut | Chief Executive Officer and Director | March 16, 1999 |
| /s/ William R. Smedberg, V<br>William R. Smedberg, V | Executive Vice-President Corporate Development (Principal Accounting and Financial Officer) | March 16, 1999 |
| David Schaeffer | Director | March , 1999 |
| /s/ Peter J. Barris<br>Peter J. Barris | Director | March 17, 1999 |
| /s/ Kevin J. Maroni<br>Kevin J. Maroni | Director | March 11, 1999 |
| /s/ Patrick J. Kerins<br>Patrick J. Kerins | Director | March 11, 1999 |
| /s/ Richard K. Prins<br>Richard K. Prins | Director | March 17, 1999 |
| /s/ Stephen A. Reinstadtler<br>Stephen A. Reinstadtler | Director | March 16, 1999 |

PATHNET, INC.

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## Report of Independent Accountants

To the Board of Directors and Stockholders Pathnet, Inc.

In our opinion, the consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Pathnet, Inc. and its subsidiaries (the Company) at December 31, 1998 and 1997, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1998 and for the period August 25, 1995 (date of inception) to December 31, 1998, in conformity with generally accepted accounting principles. These financial statements are the responsibility of the Company's management; our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits of these statements in accordance with generally accepted auditing standards, which require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for the opinion expressed above.

PricewaterhouseCoopers LLP

McLean, VA
February 14, 1999

PATHNET, INC.
(A Development Stage Enterprise)
CONSOLIDATED BALANCE SHEETS

| | December 31, | |
|---|---|---|
| | 1998 | 1997 |
| ASSETS | | |
| Cash and cash equivalents | $57,321,887 | $7,834,864 |
| Notes receivable | 3,206,841 | - |
| Interest receivable | 3,848,753 | - |
| Marketable securities available for sale, at market | 97,895,773 | - |
| Prepaid expenses and other current assets | 205,505 | 48,571 |
| Total current assets | 162,478,759 | 7,879,955 |
| Property and equipment, net | 47,971,336 | 7,207,094 |
| Deferred financing costs, net | 10,508,251 | 260,428 |
| Restricted cash | 10,731,563 | 760,211 |
| Marketable securities available for sale, at market | 71,890,757 | - |
| Pledged marketable securities held to maturity | 61,824,673 | - |
| Total assets | $365,414,139 | $16,097,688 |
| LIABILITIES, MANDATORILY REDEEMABLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT) | | |
| Accounts payable | $10,708,263 | $5,592,915 |
| Accrued interest | 8,932,294 | - |
| Accrued expenses and other liabilities | 639,688 | 300,000 |
| Total current liabilities | 20,280,245 | 5,892,915 |
| 12 1/4% Senior Notes, net of unamortized bond discount of $5,787,875 | 346,212,125 | - |
| Total liabilities | 366,492,370 | 5,892,915 |
| Series A convertible preferred stock, $0.01 par value, 1,000,000 shares authorized, issued and outstanding at December 31, 1998 and 1997, respectively (liquidation preference $1,000,000) | 1,000,000 | 1,000,000 |
| Series B convertible preferred stock, $0.01 par value, 1,651,846 shares authorized, issued and outstanding at December 31, 1998 and 1997, respectively (liquidation preference $5,053,367) | 5,008,367 | 5,008,367 |
| Series C convertible preferred stock, $0.01 par value, 3,819,549 shares authorized, 3,819,549 and 3,819,549 shares issued and outstanding at December 31, 1998 and 1997, respectively (liquidation preference $20,000,002) | 20,961,272 | 9,061,274 |
| Total redeemable preferred stock | 15,969,639 | 15,969,641 |
| Common stock, $0.01 par value, 40,000,000 and 7,500,000 shares authorized at December 31, 1998 and 1997, respectively, 2,903,358 and 2,900,000 shares issued and outstanding at December 31, 1998 and 1997, respectively | 29,024 | 29,000 |
| Common stock subscription receivable | - | (9,000) |
| Deferred compensation | (978,064) | - |
| Additional paid-in capital | 9,156,406 | 381,000 |
| Accumulated other comprehensive income | 208,211 | - |
| Deficit accumulated during the development stage | (31,403,352) | (8,206,868) |
| Total stockholders' equity (deficit) | (23,087,870) | (7,804,868) |
| Total liabilities, redeemable preferred stock and stockholders' equity (deficit) | $365,414,139 | $16,097,688 |

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

PATHNET, INC.
(A Development Stage Enterprise)
CONSOLIDATED STATEMENTS OF OPERATIONS

| | For the year ended December 31, | | | For the period August 25, 1995 (date of inception) to December 31, |
|---|---|---|---|---|
| | 1998 | 1997 | 1996 | 1998 |
| Revenue | $1,581,539 | $162,500 | $1,000 | $1,747,039 |
| Operating expenses: | | | | |
| Cost of revenue | 7,547,620 | -- | -- | 7,547,620 |
| Selling, general and administrative | 9,615,867 | 4,247,101 | 1,333,294 | 15,625,349 |
| Research and development | -- | -- | -- | |
| Depreciation expense | 232,813 | 46,642 | 9,024 | 788,831 |
| Total operating expenses | 17,896,300 | 4,293,743 | 1,342,318 | 23,961,800 |
| Net operating loss | (16,312,761) | (4,131,243) | (1,341,318) | (22,214,761) |
| Interest expense | (32,572,454) | -- | (415,357) | (32,987,811) |
| Interest income | 13,940,340 | 159,343 | 13,040 | 14,115,236 |
| Write-off of initial public offering costs | (1,354,534) | -- | -- | (1,354,534) |
| Other income (expense), net | 2,913 | (5,500) | -- | (2,587) |
| Net loss | $(36,296,496) | $(3,977,400) | $(1,743,635) | $(42,444,457) |
| Basic and diluted loss per common share | $(12.51) | $(1.37) | $(0.60) | $(14.63) |
| Weighted average number of common shares outstanding | 2,902,029 | 2,900,000 | 2,900,000 | 2,900,605 |

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

PATHNET, INC.
(A Development Stage Enterprise)
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS

| | For the year ended December 31, | | | For the period August 25, 1995 (date of inception) to December 31, |
|---|---|---|---|---|
| | 1998 | 1997 | 1996 | 1998 |
| Net loss | $(36,296,596) | $(3,977,400) | $(1,743,635) | $(42,444,457) |
| Other comprehensive income | | | | |
| Net unrealized gain on marketable securities available for sale | 208,211 | -- | -- | 208,211 |
| Comprehensive loss | $(36,088,385) | $(3,977,400) | $(1,743,635) | $(42,236,246) |

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

PATHNET, INC.
(A Development Stage Enterprise)
CONSOLIDATED STATEMENTS OF CASH FLOWS

| | For the year ended December 31, | | | For the period August 25, 1995 (date of inception) to December 31, |
|---|---|---|---|---|
| | 1998 | 1997 | 1996 | 1998 |
| Cash flows from operating activities: | | | | |
| Subtract: | | | | |
| Adjustment to reconcile net loss to net cash used in operating activities: | $(36,296,596) | $(3,977,400) | $(1,743,635) | $(42,444,457) |
| Depreciation expense | 732,813 | 46,642 | 9,024 | 788,831 |
| Amortization of deferred financing costs | 842,790 | -- | -- | 842,790 |
| Loss on disposal of asset | -- | 5,500 | -- | 5,500 |
| Write-off of deferred financing costs | 581,334 | -- | -- | 581,334 |
| Interest expense resulting from amortization of discount on | | | | |
| the bonds payable | 307,125 | -- | -- | 307,125 |
| Stock based compensation | 701,295 | -- | -- | 701,295 |
| Interest expense for beneficial conversion feature of | | | | |
| bridge loan | -- | -- | 381,990 | 381,990 |
| Accrued interest satisfied by conversion of bridge loan to | | | | |
| Series B convertible preferred stock | -- | -- | 33,367 | 33,367 |
| Changes in assets and liabilities: | | | | |
| Interest receivable | (4,846,952) | -- | -- | (4,846,952) |
| Prepaid expenses and other current assets | (156,935) | (46,876) | (1,695) | (205,506) |
| Accounts payable | 6,709 | 386,106 | 110,094 | 507,614 |
| Accrued interest | 8,932,294 | -- | -- | 8,932,294 |
| Accrued expenses and other liabilities | -- | -- | -- | -- |
| | 339,688 | 269,783 | 17,522 | 639,687 |
| Net cash used in operating activities | (28,856,435) | (3,316,245) | (1,193,283) | (33,775,082) |
| Cash flows from investing activities: | | | | |
| Expenditures for network in progress | (33,619,342) | (1,739,782) | -- | (35,359,124) |
| Expenditures for property and equipment | (2,769,076) | (381,261) | (46,653) | (3,205,893) |
| Purchase of marketable securities available for sale | (169,587,319) | -- | -- | (169,587,319) |
| Purchase of marketable securities - pledged as collateral | (83,097,655) | -- | -- | (83,097,655) |
| Sale of marketable securities - pledged as collateral | 22,271,181 | -- | -- | 22,271,181 |
| Restricted cash | (9,971,142) | (760,211) | -- | (10,731,353) |
| Advance of note receivable to incumbent | (3,206,841) | -- | -- | (3,206,841) |
| Repayment of note receivable | 9,000 | -- | -- | 9,000 |
| | (279,971,194) | (2,881,254) | (46,653) | (282,908,004) |
| Net cash used in investing activities | | | | |
| Cash flows from financing activities: | | | | |
| Issuance of voting and non-voting common stock | -- | -- | -- | 1,000 |
| Proceeds from sale of preferred stock | 19,999,998 | 12,000,054 | 2,500,000 | 35,000,052 |
| Proceeds from sale of Series B convertible preferred stock representing the conversion of committed but undrawn portion of bridge loan to Series B convertible preferred stock | -- | -- | 300,000 | 300,000 |
| Proceeds from bond offering | 350,000,000 | -- | -- | 350,000,000 |
| Proceeds from bridge loan | -- | -- | 700,000 | 700,000 |
| Exercise of employee common stock options | 81 | -- | -- | 81 |
| Payment of issuance costs for preferred stock offerings | -- | (138,780) | (25,000) | (163,780) |
| Payment of deferred financing costs | (11,681,947) | (350,428) | -- | (12,032,375) |
| Net cash provided by financing activities | 358,318,132 | 11,510,846 | 3,475,000 | 373,304,978 |
| Net increase in cash and cash equivalents | 49,490,503 | 5,313,367 | 2,235,064 | 57,038,897 |
| Cash and cash equivalents at the beginning of period | 7,840,564 | 2,527,197 | 292,133 | -- |
| Cash and cash equivalents at the end of period | $57,331,067 | $7,840,564 | $2,527,197 | $57,331,067 |
| Supplemental disclosure: | | | | |
| Cash paid for interest | $22,271,324 | $-- | $-- | $22,271,324 |
| Noncash investing and financing transactions: | | | | |
| Conversion of bridge loan plus accrued interest to Series B convertible preferred stock | $-- | $-- | $3,815,357 | $(735,357) |
| Conversion of non-voting common stock to voting common stock | $-- | $-- | $14,500 | $1,000 |
| Issuance of voting and non-voting common stock | $-- | $-- | $-- | $(1,000) |
| Acquisition of network equipment financed on an accounts payable | $30,000,000 | $3,000,000 | $-- | $33,000,000 |

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

PATHNET INC.
(A Development Stage Enterprise)
STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
Period from August 25, 1995 (date of inception) to December 31, 1995 and
for the years ended December 31, 1996, 1997 and 1998

| | Common Stock | | Note Receivable From | Deferred | Additional | Accumulated Other | Deficit Accumulated During | |
|---|---|---|---|---|---|---|---|---|
| | Shares | Amount | Stockholder | Compensation | Paid-in Capital | Comprehensive Income | Development Stage | Total |
| Balance at August 25, 1995 | -- | $-- | $-- | $-- | $-- | $-- | $-- | $-- |
| Issuance of Voting common stock | 1,450,000 | 14,500 | (14,500) | -- | -- | -- | -- | -- |
| Issuance of Non-voting common stock | 1,450,000 | 14,500 | (14,500) | -- | -- | -- | (9,500) | 500 |
| Net loss | -- | -- | -- | -- | -- | -- | (9,500) | 500 |
| | = | = | = | = | = | = | (426,826) | (426,826) |
| Balance at December 31, 1995 | 2,900,000 | 29,000 | (29,000) | -- | -- | -- | (445,826) | (445,826) |
| Cancellation of Non-voting common stock | (1,450,000) | (14,500) | -- | -- | -- | -- | -- | (14,500) |
| Issuance of Voting common stock | 1,450,000 | 14,500 | -- | -- | -- | -- | -- | 14,500 |
| Interest expense for beneficial conversion | -- | -- | -- | -- | 381,990 | -- | -- | 381,990 |
| Nature of bridge loan | -- | -- | -- | -- | -- | -- | (1,743,635) | (1,743,635) |
| Net loss | = | = | = | = | = | = | (2,189,461) | (1,387,471) |
| | | | | | | | (3,977,400) | (3,977,400) |
| Balance at December 31, 1996 | 2,900,000 | 29,000 | (29,000) | -- | 381,990 | -- | (6,166,861) | (5,764,871) |
| Exercise of stock options | 2,358 | 24 | -- | -- | 57 | -- | -- | 81 |
| Repayment of note receivable | -- | -- | 9,000 | -- | -- | -- | -- | 9,000 |
| Deferred compensation expense related to issuance of employee common stock options | -- | -- | -- | (1,679,359) | 1,679,359 | -- | -- | -- |
| Compensation expense related to issuance of employee common stock options | -- | -- | -- | 701,295 | -- | -- | -- | 701,295 |
| Fair value of warrants to purchase common stock | -- | -- | -- | -- | 4,095,000 | -- | -- | 4,095,000 |
| Net unrealized gain on marketable securities available for sale | -- | -- | -- | -- | -- | 208,211 | -- | 208,211 |
| Net loss | = | = | = | = | = | = | (36,396,596) | (36,396,596) |
| | 3,202,358 | $29,024 | $-- | $(978,064) | $6,156,406 | $208,211 | $(42,563,457) | $(37,047,880) |

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

## 1. THE COMPANY

Pathnet, Inc. (Company) is a leading "carrier's carrier", providing high-quality, low-cost digital fiber and wireless communications capacity to under-served second- and third-tier U.S. markets. The Company's strategy is to partner with owners of telecommunication assets, including utility, pipeline and railroad companies (Incumbents), to upgrade and aggregate existing infrastructure to a state-of-the-art SONET network. As of December 31, 1998, the Company had approximately 2,000 route miles of completed network, approximately 5,000 route miles of network under construction and approximately 10,000 route miles of network under contract. Due to demand and opportunity, Pathnet expanded the scope of its existing business strategy to include fiber. Pathnet offers telecommunications service to inter-exchange carriers, local exchange carriers, internet service providers, Regional Bell Operating Companies, cellular operators and resellers.

The Company's business has been funded primarily through equity investments by the Company's stockholders and a private placement in April 1998 of units consisting of 12 1/4% Senior Notes due 2008 (Restricted Notes) and warrants (Warrants) to purchase Common Stock (Debt Offering). On September 2, 1998, the Company commenced an offer to exchange (Exchange Offer) all outstanding Restricted Notes for up to $350.0 million aggregate principal amount of 12 1/4% Senior Notes due 2008 (Registered Notes) which have been registered under the Securities Act of 1933, as amended (Securities Act). The terms of the Registered Notes are identical in all material respects to the terms of the Restricted Notes, except that the Registered Notes have been registered under the Securities Act and are generally freely transferable by holders thereof and are issued without any covenant upon the Company regarding registration under the Securities Act. The Exchange Offer expired on October 2, 1998 and all outstanding Restricted Notes were exchanged for Registered Notes. (The Restricted Notes and the Registered Notes are collectively referred to herein as the "Senior Notes".)

A substantial portion of the Company's activities to date has involved developing strategic relationships with Incumbents and building its network. Accordingly, a majority of its revenues to date reflect only certain consulting and advisory services in connection with the design, development and construction of digital microwave infrastructure. The remainder of its revenues to date (approximately 10 per cent of its total revenues) was derived from the sale of bandwidth along the Company's digital network. The Company has also been engaged in constructing network, developing operating systems, constructing a network operations center, raising capital and hiring management and other key personnel. The Company has experienced significant operating and net losses and negative operating cash flow to date and expects to continue to experience operating and net losses and negative operating cash flow until such time as it is able to generate revenue sufficient to cover its operating expenses.

## 2. SIGNIFICANT ACCOUNTING POLICIES

### BASIS OF ACCOUNTING

While the Company recently commenced providing telecommunication services to customers and recognizing the revenue from the sale of such telecommunication services, its principal activities to date have been securing contractual alliances with Incumbents, designing and constructing network.

segments, obtaining capital and planning its proposed service. Accordingly, the Company's consolidated financial statements are presented as a development stage enterprise, as prescribed by Statement of Financial Accounting Standards No. 7, "Accounting and Reporting by Development Stage Enterprises." As a development stage enterprise, the Company has been relying on the issuance of equity and debt securities, rather than recurring revenues, for its primary sources of cash since inception.

## CONSOLIDATION

The consolidated financial statements include the accounts of Pathnet, Inc. and its wholly-owned subsidiaries, Pathnet Finance I, LLC, Pathnet Idaho Power License, LLC, Pathnet Fiber Optics, LLC and Pathnet BNSF Equipment, LLC. All material intercompany accounts and transactions have been eliminated in consolidation.

## USE OF ESTIMATES

The preparation of the financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period. The estimates involve judgments with respect to, among other things, various future factors which are difficult to predict and are beyond the control of the Company. Actual amounts could differ from these estimates.

## LOSS PER SHARE

Basic earnings (loss) per share is computed by dividing net income (loss) by the weighted average number of shares of Common Stock outstanding during the applicable period. Diluted earnings (loss) per share is computed by dividing net income (loss) by the weighted average common and potentially dilutive common equivalent shares outstanding during the applicable period. For each of the periods presented, basic and diluted loss per share are the same. The exercise of 2,855,833 employee Common Stock options, the exercise of warrants to purchase 1,110,500 shares of Common Stock, and the conversion of 5,470,595 shares of Series A, B and C convertible preferred stock into 15,864,715 shares of Common Stock as of December 31, 1998, which could potentially dilute basic earnings per share in the future were not included in the computation of diluted loss per share for the periods presented because to do so would have been antidilutive in each case.

## FAIR VALUE OF FINANCIAL INSTRUMENTS

The Company believes that the carrying amount of certain of its financial instruments, which include cash equivalents and accounts payable, approximate fair value due to the relatively short maturity of these instruments. As of December 31, 1998, the value of the Company's 12 1/4% Senior Notes was approximately $245 million.

## CASH EQUIVALENTS

The Company considers all highly liquid instruments with an original maturity of three months or less to be cash equivalents.

## CONCENTRATION OF CREDIT RISK

Financial instruments which potentially subject the Company to concentrations of credit risk consist of cash and cash equivalents, marketable securities and associated interest receivable, note receivable, and restricted cash. Marketable securities and associated interest receivable include U.S. Treasury securities and debt securities of U.S. Government agencies, certificates of deposit and money market funds, and corporate debt securities. The note receivable is guaranteed by the parent company of the note holder, a leading utility company. The Company has invested its excess cash in a money market fund with a commercial bank. The money market fund is collateralized by the underlying assets of the fund. The Company's restricted cash is maintained in an escrow account (see Note 5) at a major bank. The Company has not experienced any losses on its cash and cash equivalents and restricted cash.

## MARKETABLE SECURITIES

Management determines the appropriate classification of its investments in marketable securities at the time of purchase and reevaluates such determinations at each balance sheet date. Debt securities are classified as held to maturity when the Company has the positive intent and ability to hold the securities to maturity. The Company has classified certain securities as held to maturity pursuant to a pledge agreement. Held to maturity securities are stated at amortized cost. Debt securities for which the Company does not have the intent or ability to hold to maturity are classified as available for sale, along with any investments in equity securities. Securities are classified as current or non-current based on the maturity date. Securities available for sale are carried at fair value based on quoted market prices at the balance sheet date, with unrealized gains and losses reported as part of accumulated other comprehensive income.

The amortized cost of debt securities is adjusted for amortization of premiums and accretion of discounts to maturity. Such amortization and interest are included in interest income or expense. Realized gains and losses are included in other income (expense), net in the consolidated statements of operations. The cost of securities sold is based on the specific identification method. The Company's investments in debt and equity securities are diversified among high credit quality securities in accordance with the Company's investment policy.

## PROPERTY AND EQUIPMENT

Property and equipment, consisting of network in progress, communications network, office and computer equipment, furniture and fixtures and leasehold improvements, is stated at cost. Network in progress costs incurred during development are capitalized. Depreciation of the completed communications network commences when the network equipment is ready for its intended use and is computed using the straight-line method with estimated useful lives of network assets ranging between three to ten years. Depreciation of the office and computer equipment and furniture and fixtures is computed using the straight-line method, generally over three to five years, based upon estimated useful lives, commencing when the assets are available for service. Leasehold improvements are amortized over the lesser of the useful lives of the assets or the lease term. Expenditures for maintenance and repairs are expensed as incurred. When assets are retired or disposed, the cost and the related

accumulated depreciation are removed from the accounts, and any resulting gain or loss is recognized in operations for the period.

## IMPAIRMENT OF LONG-LIVED ASSETS

The Company periodically evaluates the recoverability of its long-lived assets. This evaluation consists of a comparison of the carrying value of the assets with the assets' expected future cash flows, undiscounted and without interest costs. Estimates of expected future cash flows represent management's best estimate based on reasonable and supportable assumptions and projections. If the expected future cash flow, undiscounted and without interest charges, exceeds the carrying value of the asset, no impairment is recognized. Impairment losses are measured as the difference between the carrying value of long-lived assets and their fair value.

## DEFERRED INCOME TAXES

The Company uses the liability method of accounting for income taxes. Deferred income taxes result from temporary differences between the tax bases of assets and liabilities and their financial reporting amounts at each year-end, based on enacted laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established when necessary to reduce net deferred tax assets to the amount expected to be realized. The provision for income taxes consists of the Company's current provision for federal and state income taxes and the change in the Company's net deferred tax assets and liabilities during the period.

## REVENUE RECOGNITION

The Company earns revenue from the sale of telecommunication capacity and for project management and consulting services. Revenue from the sale of telecommunications capacity is earned when the service is provided. Revenue for project management and consulting services is recognized over the related project period as milestones are achieved. The Company defers revenue when contractual payments are received in advance of the performance of services. During 1998, one customer accounted for 98 per cent of the Company's total revenue.

## DEFERRED FINANCING COSTS

The Company has incurred costs related to the Debt Offering together with costs associated with obtaining future debt financing arrangements. Such costs are amortized over the term of the debt or financing arrangement other than when financing has not been obtained, in which case, the costs are expensed immediately.

## COMPREHENSIVE LOSS

Effective March 31, 1998, the Company adopted Statement of Statement of Financial Accounting Standards No. 130 which requires additional reporting with respect to certain changes in assets and liabilities that previously were reported in stockholders' equity (deficit). Accordingly, the Company has included Consolidated Statements of Comprehensive Loss for the years ended December 31, 1998, 1997 and 1996, and for the period August 25, 1995 (date of inception) to December 31, 1998 in the accompanying financial statements.

## 3. MARKETABLE SECURITIES

The Company's marketable securities are considered "available for sale," and, as such, are stated at market value. The net unrealized gains and losses on marketable securities are reported as part of accumulated other comprehensive income. Realized gains or losses from the sale of marketable securities are based on the specific identification method.

The following is a summary of the investments in marketable securities at December 31, 1998:

| | Cost | Gross Unrealized Gains | Gross Unrealized Losses | Market Value |
|---|---|---|---|---|
| Available for sale securities | | | | |
| U.S. Treasury securities and debt securities of U.S. Government agencies | $20,684,791 | $11,436 | $-- | $20,696,227 |
| Certificates of deposit and money market funds | 7,098,225 | 116 | 878 | 7,097,463 |
| Corporate debt securities | 141,804,303 | 225,972 | 28,435 | 142,001,840 |
| | $169,587,319 | $237,524 | $29,313 | $169,795,530 |

Proceeds from the sales of available for sale securities and gross realized gains and gross realized losses on sales of available for sale securities were immaterial during the year ended December 31, 1998.

The amortized cost and estimated fair value of available for sale securities by contractual maturity at December 31, 1998 is as follows:

| | Cost | Market Value |
|---|---|---|
| Due in one year or less | $97,863,395 | $97,895,773 |
| Due after one year through two years | 71,723,924 | 71,899,757 |
| | $169,587,319 | $169,795,530 |

Expected maturities may differ from contractual maturities because the issuers of the securities may have the right to prepay obligations without prepayment penalties.

In addition to marketable securities, the Company has investments in pledged marketable securities that are pledged as collateral for repayment of interest on the Company's Senior Notes through April 2000 (see note 8) and are classified as non-current assets on the consolidated balance sheet. As of December 31, 1998 pledged marketable securities consisted of U.S. Treasury securities classified as held to maturity with an amortized cost of approximately $60.8 million, interest receivable on the pledged marketable securities of approximately $998,000 and cash and cash equivalents of approximately $31,000. Approximately $40.1 million of the investments contractually mature prior to December 31, 1999 and approximately $20.7 million contractually mature after December 31, 1999 and prior to April 30, 2000.

## 4. NOTE RECEIVABLES

Under the terms of a promissory note with an incumbent, the Company agreed to advance up to $10 million principal for the purpose of funding the incumbent's equipment expenditures under a Fixed Point Microwave Services agreement. Expenses are initially incurred by the Company and are recharged at cost to the incumbent as principal under the promissory note. The principal amount of the promissory note is due and payable on March 31, 1999. Interest on the promissory note accrues at the rate of 5 per cent per annum computed from the date of commissioning of the network, which had not occurred as of December 31, 1998. Commissioning of the network occurs when the network has been completed and is performing in accordance with agreed upon specifications. Approximately $3.2 million was outstanding under the promissory note as of December 31, 1998.

## 5. PROPERTY AND EQUIPMENT

Property and equipment, stated at cost, is comprised of the following at December 31, 1998 and 1997:

| | 1998 | 1997 |
|---|---|---|
| Network in progress | $38,669,088 | $6,831,795 |
| Communications network | 6,890,686 | -- |
| Office and computer equipment | 2,267,647 | 248,880 |
| Furniture and fixtures | 706,013 | 120,093 |
| Leasehold improvements | 166,733 | 62,344 |
| | 48,760,167 | 7,263,112 |
| Less: accumulated depreciation | (788,831) | (56,018) |
| Property and equipment, net | $47,971,336 | $7,207,094 |

Network construction costs include all direct material and labor costs together with related allocable interest costs, necessary to construct components of a high capacity digital network which is owned and maintained by the Company. During 1998, a portion of network was completed and made available for use by the Company, and was transferred from network in process to communications network. Network construction in progress at December 31, 1998 and 1997 respectively included approximately $10.2 million and $5.1 million, respectively, of telecommunications equipment not yet paid for by the Company. Corresponding amounts are included in accounts payable at December 31, 1998 and 1997, respectively.

## 6. DEFERRED FINANCING COSTS

During 1998, the Company incurred total issuance costs of approximately $11.3 million in connection with the Debt Offering. For the year ended December 31, 1998, amortization of the costs of approximately $843,000 was charged to interest expense.

As of December 31, 1997, debt-financing costs comprised approximately $250,000 related to costs incurred in anticipation of obtaining debt-financing arrangements with a vendor. During the year ended December 31, 1998, these costs, together with additional debt financing costs incurred during the year of approximately $364,000, were charged to interest expense as the related financing arrangements were not consummated.

## 7. RESTRICTED CASH

Restricted cash comprises amounts held in escrow to collateralize the Company's obligations under certain of its Fixed Point Microwave Services (FPAS) agreements. The funds in each escrow account are available only to fund the projects to which the escrow is related. Generally, funds are released from escrow to pay project costs as incurred. During the year ended December 31, 1998, the Company deposited approximately $10.3 million in escrow and no funds were released from escrow.

## 8. LONG-TERM DEBT

During 1998, the Company completed the Debt Offering for total gross proceeds of $350.0 million less total issuance costs of approximately $11.3 million. Upon issuance, approximately $345.9 million of the gross proceeds were allocated to the Senior Notes and approximately $4.1 million were allocated to the Warrants based upon estimated fair values. The Warrants expire on April 15, 2008. The estimated value attributed to the Warrants has been recorded as a discount on the face value of the Senior Notes and as additional paid-in capital. This discount is amortized as an increase to interest expense and the carrying value of the debt over the related term using the interest method. The Company has recorded approximately $205,000 of expense for the year ended December 31, 1998, related to the amortization of this discount. Interest on the Senior Notes accrues at an annual rate of 12 3/4 %, payable semiannually, in arrears, beginning October 15, 1998, with principal due in full on April 15, 2008. Interest expense, exclusive of the amortization of the discount, for the year ended December 31, 1998 was $31.3 million. The Company used approximately $81.1 million of the proceeds related to the Debt Offering to purchase U.S. Government debt securities, which are restricted and pledged as collateral for repayment of all interest due on the Senior Notes through April 15, 2000. The Company made its first interest payment of approximately $22.3 million on October 15, 1998. The Senior Notes are redeemable, in whole or part, at any time on or after April 15, 2003 at the option of the Company, at the following redemption prices plus accrued and unpaid interest (i) on or after April 15, 2003, 106% of the principal amount, (ii) on or after April 15, 2004, 104% of the principal amount, (iii) on or after April 15, 2005, 102% of the principal amount and (iv) on or after April 15, 2006, 100% of the principal amount. In addition, at any time prior to April 15, 2001, the Company may redeem within sixty days, with the net cash proceeds of one or more public equity offerings, up to 35% of the aggregate principal amount of the Senior Notes at a redemption price equal to 112.25% of the principal amount plus accrued and unpaid interest provided that at least 65% of the original principal amount of the Senior Notes remain outstanding. Upon a change in control, as defined, each holder of the Senior Notes may require the Company to repurchase all or a portion of such holder's Senior Notes at a purchase price of cash equal

to 101% of the principal amount plus accrued and unpaid interest and liquidated damages if any.

The Senior Notes contain certain covenants which restrict the activities of the Company including limitations of indebtedness, restricted payments, issuances and sales of capital stock, affiliate transactions, liens, guarantees, sale of assets and dividends.

## 9. CAPITAL STOCK TRANSACTIONS

### COMMON STOCK

The initial capitalization of the Company, on August 28, 1995, occurred through the issuance by the Company of 1,450,000 shares of voting common stock and 1,450,000 shares of non-voting common stock.

On May 8, 1998, the Company filed a Registration Statement with the Securities and Exchange Commission for an initial public offering of common stock (Initial Public Offering). See "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations -- Liquidity and Capital Resources" for a discussion of the Company's decision to postpone the Initial Public Offering. In relation to the postponement of the Initial Public Offering, the Company wrote off approximately $1.4 million in expenses, consisting primarily of legal and accounting fees, printing costs, and Securities and Exchange Commission and Nasdaq Stock Market fees. On July 24, 1998, the Company's stockholders approved a 2.9-for-1 stock split which was effected on August 3, 1998, the record date. All share information has been adjusted for this stock split for all periods presented.

### PREFERRED STOCK

As part of its initial capitalization on August 25, 1995, the Company initiated a private offering of 1,000,000 shares of Series A convertible preferred stock for $1,000,000. Pursuant to the terms of the Investment and Stockholders' Agreement by and among the Company and certain stockholders of the Company (Investment and Stockholders' Agreement), the offering closed in two phases of $500,000 each. As of the signing of the Investment and Stockholders' Agreement, the Company received $500,000, representing the first closing on this offering in 1995. In addition, the offering provided for a convertible bridge loan in the amount of $1,000,000. The bridge loan carried an interest rate of 12% per annum and was due and payable in full on the earlier to occur of the anniversary date of the bridge loan issuance or the closing date of the Company's next equity financing. The bridge loan was converted into Series B preferred stock at 73% of the price of the Series B convertible preferred stock issued in the next equity financing.

In February 1996, the Company issued 500,000 shares of Series A convertible preferred stock to the original investors in exchange for $500,000, representing the second closing under the Investment and Stockholders' Agreement. In August 1996, the Company drew $700,000 on a bridge loan with the original investors.

On December 23, 1996, the Company consummated a private offering of 609,756 shares of Series B convertible preferred stock for $2,000,000 less issuance costs of $29,000 pursuant to the Investment and Stockholders' Agreement. In addition, simultaneously, the $700,000 bridge loan plus

$75,297 of accrued interest was converted into 300,242 shares of Series B convertible preferred stock. The Company recognized $271,747 of interest expense to account for the beneficial conversion feature of the bridge loan. In addition, $500,000 representing the committed but undrawn portion of the bridge loan, was paid to the Company for the sale of 125,392 shares of Series B convertible preferred stock at a discounted rate. The Company recognized $113,863 of interest expense to account for the beneficial conversion feature of the committed but undrawn bridge loan. On June 15, 1997, pursuant to the Investment and Stockholders' Agreement, the Company received an additional $2,000,000 in a second closing in exchange for 501,756 shares of Series B convertible preferred stock. There were no issuance costs associated with the second closing.

On October 31, 1997, pursuant to the Investment and Stockholders' Agreement, the Company consummated a private offering of 939,850 shares of Series C convertible preferred stock for approximately $10 million, less issuance costs of $38,780. On April 8, 1998, pursuant to the Investment and Stockholders' Agreement, the Company consummated a second closing of 1,879,699 shares of Series C convertible preferred stock for an aggregate purchase price of approximately $20 million. There were no issuance costs associated with the second closing.

Each share of Series A, Series B and Series C convertible preferred stock entitles each holder to a number of votes per share equal to the number of shares of Common Stock into which each share of Series A, Series B and Series C convertible preferred stock is currently convertible.

The holders of the Series A, Series B and Series C convertible preferred stock are entitled to receive dividends in preference to and at the same rate as dividends are paid with respect to the common stock. In the event of any liquidation, dissolution or winding up of the Company, whether voluntary or involuntary, holders of each share of Series A, Series B and Series C convertible preferred stock outstanding are entitled to be paid before any payment shall be made to the holders of any class of common stock or any stock ranking on liquidation junior to the convertible preferred stock, in amount, in cash, equal to the original purchase price paid by such holder plus any declared but unpaid dividends.

In the event the assets of the Company are insufficient to pay liquidation preference amounts, then all of the assets available for distribution shall be distributed pro rata so that each holder receives that portion of the assets available for distribution as the number of shares of convertible preferred stock held by such holder bears to the total number of shares of convertible preferred stock then outstanding.

Shares of the Series A, Series B, and Series C convertible preferred stock may be converted at any time, at the option of the holder, into voting common stock. The number of shares of voting common stock entitled upon conversion is the quotient obtained by dividing the face value of the Series A, Series B and Series C convertible preferred stock by the Applicable Conversion Rate, defined as the Applicable Conversion Value of $0.54, $1.11 or $3.67 per share, respectively.

Each share of convertible preferred stock shall automatically be converted into the number of shares of voting common stock which such shares are convertible upon application of the Applicable Conversion Rate immediately upon the closing of a qualified underwritten public offering covering the offer and sale of capital stock which is defined as: (i) the Company is valued on a pre-money basis at greater than $50,000,000, (ii) the gross proceeds received by the Company exceed $20,000,000, and (iii)

the Company uses a nationally recognized underwriter approved by holders of a majority interest of the Series A, Series B and Series C convertible preferred stock voting together.

If the Company issues any additional shares of common stock of any class at a price less than the Applicable Conversion Value, in effect for the Series A, Series B or Series C convertible preferred stock immediately prior to such issuance or sale, then the Applicable Conversion Value shall be adjusted accordingly.

In the event a qualified public offering has not occurred prior to December 23, 2000, the holder of shares of Series A or Series B preferred stock can require the Company to redeem the shares of Series A and Series B convertible preferred stock. After receipt from any one holder of an election to have any shares redeemed, the Company is required to send a notice to the Series A and Series B preferred stockholders on December 24, 2000 of the redemption price. If after sending the redemption notice to Series A and Series B preferred stockholders, the Company receives requests for redemption on or prior to January 11, 2001, from the holders of at least 67% of the Series A and Series B convertible preferred stock taken together, the Company must redeem all shares of Series A and Series B convertible preferred stock. Payment of the redemption price is due on January 23, 2001, for a cash price equal to the original purchase price paid by such holders for each share of Series A and Series B convertible preferred stock as adjusted for any stock split, stock distribution or stock dividends with respect to such shares. The successful completion of a qualified public offering is not within the control of the Company. Therefore, the Company does not present the Series A and Series B preferred stock as a component of stockholders' equity.

In the event that a qualified public offering has not occurred prior to November 3, 2001, the holder of shares of Series C preferred stock can require the Company to redeem the shares of Series C convertible preferred stock. After receipt from any one holder of an election to have any shares redeemed, the Company is required to send a notice to the Series C preferred stockholders on November 4, 2001 of the redemption price. If after sending the redemption notice to Series C preferred stockholders, the Company receives requests for redemption on or prior to November 21, 2001 from the holders of at least 67% of the Series C convertible preferred stock, the Company must redeem all shares of Series C convertible preferred stock. Payment of the redemption price is due on December 3, 2001 for a cash price equal to the original purchase price paid by such holders for each share of Series C convertible preferred stock as adjusted for any stock split, stock distribution or stock dividends with respect to such shares. The successful completion of a qualified public offering is not within the control of the Company. Therefore, the Company does not present the Series C preferred stock as a component of stockholders' equity.

Notwithstanding the provisions for optional redemption described above, pursuant to a Consent Waiver and Amendment effective March 24, 1998 among the Company and certain stockholders of the Company, the holders of the Series A, Series B and Series C convertible preferred stock agreed that no optional redemption of the Series A, Series B or Series C convertible preferred stock may be made by the Company prior to 90 days after (i) the final maturity dated of the Senior Notes (ii) or such earlier date (after the redemption date specified for such preferred stock) as the Senior Notes shall be paid in full.

10. STOCK OPTIONS

On August 28, 1995, the Company adopted the 1995 Stock Option Plan (1995 Plan), under which incentive stock options and non-qualified stock options could be granted to the Company's employees and certain other persons and entities in accordance with law. The Compensation Committee, which administers the 1995 Plan, determined the number of options granted, the vesting period and the exercise price of each award made under the 1995 Plan. The 1995 Plan will terminate August 28, 2005 unless terminated earlier by the Board of Directors. During 1998, the Compensation Committee determined that no further awards would be granted under the 1995 Plan.

Options granted to date under the 1995 Plan generally vest over a three period and expire either 30 days after termination of employment or 10 years after date of grant. As of December 31, 1998, a total of 30,731 non-qualified stock options and 424,393 incentive stock options were issued at an exercise price of $0.03 per share, an amount estimated to equal or exceed the per share fair value of the common stock at the time of grant. As of December 31, 1998, the options issued at an exercise price of $0.03 had a weighted average contractual life of 6.68 years. As of December 31, 1998, 430,430 of the options issued at an exercise price of $0.03 were exercisable.

On August 1, 1997, the Company adopted the 1997 Stock Incentive Plan (1997 Plan), under which incentive stock options, non-qualified stock options, stock appreciation rights, restricted stock, performance awards and certain other types of awards may be granted to the Company's employees and certain other persons and entities in accordance with the law. To date, only non-qualified stock options have been granted under the 1997 Plan. The Compensation Committee, which administers the 1997 Plan, determines the number of options granted, the vesting period and the exercise price of each award granted under the 1997 Plan. The 1997 Plan will terminate July 31, 2007 unless earlier terminated by the Board of Directors.

Options granted under the 1997 Plan generally vest over a three to seven year period and expire: (1) ten years after the date of grant, (2) two years after the date of the participant's termination without cause, disability or death, (3) three months after the date of the participant's resignation, (4) on the date of the participant's termination with cause or (5) on the date of any material breach of any confidentiality or non-competition covenant or agreement entered into between the participant and the Company.

Participations issued on October 31, 1997, at $3.67, vest on October 31, 2004 provided, however (i) if the Company has met 80% of its revenue and Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) budget for the calendar year ending December 31, 1998, which budget is approved by the Board of Directors of the Company, 50% of the shares covered by the options shall vest and become exercisable on January 1, 1999, (ii) if the Company has met 80% of its revenue and EBITDA budget for the calendar year ending December 31, 1999, which budget is approved by the Board of Directors of the Company, the remaining 50% of the shares covered by the options shall vest and become exercisable on January 1, 2000, and (iii) in the event that the first 50% of the shares covered by the options did not vest on January 1, 1999 as set forth in (i) above and the Company not only meets 80% of its revenue and EBITDA budget for the year ending December 31, 1999 but exceeds 80% of its

revenue and EBITDA budget for the year ending December 31, 1999, which budget is approved by the Board of Directors of the Company, in an amount at least equal to the deficiency that occurred in the year ending December 31, 1998, 100% of the shares covered by the options shall vest and become exercisable on January 1, 2000. Unvested and uncancelled options issued at $3.67 immediately become fully vested and exercisable upon a change of control or a qualified public offering, as defined in the option agreement.

The options issued at $1.13 vest ratably over three or four consecutive years subject to certain acceleration provisions set forth in an employment agreement such as the immediate vesting upon a change in control or a qualified initial public offering. Under certain circumstances and subject to the terms of the Senior Notes, upon the election of the employee upon termination of employment, the Company will be required to pay the employee the fair value of the vested options held on the date of such termination.

As of December 31, 1998, a total of 2,390,707 non-qualified options were issued and outstanding, 1,323,323 at an exercise price of $1.13 per share, 520,134 at an exercise price of $3.67 per share and 347,250 at an exercise price of $5.20 per share. Of the options issued at $1.13, 425,790 shares were exercisable at December 31, 1998. None of the options issued at $3.67 or $5.20 were exercisable at December 31, 1998. As of December 31, 1998, the weighted average contractual life of the options issued at $1.13, $3.67 and $5.20 was 8.9 and 8.9 and 9.9 years, respectively.

During the year ended December 31, 1998, 667,373 and 89,721 options were issued at an exercise price of $1.13 and $3.67 per share, respectively. The estimated fair value of the Company's underlying common stock in each case was determined to be $1.99 per share and $3.67, respectively. Accordingly, the Company calculated deferred compensation expense of approximately $1.7 million related to the options granted during the year and recognized compensation expense of approximately $701,000. The Company will recognize the balance of the compensation expense over the remainder of the vesting period of the options.

Stock option activity was as follows:

| | 1995 Plan | | | 1997 Plan | | |
|---|---|---|---|---|---|---|
| | Incentive Stock Options | Non-Qualified Stock Options | Price | Non-Qualified Stock Options | Price | Weighted Average Exercise Price |
| Options outstanding, December 31, 1995 | -- | -- | -- | -- | -- | -- |
| Granted | 410,248 | 70,721 | $0.034 | -- | -- | $0.034 |
| Exercised | -- | -- | -- | -- | -- | -- |
| Canceled | (14,147) | (3,674) | $0.034 | -- | -- | $0.034 |
| Options outstanding, December 31, 1996 | 396,101 | 67,047 | $0.034 | -- | -- | $0.034 |
| Granted | 424,395 | 77,805 | $0.034 | -- | -- | -- |
| Exercised | -- | -- | -- | -- | -- | -- |
| Canceled | -- | -- | -- | 1,289,167 | $1.13-$3.67 | $1.980 |
| Options outstanding, December 31, 1997 | 820,496 | 144,852 | $0.034 | 1,289,167 | $1.13-$3.67 | $1.430 |
| Options granted | -- | -- | -- | 1,107,094 | $1.13-$5.20 | $2.022 |
| Options exercised | -- | (62,358) | $0.034 | -- | -- | -- |
| Options cancelled | -- | (4,718) | $0.034 | (45,554) | $1.13-$5.20 | $2.445 |
| Options outstanding at December 31, 1998 | 820,496 | 77,721 | $0.034 | 2,390,707 | $1.13-$5.20 | $1.988 |

The Company measures compensation expense for its employee stock-based compensation using the intrinsic value method and provides pro forma disclosures of net loss as if the fair value method had been applied in measuring compensation expense. Under the intrinsic value method of accounting for stock-based compensation, when the exercise price of options granted to employees is less than the fair value of the underlying stock on the date of grant, compensation expense is to be recognized over the applicable vesting period.

| | Year Ended December 31, | | |
|---|---|---|---|
| | 1998 | 1997 | 1996 |
| Net loss as reported | $36,296,596 | $3,977,400 | $1,743,635 |
| Pro forma net loss | $36,839,594 | $3,978,164 | $1,747,570 |
| Basic and diluted net loss per share as reported | $(12.51) | $(1.37) | $(0.60) |
| Pro forma basic and diluted net loss per share | $(12.70) | $(1.37) | $(0.60) |

The fair value of each option is estimated on the date of grant using a type of Black-Scholes option pricing model with the following weighted-average assumptions used for grants during the years ended December 31, 1997 and 1996, respectively: dividend yield of 0%, expected volatility of 0%, risk-free interest rate of 6.55% and 6.35% and expected terms of 5.0 and 5.8 years. The following weighted-average assumptions were used for grants during the year ended December 31, 1998: dividend yield of 0%, expected volatility of 0%, risk-free interest rate of 5.18% and expected terms of 5.5 years.

As of December 31, 1998 and 1997, the weighted average remaining contractual life of the options is 8.03 years and 9.23 years, respectively. As of December 31, 1998 and 1997 the pro forma tax effects would include an increase to the deferred tax asset and the valuation allowance approximately $225,000, and $Nil respectively, therefore, there is no pro forma tax effect.

## 11. VENDOR AGREEMENTS

Pursuant to a Master Agreement entered into by the Company and NEC on August 8, 1997, as amended, the Company has the option to acquire, March 31, 2003, a total of $200 million worth of certain equipment, services and licensed software to be used by the Company in its network and pricing and payment terms that the Company believes are favorable. In addition, NEC has agreed, subject to certain conditions, to warrant equipment purchased by the Company from NEC for three years, if defective, to repair or replace certain equipment promptly and to maintain a stock of critical spare parts for up to 15 years. The Company's agreement with NEC provides for fixed prices during the first three years of its term. As of December 31, 1998, the Company had purchased $31.1 million of equipment under this agreement.

Pursuant to a supply agreement entered into by the Company and Lucent Technologies (Lucent) on December 18, 1998, the Company agreed that Lucent should be its exclusive supplier of fiber optic cable for its nationwide, voice and data network. Lucent may provide financing of up to approximately $600 million of fiber purchases for the construction of the Company's network and may provide or arrange financing for future phases of the fiber portion of the Company's network. The total amount of financing over the life of this seven-year agreement is not to exceed $1.8 billion. Certain material terms of the Company's transactions with Lucent are currently under review by Lucent and the Company. There can be no assurance that the financing contemplated by the supply agreement will be consummated or, if consummated, consummated on the terms and conditions described above. The supply agreement provides that Lucent will provide the Company with a broad level of support, including fiber optic equipment network planning and design, technical and marketing support, and financing. As of December 31, 1998, no purchases were made by the Company under this agreement.

## 12. COMMITMENTS AND CONTINGENCIES

The Company maintains office space in Washington, D.C., Kansas and Texas. The most significant lease relates to the Company's headquarters facility in Washington, D.C. The partnership leasing the space in Washington, D.C. is controlled by a director of the Company. The lease expires on August 31, 1999, and is renewable by the Company for two additional one-year periods. Rent paid to this related party during the year ended December 31, 1998, 1997 and 1996, was $281,890, $60,980 and $0, respectively. The Company has no amounts due to the related party as of December 31, 1998.

On December 30, 1998, the Company entered into a lease agreement for the lease of tower site space, sufficient to perform its obligations under a fixed point microwave agreement (FPMA) with an incumbent. Under the terms of the lease, the Company is obligated to rent of $130.00 per month for a period expiring on the later of (i) the expiration of the FPMA as to that site, or (ii) ten years from the

effective date of the agreement. The agreement provides for an increase in the rent payable commencing on December 1, 1999 and on succeeding year thereafter to December 1, 2008, by an amount equal to 4 per cent of the rent then in effect.

The Company's future minimum rental payments under noncancellable operating leases are as follows:

| | |
|---|---|
| 1999 | $2,177,440 |
| 2000 | 1,913,822 |
| 2001 | 1,967,214 |
| 2002 | 2,033,577 |
| 2003 and thereafter | 12,089,432 |
| Total | $20,181,485 |

Rent expense for the years ended December 31 1998, 1997, and 1996 was $389,969, $114,673 and $4,399, respectively.

The Company earns microwave telecommunication capacity revenue under an indefeasible right of use (IRU) agreement dated December 1, 1998, of $137,000 per month commencing December 1998 and expiring on the later of (i) the expiration of the FPMA as to that site, or (ii) ten years from the effective date of the agreement. The IRU agreement provides for an increase in the rent receivable commencing on December 1, 1999 and on each succeeding year thereafter to December 1, 2008, by an amount equal to 4 per cent of the rent then in effect.

In exchange for a non-compete agreement, the Company has agreed to pay a senior management employee a severance payment of $278,000, if such employee's employment with the Company is terminated.

As at December 31, 1998, the Company had capital commitments of approximately $28.0 million relating to telecommunications and transmission equipment.

## 13. INCOME TAXES

The tax effect of temporary differences that give rise to significant portions of the deferred tax asset at December 31, 1998 and 1997, is as follows:

| | December 31, 1998 | 1997 |
|---|---|---|
| Deferred revenue | 594 | |
| Capitalized start-up costs | 1,370,937 | $117,000 |
| Capitalized research and development costs | 66,111 | 1,271,227 |
| Net operating loss carryforward | 15,325,484 | 79,333 |
| | | 754,458 |
| | 16,763,481 | 2,222,018 |
| Less valuation allowance | (16,763,481) | (2,222,018) |
| Net deferred tax asset | $— | $— |

Capitalized costs represent expenses incurred in the organization and start-up of the Company. For federal income tax purposes, these costs ar being amortized over sixty months.

The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income in the periods in which those temporary differences are deductible. The Company has provided a valuation allowance against its deferred tax assets as they are long-term in nature and their ultimate realization cannot be determined.

Exhibit 3.1

# CERTIFICATE OF AMENDMENT
# OF
# RESTATED CERTIFICATE OF INCORPORATION
# OF
# PATHNET, INC.

Adopted in accordance with the provisions of Section 242 of
the General Corporation Law of the State of Delaware

We, William R. Smedberg, V, Vice President, Finance and Corporate Development, and Michael A. Lubin, Vice President, General Counsel and Secretary, of Pathnet, Inc., a corporation organized and existing under and by virtue of the General Corporation Law of the State of Delaware (the "Corporation"), DO HEREBY CERTIFY as follows:

FIRST: The Restated Certificate of Incorporation of the Corporation is hereby amended by deleting the current Section 10 thereof in its entirety and renumbering Section 11 as new Section 10.

SECOND: This Amendment has been duly adopted in accordance with the provisions of Section 242 of the General Corporation Law of the State of Delaware.

IN WITNESS WHEREOF, the Corporation has caused this Certificate to be signed by William R. Smedberg, V, Vice President, Finance and Corporate Development, and attested to by Michael A. Lubin, Vice President, General Counsel and Secretary, on this 5th day of December, 1995.

PATHNET, INC.

By: /s/ William R. Smedberg, V

William R. Smedberg, V
Vice President,
Finance and Corporate Development

ATTEST:

By: /s/ Michael A. Lubin

Michael A. Lubin
Vice President,
General Counsel and Secretary

# AMENDED AND RESTATED CERTIFICATE OF INCORPORATION
# OF
# PATHNET, INC.

Pathnet, Inc., a corporation duly incorporated under the laws of the State of Delaware, hereby certifies as follows:

FIRST: The name of the corporation is Pathnet, Inc. (the "Corporation"). The original Certificate of Incorporation of the Corporation was filed with the Secretary of State of the State of Delaware on 25th day of August, 1995, under the name PathNet, Inc.

SECOND: This Amended and Restated Certificate of Incorporation has been duly adopted in accordance with Sections 242 and 245 of the Delaware General Corporation Law (the "General Corporation Law").

THIRD: This Amended and Restated Certificate of Incorporation hereby restates, integrates and amends the Certificate of Incorporation, as amended, of the Corporation as follows:

1. NAME. The name of the corporation is PATHNET, INC. (the "Corporation").

2. ADDRESS; REGISTERED OFFICE AND AGENT. The address of the Corporation's registered office is 1013 Centre Road, Wilmington, New Castle County, Delaware 19805. The name of its registered agent at such address is The Prentice-Hall Corporation System, Inc.

3. PURPOSE. The purpose of the Corporation is to engage in, carry on and conduct any lawful act or activity for which corporations may be organized under the General Corporation Law.

4. NUMBER OF SHARES. The total number of shares of stock that the Corporation shall have authority to issue is 75,470,595, divided as follows: 70,000,000 shares of Preferred Stock, par value of $0.01 per share (the "Preferred Stock"), 1,000,000 shares of Series A Convertible Preferred Stock, par value of $0.01 per share (the "Series A Preferred Stock"), 1,651,046 shares of Series B Convertible Preferred Stock, par value of $0.01 per share (the "Series B Preferred Stock"), 2,819,549 shares of Series C Convertible Preferred Stock, par value of $0.01 per share (the "Series C Preferred Stock," and together with the Series A Preferred Stock and the

5,000,000 shares of Preferred Stock, one Series Preferred Stock, and 40,000,000 shares of Common Stock, par value of $0.001 per share (the "Common Stock").

5. DESIGNATION OF CLASSES, RELATIVE RIGHTS, ETC. The designation, relative rights, preferences and limitations of the shares of each class are as follows:

(a) PREFERRED STOCK. The shares of Preferred Stock may be issued from time to time in one or more series of any number of shares, provided that the aggregate number of shares issued and not canceled of any and all such series shall not exceed the total number of shares of Preferred Stock hereinabove authorized, and with such powers, preferences and rights and qualifications, limitations or restrictions thereof, and such distinctive serial designations, all as shall hereafter be stated and expressed in the resolution or resolutions providing for the issue of such shares of Preferred Stock from time to time adopted by the Board of Directors of the Corporation (the "Board of Directors") pursuant to authority so to do which is hereby vested in the Board of Directors. Each series of shares of Preferred Stock (a) may have such voting rights or powers, full or limited, or may be without voting rights or powers; (b) may be subject to redemption at such time or times and at such prices; (c) may be entitled to receive dividends (which may be cumulative or non-cumulative) at such rate or rates, on such conditions and at such times, and payable in preference to, or in such relation to, the dividends payable on any other class or classes or series of stock; (d) may have such rights upon the voluntary or involuntary liquidation, winding up or dissolution of, or upon any distribution of the assets of, the Corporation; (e) may be made convertible into or exchangeable for, shares of any other class or classes or of any other series of the same or any other class or classes of stock of the Corporation at such price or prices or at such rates of exchange and with such adjustments; (f) may be entitled to the benefit of a sinking fund to be applied to the purchase or redemption of shares of such series in such amount or amounts; (g) may be entitled to the benefit of conditions and restrictions upon the creation of indebtedness of the Corporation or any subsidiary, upon the issue of any additional shares (including additional shares of such series or of any other series), and upon the payment of dividends or the making of other distributions on, and the purchase, redemption or other acquisition by the Corporation or any subsidiary of, any outstanding shares of the Corporation and (h) may have such other relative, participating, optional or other special rights, qualifications, limitations or restrictions thereof, all as shall be stated in said resolution or resolutions providing for the issue of such shares of Preferred Stock. Any of the voting powers, designations, preferences, rights and qualifications, limitations or restrictions of any such series of Preferred Stock may be made dependent upon facts ascertainable outside of the resolution or resolutions providing for the issue of such Preferred Stock adopted by the Board of Directors pursuant to the authority vested in it by this Section 5.1, provided that the manner in which such facts shall operate upon the voting powers, designations, preferences, rights and qualifications, limitations or restrictions of such series of Preferred Stock is clearly and expressly set forth in the resolution or resolutions providing for the issue of such Preferred Stock. The term "facts" as used in the next preceding sentence shall have the meaning given to it in Section 151(a) of the General Corporation Law. Shares of Preferred Stock of any series that have been redeemed (whether through the operation of a sinking fund or otherwise) or that if

convertible or exchangeable, have been converted into or exchanged for shares of any other class or classes shall have the status of authorized and unissued shares of Preferred Stock undesignated as to series and may be reissued as a part of the series of which they were originally a part or as part of a new series of shares of Preferred Stock to be created by resolution or resolutions of the Board of Directors or as part of any other series of shares of Preferred Stock, all subject to the conditions or restrictions on issuance set forth in the resolution or resolutions adopted by the Board of Directors providing for the issue of any series of shares of Preferred Stock.

5.2 COMMON STOCK. Subject to the provisions of any applicable law or of the Bylaws of the Corporation, as from time to time amended (the "Bylaws"), with respect to the closing of the transfer books or the fixing of a record date for the determination of stockholders entitled to vote and except as otherwise provided herein with respect to any shares of Series Preferred Stock, by law or by the resolution or resolutions providing for the issue of any series of shares of Preferred Stock, the holders of outstanding shares of Common Stock shall exclusively possess voting power for the election of directors and for all other purposes, each holder of record of shares of Common Stock being entitled to one vote for each share of Common Stock standing in his or her name on the books of the Corporation. Except as otherwise provided herein with respect to any shares of Series Preferred Stock or by the resolution or resolutions providing for the issue of any series of shares of Preferred Stock, the holders of shares of Common Stock shall be entitled, to the exclusion of the holders of shares of Preferred Stock of any and all series, to receive such dividends as from time to time may be declared by the Board of Directors. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, after payment shall have been made to the holders of shares of any Series Preferred Stock and any Preferred Stock of the full amount to which they shall be entitled pursuant to this Amended and Restated Certificate of Incorporation or the resolution or resolutions providing for the issue of any series of shares of Preferred Stock, the holders of shares of Common Stock shall be entitled, to the exclusion of the holders of shares of Series Preferred Stock and Preferred Stock of any and all series, to share, ratably according to the number of shares of Common Stock held by them, in all remaining assets of the Corporation available for distribution to its stockholders.

5.3 SERIES PREFERRED STOCK.

5.3.1 SHARES.

(a) AUTHORIZED SHARES. The Corporation shall have authority to issue Five Million Four Hundred Seventy Thousand Five Hundred Ninety-Five (5,470,595) shares of Series Preferred Stock, of which One Million (1,000,000) shares shall be designated the Series A Preferred Stock, One Million Six Hundred Fifty One Thousand Forty Six (1,651,046) shares shall be designated the Series B Preferred

Stock, and Two Million Eight Hundred Nineteen Thousand Five Hundred Forty-Nine (2,819,549) shares shall be designated as the Series C Preferred Stock.

(b) DIVIDENDS. The holders of the Series Preferred Stock shall be entitled to receive, out of funds legally available therefor, dividends (other than dividends paid in additional shares of Common Stock) in preference to and at the same rate as dividends are paid with respect to the Common Stock (treating each share of Series Preferred Stock as being equal to the number of shares of Common Stock into which each such share of Series Preferred Stock could be converted pursuant to the provisions of Section 5.3.4 hereof, with such number determined as of the record date for the determination of holders of Common Stock entitled to receive such dividend).

5.3.2 LIQUIDATION, DISSOLUTION OR WINDING UP.

(a) DISTRIBUTIONS TO HOLDERS OF SERIES PREFERRED STOCK. In the event of any liquidation, dissolution or winding up of the Corporation, whether voluntary or involuntary, the Series A Preferred Stock, the Series B Preferred Stock and the Series C Preferred Stock shall rank on a parity with each other and shall rank prior to the Common Stock or any class of stock ranking junior to the Series Preferred Stock. Upon such liquidation, holders of each share of Series Preferred Stock outstanding shall be entitled to be paid, out of the assets of the Corporation available for distribution to stockholders and before any payment shall be made to the holders of any class of Common Stock or of any stock ranking on liquidation junior to the Series Preferred Stock, an amount in cash equal to the original purchase price paid by such holder for each such share of Series Preferred Stock held (appropriately adjusted for stock splits, stock dividends and the like) plus any declared but unpaid dividends thereon. If upon any liquidation, dissolution or winding up of the Corporation, the assets to be distributed to the holders of the Series Preferred Stock under the foregoing sentence shall be insufficient to permit payment to such stockholders of the full preferential amounts aforesaid, then all of the assets of the Corporation available for distribution to such holders under such sentence shall be distributed among the holders of Series Preferred Stock, pro rata in accordance with the total amount of preference which would have been payable to such holders if funds had been available to pay the full preference under the previous sentence. After such payment shall have been made in full to such holders of Series Preferred Stock, or funds necessary for such payment shall have been set aside by the Corporation in trust for the account of such holders so as to be available for such payment, the holders of the outstanding shares of Common Stock and any class of stock ranking junior to the Series Preferred Stock shall share ratably in the distribution of the remaining assets and funds of the Corporation available for distribution to shareholders.

(b) DEEMED LIQUIDATIONS. In the case of (i) a consolidation or merger of the Corporation (other than a consolidation or merger upon

consummation of which the holders of voting securities of the Corporation immediately prior to such transaction, continue to own directly or indirectly not less than a majority of the voting power of the surviving corporation) or a sale of all or substantially all of the assets of the Corporation or other similar transaction and (iv) either receipt by the Corporation of (x) consideration less than the equivalent of $1.00 per share (appropriately adjusted for stock splits, stock dividends and the like) of Series A Preferred Stock plus any declared but unpaid dividends, (y) consideration less than the equivalent of $3.28 per share (appropriately adjusted for stock splits, stock dividends and the like) of Series B Preferred Stock plus any declared but unpaid dividends, or (z) consideration less than the equivalent of $10.64 per share (appropriately adjusted for stock splits, stock dividends and the like) of Series C Preferred Stock plus any declared but unpaid dividends, such event shall be regarded, at the option of the holders of a majority of the then outstanding shares of Series Preferred Stock, as a liquidation, dissolution or winding up of the affairs of the Corporation within the meaning of this Section 5.3.2.

Notwithstanding the foregoing, each holder of Series Preferred Stock shall have the right to elect the benefits of the provisions of Section 5.3.4(b) hereof in lieu of receiving payment in liquidation, dissolution or winding up of the Corporation pursuant to this Section 5.3.2(b). For purposes of this Section 5.3.2 and Section 5.3.6 hereof, a sale of substantially all of the assets of the Corporation shall mean (x) the sale or other disposition other than in the ordinary course of business of more than 50% of such assets, as determined by reference to either (A) the book value or (B) the fair market value, of such assets, or (y) any issuance of Common Stock by the Corporation or transfer of Common Stock by the holder thereof to any person or persons acting in concert or a group of affiliated persons, which issuance or transfer results in such person or persons or group holding in the aggregate more than 50% of the issued and outstanding Common Stock after giving effect to such issuance or transfer.

(c) NON-CASH DISTRIBUTIONS. In the event of a liquidation, dissolution or winding up the Corporation resulting in the availability of assets other than cash for distribution to the holde of the Series Preferred Stock, the holders of the Series Preferred Stock shall be entitled to distribution of cash and or assets equal in value to the liquidation preference and other distributio rights stated in Section 5.3.2(a) and Section 5.3.2(b) hereof. In the event that such distribution to the holders of the Series Preferred Stock shall include any assets other than cash, the followin provisions shall govern. The Board of Directors shall first determine the value of such assets fo such purpose, and shall notify all holders of shares of Series Preferred Stock of such determination. The value of such assets for purposes of the distribution under this Section 5.3.2(c) shall be the value as determined by the Board of Directors in good faith and with due care, unless the holders of a majority of the outstanding shares of Series Preferred Stock shall object thereto in writing within 15 days after the date of such notice. In the event of such objection, the valuation of such

purposes of such distribution shall be determined by an arbitrator selected by the objecting stockholders and the Board of Directors, or if the parties are unable to agree upon within 10 days after the written objection sent by the objecting stockholders in accordance with the previous sentence, the valuation of such assets shall be determined by arbitration in which (i) the objecting stockholders shall name on their notice of objection one arbitrator, (ii) the Board of Directors shall name a second arbitrator within 15 days from the receipt of such notice, (iii) the two arbitrators thus selected shall select a third arbitrator within 15 days thereafter, and (iv) the three arbitrators thus selected shall determine the valuation of such assets within 15 days thereafter for purposes of such distribution by majority vote. The costs of such arbitration shall be borne by the Corporation or by the holders of the Series Preferred Stock (on a pro rata basis out of the assets otherwise distributable to them) as follows: (i) if the valuation as determined by the arbitrators is greater than 95% of the valuation as determined by the Board of Directors, the holders of the Series Preferred Stock shall pay the costs of the arbitration, and (ii) otherwise, the Corporation shall bear the costs of the arbitration.

5.3.3 VOTING RIGHTS.

(a) GENERAL. Except as otherwise expressly provided herein or as required by law, the holder of each share of the Series Preferred Stock shall be entitled to vote on any matters presented to the holders of the Common Stock. Each share of Series Preferred Stock shall entitle the holder thereof to such number of votes per share as shall equal the number of shares of Common Stock into which such share of Series Preferred Stock is convertible in accordance with the terms of Section 5.3.4 hereof at the record date for the determination of stockholders entitled to vote on such matter or, if no record date is established, at the date such vote is taken or any written consent of stockholders is solicited. Except as otherwise expressly provided herein (including, without limitation, the provisions of Section 5.3.6 hereof) or as required by law, the holders of shares of Series Preferred Stock and the Common Stock shall vote together as a single class on any matters presented to the holders of the Common Stock.

(b) BOARD OF DIRECTORS.

(i) INVESTOR DIRECTORS. The holders of the Series A Preferred Stock shall be entitled to vote as a class separately from all other classes of stock of the Corporation in any vote for the election of directors of the Corporation, and shall be entitled to elect by such class vote two directors (the "Series A Investor Directors"), one of which Series A Investor Directors to be designated by Spectrum Equity Investors, L.P. ("Spectrum") for so long as it owns shares of Series A Preferred Stock, and thereafter by the holders of a majority of the issued and outstanding shares of Series A Preferred Stock, and the other to be designated by New Enterprise Associates VI, Limited Partnership or its affiliates (collectively, "NEA VI")

for so long as it owns shares of Series A Preferred Stock and thereafter by the holders of a majority of the issued and outstanding shares of Series A Preferred Stock. The holders of the Series B Preferred Stock shall be entitled to vote as a class separately from all other classes of stock of the Corporation, in any vote for the election of directors of the Corporation, and shall be entitled to elect by such class vote one director (the "Series B Investor Director") to be designated by Grotech Capital Group IV, LLC ("Grotech IV") for so long as it owns shares of Series B Preferred Stock and thereafter by the holders of a majority of the issued and outstanding shares of Series B Preferred Stock. The holders of the Series C Preferred Stock shall be entitled to vote as a class separately from all other classes of stock of the Corporation in any vote for the election of directors of the Corporation, and shall be entitled to elect by such class vote one director (the "Series C Investor Director") to be designated by the holders of a majority of the issued and outstanding shares of Series C Preferred Stock; provided, however, that if the holders of a majority of the issued and outstanding shares of Series C Preferred Stock designate for election as the Series C Investor Director an individual who is not a partner or associate of a Series C Investor or an entity under substantially the same management as a Series C Investor, such designee shall be elected as a director only with the vote of a majority of the Common Stock Directors and Investor Directors, voting together. Initially, the Series C Investor Director will be designated by Toronto Dominion Capital (U.S.A.), Inc. In no event shall the Series C Investor Director be (i) a partner or associate of Spectrum or an entity under substantially the same management as Spectrum for so long as Spectrum has designation rights under this Section 5.3.3(a), (ii) a partner or associate of NEA VI or an entity under substantially the same management as NEA VI for so long as NEA VI has designation rights under this Section 5.3.3(a), and (iii) a partner or associate of Grotech IV or an entity under substantially the same management as Grotech IV for so long as Grotech IV has designation rights under this Section 5.3.3(a).

(ii) COMMON STOCK DIRECTORS. For so long as any Series Preferred Stock remains outstanding, the holders of Common Stock shall be entitled to vote as a class separately from all other classes in any vote for the election of directors of the Corporation, and shall be entitled to elect by such class vote two directors (the "Common Stock Directors").

(iii) APPOINTMENT OF CHIEF EXECUTIVE OFFICER/OFFICER DIRECTOR. Upon the termination or resignation of the Chief Executive Officer of the Corporation, the Corporation will select and hire a successor Chief Executive Officer (and any successor thereto) by the affirmative vote of a majority of the Common Stock Directors, the Series A Investor Directors, the Series B Investor Director and the Series C Investor Director, voting together. The Chief Executive Officer (and any replacement or successor Chief Executive Officer) as so selected and hired shall be elected to the Corporation's Board of Directors by the holders of the Series Preferred Stock and the Common Stock voting together as a single class (the "Officer Director"). David Schaeffer may serve as Chief Executive Officer of the

Corporation in the discretion of the Board of Directors, but in no event shall David Schaeffer be elected as the Officer Director.

(iv) REMOVAL OF DIRECTORS. The removal of any director of the Corporation shall be as set forth in the Bylaws of the Corporation.

(c) SPECIAL VOTING RIGHTS. The holders of the Series Preferred Stock shall be entitled to the special voting rights set forth in Section 5.3.6 hereof.

5.3.4 CONVERSION. The holders of the Series Preferred Stock shall have the following conversion rights:

(a) RIGHT TO CONVERT. Subject to and in compliance with the provisions of this Section 5.3.4, any shares of the Series Preferred Stock may, at any time or from time to time at the option of the holder, be converted into fully-paid and non-assessable shares of Common Stock. The number of shares of Common Stock to which a holder of the Series Preferred Stock shall be entitled upon conversion shall be the product obtained by multiplying the Applicable Conversion Rate (determined as provided in Section 5.3.4(c)) by the number of shares of Series Preferred Stock being converted.

(b) AUTOMATIC CONVERSION.

(i) Each share of the Series Preferred Stock outstanding shall automatically be converted into the number of shares of Common Stock into which such shares are convertible upon application of the then effective Applicable Conversion Rate (determined as provided in Section 5.3.4(c)) immediately upon the closing of an underwritten public offering pursuant to an effective registration statement under the Securities Act of 1933, as amended, or under such other applicable securities regulations covering the offer and sale of capital stock of the Corporation (other than a registration relating solely to Rule 145 under such Act (or any successor thereto) or to an employee benefit plan of the Corporation) (i) immediately prior to the consummation of which, the Corporation is valued (based on the per-share price paid in such public offering, but without regard to any proceeds to be received by the Company in connection with such offering) at greater than $50,000,000, (ii) in which the gross proceeds received by the Corporation exceed $20,000,000, and (iii) in which the Corporation uses a nationally recognized underwriter approved by holders of a majority in interest of the Series Preferred Stock (a "Qualified Public Offering").

(ii) Upon the occurrence of an event specified in Section 5.3.4(b)(i), the outstanding shares of Series Preferred Stock shall be converted automatically without any further action by the holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that the Corporation shall not be

entitled to issue certificates evidencing such shares of the Common Stock unless certificates evidencing such shares of the Series Preferred Stock being converted are either delivered to the Corporation or any transfer agent, as hereinafter provided, or the holder notifies the Corporation or any transfer agent, as hereinafter provided, that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection therewith.

Upon the occurrence of the automatic conversion of all of the outstanding Series Preferred Stock, the holders of the Series Preferred Stock shall surrender the certificates representing such shares at the office of the Corporation or of any transfer agent for the Common Stock. Thereupon, there shall be issued and delivered to each such holder, promptly at such office and in his name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of shares of Common Stock into which the shares of the Series Preferred Stock surrendered were converted on the date on which such automatic conversion occurred and cash as provided in Section 5.3.4(k) below in respect of any fraction of a share of Common Stock issuable upon such automatic conversion.

(c) APPLICABLE CONVERSION RATE. The conversion rate in effect at any time for the applicable series of Series Preferred Stock (the "Applicable Conversion Rate") shall equal the quotient obtained by dividing $1.00 in the case of Series A Preferred Stock, $3.28 in the case of Series B Preferred Stock, or $10.64 in the case of the Series C Preferred Stock by the Applicable Conversion Value, calculated as hereinafter provided.

(d) APPLICABLE CONVERSION VALUE. The Applicable Conversion Value in effect initially, and until first adjusted in accordance with Section 5.3.4(e) or Section 5.3.4(f) hereof, shall be $1.00 in the case of Series A Preferred Stock, $3.28 in the case of Series B Preferred Stock and $10.64 in the case of the Series C Preferred Stock.

(e) ADJUSTMENT FOR COMMON STOCK DIVIDENDS, SUBDIVIDENDS AND COMBINATIONS OF COMMON STOCK, ETC. Upon the happening of any of the following: (i) the issuance of additional shares of Common Stock of any class as a dividend or other distribution of outstanding Common Stock, (ii) the subdivision of outstanding shares of Common Stock of any class into a greater number of shares of Common Stock, or (iii) the combination of outstanding shares of Common Stock of any class into a smaller number of shares of Common Stock (each an "Extraordinary Common Stock Event"), the Applicable Conversion Value shall, simultaneously with the happening of such Extraordinary Common Stock Event, be adjusted by dividing the then effective Applicable Conversion Value by a fraction, the numerator of which shall be the number of shares of Common Stock outstanding (excluding treasury

stock) immediately after such Extraordinary Common Stock Event and the denominator of which shall be the number of shares of Common Stock outstanding (excluding treasury stock) immediately prior to such Extraordinary Common Stock Event, and the quotient so obtained shall thereafter be the Applicable Conversion Value. The Applicable Conversion Value, as so adjusted, shall be readjusted in the same manner upon the happening of any successive Extraordinary Common Stock Event or Events.

(f) ADJUSTMENTS FOR DILUTING ISSUES.

(1) Except as provided in Section 5.3.4(e) above or for Excluded Shares (as defined below), if the Corporation shall issue any additional shares of Common Stock of any class for no consideration or at a price per share less than the Applicable Conversion Value in effect for each applicable series of Series Preferred Stock immediately prior to such issuance or sale, then in each such case such Applicable Conversion Value shall be reduced to such lower price.

For purposes of this Section 5.3.4(f), "Excluded Shares" shall mean (i) shares issued or delivered from treasury or stock options (and shares of Common Stock issued upon the exercise thereof) granted by the Corporation, with the approval of the Board of Directors, to directors, officers, employees, agents or consultants of the Corporation for up to an aggregate of 1,325,212 shares of the Common Stock (as adjusted for stock splits, stock dividends and the like); (ii) warrants to purchase shares of Common Stock (and any shares of Common Stock issued upon the exercise thereof) issued by the Corporation in connection with the Corporation's offering of units, each such unit consisting of $1,000 principal amount at maturity of Senior Notes due 2008 (the "Notes") of the Corporation and warrants to purchase shares of Common Stock; and (iii) warrants to purchase shares of Common Stock (and any shares of Common Stock issued upon the exercise thereof) issued by the Corporation in connection with the credit facilities among the Corporation and/or its subsidiaries, its equipment vendors and certain other senior lenders.

For purposes of this Section 5.3.4(f), if a part or all of the consideration received by the Corporation in connection with the issuance of shares of the Common Stock or the issuance of any of the securities described below in paragraph (ii) of this Section 5.3.4(f) consists of property other than cash, such consideration shall be deemed to have the same value as is determined by the Corporation's Board of Directors with respect to receipt of such property so long as such determination was made reasonably and in good faith, and shall otherwise be deemed to have a value equal to its fair market value.

(ii) For the purpose of this Section 5.3.4(f), the issuance of any warrants, options or other subscription or purchase rights with respect to shares of Common Stock of any class and the issuance of any securities convertible into shares of Common Stock of any class (or the issuance of any warrants, options or any rights with respect to such convertible securities) shall be deemed an issuance at such time of such Common Stock if the Net Consideration Per Share which may be received by the Corporation for such Common Stock (as hereinafter determined) shall

being able to convert into shares of Common Stock of the Corporation or the successor corporation the holders of the Series Preferred Stock (including any such preferred stock issued upon conversion of the Series Preferred Stock) shall thereafter be entitled to receive upon conversion of the Series Preferred Stock (including any such preferred stock issued upon conversion of the Series Preferred Stock) the number of shares of stock or other securities or property of the Corporation or of the successor corporation resulting from such merger or consolidation or sale, to which a holder of the number of shares of Common Stock deliverable upon conversion of the Series Preferred Stock immediately prior to the capital reorganization, merger, consolidation or sale would have been entitled on such capital reorganization, merger, consolidation, or sale. In any such case, appropriate provisions shall be made with respect to the rights of the holders of the Series Preferred Stock (including any such preferred stock issued upon conversion of the Series Preferred Stock) after the reorganization, merger, consolidation or sale to the end that the provisions of this Section 5.3.4 (including, without limitation, provisions for adjustment of the Applicable Conversion Value and the number of shares purchasable upon conversion of the Series Preferred Stock or such preferred stock) shall thereafter be applicable, as nearly as may be, with respect to any shares of stock, securities or assets to be deliverable thereafter upon the conversion of the Series Preferred Stock or such preferred stock.

Each holder of Series Preferred Stock upon the occurrence of a capital reorganization, merger or consolidation of the Corporation or the sale of all or substantially all of its assets and properties as such events are more fully set forth in the first paragraph of this Section 5.3.4(h), shall have the option of electing treatment of his shares of Series Preferred Stock under either this Section 5.3.4(h) or Section 5.3.2(b) hereof, and except as otherwise provided in said Section 5.3.2(b), notice of which election shall be submitted in writing to the Corporation at its principal offices no later than 10 days before the effective date of such event, provided that any such notice shall be effective if given not later than 15 days after the date of the Corporation's notice, pursuant to Section 5.3.8, with respect to such event.

(i) CERTIFICATE AS TO ADJUSTMENTS. In each case of an adjustment or readjustment of the Applicable Conversion Rate, the Corporation will promptly furnish each holder of Series Preferred Stock with a certificate, prepared by the chief financial officer of the Corporation, showing such adjustment or readjustment, and stating in detail the facts upon which such adjustment or readjustment is based.

(j) MECHANICS OF CONVERSION. To exercise its conversion privilege, a holder of Series Preferred Stock shall surrender the certificate or certificates representing the shares being converted to the Corporation at its principal office, and shall give written notice to the Corporation at that office that such holder elects to convert such shares. Such notice shall also state the name or names (with address or addresses) in which the certificate or certificates for shares of Common Stock issuable upon such conversion shall be issued. The certificate or

certificates for shares of Series Preferred Stock surrendered for conversion shall be accompanied by proper assignment thereof to the Corporation or in blank. The date when such written notice is received by the Corporation together with the certificate or certificates representing the shares of Series Preferred Stock being converted, shall be the "Conversion Date." As promptly as practicable after the Conversion Date, the Corporation shall issue and shall deliver to the holder of the shares of Series Preferred Stock being converted, a certificate or certificates in such denominations as it may request in writing for the number of full shares of Common Stock issuable upon the conversion of such shares of Series Preferred Stock in accordance with the provisions of this Section 5.3.4 and cash as provided in Section 5.3.4(k) below in respect of any fraction of a share of Common Stock issuable upon such conversion. Such conversion shall be deemed to have been effected immediately prior to the close of business on the Conversion Date, and at such time the rights of the holder as holder of the converted shares of Series Preferred Stock shall cease and the person or persons in whose name or names any certificate or certificates for shares of Common Stock shall be issuable upon such conversion shall be deemed to have become the holder or holders of record of shares of Common Stock represented thereby.

(k) FRACTIONAL SHARES. No fractional shares of Common Stock or scrip representing fractional shares shall be issued upon conversion of Series Preferred Stock. Instead of any fractional shares of Common Stock that would otherwise be issuable upon conversion of Series Preferred Stock, the Corporation shall pay to the holder of the shares of Series Preferred Stock that were converted a cash adjustment in respect of such fraction in an amount equal to the same fraction of the market price per share of the Common Stock (as determined in a manner prescribed in good faith by the Board of Directors) at the close of business on the Conversion Date.

(l) PARTIAL CONVERSION. In the event some but not all of the shares of Series Preferred Stock represented by a certificate or certificates surrendered by a holder are converted, the Corporation shall execute and deliver to or on the order of the holder, at the expense of the Corporation, a new certificate representing the number of shares of Series Preferred Stock which were not converted.

(m) RESERVATION OF COMMON STOCK. The Corporation shall at all times reserve and keep available out of its authorized but unissued shares of Common Stock, solely for the purpose of effecting the conversion of the shares of the Series Preferred Stock, such number of its shares of Common Stock as shall from time to time be sufficient to effect the conversion of all outstanding shares of the Series Preferred Stock; and if at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect the conversion of all then outstanding shares of the Series Preferred Stock, the Corporation shall take such corporate action as may, in the opinion of its counsel, be necessary to increase its authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purpose.

5.3.5 REDEMPTION.

(a) OPTIONAL REDEMPTION.

(i) OPTIONAL REDEMPTION OF SERIES A PREFERRED STOCK AND SERIES B PREFERRED STOCK. In the event that there shall not have occurred a Closing of a Qualified Public Offering (as defined in Section 5.3.4(b) hereof) prior to December 23, 2000, at the election of any holder of shares of Series A Preferred Stock or any holder of Series B Preferred Stock outstanding as of December 24, 2000, the Corporation shall redeem all (but not part) of the shares of Series A Preferred Stock and Series B Preferred Stock then held by such holder. Payment of the Series A Redemption Price (as defined below) to the holders of Series A Preferred Stock and the Series B Redemption Price (as defined below) to the holders of shares of Series B Preferred Stock, shall be made by the Corporation on January 23, 2001, for a cash price equal to the original purchase price paid by such holders for each share of Series A Preferred Stock and Series B Preferred Stock outstanding, adjusted for any stock split, combined consolidation or stock distribution or stock dividends with respect to such shares (the "Series A Redemption Price" and the "Series B Redemption Price," respectively). On or prior to December 24, 2000, the Corporation shall give written notice (the "Series A and Series B Redemption Notice") by mail, postage prepaid, to the holders of the then outstanding shares of Series A Preferred Stock and Series B Preferred Stock at the address of each such holder appearing on the books of the Corporation or given by such holder to the Corporation for the purpose of notice. Such notice shall set forth the Series A Redemption Price and the Series B Redemption Price, as the case may be, and shall further state that any holder of shares of Series A Preferred Stock or Series B Preferred Stock, who intends to request redemption of its Series A Preferred Stock or Series B Preferred Stock, respectively, pursuant to this Section 5.3.5(a) must give written notice to the Corporation of its request for redemption on or before January 11, 2001. On or after January 11, 2001, each holder of shares of Series A Preferred Stock and Series B Preferred Stock who requested that such holder's shares of Series A Preferred Stock and Series B Preferred Stock be so redeemed, shall surrender the certificate or certificates evidencing such shares to the Corporation. In the case of any certificate or certificates which have been lost, stolen or destroyed, the holder of such certificate or certificates shall make and deliver an affidavit of that fact to the Corporation without the necessity of giving the Corporation a bond.

(ii) MANDATORY REDEMPTION OF SERIES A PREFERRED STOCK AND SERIES B PREFERRED STOCK. If after sending the Series A and Series B Redemption Notice, the Corporation receives requests for redemption on or prior to January 11, 2001 from the holders of at least sixty-seven percent (67%) of the Series A Preferred Stock and Series B Preferred Stock taken together, it shall give written notice by mail, postage prepaid, to the holders of Series A Preferred Stock and Series B Preferred Stock that all shares of the Series A Preferred Stock and Series B Preferred Stock then outstanding will be redeemed on January 23, 2001 (the "Series A

"Series B Redemption Date") for a per share cash price equal to the Series A Redemption Price and the Series B Redemption Price, as the case may be. The notice shall further call upon such holders to surrender to the Corporation on or before the Series A and Series B Redemption Date, as the case may be, specified in the notice such holder's certificate or certificates representing the shares to be redeemed. On or after the Series A and Series B Redemption Date, each holder of shares of Series A Preferred Stock and Series B Preferred Stock called for redemption shall surrender the certificate or certificates evidencing such shares to the Corporation. In the case of any certificate or certificates which have been lost, stolen or destroyed, the holder of such certificate or certificates shall make and deliver an affidavit of that fact to the Corporation without the necessity of giving the Corporation a bond.

(iii) OPTIONAL REDEMPTION OF SERIES C PREFERRED STOCK. In the event there shall not have occurred a closing of a Qualified Public Offering (as defined in Section 5.3.4(b) hereof) prior to November 3, 2001, at the election of each holder of shares of Series C Preferred Stock outstanding as of November 4, 2001, the Corporation shall redeem all (but not part) of the shares of Series C Preferred Stock then held by such holder. Payment of the applicable Series C Redemption Price (as defined below) to the holders of Series C Preferred Stock shall be made by the Corporation on December 3, 2001, for a cash price equal to the original purchase price paid by such holders for each share of Series C Preferred Stock outstanding, adjusted for any stock split, combination, consolidation or stock distribution or stock dividends with respect to such shares (the "Series C Redemption Price"). On or prior to November 4, 2001, the Corporation shall give written notice (the "Series C Redemption Notice") by mail, postage prepaid, to the holders of the then outstanding shares of Series C Preferred Stock at the address of each such holder appearing on the books of the Corporation or given by such holder to the Corporation for the purpose of notice. The Series C Redemption Notice shall set forth the Series C Redemption Price and shall further state that any holder of shares of Series C Preferred Stock who intends to request redemption of its Series C Preferred Stock pursuant to this Section 5.3.4(a) must give written notice to the Corporation of its request for redemption on or before November 21, 2001. On or after December 3, 2001, each holder of shares of Series C Preferred Stock who requested that such holder's shares of Series C Preferred Stock be so redeemed, shall surrender the certificate or certificates evidencing such shares to the Corporation. In the case of any certificate or certificates which have been lost, stolen or destroyed, the holder of such certificate or certificates shall make and deliver an affidavit of that fact to the Corporation without the necessity of giving the Corporation a bond.

(iv) MANDATORY REDEMPTION OF SERIES C PREFERRED STOCK. If after sending the Series C Redemption Notice, the Corporation receives requests for redemption on or prior to November 21, 2001 from the holders of at least sixty-seven percent (67%) of the Series C Preferred Stock, it shall give written notice by mail, postage prepaid, to the holders of Series C Preferred Stock that all shares of Series C Preferred Stock then outstanding will be redeemed on December 3,

200, the Series C Redemption Date) for a per-share cash price equal to the Series C Redemption Price. The notice shall further call upon such holders to surrender to the Corporation on or before the Series C Redemption Date at the place designated in the notice such holder's certificate or certificates representing the shares to be redeemed on or after the Series C Redemption Date, each holder of shares of Series C Preferred Stock called for redemption shall surrender the certificate or certificates evidencing such shares to the Corporation. In the case of any certificate or certificates which have been lost, stolen or destroyed, the holder of such certificate or certificates shall make and deliver an affidavit of that fact to the Corporation, without the necessity of giving the Corporation a bond.

(v) EXTENSION OF REDEMPTION DATES. Notwithstanding the foregoing clauses (i) through (iv), in the event any indebtedness under the Notes remains outstanding, the holders of shares of Series A Preferred Stock, Series B Preferred Stock and Series C Preferred Stock shall not have the right to require the Corporation to redeem any of such shares until ninety (90) days after the later of (x) the date on which such Notes shall be indefeasibly paid in full and (y) the applicable Redemption Date.

(b) TERMINATION OF RIGHTS. From and after the Series A and Series B Redemption Date or the Series C Redemption Date (each a "Redemption Date"), as the case may be, unless there shall have been a default in payment or tender by the Corporation of the Series A Redemption Price and the Series B Redemption Price or the Series C Redemption Price (each a "Redemption Price"), as the case may be, all rights of the holders with respect to such redeemed shares of the Series Preferred Stock (except the right to receive the applicable Redemption Price upon surrender of their certificate) shall cease and such shares shall not thereafter be transferred on the books of this Corporation or be deemed to be outstanding for any purpose whatsoever.

(c) INSUFFICIENT FUNDS. If the funds of the Corporation legally available for redemption of shares of the Series Preferred Stock on the applicable Redemption Date are insufficient to redeem the total number of shares of Series A Preferred Stock and Series B Preferred Stock or Series C Preferred Stock, as the case may be, on such Redemption Date, the Corporation will use its best efforts to engage in a recapitalization or the sale of its business or businesses to generate sufficient funds to redeem all of the shares of the Series A Preferred Stock and Series B Preferred Stock or the Series C Preferred Stock, as the case may be. The Corporation shall use those funds which are legally available to redeem the maximum possible number of such shares ratably among the holders of such shares to be redeemed. At any time thereafter when additional funds of the Corporation are legally available for the redemption of shares of the Series Preferred Stock, such funds will immediately be used to redeem the balance of the shares which the Corporation has become obligated to redeem on the applicable Redemption Date but which it has not redeemed at the applicable Redemption Price. If any shares of the Series Preferred Stock are not

redeemed for the foregoing reasons or because the Corporation otherwise failed to pay or tender to pay the aggregate applicable Redemption Price on all outstanding shares of Series Preferred Stock, all shares which have not been redeemed shall remain outstanding and entitled to all the rights and preferences provided herein, and the Corporation shall pay interest on the applicable Redemption Price for the unredeemed portion at an aggregate per annum rate equal to the greater of (i) twelve percent (12%) or (ii) the Base Rate or any similar lending rate announced from time to time by The First National Bank of Boston or any successor entity plus five percent (5%), increased, in each case, by one percent (1%) at the end of each calendar quarter thereafter. All provisions hereof are hereby expressly limited so that in no contingency or event whatsoever shall the amount paid or agreed to be paid to the holders of the Series Preferred Stock exceed the maximum amount which the holder is permitted to receive under applicable law. If fulfillment of any provision hereof shall involve exceeding such amount, then the obligation to be fulfilled shall automatically be reduced to the limit of such maximum amount. As used herein, the term "applicable law" shall mean the law in effect as of the date hereof, provided, however, that in the event that there is a change in the law which results in a higher permissible rate of interest, then these provisions shall be governed by such new law as of its effective date.

5.3.6 RESTRICTIONS AND LIMITATIONS. The Corporation shall not without the affirmative vote or written consent of the holders of a majority of the then outstanding shares of the Series Preferred Stock:

(i) Redeem, purchase or otherwise acquire for value (or pay into or set aside for a sinking fund for such purpose), any share or shares of Series Preferred Stock other than pursuant to Section 5.3.5 hereof;

(ii) Redeem, purchase or otherwise acquire for value (or pay into or set aside for a sinking fund for such purpose) any of the Common Stock of any class or any other capital stock of the Corporation other than the Series Preferred Stock or any of the Corporation's options, warrants or convertible or exchangeable securities, except that these provisions will not prohibit the Corporation from repurchasing or redeeming any shares of capital stock from individuals and entities who have entered into stockholder agreements, stock option agreements, employment agreements or other similar agreements with the Corporation in each case approved by a majority of the Series A Investor Directors, Series B Investor Director and Series C Investor Director under which the Corporation has the option to repurchase such shares upon the occurrence of certain events, including the termination of employment and involuntary transfers by operation of law (and their permitted transferees); provided, however, that any such agreement between such individual and the Corporation under which the Corporation has such options to repurchase, must be approved by the affirmative vote or written consent of the holders of a majority of the then outstanding Series Preferred Stock before such agreement is executed by the Corporation;

(iii) Authorize or issue, or obligate itself to issue, any other debt or equity security, other than as provided in that certain Investment and Stockholders Agreement, by and among the Corporation and the Investors named therein, dated as of October 31, 1997 (the "Investment Agreement");

(iv) Increase or decrease (other than by conversion as permitted hereby) the total number of authorized shares of Series Preferred Stock;

(v) Pay or declare any dividend or distribution on any of its capital stock;

(vi) Authorize any merger, consolidation of the Corporation with or into any other company or entity, or authorize the reorganization or sale of the Corporation or the sale of substantially all of the assets of the Corporation;

(vii) Amend the charter documents of the Corporation or amend the Bylaws of the Corporation in any manner that adversely affects the preferences, powers, rights or privileges of the holders of Series Preferred Stock;

(viii) Authorize any reclassification or recapitalization of the outstanding capital stock of the Corporation;

(ix) Approve the annual operating budget of the Corporation;

(x) Change the composition or compensation of management of the Corporation except as provided in the Investment Agreement; or

(xi) Incur, create, assume, become or be liable in any manner with respect to, or permit to exist any new or additional indebtedness or liability in excess of $50,000, except as provided in the Investment Agreement.

5.3.7 NO REISSUANCE OF SERIES PREFERRED STOCK. No share or shares of the Series Preferred Stock acquired by the Corporation by reason of redemption, purchase, conversion or otherwise shall be reissued, and all such shares shall be canceled, retired, and eliminated from the shares which the Corporation shall be authorized to issue. The Corporation may from time to time take such appropriate corporate action as may be necessary to reduce the authorized number of shares of the Series Preferred Stock accordingly.

5.3.8 NOTICES OF RECORD DATE. In the event (i) the Corporation establishes a record date to determine the holders of any class of securities who are entitled to receive any dividend or other distribution, or (ii) there occurs any capital

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redeemed for the foregoing reason or because the Corporation otherwise failed to pay or tender to pay the aggregate applicable Redemption Price of all outstanding shares of Series Preferred Stock, all shares which have not been redeemed shall remain outstanding and entitled to all the rights and preferences provided herein, and the Corporation shall pay interest on the applicable Redemption Price for the unredeemed portion at an aggregate per annum rate equal to the greater of (i) twelve percent (12%) or (ii) the Base Rate or any similar lending rate announced from time to time by The First National Bank of Boston or any successor entity plus five percent (5%), increased, in each case, by one percent (1%) at the end of each calendar quarter thereafter. All provisions hereof are hereby expressly limited so that in no contingency or event whatsoever shall the amount paid or agreed to be paid to the holders of the Series Preferred Stock exceed the maximum amount which the holder is permitted to receive under applicable law. If fulfillment of any provision hereof shall involve exceeding such amount, then the obligation to be fulfilled shall automatically be reduced to the limit of such maximum amount. As used herein, the term "applicable law" shall mean the law in effect as of the date hereof, provided, however, that in the event that there is a change in the law which results in a higher permissible rate of interest, then these provisions shall be governed by such new law as of its effective date.

5.3.6 RESTRICTIONS AND LIMITATIONS. The Corporation shall not without the affirmative vote or written consent of the holders of a majority of the then outstanding shares of the Series Preferred Stock:

(i) Redeem, purchase or otherwise acquire for value (or pay into or set aside for a sinking fund for such purpose), any share or shares of Series Preferred Stock other than pursuant to Section 5.3.5 hereof.

(ii) Redeem, purchase or otherwise acquire for value (or pay into or set aside for a sinking fund for such purpose) any of the Common Stock of any class or any other capital stock of the Corporation other than the Series Preferred Stock or any of the Corporation's options, warrants or convertible or exchangeable securities, except that these provisions will not prohibit the Corporation from repurchasing or redeeming any shares of capital stock from individuals and entities who have entered into stockholder agreements, stock option agreements, employment agreements or other similar agreements with the Corporation in each case approved by a majority of the Series A Investor Directors, Series B Investor Director and Series C Investor Director under which the Corporation has the option to repurchase such shares upon the occurrence of certain events, including the termination of employment and involuntary transfers by operation of law (and their permitted transferees); provided, however, that any such agreement between such individuals and the Corporation under which the Corporation has such options to repurchase must be approved by the affirmative vote or written consent of the holders of a majority of the then outstanding Series Preferred Stock before such agreement is executed by the Corporation;

(iii) Authorize or issue, or obligate itself to issue, any other debt or equity security, other than as provided in that certain Investment Stockholders' Agreement, by and among the Corporation and the Investors named therein, dated as of October 21, 1997 (the "Investm ("Agreement");

(iv) Increase or decrease (other than by conversion as permitted hereby) the total number authorized shares of Series Preferred Stock;

(v) Pay or declare any dividend or distribution on any of its capital stock;

(vi) Authorize any merger, consolidation of the Corporation with or into any other company o entity, or authorize the reorganization or sale of the Corporation or the sale of substantially all o the assets of the Corporation;

(vii) Amend the charter documents of the Corporation or amend the Bylaws of the Corporation in any manner that adversely affects the preferences, powers, rights or privileges of the holders of Series Preferred Stock.

(viii) Authorize any reclassification or recapitalization of the outstanding capital stock of the Corporation;

(ix) Approve the annual operating budget of the Corporation;

(x) Change the composition or compensation of management of the Corporation except as provided in the Investment Agreement; or

(xi) Incur, create, assume, become or be liable in any manner with respect to, or permit to exist, any new or additional indebtedness or liability in excess of $50,000, except as provided in the Investment Agreement.

5.3.7 NO REISSUANCE OF SERIES PREFERRED STOCK. No share or shares of the Series Preferred Stock acquired by the Corporation by reason of redemption, purchase, conversion or otherwise shall be reissued, and all such shares shall be canceled, retired, and eliminated from the shares which the Corporation shall be authorized to issue. The Corporation may from time to time take such appropriate corporate action as may be necessary to reduce the authorized number of shares of the Series Preferred Stock accordingly.

5.3.8 NOTICES OF RECORD DATE. In the event (i) the Corporation establishes a record date to determine the holders of any class of securities who are entitled to receive any dividend or other distribution, or (ii) there occurs any capital

END

OF

RETAKE

reorganization of the Corporation, any reclassification or recapitalization of the capital stock of the Corporation, any merger or consolidation of the Corporation, or any transfer of all or substantially all of the assets of the Corporation to any other company, or any other entity or person, or any voluntary or involuntary dissolution, liquidation or winding up of the Corporation; the Corporation shall mail to each holder of Series Preferred Stock at least 20 days prior to the record date specified therein, a notice specifying: (a) the date of such record date for the purpose of such dividend or distribution and a description of such dividend or distribution, (b) the date on which any such reorganization, reclassification, transfer, consolidation, merger, dissolution, liquidation or winding up is expected to become effective, and (c) the time, if any, that is to be fixed, as to when the holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable upon such reorganization, reclassification, transfer, consolidation, merger, dissolution, liquidation or winding up.

5.3.9 OTHER RIGHTS. Except as otherwise provided in this Amended and Restated Certificate of Incorporation shares of each series of the Series Preferred Stock and shares of Common Stock shall be identical in all respects (each share of Series Preferred Stock having equivalent rights to the number of shares of Common Stock into which it is then convertible), shall have the same powers, preferences and rights, without preference of any such class or share over any other such class or share, and shall be treated as a single class of stock for all purposes.

5.3.10 RANKING. Each series of Series Preferred Stock shall rank on a parity with the other series of Series Preferred Stock as to the distribution of assets on liquidation, dissolution and winding up of the Corporation. The Series Preferred Stock shall rank senior to the Common Stock as to the distribution of assets on liquidation, dissolution and winding up of the Corporation.

5.3.11 MISCELLANEOUS.

(a) All notices referred to herein shall be in writing, and all notices hereunder shall be deemed to have been given, upon the earlier of delivery thereof by hand delivery, by courier, or by standard form of telecommunication, addressed: (i) if to the Corporation, to its principal executive office (Attention: President) and to the transfer agent, if any, for the Series Preferred Stock or other agent of the Corporation designated as permitted hereby or (ii) if to any holder of the Series Preferred Stock or Common Stock, as the case may be, to such holder at the address of such holder as listed in the stock record books of the Corporation (which may include the records of any transfer agent for the Series Preferred Stock or Common Stock, as the case may be) or (iii) to such other address as the Corporation or any such holder, as the case may be, shall have designated by notice similarly given.

(b) The Corporation shall pay any and all stock transfer and documentary stamp taxes that may be payable in respect of any issuance or

delivery of shares of Series Preferred Stock or shares of Common Stock or other securities issued on account of Series Preferred Stock pursu
hereto or certificates representing such shares or securities. The Corporation shall not, however, be required to pay any such tax which may
payable in respect of any transfer involved in the issuance or delivery of shares of Series Preferred Stock or Common Stock or other securities i
name other than that in which the shares of Series Preferred Stock with respect to which such shares or other securities are issued or delivered w
registered, or in respect of any payment to any person with respect to any such shares or securities other than a payment to the registered hol
thereof, and shall not be required to make any such issuance, delivery or payment unless and until the person otherwise entitled to such issuanc
delivery or payment has paid to the Corporation the amount of any such tax or has established, to the satisfaction of the Corporation, that such tax h
been paid or is not payable. (c) The Corporation may appoint, and from time to time discharge and change, a transfer agent of the Series Preferr
Stock. Upon any such appointment or discharge of a transfer agent, the Corporation shall send notice thereof by hand delivery, by courier, b
standard form of telecommunication or by first class mail (postage prepaid), to each holder of record of the Series Preferred Stock. 5.3 Subject to t
provisions of this Amended and Restated Certificate of Incorporation and except as otherwise provided by law, the stock of the Corporation
regardless of class, may be issued for such consideration and for such corporate purposes as the Board of Directors may from time to time determine

6. COMPROMISE, ARRANGEMENT OR REORGANIZATION. Whenever a compromise or arrangement is proposed between thi
Corporation and its creditors or any class of them and/or between this Corporation and its stockholders or any class of them, any court of equitabl
jurisdiction within the State of Delaware may, on the application in a summary way of this Corporation or of any creditor or stockholder thereof or o
the application of any receiver or receivers appointed for this Corporation under the provisions of Section 291 of the General Corporation Law or o
the application of trustees in dissolution or of any receiver or receivers appointed for this Corporation under the provisions of Section 279 of Genera
Corporation Law order a meeting of the creditors or class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the
case may be, to be summoned in such manner as the said court directs. If a majority in number representing three-fourths in value of the creditors or
class of creditors, and/or of the stockholders or class of stockholders of this Corporation, as the case may be, agree to any compromise or
arrangement and to any reorganization of this Corporation as a consequence of such compromise or arrangement, the said compromise or
arrangement and the said reorganization shall, if sanctioned by the court to which the said application has been made, be binding on all the creditors
or class of creditors, and/or on all stockholders or class of stockholders of this Corporation, as the case may be, and also on this Corporation.

7.6 LIMITATION OF LIABILITY. No director of the Corporation shall be personally liable to the Corporation or its stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (a) for any breach of the director's duty of loyalty to the Corporation or its stockholders, (b) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (c) under Section 174 of the General Corporation Law, or (d) for any transaction from which the director derived any improper personal benefits. If the General Corporation Law is hereafter amended to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of a director of the Corporation shall be eliminated or limited to the fullest extent permitted by the General Corporation Law, as so amended.

Any repeal or modification of the foregoing paragraph by the stockholders of the Corporation shall not adversely affect any right or protection of a director of the Corporation existing at the time of such repeal or modification.

## 8.0 INDEMNIFICATION

8.1 INDEMNITY UNDERTAKING. To the extent not prohibited by law, the Corporation shall indemnify any person (an "Eligible Person") who is or was made, or threatened to be made, a party to any threatened, pending or completed action, suit or proceeding (a "Proceeding"), whether civil, criminal, administrative or investigative, including, without limitation, an action by or in the right of the Corporation to procure a judgment in its favor, by reason of the fact that such person, or a person of whom such person is the legal representative, is or was a Director or officer of the Corporation, or, while a Director or officer of the Corporation, is or was serving, at the request of the Corporation, as a director or officer of any other corporation or in a capacity with comparable authority or responsibilities for any partnership, joint venture, trust, employee benefit plan or other enterprise (an "Other Entity"), against judgments, fines, penalties, excise taxes, amounts paid in settlement and costs, charges and expenses (including attorneys' fees, disbursements and other charges).

8.2 PAYMENT OF EXPENSES. The Corporation shall, from time to time pay to an Eligible Person the funds necessary for payment of expenses, including attorneys' fees and disbursements, incurred by or on behalf of such Eligible Person in connection with any Proceeding, as such expenses are incurred in advance of the final disposition of such Proceeding; provided, however, that, if required by the General Corporation Law, such expenses incurred by or on behalf of such Eligible Person may be paid in advance of the final disposition of a Proceeding only upon receipt by the Corporation of an undertaking, by or on behalf of such Eligible Person, to repay any such amount so advanced if it shall ultimately be determined by final judicial decision from which there is no further right of appeal that such Eligible Person is not entitled to be indemnified for such expenses.

8.3 CERTAIN EXCLUSIONS. Section 8.1 and 8.2 shall not include any Proceeding commenced by any Eligible Person without the advance approval of the Board of Directors.

8.4 BINDING EFFECT. The provisions of this Section 8 shall be a contract between the Corporation, on the one hand, and each Eligible Person, on the other hand, pursuant to which the Corporation and each such Eligible Person intend to be, and shall be, legally bound. No repeal or modification of this Section 8 shall affect any rights or obligations with respect to any state of facts then or theretofore existing or any proceeding theretofore or thereafter brought or threatened based in whole or in part upon any such state of facts.

8.5 PROCEDURAL RIGHTS. The rights to indemnification and payment of expenses provided by, or granted pursuant to, this Section 8 shall be enforceable by an Eligible Person entitled to such indemnification or payment of expenses in any court of competent jurisdiction. The burden of proving that such indemnification or payment of expenses is not appropriate shall be on the Corporation. Neither the failure of the Corporation (including the disinterested Directors on its Board of Directors, a committee of such disinterested Directors, the Corporation's independent legal counsel and its stockholders) to have made a determination prior to the commencement of such action that such indemnification or payment of expenses is proper in the circumstances, nor an actual determination by the Corporation (including the disinterested Directors on its Board of Directors, a committee of such disinterested Directors, the Corporation's independent legal counsel and its stockholders) that such person is not entitled to such indemnification or payment of expenses shall constitute a defense to the action or create a presumption that such person is not so entitled. Notwithstanding anything to the contrary in Section 8.3, such Eligible Person shall also be indemnified for any expenses incurred in connection with successfully establishing his or her right to such indemnification or payment of expenses, in whole or in part, in any such proceeding.

8.6 SERVICE DEEMED AT CORPORATION'S REQUEST. Any Director or officer of the Corporation serving (a) as a director or officer of another corporation of which a majority of the shares entitled to vote in the election of its directors is held, directly or indirectly, by the Corporation or (b) any employee benefit plan of the Corporation or any corporation referred to in clause (a) shall be deemed to be doing so at the request of the Corporation.

8.7 ELECTION OF APPLICABLE LAW. Any person entitled to be indemnified or to payment of expenses as a matter of right pursuant to this Section 8 may elect to have the right to indemnification or payment of expenses interpreted on the basis of the applicable law in effect at the time of the occurrence of the event or events giving rise to the applicable Proceeding, to the extent permitted by law, or on the basis of the applicable law in effect at the time such indemnification or payment of expenses is sought. Such election shall be made, by a notice in writing to the

Corporation, at the time indemnification or payment of expenses is sought; provided, however, that if no such notice is given, the right to indemnification or payment of expenses shall be determined by the law in effect at the time indemnification or payment of expenses is sought.

§ 8 RIGHTS NOT EXCLUSIVE. The rights to indemnification and reimbursement or advancement of expenses provided by, or granted pursuant to, this Section 8 shall not be deemed exclusive of any other rights to which a person seeking indemnification or reimbursement or advancement of expenses may have or hereafter be entitled under any statute, this Restated Certificate of Incorporation, the By-laws, any agreement, any vote of stockholders or disinterested Directors or otherwise, both as to action in his or her official capacity and as to action in another capacity while holding such office.

§ 9 CONTINUATION OF BENEFITS. The rights to indemnification and reimbursement or advancement of expenses provided by, or granted pursuant to, this Section 8 shall continue as to a person who has ceased to be a Director or officer (or other person indemnified hereunder) and shall inure to the benefit of the executors, administrators, legatees and distributees of such person.

§ 10 INSURANCE. The Corporation shall have power to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the Corporation, or is or was serving at the request of the Corporation as a director, officer, employee or agent of an Other Entity, against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the Corporation would have the power to indemnify such person against such liability under the provisions of this Section 8 or under Section 145 of the General Corporation Law or any other provision of law.

§ 11 DIRECTORS. This Section is inserted for the management of the business and for the conduct of the affairs of the Corporation and it is expressly provided that it is intended to be in furtherance of and not in limitation or exclusion of the powers conferred by applicable law.

§ 12 NUMBER, ELECTION, AND TERMS OF OFFICE OF BOARD OF DIRECTORS. The business of the Corporation shall be managed by a Board of Directors consisting of not less than three or more than 15 members. The exact number of directors within the minimum and maximum limitations specified in the preceding sentence shall be fixed from time to time by resolution adopted by a majority of the entire Board of Directors then in office, whether or not present at a meeting. Directors need not be stockholders of the Corporation. The directors shall be divided into three classes of approximately equal size with the term of office of the first class to expire at the first annual meeting of stockholders of the Corporation next following the end of the Corporation's fiscal year ending December 31, 1998, the term of office of the

second class to expire at the first annual meeting of stockholders of the Corporation next following the end of the Corporation's fiscal year ending December 31, 1999 and the term of office of the third class to expire at the annual meeting of stockholders of the Corporation next following the end of the Corporation's fiscal year ending December 31, 2000. At each annual meeting of stockholders following such initial election as specified above, directors elected to succeed those directors whose terms expire shall be elected for a term of office to expire at the third succeeding annual meeting of stockholders after their election.

Notwithstanding the foregoing, whenever, pursuant to the provisions of Section 5.1 of this Amended and Restated Certificate of Incorporation, the holders of any one or more series of Preferred Stock shall have the right, voting separately as a series or together with holders of other such series, to elect Directors at an annual or special meeting of stockholders, the election, term of office, filling of vacancies, and other features of such directorships shall be governed by the terms of this Amended and Restated Certificate of Incorporation and any certificate of designations applicable thereto.

During any period when the holders of any series of Preferred Stock have the right to elect additional Directors as provided for or fixed pursuant to the provisions of this Amended and Restated Certificate of Incorporation or any certificate of designation related thereto, then upon commencement and for the duration of the period during which such right continues: (i) the then otherwise total authorized number of Directors of the Corporation shall automatically be increased by such specified number of Directors, and the holders of such Preferred Stock shall be entitled to elect the additional Directors so provided for or fixed pursuant to said provisions, and (ii) each such additional Director shall serve until such Director's successor shall have been duly elected and qualified, or until such Director's right to hold such office terminates pursuant to said provisions, whichever occurs earlier, subject to such Director's earlier death, disqualification, resignation or removal. Except as otherwise provided by the Board in the resolution or resolutions establishing such series, whenever the holders of any series of Preferred Stock having such right to elect additional Directors are divested of such right pursuant to the provisions of such stock, the terms of office of all such additional Directors elected by the holders of such stock, or elected to fill any vacancies resulting from the death, resignation, disqualification or removal of such additional Directors, shall forthwith terminate and the total and authorized number of Directors of the Corporation shall be reduced accordingly.

9.2 TENURE. Notwithstanding any provisions to the contrary contained herein, (i) each director shall hold office until his or her successor is elected and qualified, or until the earlier of such director's death, resignation or removal and (ii) the term of any director who is also an officer of the Corporation shall terminate if he or she ceases to be an officer of the Corporation.

9.3 NEWLY CREATED DIRECTORSHIPS AND VACANCIES. Subject to the rights of the holders of any series of Preferred Stock then outstanding, newly created directorships resulting from any increase in the authorized number of directors or any vacancies in the Board of Directors resulting from death, resignation, retirement, disqualification, removal from office or other cause shall be filled by a majority vote of the remaining directors then in office although less than a quorum, or by a sole remaining director and directors so chosen shall hold office for a term expiring at the annual meeting of stockholders at which the term of the class to which they have been elected expires or, in each case, until their respective successors are duly elected and qualified. No decrease in the number of directors constituting the Board of Directors shall shorten the term of any incumbent director. When any director shall give notice of resignation effective at a future date, the Board of Directors may fill such vacancy to take effect when such resignation shall become effective. In the event of a vacancy in the Board of Directors, the remaining Directors, except as otherwise provided by law, may exercise the powers of the full Board of Directors until the vacancy is filled.

9.4 REMOVAL OF DIRECTORS. Any one or more or all of the directors may be removed, at any time, but only for cause by the stockholders having at least a majority in voting power of the then issued and outstanding shares of capital stock of the Corporation.

10) ACTION BY STOCKHOLDERS. Notwithstanding the provisions of Section 228 of the General Corporation Law (or any successor statute), any action required or permitted by the General Corporation Law to be taken at any annual or special meeting of stockholders of the Corporation may be taken only at such an annual or special meeting of stockholders and cannot be taken by written consent without a meeting. At any annual meeting or special meeting of stockholders of the Corporation, only such business shall be conducted as shall have been brought before such meeting in the manner provided by the By-laws.

(d) ADOPTION, AMENDMENT AND/OR REPEAL OF BYLAWS. The Board of Directors may from time to time adopt, amend or repeal Bylaws; provided, however, that any Bylaws adopted or amended by the Board of Directors may be amended or repealed, and any Bylaws made adopted, by a vote of the stockholders having at least two-thirds of the voting power of the then issued and outstanding shares of capital stock of Corporation.

IN WITNESS WHEREOF, the undersigned has executed this Restated Certification of Incorporation this _____ day of August, 1998.

PATINET, INC.

By:
Richard A. Jalkut President and Chief Executive Officer

Attest:

By:
Michael A. Lubin
Vice President, General Counsel and Secretary

Exhibit 3.2

# AMENDED AND RESTATED BYLAWS
# OF
# PATHNET, INC.

A Delaware Corporation

## ARTICLE I

## DEFINITIONS

As used in these Bylaws, unless the context otherwise requires, the term:

1.1 "Assistant Secretary" means an Assistant Secretary of the Corporation.

1.2 "Assistant Treasurer" means an Assistant Treasurer of the Corporation.

1.3 "Board" means the Board of Directors of the Corporation.

1.4 "Business Day" means any day which is not a Saturday, a Sunday, or a day on which banks are authorized to close in the City of New York.

1.5 "Bylaws" means the bylaws of the Corporation, as amended from time to time.

1.6 "Certificate of Incorporation" means the certificate of incorporation of the Corporation, as amended, supplemented or restated from time to time.

1.7 "Chairman" means the Chairman of the Board of the Corporation.

1.8 "Chief Executive Officer" means the Chief Executive Officer of the Corporation.

1.9 "Corporation" means Pathnet, Inc.

1.10 "Directors" means directors of the Corporation.

1.11 "Entire Board" means all Directors of the Corporation in office, whether or not present at a meeting of the Board, but disregarding vacancies.

1.12 "Executive Vice President" means an Executive Vice President of the Corporation.

1.13 "General Corporation Law" means the General Corporation Law of the State of Delaware, as amended from time to time.

1.14 "Office of the Corporation" means the executive office of the Corporation, anything in Section 131 of the General Corporation Law to the contrary notwithstanding.

1.15 "President" means the President of the Corporation.

1.16 "Secretary" means the Secretary of the Corporation.

1.17 "Stockholders" means stockholders of the Corporation.

1.18 "Treasurer" means the Treasurer of the Corporation.

1.19 "Vice President" means a Vice President of the Corporation.

## ARTICLE 2

## STOCKHOLDERS

2.1 PLACE OF MEETINGS. Every meeting of Stockholders shall be held at the Office of the Corporation or at such other place within or without the State of Delaware as shall be designated, from time to time, by the Board, the Chairman or the President, and specified or fixed in the notice of such meeting or in the waiver of notice thereof.

2.2 ANNUAL MEETING. A meeting of Stockholders shall be held annually for the election of Directors and the transaction of other business at such hour and on such business day in each year as may be determined by resolution adopted by affirmative vote of a majority vote of the Entire Board and designated in the notice of meeting.

2.3 DEFERRED MEETING FOR ELECTION OF DIRECTORS, ETC. If the annual meeting of Stockholders for the election of Directors and the transaction of other business is not held on the date designated therefor or at any adjournment of a meeting convened on such date, the Board shall call a meeting of Stockholders for the election of Directors and the transaction of other business as soon thereafter as convenient.

2.4 SPECIAL MEETINGS. A special meeting of Stockholders, unless otherwise prescribed by statute, may be called at any time by the Board, the Chairman or by the President. At any special meeting of Stockholders, no business may be transacted other than (i) such business stated in the notice thereof given pursuant to Section 2.6 hereof or in any waiver of notice thereof given pursuant to Section 2.7 hereof (in a form prepared by the Secretary) or (ii) such business as is related to the purpose or purposes of such meeting and which is properly brought before the meeting by or at the direction of the Board.

2.5 FIXING RECORD DATE. For the purpose of (a) determining the Stockholders entitled (i) to notice of or to vote at any meeting of Stockholders or any adjournment thereof or (ii) to receive payment of any dividend or other distribution or allotment of any rights, or to exercise any rights in respect of any change, conversion or exchange of stock, or (b) any other lawful action, the Board may fix a record date, which record date shall not precede the date upon which the resolution fixing the record date was adopted by the Board and which record date shall not be (x) in the case of clause (a)(i) above, more than sixty nor less than ten days before the date of such meeting and (y) in the case of clause (a)(ii) or (b) above, more than sixty days prior to such action. If no such record date is fixed:

2.5.1 the record date for determining Stockholders entitled to notice of or to vote at a meeting of Stockholders shall be at the close of business on the day next preceding the day on which notice is given, or, if notice is waived, at the close of business on the day next preceding the day on which the meeting is held; and

2.5.2 the record date for determining Stockholders entitled to express consent to corporate action in writing without a meeting (unless otherwise provided in the Certificate of Incorporation), when no prior action by the Board is required under the General Corporation Law, shall be the first day on which a signed written consent setting forth the action taken or proposed to be taken is delivered to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of Stockholders are recorded; and when prior action by the Board is required under the General Corporation Law, the record date for determining Stockholders entitled to consent to corporate action in writing without a meeting shall be at the close of business on the date on which the Board adopts the resolution taking such prior action; and

2.5.3 the record date for determining Stockholders for any purpose other than those specified in Section 2.5.1 and 2.5.2 hereof shall be at the close of business on the day on which the Board adopts the resolution relating thereto.

When a determination of Stockholders entitled to notice of or to vote at any meeting of Stockholders has been made as provided in this Section 2.5, such determination shall apply to any adjournment thereof unless the Board fixes a new record date for the adjourned meeting.

Delivery made to the Corporation's registered office in accordance with Section 2.5.2 shall be by hand or by certified or registered mail, return receipt requested.

2.6 NOTICE OF MEETINGS OF STOCKHOLDERS. Except as otherwise provided in Section 2.7 hereof, whenever under the provisions of any statute, the Certificate of Incorporation or these Bylaws, Stockholders are required or permitted to take any action at a meeting, written notice shall be given stating the place, date and hour of the meeting and, in the case of a special meeting, the purpose or purposes for which the meeting is called. Unless otherwise provided by any statute, the Certificate of Incorporation or these By-laws, a copy of the notice of any meeting shall be given personally or by mail, not less than ten nor more than sixty days before the date of the meeting, to each Stockholder entitled to notice of or to vote at such meeting. If mailed, such notice shall be deemed to be given when deposited in the United States mail, with postage prepaid, directed to the Stockholder at his or her address as it appears on the records of the Corporation. An affidavit of the Secretary or an Assistant Secretary or of the transfer agent of the Corporation that the notice required by this Section 2.6 has been given shall, in the absence of fraud, be prima facie evidence of the facts stated therein. When a meeting is adjourned to another time or place, notice need not be given of the adjourned meeting if the time and place thereof are announced at the meeting at which the adjournment is taken, and at the adjourned meeting any business may be transacted that might have been transacted at the meeting as originally called. If, however, the adjournment is for more than thirty days, or if after the adjournment a new record date is fixed for the adjourned meeting, a notice of the adjourned meeting shall be given to each Stockholder of record entitled to vote at the meeting.

2.7 WAIVERS OF NOTICE. Whenever the giving of any notice is required by statute, the Certificate of Incorporation or these Bylaws, a waiver thereof in writing, signed by the Stockholder or Stockholders entitled to said notice, whether before or after the event as to which such notice is required, shall be deemed equivalent to notice. Attendance by a Stockholder at a meeting shall constitute a waiver of notice of such meeting except when the Stockholder attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business on the ground that the meeting has not been lawfully called or convened.

2.8 LIST OF STOCKHOLDERS. The Secretary shall prepare and make, or cause to be prepared and made, at least ten days before every meeting of Stockholders, a complete list of the Stockholders entitled to vote at the meeting, arranged in alphabetical

order, one showing the address of each Stockholder and the number of shares registered in the name of each Stockholder. If any voting group exists, such list shall be arranged by voting group and within each voting group by series or class of shares. Such list shall be open to the examination of any Stockholder, the Stockholder's agent or attorney, at the Stockholder's expense, for any purpose germane to the meeting, during ordinary business hours, for a period of at least ten days prior to the meeting, either at a place within the city where the meeting is to be held, which place shall be specified in the notice of the meeting, or, if not so specified, at the place where the meeting is to be held. The list shall also be produced and kept at the time and place of the meeting during the whole time thereof, and may be inspected by any Stockholder who is present. The Corporation shall maintain the list of Stockholders in written form or in another form capable of conversion into written form within a reasonable time. Upon the willful neglect or refusal of the Directors to produce such a list at any meeting for the election of Directors, they shall be ineligible for election to any office at such meeting. The stock ledger shall be the only evidence as to who are the Stockholders entitled to examine the stock ledger, the list of Stockholders or the books of the Corporation, or to vote in person or by proxy at any meeting of Stockholders.

2.9 QUORUM OF STOCKHOLDERS; ADJOURNMENT. Except as otherwise provided by any statute, the Certificate of Incorporation or these Bylaws, the holders of a majority of all outstanding shares of stock entitled to vote at any meeting of Stockholders, present in person or represented by proxy, shall constitute a quorum for the transaction of any business at such meeting. When a quorum is once present to organize a meeting of Stockholders, it is not broken by the subsequent withdrawal of any Stockholders. The holders of a majority of the shares of stock present in person or represented by proxy at any meeting of Stockholders, including an adjourned meeting, whether or not a quorum is present, may adjourn such meeting to another time and place. Shares of its own stock belonging to the Corporation or to another corporation, if a majority of the shares entitled to vote in the election of Directors of such other corporation is held, directly or indirectly, by the Corporation, shall neither be entitled to vote nor be counted for quorum purposes; provided, however, that the foregoing shall not limit the right of the Corporation to vote stock, including but not limited to its own stock, held by it in a fiduciary capacity.

2.10 VOTING; PROXIES. Unless otherwise provided in the Certificate of Incorporation, every Stockholder of record shall be entitled at every meeting of Stockholders to one vote for each share of capital stock standing in his or her name on the record of Stockholders determined in accordance with Section 2.5 hereof. If the Certificate of Incorporation provides for more or less than one vote for any share on any matter, each reference in the Bylaws or the General Corporation Law to a majority or other proportion of stock shall refer to such majority or other proportion of the votes of such stock. The provisions of Sections 212 and 217 of the General Corporation Law shall apply in determining whether any shares of capital stock may be voted and the persons, if any, entitled to vote such shares, but the Corporation shall be protected in

assuming that the persons in whose names shares of capital stock stand on the stock ledger of the Corporation are entitled to vote such shares, holders of redeemable shares of stock are not entitled to vote after the notice of redemption is mailed to such holders and a sum sufficient to redeem the stocks has been deposited with a bank, trust company, or other financial institution under an irrevocable obligation to pay the holders the redemption price on surrender of the shares of stock. At any meeting of Stockholders at which a quorum was present to organize the meeting, all matters, except as otherwise provided by statute or by the Certificate of Incorporation or by these Bylaws, shall be decided by a majority of the votes cast at such meeting by the holders of shares present in person or represented by proxy and entitled to vote thereon, whether or not a quorum is present when the vote is taken. Where a separate vote by a class or classes of stock is required by statute, the Certificate of Incorporation or these Bylaws, a majority of the outstanding shares of such class or classes present in person or represented by proxy shall constitute a quorum entitled to take action with respect to that vote on that matter, and such matter shall be decided by a majority of the votes of such class or classes present in person or represented by proxy at the meeting. Directors may be elected either by written ballot or by voice vote. In voting on any other question on which a vote by ballot is required by law or is demanded by any Stockholder entitled to vote, the voting shall be by ballot. Each ballot shall be signed by the Stockholder voting or the Stockholder's proxy and shall state the number of shares voted. On all other questions, the voting may be by voice vote. Each Stockholder entitled to vote at a meeting of Stockholders may authorize another person or persons to act for such Stockholder by proxy. The validity and enforceability of any proxy shall be determined in accordance with Section 212 of the General Corporation Law. A Stockholder may revoke any proxy that is not irrevocable by attending the meeting and voting in person or by filing an instrument in writing revoking the proxy or by delivering a proxy in accordance with applicable law bearing a later date to the Secretary.

2.11 VOTING PROCEDURES AND INSPECTORS OF ELECTION AT MEETINGS OF STOCKHOLDERS. The Corporation, in advance of any meeting of Stockholders, shall appoint one or more inspectors to act at the meeting and make a written report thereof. The Corporation may designate one or more persons as alternate inspectors to replace any inspector who fails to act. If no inspector or alternate is able to act at a meeting, the person presiding at the meeting shall appoint one or more inspectors to act at the meeting. Each inspector, before entering upon the discharge of his or her duties, shall take and sign an oath faithfully to execute the duties of inspector with strict impartiality and according to the best of his or her ability. The inspectors shall (a) ascertain the number of shares outstanding and the voting power of each, (b) determine the shares represented at the meeting and the validity of proxies and ballots, (c) count all votes and ballots, (d) determine and retain for a reasonable period a record of the disposition of any challenges made to any determination by the inspectors, and (e) certify their determination of the number of shares represented at the meeting and their count of all votes and ballots. The inspectors may appoint or retain other persons or entities to assist the inspectors in the performance of their duties. The date and time of the opening and

the closing of the polls for each matter upon which the Stockholders will vote at a meeting shall be determined by the person presiding at the meeting and shall be announced at the meeting. No ballot, proxies or votes, or any revocation thereof or change thereto, shall be accepted by the inspector after the closing of the polls unless the Court of Chancery of the State of Delaware upon application by a Stockholder shall determine otherwise.

2.12 CONDUCT OF MEETINGS. (a) At each meeting of Stockholders, the President, or in the absence of the President, the Chairman, or if there is no Chairman or if there be one and the Chairman is absent, an Executive Vice President, and in case more than one Executive Vice President shall be present, that Executive Vice President designated by the Board (or in the absence of any such designation, in the order of their first election, present), or if there is no Executive Vice President or if there be one and the Executive Vice President is absent, a Vice President, and in case more than one Vice President shall be present, that Vice President designated by the Board (or in the absence of any such designation, in the order of their first election, present), shall act as chairman of the meeting. The Secretary, or in his or her absence one of the Assistant Secretaries, shall act as secretary of the meeting. In case none of the officers above designated to act as chairman or secretary of the meeting, respectively, shall be present, a chairman or a secretary of the meeting, as the case may be, shall be chosen by a majority of the votes cast at such meeting by the holders of shares of capital stock present in person or represented by proxy and entitled to vote at the meeting.

2.13 ORDER OF BUSINESS. The order of business at all meetings of Stockholders shall be as determined by the chairman of the meeting, but the order of business to be followed at any meeting at which a quorum is present may be changed by a majority of the votes cast at such meeting by the holders of shares of capital stock present in person or represented by proxy and entitled to vote at the meeting.

2.14 WRITTEN CONSENT OF STOCKHOLDERS WITHOUT A MEETING. Unless otherwise provided in the Certificate of Incorporation, any action required or permitted by the General Corporation Law to be taken at any annual or special meeting of Stockholders may be taken without a meeting, without prior notice and without a vote, if a consent or consents in writing, setting forth the action so taken, shall be signed by the holders of outstanding stock having not less than the minimum number of votes that would be necessary to authorize or take such action at a meeting at which all shares entitled to vote thereon were present and voted and shall be delivered (by hand or by certified or registered mail, return receipt requested) to the Corporation by delivery to its registered office in the State of Delaware, its principal place of business, or an officer or agent of the Corporation having custody of the book in which proceedings of meetings of stockholders are recorded. Every written consent shall bear the date of signature of each stockholder who signs the consent and no written consent shall be effective to take the corporate action referred to therein unless, within 60 days of the earliest dated consent delivered in the manner required by this Section 2.14, written consents signed by a

sufficient number of Stockholders to take action are delivered to the Corporation as aforesaid. Prompt notice of the taking of the corporate action without a meeting by less than unanimous written consent shall be given to those Stockholders who have not consented in writing and who, if the action had been taken at a meeting, would have been entitled to notice of the meeting if the record date for such meeting had been the date that written consents signed by a sufficient number of Stockholders to take the action were delivered to the Corporation as aforesaid.

## ARTICLE 3

## DIRECTORS

3.1 GENERAL POWERS. Except as otherwise provided in the Certificate of Incorporation, the business and affairs of the Corporation shall be managed by or under the direction of the Board. The Board may adopt such rules and regulations, not inconsistent with the Certificate of Incorporation or these Bylaws or applicable laws, as it may deem proper for the conduct of its meetings and the management of the Corporation. In addition to the powers expressly conferred by these Bylaws, the Board may exercise all powers and perform all acts that are not required, by these Bylaws or the Certificate of Incorporation or by statute, to be exercised and performed by the Stockholders.

3.2 NUMBER; QUALIFICATION; TERM OF OFFICE. The Board shall consist of not less than three or more than 15 members. The exact number of Directors within the minimum and maximum limitations specified in the preceding sentence shall be fixed from time to time by resolution adopted by a majority of the Entire Board then in office, whether or not present at a meeting. Directors need not be Stockholders. The Directors shall be divided into three classes with the term of office of the first class to expire at the first annual meeting of Stockholders of the Corporation next following the end of the Corporation's fiscal year ending December 31, 1998, the term of office of the second class to expire at the first annual meeting of Stockholders of the Corporation next following the end of the Corporation's fiscal year ending December 31, 1999 and the term of office of the third class to expire at the annual meeting of Stockholders of the Corporation next following the end of the Corporation's fiscal year ending December 31, 2000. At each annual meeting of Stockholders following such initial election as specified above, Directors elected to succeed those Directors whose terms expire shall be elected for a term of office to expire at the third succeeding annual meeting of Stockholders after their election.

3.3 TENURE. Notwithstanding any provisions to the contrary contained herein, (i) each Director shall hold office until his or her successor is elected and qualified, or until the earlier of such Director's death, resignation or removal and (ii) the

term of any director who is also an officer of the Corporation shall terminate if he or she ceases to be an officer of the Corporation.

3.4 ELECTION. Directors shall, except as otherwise required by statute or by the Certificate of Incorporation, be elected by a plurality of the votes cast at a meeting of Stockholders by the holders of shares present in person or represented by proxy at the meeting and entitled to vote in the election.

3.5 NEWLY CREATED DIRECTORSHIPS AND VACANCIES. Subject to the rights of the holders of any series of preferred stock of the Corporation then outstanding, newly created directorships resulting from any increase in the authorized number of Directors or any vacancies in the Board resulting from death, resignation, retirement, disqualification, removal from office or other cause shall be filled by a majority vote of the remaining Directors then in office although less than a quorum, or by a sole remaining Director and Directors so chosen shall hold office for a term expiring at the annual meeting of stockholders at which the term of the class to which they have been elected expires or, in each case, until their respective successors are duly elected and qualified. No decrease in the number of Directors constituting the Board shall shorten the term of any incumbent Director. When any Director shall give notice of resignation effective at a future date, the Board may fill such vacancy to take effect when such resignation shall become effective.

3.6 RESIGNATION. Any Director may resign at any time by written notice to the Corporation. Such resignation shall take effect at the time therein specified, and, unless otherwise specified in such resignation, the acceptance of such resignation shall not be necessary to make it effective.

3.7 REMOVAL. Any one or more or all of the Directors may be removed, at any time, but only for cause by the Stockholders having at least a majority in voting power of the then issued and outstanding shares of capital stock of the Corporation. If pursuant to the Certificate of Incorporation a Director is elected by a voting group of Stockholders, only the Stockholders of the voting group may participate in the vote to remove such Director.

3.8 COMPENSATION. Each Director, in consideration of his or her service as such, may receive from the Corporation such amount per annum or such fees for attendance at Directors' meetings, or both, as the Board may from time to time determine, together with reimbursement for the reasonable out-of-pocket expenses, if any, incurred by such Director in connection with the performance of his or her duties. Each Director who shall serve as a member of any committee of Directors in consideration of serving as such may receive such additional amount per annum or such fees for attendance at committee meetings, or both, as the Board may from time to time determine, together with reimbursement for the reasonable out-of-pocket expenses, if any, incurred by such Director in the performance of his or her duties. Nothing

contained in this Section 3.8 shall preclude any Director from serving the Corporation or its subsidiaries in any other capacity and receiving proper compensation therefor.

3.9 TIMES AND PLACES OF MEETINGS. The Board may hold meetings, both regular and special, either within or without the State of Delaware. The times and places for holding meetings of the Board may be fixed from time to time by resolution of the Board or (unless contrary to a resolution of the Board) in the notice of the meeting.

3.10 ANNUAL MEETINGS. On the day when and at the place where the annual meeting of Stockholders for the election of Directors is held, and as soon as practicable thereafter, the Board may hold its annual meeting, without notice of such meeting, provided a quorum shall be present, for the purposes of organization, the election of officers and the transaction of other business. The annual meeting of the Board may be held at any other time and place specified in a notice given as provided in Section 3.12 hereof for special meetings of the Board or in a waiver of notice thereof.

3.11 REGULAR MEETINGS. Regular meetings of the Board may be held without notice at such times and at such places as shall from time to time be determined by the Board.

3.12 SPECIAL MEETINGS. Special meetings of the Board may be called by the President or any Director then serving on at least one day's notice to each Director given by one of the means specified in Section 3.15 hereof other than by mail, or on at least three days' notice if given by mail.

3.13 TELEPHONE MEETINGS. Directors or members of any committee designated by the Board may participate in a meeting of the Board or of such committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this Section 3.13 shall constitute presence in person at such meeting.

3.14 ADJOURNED MEETINGS. A majority of the Directors present at any meeting of the Board, including an adjourned meeting, whether or not a quorum is present, may adjourn such meeting to another time and place. At least one day's notice of any adjourned meeting of the Board shall be given to each Director whether or not present at the time of the adjournment, if such notice shall be given by one of the means specified in Section 3.15 hereof other than by mail, or at least three days' notice if by mail. Any business may be transacted at an adjourned meeting that might have been transacted at the meeting as originally called.

3.15 NOTICE PROCEDURE. Subject to Sections 3.13 and 3.16 hereof, whenever, under the provisions of any statute, the Certificate of Incorporation or these Bylaws, notice is required to be given to any Director, such notice shall be deemed given effectively if given in person or by telephone, by mail addressed to such Director at such

Director's address as it appears on the records of the Corporation, with postage thereon prepaid, or by telegram, telex, telecopy or similar mea addressed as aforesaid.

3.16 WAIVER OF NOTICE. Whenever the giving of any notice is required by statute, the Certificate of Incorporation or these Bylaws, a waiv thereof, in writing, signed by the person or persons entitled to said notice, whether before or after the event as to which such notice is required, shal be deemed equivalent to notice. Attendance by a person at a meeting shall constitute a waiver of notice of such meeting except when the perso attends a meeting for the express purpose of objecting, at the beginning of the meeting, to the transaction of any business on the ground that the meeting has not been lawfully called or convened. Neither the business to be transacted at, nor the purpose of, any regular or special meeting of the Directors or a committee of Directors need be specified in any written waiver of notice unless so required by statute, the Certificate of Incorporation or these Bylaws.

3.17 ORGANIZATION. At each meeting of the Board, the Chairman, or in the absence of the Chairman, the President, or in the absence of the President, a chairman chosen by a majority of the Directors present, shall preside. The Secretary shall act as secretary at each meeting of the Board. In case the Secretary shall be absent from any meeting of the Board, an Assistant Secretary shall perform the duties of secretary at such meeting, and in the absence from any such meeting of the Secretary and all Assistant Secretaries, the person presiding at the meeting may appoint any person to act as secretary of the meeting.

3.18 QUORUM OF DIRECTORS. Except as otherwise expressly provided by statute or the Certificate of Incorporation, the presence in person of a majority of the Entire Board shall be necessary and sufficient to constitute a quorum for the transaction of business at any meeting of the Board, but a majority of a smaller number may adjourn any such meeting to a later date.

3.19 ACTION BY MAJORITY VOTE. Except as otherwise expressly required by statute, the Certificate of Incorporation or these Bylaws, the act of a majority of the Directors present at a meeting at which a quorum is present shall be the act of the Board.

3.20 ACTION WITHOUT MEETING. Unless otherwise restricted by the Certificate of Incorporation or these By-laws, any action required or permitted to be taken at any meeting of the Board or of any committee thereof may be taken without a meeting if all Directors or members of such committee, as the case may be, consent thereto in writing, and the writing or writings are filed with the minutes of proceedings of the Board or committee.

## ARTICLE 4

## COMMITTEES OF THE BOARD

The Board, by resolution adopted by a majority of the Entire Board, may designate one or more committees, each committee to consist of one or more of the Directors of the Corporation. The Board may designate one or more Directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of such committee. If a member of a committee shall be absent from any meeting, or disqualified from voting thereat, the remaining member or members present and not disqualified from voting, whether or not such member or members constitute a quorum, may, by a unanimous vote, appoint another member of the Board to act at the meeting in the place of any such absent or disqualified member. Any such committee, to the extent provided in the resolution of the Board or these Bylaws, shall have and may exercise all the powers and authority of the Board in the management of the business and affairs of the Corporation, and may authorize the seal of the Corporation to be affixed to all papers that may require it; but no such committee shall have the power or authority of the Board in reference to (i) approving, or recommending to the Stockholders, any action that the Delaware General Corporation Law requires to be approved by the Stockholders, (ii) filling vacancies on the Board or on any of its committees, (iii) amending the Certificate of Incorporation, (iv) adopting, amending, or repealing these Bylaws, (v) approving a plan of merger not requiring approval of the Stockholders, (vi) authorizing or approving a distribution, except according to a general formula or method prescribed by the Board, or (vii) authorizing or approving the issuance or sale or contract for sale of shares, or determine the designation and relative rights, preferences, and limitations of a class or series of shares, except that the Board may authorize a committee, or a senior executive officer of the Corporation, to do so within limits specifically prescribed by the Board. Unless otherwise specified in the resolution of the Board designating a committee, at all meetings of such committee a majority of the total number of members of the committee shall constitute a quorum for the transaction of business, and the vote of a majority of the members of the committee present at any meeting at which there is a quorum shall be the act of the committee. Each committee shall keep regular minutes of its meetings and report the same to the Board when required. Unless the Board otherwise provides, each committee designated by the Board may make, alter and repeal rules for the conduct of its business. In the absence of such rules each committee shall conduct its business in the same manner as the Board conducts its business pursuant to Article 3 of these Bylaws.

## ARTICLE 5

## OFFICERS

5.1. POSITIONS. The officers of the Corporation shall be a President, a Secretary, a Treasurer and such other officers as the Board may appoint, including a Chairman, a Chief Executive Officer, one or more Executive Vice Presidents, one or more Vice Presidents and one or

more Assistant Secretaries and Assistant Treasurers, who shall exercise such powers and perform such duties as shall be determined from time to time by the Board. The Board may use descriptive words or phrases to designate the standing, seniority or areas of special competence of the Vice Presidents elected or appointed by it. Any number of offices may be held by the same person unless the Certificate of Incorporation or these By-laws otherwise provide.

5.2 APPOINTMENT. The officers of the Corporation shall be chosen by the Board at its annual meeting or at such other time or times as the Board shall determine.

5.3 COMPENSATION. The compensation of all officers of the Corporation shall be fixed by, or in the manner prescribed by, the Board. No officer shall be prevented from receiving a salary or other compensation by reason of the fact that the officer is also a Director.

5.4 TERM OF OFFICE. Each officer of the Corporation shall hold office for the term for which he or she is elected and until such officer's successor is chosen and qualifies or until such officer's earlier death, resignation or removal. Any officer may resign at any time upon written notice to the Corporation. Such resignation shall take effect at the date of receipt of such notice or at such later time as is therein specified; and, unless otherwise specified, the acceptance of such resignation shall not be necessary to make it effective. The resignation of an officer shall be without prejudice to the contract rights of the Corporation, if any. Any officer elected or appointed by the Board may be removed at any time, with or without cause, by vote of a majority of the Entire Board. Any vacancy occurring in any office of the Corporation shall be filled by the Board. The removal of an officer without cause shall be without prejudice to the officer's contract rights, if any. The election or appointment of an officer shall not of itself create contract rights.

5.5 FIDELITY BONDS. The Corporation may secure the fidelity of any or all of its officers or agents by bond or otherwise.

5.6 CHAIRMAN. The Chairman shall exercise such duties as are and may be prescribed from time to time by the Board. In the absence of or disability of the Chairman, an officer appointed by the Chairman, or if the Chairman fails to make such appointment, by the Board, shall perform the duties and exercise the powers of the Chairman. The Chairman may sign, execute and deliver, in the name of the Corporation, powers of attorney, contracts, bonds and other obligations which implement policies established by the Board. The Chairman shall preside at all meetings the Board at which he is present, and shall perform such other duties as may be prescribed from time to time by the Board or these Bylaws.

5.7 CHIEF EXECUTIVE OFFICER. The Chief Executive Officer shall exercise such duties as are and may be prescribed from time to time by th Board. The Chief Executive Officer may sign, execute and deliver, in the name of the Corporation, powers of attorney, contracts bonds and othe obligations which implement policies established by the Board.

5.8 PRESIDENT. The President shall be responsible to, and shall exercise such duties as are and may be prescribed from time to time by, the Board. The President may sign, execute and deliver, in the name of the Corporation, powers of attorney, contracts, bonds and other obligations which implement policies established by the Board.

5.9 EXECUTIVE VICE PRESIDENT. In the absence of the President or in the event of his death, inability or refusal to act, the Executive Vice President, if any, or in the event there be more than one Executive Vice President, the Executive Vice Presidents, in the order designated, or in the absence of any designation, then in the order of their first election, shall perform the duties of the President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the President. The Executive Vice President shall generally assist the President and shall perform such other duties and have such other powers as the Board may from time to time prescribe.

5.10 VICE PRESIDENT. In the absence of the Executive Vice President or in the event of his death, inability or refusal to act, the Vice President, if any, or in the event there be more than one Vice President, the Vice Presidents, in the order designated, or in the absence of any designation, then in the order of their first election, shall perform the duties of the Executive Vice President, and when so acting, shall have all the powers of and be subject to all the restrictions upon the Executive Vice President. The Vice President shall generally assist the President and shall perform such other duties and have such other powers as the Board may from time to time prescribe.

5.11 SECRETARY. The Secretary shall attend all meetings of the Board and all meetings of the stockholders and shall record all the proceedings of the meetings of the stockholders and of the Board in a book to be kept for that purpose and shall perform like duties for the standing committees when requested by such committees. The Secretary shall give, or cause to be given, required notice of all meetings of the stockholders and the Board, and shall perform such other duties as may be prescribed by the Board or assigned by the President or Chairman. The Secretary shall have custody of the stock certificate books and stockholder records and such other books and records as the Board may direct. The Secretary shall have custody of the corporate seal of the Corporation and shall have authority to affix the same to any instrument, and when so affixed, it may be attested by the Secretary's signature. The Board may give general authority to any other officer to affix the seal of the Corporation and to attest the affixing thereof by his signature.

5.5 ASSISTANT SECRETARY. Any Assistant Secretary elected by the Board shall have the same duties as prescribed for the Secretary, and shall perform such duties at the direction of the Secretary, to assist the Secretary, and in the absence of the Secretary, at the direction of the Chairman, the President and any Vice President, and otherwise as directed from time to time by the Chairman, the President or the Board.

5.6 TREASURER OR CHIEF FINANCIAL OFFICER. The Treasurer or Chief Financial Officer shall have the custody of the corporate funds and securities, and shall keep full and accurate accounts of receipts and disbursements in books belonging to the Corporation, and shall deposit all moneys and other valuable effects in the name and to the credit of the Corporation in such depositories as may be designated by the Board, and shall disburse the funds of the Corporation, as may be ordered by the Board, taking proper vouchers for such disbursements, and shall render to the Chairman, the President and the Board at its regular meetings, or when the Board so requires, an account of all his transactions as treasurer and of the financial condition of the Corporation, and shall perform such other duties and have such other powers as the Board, the Chairman or the President may from time to time prescribe.

5.7 ASSISTANT TREASURER. Any Assistant Treasurer elected by the Board shall have the same duties as prescribed for the Treasurer and shall perform such duties at the direction of the Treasurer, to assist the Treasurer, and in the absence of the Treasurer, at the direction of the Chairman, the President, any Vice President, and otherwise as directed from time to time by the Chairman, the President or the Board.

## ARTICLE 6

## CONTRACTS, CHECKS, DRAFTS, BANK ACCOUNTS, ETC.

6.1 EXECUTION OF CONTRACTS. The Board, except as otherwise provided in these Bylaws, may prospectively or retroactively authorize any officer or officers, employee or employees or agent or agents, in the name and on behalf of the Corporation, to enter into any contract or execute and deliver any instrument, and any such authority may be general or confined to specific instances, or otherwise limited.

6.2 LOANS. The Board may prospectively or retroactively authorize the President or any other officer, employee or agent of the Corporation to effect loans and advances at any time for the Corporation from any bank, trust company or other institution, or from any firm, corporation or individual, and for such loans and advances the person so authorized may make, execute and deliver promissory notes, bonds or other certificates or evidences of indebtedness of the Corporation, and, when authorized by the Board so to do, may pledge and hypothecate or transfer any securities or other property of the Corporation as security for any such loans or advances. Such authority conferred by the Board may be general or confined to specific instances, or otherwise limited.

6.3 CHECKS, DRAFTS, ETC. All checks, drafts and other orders for the payment of money out of the funds of the Corporation and all evidences of indebtedness of the Corporation shall be signed on behalf of the Corporation in such manner as shall from time to time be determined by resolution of the Board.

6.4 DEPOSITS. The funds of the Corporation not otherwise employed shall be deposited from time to time to the order of the Corporation with such banks, trust companies, investment banking firms, financial institutions or other depositaries as the Board may select or as may be selected by an officer, employee or agent of the Corporation to whom such power to select may from time to time be delegated by the Board.

## ARTICLE 7

## STOCK AND DIVIDENDS

7.1 CERTIFICATES REPRESENTING SHARES. The shares of capital stock of the Corporation shall be represented by certificates in such form (consistent with the provisions of Section 158 of the General Corporation Law) as shall be approved by the Board. Such certificates shall be signed [illegible] the Chairman of the Board, the President or a Vice President and by the Secretary or an Assistant Secretary or the Treasurer or an Assistant Treasurer, and may be impressed with the seal of the Corporation or a facsimile thereof. If the Corporation is authorized to issue shares of stock of more than one class or of different series within a class, the designations, relative rights, preferences, and limitations applicable to each class and the variations in rights, preferences, and limitations determined for each series (and the authority of the Board to determine variations for future series) shall be summarized on the front or back of each certificate. Alternatively, each certificate may state conspicuously on its front or back that the Corporation will furnish the shareholder this information on request in writing and without charge. All certificates for shares shall be consecutively numbered or otherwise identified. The name and address of the person to whom the shares represented thereby are issued, with the number of shares and date of issue, shall be entered on the stock transfer books of the Corporation. The signatures of the officers, transfer agent or registrar upon a certificate may be facsimiles, if the certificate is countersigned, manually or by facsimile signature, by a transfer agent or registrar, other than the Corporation itself or one of its employees. In case any officer, transfer agent or registrar who has signed or whose facsimile signature has been placed upon a certificate shall have ceased to be such officer, transfer agent or registrar before such certificate is issued, such certificate may, unless otherwise provided by the Board, be issued by the Corporation with the same effect as if such person were such officer, transfer agent or registrar at the date of issue.

7.2 TRANSFER OF SHARES. Transfers of shares of capital stock of the Corporation shall be made only on the books of the Corporation by the holder thereof or by the holder's duly authorized attorney appointed by a power of attorney duly executed and filed with the Secretary or a transfer agent of the Corporation, and on surrender of the certificate or certificates representing such shares of capital stock properly endorsed for transfer and upon payment of all necessary transfer taxes. Every certificate exchanged, returned or surrendered to the Corporation shall be marked "Cancelled," with the date of cancellation, by the Secretary or an Assistant Secretary of the transfer agent of the Corporation. A person in whose name shares of capital stock shall stand on the books of the Corporation shall be deemed the owner thereof to receive dividends, to vote as such owner and for all other purposes as respects the Corporation. No transfer of shares of capital stock shall be valid as against the Corporation, its Stockholders and creditors for any purpose, except to render the transferee liable for the debts of the Corporation to the extent provided by law, until such transfer shall have been entered on the books of the Corporation by an entry showing from and to whom transferred.

7.3 TRANSFER AND REGISTRY AGENTS. The Corporation may from time to time maintain one or more transfer offices or agents and registry offices or agents at such place or places as may be determined from time to time by the Board.

7.4 LOST, DESTROYED, STOLEN AND MUTILATED CERTIFICATES. The holder of any shares of capital stock of the Corporation shall immediately notify the Corporation of any loss, destruction, theft or mutilation of the certificate representing such shares, and the Corporation may issue a new certificate to replace the certificate alleged to have been lost, destroyed, stolen or mutilated. The Board may, in its discretion, as a condition to the issue of any such new certificate, require the owner of the lost, destroyed, stolen or mutilated certificate, or his or her legal representatives, to make proof satisfactory to the Board of such loss, destruction, theft or mutilation and to advertise such fact in such manner as the Board may require, and to give the Corporation and its transfer agents and registrars, or such of them as the Board may require, a bond in such form, in such sums and with such surety or sureties as the Board may direct, to indemnify the Corporation and its transfer agents and registrars against any claim that may be made against any of them on account of the continued existence of any such certificate so alleged to have been lost, destroyed, stolen or mutilated and against any expense in connection with such claim.

7.5 RULES AND REGULATIONS. The Board may make such rules and regulations as it may deem expedient, not inconsistent with these Bylaws or with the Certificate of Incorporation, concerning the issue, transfer and registration of certificates representing shares of its capital stock.

7.6 RESTRICTION ON TRANSFER OF STOCK. A written restriction on the transfer or registration of transfer of capital stock of the Corporation, if permitted by Section 202 of the General Corporation Law and noted conspicuously on the certificate

representing such capital stock, may be enforced against the holder of the restricted capital stock or any successor or transferee of the holder including an executor, administrator, trustee, guardian or other fiduciary entrusted with like responsibility for the person or estate of the holder. Unless noted conspicuously on the certificate representing such capital stock, a restriction, even though permitted by Section 202 of the General Corporation Law, shall be ineffective except against a person with actual knowledge of the restriction. A restriction on the transfer or registration of transfer of capital stock of the Corporation may be imposed either by the Certificate of Incorporation or by an agreement among any number of Stockholders or among such Stockholders and the Corporation. No restriction so imposed shall be binding with respect to capital stock issued prior to the adoption of the restriction unless the holders of such capital stock are parties to an agreement or voted in favor of the restriction.

7.7 DIVIDENDS, SURPLUS, ETC. Subject to the provisions of the Certificate of Incorporation and of law, the Board:

7.7.1 may declare and pay dividends or make other distributions on the outstanding shares of capital stock in such amounts and at such time or times as it, in its discretion, shall deem advisable giving due consideration to the condition of the affairs of the Corporation;

7.7.2 may use and apply, in its discretion, any of the surplus of the Corporation in purchasing or acquiring any shares of capital stock of the Corporation, or purchase warrants therefor, in accordance with law, or any of its bonds, debentures, notes, scrip or other securities or evidences of indebtedness; and

7.7.3 may set aside from time to time out of such surplus or net profits such sum or sums as, in its discretion, it may think proper, as a reserve fund to meet contingencies, or for equalizing dividends or for the purpose of maintaining or increasing the property or business of the Corporation, or for any purpose it may think conducive to the best interests of the Corporation.

## ARTICLE 8

## BOOKS AND RECORDS

8.1 BOOKS AND RECORDS. There shall be kept at the Office of the Corporation correct and complete records and books of account recording the financial transactions of the Corporation and minutes of the proceedings of the Stockholders, the Board and any committee of the Board. The Corporation shall keep at its principal office, or at the office of the transfer agent or registrar of the Corporation, a record

containing the names and addresses of all Stockholders, the number and class of shares held by each and the dates when they respectively became owners of record thereof.

S 2 FORM OF RECORDS. Any records maintained by the Corporation in the regular course of its business, including its stock ledger, books of account, and minute books, may be kept on, or be in the form of, punch cards, magnetic tape, photographs, microphotographs, or any other information storage device, provided that the records so kept can be converted into clearly legible written form within a reasonable time. The Corporation shall so convert any records so kept upon the request of any person entitled to inspect the same.

S3 INSPECTION OF BOOKS AND RECORDS. Except as otherwise provided by law, the Board shall determine from time to time whether and, if allowed, when and under what conditions and regulations, the accounts, books, minutes and other records of the Corporation, or any of them shall be open to the Stockholders for inspection.

## ARTICLE 9

### SEAL

The corporate seal, if the Board elects to adopt one, shall have inscribed thereon the name of the Corporation, the year of its organization and th words "Corporate Seal, Delaware." The seal may be used by causing it or a facsimile thereof to be impressed or affixed or otherwise reproduced.

## ARTICLE 10

### FISCAL YEAR

The fiscal year of the Corporation shall end on December 31 of each calendar year, and may be changed, by resolution of the Board.

## ARTICLE 11

### PROXIES AND CONSENTS

Unless otherwise directed by the Board, the Chairman, the President, any Executive Vice President, any Vice President, the Secretary or the Treasurer, or any one of them, may execute and deliver on behalf of the Corporation proxies respecting any and all shares or other ownership interests of any Other Entity owned by the Corporation appointing such person or persons as the officer executing the same shall deem proper to represent and vote the shares or other ownership interests so owned at any and all meetings of holders of shares or other ownership interests, whether general or special, and/or to execute and deliver consents respecting such shares or other ownership interests; or any of the aforesaid officers may attend any meeting of the holders of shares or other ownership interests of such Other Entity and thereat vote or exercise any or all other powers of the Corporation as the holder of such shares or other ownership interests.

## ARTICLE 12

### OFFICES

12.1 REGISTERED OFFICE. The registered office of the Corporation shall be at 32 Loockerman Square, Suite L-100, in the City of Dover, County of Kent, State of Delaware. The registered agent of the corporation at such address is The Prentice-Hall Corporation System, Inc.

12.2 OTHER OFFICES. The Corporation may also have offices, including its principal office, at such other places both within and without the State of Delaware as the Board of Directors may from time to time determine or the business of the Corporation may require.

## ARTICLE 13

## EMERGENCY BYLAWS

Unless the Certificate of Incorporation provides otherwise, the following provisions of this Article 13 shall be effective during an emergency resulting from an attack on the United States or during any nuclear or atomic disaster or during the existence of a similar catastrophe. During such emergency:

13.1 NOTICE TO BOARD MEMBERS. Any one member of the Board or any one of the following officers: Chairman, President, any Executive Vice President, any Vice President, Secretary, or Treasurer, may call a meeting of the Board. Such person shall use reasonable efforts to notify all members of the Board, but notice of such meeting need be given only to those Directors whom after reasonable effort it is practicable to reach, and may be given in any practical manner, including by publication and radio. Such notice shall be given at least six hours prior to commencement of the meeting.

13.2 TEMPORARY DIRECTORS AND QUORUM. One or more officers of the Corporation present at the emergency Board meeting, as is necessary to achieve a quorum, shall be considered to be Directors for the meeting, and shall so serve in order of rank, and within the same rank, in order of seniority. In the event that less than a quorum of the Directors are present (including any officers who are to serve as Directors for the meeting), those Directors present (including the officers serving as Directors) shall constitute a quorum. Notwithstanding the foregoing, no meeting of the Board shall take place pursuant to this Article 13 without the presence of at least three Directors (not including officers serving as Directors for the meeting).

13.3 ACTIONS PERMITTED TO BE TAKEN. The Board as constituted in Section 13.2 hereof, and after notice as set forth in Section 13.1 hereof may:

13.3.1 prescribe emergency powers to any officer of the Corporation;

13.3.2 delegate to any officer or Director, any of the powers of the Board;

13.3.3 designate lines of succession of officers and agents, in the event that any of them are unabl discharge their duties;

13.3.4 relocate the principal place of business, or designate successive or simultaneous principal place business; and

13.3.5 take any other action reasonably necessary to carry on the business of the Corporation.

13.4 EFFECTIVENESS OF EMERGENCY BYLAWS. To the extent that they are not inconsistent with t provisions of this Article 13, all other provisions of these Bylaws shall remain in effect during an emergenc Upon termination of the emergency, the provisions of this Article 13 shall cease to be operative.

ARTICLE 14

AMENDMENTS

Except as otherwise expressly specified in the Certificate of Incorporation or these Bylaws, the Board may from time to time adopt, amend or repea the Bylaws; provided, however, that any Bylaws adopted or amended by the Board may be amended or repealed, and any Bylaws may be adopted, b a vote of the Stockholders having at least two-thirds of the voting power of the then issued and outstanding shares of capital stock of the Corporation.

* * *

CERTIFICATION

The undersigned, in his capacity as Secretary of the Corporation, hereby certifies that the foregoing is the Amended and Restated Bylaws of the Corporation adopted by the Board of the Corporation on this _____ day of July, 1998.

Michael A. Lubin
Secretary of Pathnet, Inc.

Exhibit 10.1.3
Amendment #5 to Master Agreement
Dated 8 August, 1997 between Pathnet, Inc.
and NEC America, Inc.

Except as expressed herein, the terms and conditions of the Master Agreement remain in full force and effect:

Article 2. Scope of Contract

2.2 Modify text to read, "Appendix A - Sellers Quotation, DCQ98-M2000554A, dated 9/18/98, excluding General Terms and Conditions"

Article 3 Prices

Delete "Subject to Section 3.2, the pricing stated in Appendix A is valid for orders placed within three years from the signing of this Agreement and is" and modify first paragraph to read, "Subject to Article 3.2, the pricing stated in Appendix A hereto is valid for orders placed from the date 9/18/98 for the balance of the Master Agreement term, subject to Article 3.5 below, as expressed in Article 5, Term and Option, and is "

3.5 Delete in its entirety Amendment #3 and replace in the Master Agreement with the following. "At the end of calendar year 1999, the Parties agree to have a good faith negotiation to reach mutually beneficial prices for the balance of the Agreement term. In consideration of the prices stated in Appendix A hereto, Buyer agrees to hold Seller as the primary supplier of digital microwave equipment as listed in Appendix A with a minimum share of purchase volume in U.S. dollars of 60% with Buyer having a two supplier relationship and 50% with Buyer having a three supplier relationship.

Furthermore, Buyer agrees it shall purchase from Seller, Equipment in a cumulative amount of no less than $200,000,000.00 U.S. dollars by the end of calendar year 2002. As part of this commitment, in good faith effort, Buyer will procure no less than a quantity of 700 T/R's (digital microwave terminals) each six month period beginning 9/18/98. Buyer's failure to meet this T/R commitment level as set forth herein shall result in the sole and exclusive remedy of Seller as follows: Seller shall reserve the right to withdraw the pricing levels set forth in this Agreement for subsequent purchases of Equipment."

3.6 Modify to read, "The pricing set forth in Appendix A hereto is applicable to any orders placed after 9/18/98."

Article 27 Product Support, Training and Other Support

27.1 Product Support and Training shall be performed as stated in the Product Line Support Policy in Appendix A. In addition to this Appendix, Seller shall provide Sales Engineering support to Buyer on an "as needed" basis at no cost during the term of this Agreement.

27.2 Seller agrees to provide training on an agreed upon scheduled basis to any new Buyer or Buyer Company engineering personnel and Buyer operations personnel. Such training can be either at Seller's facility in Herndon, VA or Buyer's facilities in Washington, D.C. or Richardson, Texas. For training at Buyer or Buyer's Company's facility, Buyer agrees to reimburse Seller for the instructor's reasonable travel and living expense only.

27.3 Seller agrees to provide Buyer two hops of radio in terminal-terminal arrangement configured as follows: 1X1, frequency diversity/space diversity with switchover processors. One hop would be installed in each of the Buyer facilities in Washington, D.C. and Richardson, Texas.

27.4 In a good faith effort and to the extent reasonably feasible, Seller to provide for Seller radio and multiplexer product - including any enhancements or modifications thereto, (i) detailed specification for the OS (Operation System) to NE (Network Element) operations communications path. This will include detailed specifications on how the network elements may be accessed directly or indirectly by the OS and identifying the protocols used for OS to NE operations and NE to NE operations. Conformance statements to all relevant protocols at the physical, data link, transport, session, presentation and application layer should be provided. Use of the proprietary or non-standard protocol implementations must be identified, (ii) a detailed description of the management interfaces and functionality implemented at the application layer described in terms of GDMO or TL-1, (iii) a technical contact available to support Buyer during OS development. This point of contact should possess a detailed understanding of the protocol interfaces and the network management applications implemented on the NE. The primary means of contact will be through email to both Wally Strader (Director, Systems Engineering) and Robert Lowell (Director, Customer Engineering) or their successors, if any. To assist Seller in its response, each such contact should include a priority listing ranking of either a Level One, Two or Three inquiry (Level One to denote in need of a response within less than a week, Level Two or denote in need of response within one to two weeks, and Level Three to denote in need of response beyond two weeks), and (iv) notification to Buyer in the event of any modifications to the above TMN interfaces or communication protocols for new product releases and the appropriate documentation and support provided as describe above.

27.5 In good faith effort and to the extent reasonably feasible, Seller will test the current 3000S radio to Bellcore's Network Equipment Building System (NEBS) requirements. Such tests shall be conducted by either an independent third party testing facility or by the manufacturer as witnessed by a third party. The testing criteria shall be those elements off NEBS tests that are applicable to the 3000S radio.

equipment and that Seller has stated either meet or may meet the NEBS standard. Seller's intention is to assist Bu
where and when practical, in using these tests' results to obtain collocation approval.

Furthermore, in a good faith effort, Seller will design, build and make available during the term of this Master Agreemer
new enhanced version of the 2000S radio. This new version will be in significant compliance with the NEBS standard.

NEC America, Inc.

By: s/Patrick Stewart

P. Stewart

Title: AGM, RCSD

Date: 11-19-98

Pathnet, Inc.

By: s/David Schaeffer

D. Schaeffer

Title: Chairman

Date: 11-20-98

Exhibit 10.10.2

# THIRD AMENDMENT TO LEASE

THIS THIRD AMENDMENT TO LEASE (this "Third Amendment") is entered into as of the 1st day of September 1998 (the "Effective Date") by and between 6715 Kenilworth Avenue General Partnership ("Landlord") and Pathnet, Inc. ("Tenant").

## RECITALS

A. Landlord and Tenant are parties to that certain Lease Agreement dated August 9, 1997, as amended by that certain Amendment to Lease dated March 5, 1998 and that Second Amendment to Lease dated May 1, 1998 (together, the "Lease").

B. Landlord and Tenant desire to add certain premises to the Lease and make certain other modifications to the Lease as more particularly set forth herein.

NOW, THEREFORE, in consideration of the mutual promises of the parties and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereby agree as follows:

1. PREMISES. From and after the Effective Date, the area described in Exhibit A, attached hereto and incorporated herein, located on the first floor of the building containing the Premises and consisting of approximately 1,500 square feet, is hereby incorporated into the Premises for all purposes.

2. RENT. In Paragraph 3 of the Lease, as amended by the Second Amendment to Lease, (i) the number "$305,860.00" is hereby deleted and the number "335,860.00" is inserted in its place; and (ii) the number "25,488.33" is hereby deleted, and the number "27,988.00" is inserted in its place.

3. SECURITY DEPOSIT. As of the date hereof, Tenant has increased the Security Deposit under the Lease by delivering to Landlord, and Landlord hereby acknowledges receipt of, the sum of $2,500. The parties acknowledge that the Security Deposit is currently $19,493.33.

4. IMPROVEMENTS. The parties acknowledge that certain improvements will be constructed in the Premises pursuant to a separate agreement.

5. CAPITALIZED TERMS. All capitalized terms not defined herein shall have the meanings ascribed to such terms in the Lease.

6. RATIFICATION. Except as expressly modified herein, the Lease remains in full force and effect in accordance with its terms.

{SIGNATURES BEGIN ON FOLLOWING PAGE}

EXECUTED, under seal, as of the day and year first written above.

LANDLORD:

6715 KENILWORTH AVENUE GENERAL PARTNERSHIP

BY: s/David Schaeffer

David Schaeffer
General Partner

TENANT:

PATHNET, INC.

BY: s/William R. Smedberg V

William R. Smedberg V
Vice President, Finance and
Corporate Development

<ARTICLE> 5
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The schedule contains summary financial information extracted from the Company's
balance sheet as of September 30, 1998 and the Statements of Operations for the
year ended December 31, 1998 and is qualified in its entirety by reference to
such financial statements.
</LEGEND>
<CIK> 0001061148
<NAME> Pathnet, Inc.
<MULTIPLIER> 1,000

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<EPS-PRIMARY> (12.51)
<EPS-DILUTED> (12.51)

be less than the Applicable Conversion Value at the time of such issuance and, except as hereinafter provided, an adjustment in the Applicable Conversion Value shall be made upon each such issuance in the manner provided in paragraph (i) of this Section 5.3.4(f) as if such Common Stock were issued at such Net Consideration Per Share. No adjustment of the Applicable Conversion Value shall be made under this Section 5.3.4(f) upon the issuance of any additional shares of Common Stock which are issued pursuant to the exercise of any warrants, options or other subscription or purchase rights or pursuant to the exercise of any conversion or exchange rights in any convertible securities if any adjustment shall previously have been made upon the issuance of such warrants, options or other rights. Any adjustment of the Applicable Conversion Value with respect to this paragraph (iii) of this Section 5.3.4(f) shall be disregarded if, as and when the rights to acquire shares of Common Stock upon exercise or conversion of the warrants, options, rights or convertible securities which gave rise to such adjustment expire or are canceled without having been exercised, so that the Applicable Conversion Value effective immediately upon such cancellation or expiration shall be equal to the Applicable Conversion Value in effect immediately prior to the time of the issuance of the expired or canceled warrants, options, rights or convertible securities, with such additional adjustments as would have been made to that Applicable Conversion Value had the expired or canceled warrants, options, rights or convertible securities not been issued; provided, however, that no such readjustment of the Applicable Conversion Value shall have the effect of increasing the Applicable Conversion Value to an amount which exceeds the lower of (x) the Applicable Conversion Value on the original adjustment date, or (y) the Applicable Conversion Value that would have resulted from any issuance of any additional shares of Common Stock pursuant to such warrants, options, rights or convertible securities between the original adjustment date and such readjustment date. In the event that the terms of any warrants, options, other subscription or purchase rights or convertible securities previously issued by the Corporation are changed (whether by their terms or for any other reason) so as to change the Net Consideration Per Share payable with respect thereto (whether or not the issuance of such warrants, options, rights or convertible securities originally gave rise to an adjustment of the Applicable Conversion Value), the Applicable Conversion Value shall be recomputed as of the date of such change, so that the Applicable Conversion Value effective immediately upon such change shall be equal to the Applicable Conversion Value in effect at the time of the issuance of the warrants, options, rights or convertible securities subject to such change, adjusted for the issuance thereof in accordance with the terms thereof after giving effect to such change, and with such additional adjustments as would have been made to that Applicable Conversion Value had the warrants, options, rights or convertible securities been issued on such changed terms. For purposes of this paragraph (iii), the Net Consideration Per Share which may be received by the Corporation shall be determined as follows:

(A) The Net Consideration

Per Share shall mean the amount equal to the total amount of consideration, if any, received by the Corporation for the issuance of such warrants, options, rights or convertible securities, plus the minimum amount of consideration, if any, payable to the

Corporation upon exercise or conversion thereof, divided by the aggregate number of shares of Common Stock that would be issued if all such warrants, options, subscriptions, or other purchase rights or convertible securities were exercised or converted at such net consideration per share.

(B) The Net Consideration Per Share which may be received by the Corporation shall be determined in each instance as of the date of issuance of warrants, options, rights or convertible securities without giving effect to any possible future price adjustments or rate adjustments which may be applicable with respect to such warrants, options, rights or convertible securities and which are contingent upon future events, provided that in the case of an adjustment to be made as a result of a change in terms of such warrants, options, rights or convertible securities, the Net Consideration Per Share shall be determined as of the date of such change.

(g) ADJUSTMENTS FOR RECLASSIFICATION. If the Common Stock issuable upon the conversion of the Series Preferred Stock shall be changed into the same or different number of shares of any class or classes of stock, whether by reclassification or otherwise (other than an Extraordinary Common Stock Event, or a reorganization, merger, consolidation or sale of assets provided for elsewhere in this Section 5.3.4), then and in each such event the holder of each share of Series Preferred Stock shall have the right thereafter to convert such share into the kind and amount of shares of stock and other securities and property receivable upon such reorganization, reclassification or other change by holders of the number of shares of Common Stock into which such shares of Series Preferred Stock might have been converted immediately prior to such reorganization, reclassification or change, all subject to further adjustment as provided herein. Without limiting the generality of the foregoing, the Applicable Conversion Rate, as defined in this Section 5.3.4, in respect of such other shares or securities so receivable upon conversion of shares of Series Preferred Stock shall thereafter be adjusted, and shall be subject to further adjustment from time to time, in a manner and on terms as nearly equivalent as practicable to the provisions with respect to Common Stock contained in this Section 5.3.4, and the remaining provisions herein with respect to the Common Stock shall apply on like or similar terms to any such other shares or securities.

(h) ADJUSTMENTS FOR REORGANIZATIONS. If at any time or from time to time there shall be a capital reorganization of the Common Stock (other than a subdivision, combination, reclassification or exchange of shares provided for elsewhere in this Section 5.3.4) or a merger or consolidation of the Corporation with or into another corporation or the sale of all or substantially all of the Corporation's properties and assets to any other person, then, as a part of and as a condition to the effectiveness of such reorganization, merger, consolidation or sale, lawful and adequate provision shall be made so that if the Corporation is not the surviving corporation, the Series Preferred Stock shall be converted into preferred stock of the surviving corporation having equivalent preferences, rights and privileges except that in lieu of

EXHIBIT D

SEC Form 10-Q
(Sept. 30, 1999)

[Exhibits 10.1 through 10.7 omitted due to volume;
available upon request]

## SECTION 2: REGULATIONS

2.13 Transfers and Assignments

Neither the Company nor the Customer may assign or transfer its rights or duties in connection with the services and facilities provided by the Company without the written consent of the other party, except that the Company may assign its rights and duties:

A) to any subsidiary, parent company or affiliate of the Company; or

B) pursuant to any sale or transfer of substantially all the assets of the Company; or

C) pursuant to any financing, merger or reorganization of the Company.

## SECTION 2: REGULATIONS

2.14 Notices and Communications

A) The Customer shall designate on the Service Order an address to which the Company shall mail or deliver all notices and other communications, except that Customer may also designate a separate address to which the Company's bills for service shall be mailed.

B) The Company shall designate on the Service Order an address to which the Customer shall mail or deliver all notices and other communications, except that Company may designate a separate address on each bill for service to which the Customer shall mail payment on that bill. Mail or other communications should be delivered to:
Pathnet, Inc.
1015 31st Street, NW
Suite 500
Washington, DC 20007
Attn: General Counsel

C) All notices or other communications required to be given pursuant to this tariff will be in writing. Notices and other communications of either party, and all bills mailed by the Company, shall be presumed to have been delivered to the other party on the third business day following placement of the notice, communication or bill with the U.S. Mail or a private delivery service, prepaid and properly addressed, or when actually received or refused by the addressee, whichever occurs first.

D) The Company or the Customer shall advise the other party of any changes to the addresses designated for notices, other communications or billing, by following the procedures for giving notice set forth herein.

# SECTION 3: APPLICATION OF RATES

## 3.1 Introduction

The regulations set forth in this section govern the application of rates for services contained in other sections of this tariff.



Richard A. Jalkut, President & CEO
1015 31st Street, NW
Suite 500
Washington, DC 20007

## SECTION 3: APPLICATION OF RATES

### 3.2 Rates Based Upon Distance

Where charges for a service are specified based upon distance, the following rules apply:

A) Distance between two points is measured as airline distance between the rate centers of the originating and terminating telephone lines. The rate center is a set of geographic coordinates, as refereneed in the Local Exchange Routing Guide issued by Telcordia Technologies, Inc., associated with each NPA-NXX combination (where NPA is the area code and NXX is the first three digits of a seven-digit telephone number). Where there is no telephone number associated with an access line on the Company's network (such as a dedicated Toll Free Service or WATS access line), the Company will apply the rate center of the Customer's main billing telephone number.

B) The airline distance between any two rate centers is determined as follows:

1) Obtain the "V" (vertical) and "H" (horizontal) coordinates for each rate center from the above-referenced Telcordia Technologies, Inc. document.

2) Compute the difference between the "V" coordinates of the two rate centers; and the difference between the two "H" coordinates.

3) Square each difference obtained in step (2) above.

4) Add the square of the "V" difference and the square of the "H" obtained in step (3) above.

5) Divide the sum of the squares by 10. Round to the next higher whole number if any fraction is obtained.

6) Obtain the square root of the whole number result obtained above. Round to the next higher whole number if any fraction is obtained. This is the airline mileage.

7) FORMULA= Square Root of: $\frac{(V1 - V2)^2 + (H1 - H2)^2}{10}$



Richard A. Jalkut, President & CEO
1015 31st Street, NW
Suite 500
Washington, DC 20007

## SECTION 4: SERVICE AREAS

4.1 Service Areas

The company's Special Access, Private Line and Exchange Services are provided pursuant to this tariff in limited Service Areas (SAs). Services are provided in the following cities.

Geographic Area in which Full Service is Available

Brookings

Full service versions of the Company's Special Access, Private Line and Exchange Services will be provided to Customers, at Customer premises located in the SAs pursuant to this tariff, to the extent that: (a) the Company has in place and available network facilities extending to such premises; or (b) the Customer's premises is served by an ILEC or any Other Telephone Company operating in the service area of the customer.

## SECTION 5: PRIVATE LINE SERVICES

### 5.1 General

The Company provides intraLATA and interLATA Private Line Service to Customers with transmission speeds ranging from 64 Kbps (DS-0) to 155.52 Mbps (OC-3). Private Line Services are offered on a point-to-point basis. Each Private Line Service is dedicated to the Customer and the entire usable bandwidth for each service is available to the Customer for its exclusive use. Higher bandwidths may be requested and if available may be provided on an individual case basis.

#### 5.1.1 Two Point Service

Two Point Service allows two Customer-designated locations to be connected by one Private Line Service. The service terminated at both locations must be the same speed and the same capacity. Multiplexing can be provided where facilities exist to reach multiple locations.



Richard A. Jalkut, President & CEO
1015 31st Street, NW
Suite 500
Washington, DC 20007

## SECTION 5: PRIVATE LINE SERVICES

### 5.2 Application of Rates

#### 5.2.1 Recurring Charges

Recurring charges for Private Line Services vary based on the capacity of service, the distance of service, the term plan selected and the monthly revenue commitment made by the Customer. Unless otherwise stated in the description associated with the rate element in this tariff, Private Line Service recurring charges are applied on a circuit basis. A minimum circuit charge applies which varies by circuit bandwidth.

#### 5.2.2 Term and Volume Discounts

Recurring charges for services purchased under a Term Plan will be fixed for the life of the term. The rate level applicable throughout the Term Plan is based on the volume commitment specified by the Customer at the time service is ordered. Customer may terminate any circuit upon 90 days' notice; provided that if termination occurs (i) prior to the Activation Date, Customer shall reimburse Company for all costs of the implementation of such circuit; or (ii) on or after such date, Customer shall pay: (a) all charges for services previously rendered and (b) the amount due through the end of the applicable circuit lease term.

#### 5.2.3 Nonrecurring Charges

Nonrecurring Charges (NRC) are one-time-only charges. NRC's may be waived for certain promotions and under the specific terms of individually negotiated contract services.

Notes to Sections 5.2.1 – 5.2.3

1. Charges not described above will be considered special handling and will be assessed on an Individual Case Basis (ICB).

2. All of the above charges are subject to a 30 day notice.

3. All Private Line ancillary service charges to cities not listed will be priced on an Individual Case Basis and will be subject to the terms and charges of the underlying carrier.

4. Special charges incurred by Company on Customer's behalf from any other Carrier will be passed on directly to the Customer.



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## SECTION 5: PRIVATE LINE SERVICES

5.2 Application of Rates (cont'd.)

5.2.4 Customer Entrance Facility Charges

Customer Entrance Facility Charges apply to connections between the Company POP and Customer POP. These facilities may be between two different buildings or between the Company's suite connected to an OTC suite in the same building. Since costs vary widely by location, the Customer Entrance Facility Charges will be determined on an Individual Case Basis. All other construction charges and individual case basis charges incurred by the Company will be passed through to the Customer.

5.2.5 Order Cancellation Policy

The Company will provide an order confirmation after the Customer places an order for service. If the Customer changes the order, a change order charge will apply based on the scope of the change. If the Customer cancels the order, the Customer must reimburse the Company for all costs incurred to that point. The Customer must notify the Company of service date changes 45 days prior to the due date. Service date changes may be extended by the Customer a maximum of thirty days from the due date. Service date changes for OC-3 bandwidths are restricted to one change, after which the order will be subject to all recurring and nonrecurring charges applicable to the service.



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## SECTION 5: PRIVATE LINE SERVICES

5.3 Service Descriptions

Private Line Service allows the Customer to connect two locations with private dedicated service at one of a number of transmission speeds.

5.3.1 DS-0 Voice Grade Services

DS-0 Service is a dedicated Voice Grade channel with a line speed of 64 Kbps. Services that can be provided on a DS-0 channel are multiple types of analog voice lines, including Off Premise Extensions (OPX), 2 wire and 4 wire Tie Lines, Foreign Exchange Services and analog data lines. The local loop may be provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

5.3.2 DS-0 Digital Services

DS-0 Services are dedicated digital services operating at 56Kbps or 64 Kbps. The local loop may be provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

5.3.3 DS-1 Service

DS-1 Service is a dedicated, high capacity channel with a line speed of 1.544 Mbps. The service will support both channelized and unchannelized services with AMI or B8ZS line coding provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

5.3.4 DS-3 Service

DS-3 Service is a dedicated, high capacity channel with a line speed of 44.736 Mbps. The service will support both channelized and unchannelized services provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

SECTION 5: PRIVATE LINE SERVICES

5.3 Service Descriptions (cont'd.)

5.3.5 OC-3 Service

OC-3 Service is a high capacity channel for the full duplex, synchronous, optical transmission of digital data based on the SONET standard at a rate of 155.52 Mbps. The local loop may be provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

5.3.6 Multiplexing

Multiplexing is the application of electronic equipment which allows two or more signals to pass over one communications circuit.

Multiplexing services can be ordered with DS-0, DS-1, DS-3, or OC-3 listed above. Multiplexing services are offered where facilities exist for the requested combinations.

5.3.6.1 DS-1-DS-0 multiplexing service enables a DS-1 input and 24 dedicated DS-0 outputs in connection with the Company's DS-0 facility service above.

5.3.6.2 DS-3-DS-1 multiplexing service enables a DS-3 input and 28 dedicated DS-1 outputs in connection with the Company's DS-1 facility service above.

5.3.6.3 OC-3-DS-3/DS-1/DS-0 multiplexing enables an OC-3 input and output as DS-0, DS-1 or DS-3, in above combinations.

5.3.7 Special Construction

Special construction or arrangement for facilities may be undertaken on a reasonable efforts basis at the request of the Customer, and upon a determination by the Company that Special Construction charges should apply in that particular instance. Special Construction is undertaken:

(a) where facilities are not presently available;

(b) where the service is of a type other than that which the Company would normally utilize in the furnishing of its service;

(c) where the service is requested over a route other than that which the Company would normally utilize in the furnishing of its services;

(d) where the service is in a quantity greater than that which the Company would normally provide;



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## SECTION 5. PRIVATE LINE SERVICES

5.3 Service Descriptions (cont'd.)

5.3.7 Special Construction (cont'd.)

(e) where service is requested on an expedited basis;

(f) where service is requested on a temporary basis until permanent facilities are available;

(g) where the service requested involves abnormal costs; or

(h) where service is requested in advance of the Company's normal construction schedule.

5.3.8 Time and Material Service

This service provides for the Labor and Material charges associated with installation, maintenance, testing and repair deemed to be associated with equipment and facilities not provided by the Company or deemed to be non-standard or non-routine.

The Company shall have no responsibility for the maintenance and repair of any kind with respect to equipment and facilities not provided by the Company. The Company will charge the Customer time, materials and charges listed in Section 5.4 for any maintenance visits with respect to service problems which are determined to arise from equipment or facilities not provided by the company.

When a Customer reports a trouble to the Company for clearance and no trouble is found in the Company's facilities, the Customer shall be responsible for payment of Time and Materials Charges as listed in Section 5.4 for the period of time from when the Company personnel were dispatched to the Customer's premises to when the work is completed. Failure of Company personnel to find trouble in Company facilities will result in no charge if the trouble is actually in those facilities, but not discovered at the time.

If the Customer, after being informed that the trouble is not in Company facilities, wishes to have the maintenance work performed by the Company, and the Company agrees to perform the work, the Time and Material Charges listed in Section 5.4 will apply.

At the Customer's request, installation and/or maintenance may be performed outside the Company's regular business hours or in hazardous locations. In such cases, Time and Material Charges listed in Section 5.4 will apply. If installation is started during regular business hours but, at the Customer's request, extends beyond regular business hours into time periods including, but not limited to, weekends, holidays, and/or night hours, additional charges may apply.

# SECTION 5: PRIVATE LINE SERVICES

## 5.4 Rates and Charges

### 5.4.1 Nonrecurring Charges

| | DS-0 | DS-1 | DS-3 | OC-3 |
|---|---|---|---|---|
| New Order Installation | $400.00 | $1,000.00 | $3,000.00 | $6,000.00 |
| Change of Requested Service Date – 1st* | Free | Free | Free | $2,000.00 |
| Change of Requested Service Date – 2nd or more* | $400.00 | $400.00 | $400.00 | $2,000.00 |
| Order Change (Pre-Engineering) | $200.00 | $200.00 | $200.00 | $1,000.00 |
| Order Change (Post-Engineering) | $400.00 | $800.00 | $1,200.00 | $5,000.00 |
| Order Cancellation (Pre-Engineering) | $400.00 | $500.00 | $500.00 | $1,000.00 |
| Order Cancellation (Post-Engineering) | $400.00 | $800.00 | $3,000.00 | $3,500.00 |
| ASR (New or Disconnect) Special Access | $500.00 | $500.00 | $500.00 | $500.00 |
| ASR Supplement | $300.00 | $300.00 | $300.00 | $300.00 |
| Order Expedite | $600.00 | $600.00 | $600.00 | $600.00 |
| Reconfiguration | $400.00 | $800.00 | $2,500.00 | $5,000.00 |

* Customer must notify Pathnet of service date changes 45 days prior to due date. Service date changes can be extended a maximum of 30 days after due date. Service date changes for OC-3 bandwidths are restricted to one change, after which the order will be subject to all recurring and nonrecurring charges applicable to the service billing.

## SECTION 5: PRIVATE LINE SERVICES

5.4 Rates and Charges (cont'd.)

5.4.2 Monthly Recurring Charges

A. DS-0 Service

I. 2-Wire

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $140.79 | $4.22 |
| 2. InterLATA | $133.38 | $4.00 |

II. 4-Wire

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $205.12 | $4.22 |
| 2. InterLATA | $194.33 | $4.00 |

B. DS-1 Service

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $772.24 | $119.74 |
| 2. InterLATA | $731.59 | $113.44 |

C DS-3 Service (Electrical Interface)

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $6,574.00 | $2,648.60 |
| 2. InterLATA | $6,228.00 | $2,509.20 |

D OC-3 Service

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | ICB | ICB |
| 2. InterLATA | ICB | ICB |

* All services assume interoffice transport. If no interoffice transport is required, discounts may be offered

## SECTION 5: PRIVATE LINE SERVICES

5.4 Rates and Charges (cont'd.)

5.4.2 Monthly Recurring Charges (cont'd.)

E. Other Charges

| | Recurring | Nonrecurring |
|---|---|---|
| A. Multiplexing | | |
| 1 M 1/0 | ICB | ICB |
| 2 M 1/3 3 OC-3/DS-2 | ICB | ICB |
| 4 OC-3/DS-3 | ICB | ICB |
| | ICB | ICB |

5.4.3 Customer Entrance Facility Charges

Customer Entrance Facility Charges apply to connections between the Company POP and a Customer POP. These facilities may be between two different buildings or between the Company's suite connected to an OTC suite in the same building. Since costs vary widely by location, the Customer Entrance Facility Charges will be determined on an Individual Case Basis. All other construction charges and individual case basis charges incurred by the Company will be passed through to the Customer.

5.4.4 Special Construction

Charges for Special Construction will be determined on an Individual Case Basis, in accordance with the terms set forth in Section 14.1.



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## SECTION 5: PRIVATE LINE SERVICES

5.4 Rates and Charges (cont'd.)

5.4.5 Time and Materials Service

| | |
|---|---|
| Monday through Friday<br>8:00 AM to 5:00 PM, excluding<br>Company-recognized holidays | $112.50 per hour, 4 hour minimum |
| All other times and days | $150.00 per hour, 4 hour minimum |

Maintenance Charges

Trouble Assistance Ticket per dispatch (work limited to recovery of downed circuits or equipment, not new installations)

| | |
|---|---|
| Monday through Friday<br>8:00 AM to 5:00 PM | $75.00 per hour, 4 hour minimum |
| After hours | $95.00 per hour, 4 hour minimum |



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## SECTION 6. SPECIAL ACCESS SERVICES

### 6.1 General

The Company provides intrastate intraLATA and interLATA Special Access Services to Customers with transmission speeds ranging from 64 Kbps (DS-0) to 155.52 Mbps (OC-3). Special Access Services are offered on a point-to-point basis. Each Special Access Service is dedicated to the Customer and the entire usable bandwidth for each service is available to the Customer for its exclusive use. Higher bandwidths may be requested and if available may be provided on an individual case basis.

#### 6.1.1 Special Access Services

Special Access Service is a dedicated telecommunications service which connects an End User to an interexchange carrier for the purpose of originating or terminating interexchange telecommunications.



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## SECTION 6: SPECIAL ACCESS SERVICES

### 6.2 Application of Rates

#### 6.2.1 Recurring Charges

Recurring charges for Special Access Services vary based on the capacity of service, the distance of service, the term plan selected and the monthly revenue commitment made by the Customer. Unless otherwise stated in the description associated with the rate element in this tariff, Special Access Service recurring charges are applied on a circuit basis. A minimum circuit charge applies which varies by circuit bandwidth.

#### 6.2.2 Term and Volume Discounts

Recurring charges for services purchased under a Term Plan will be fixed for the life of the term. The rate level applicable throughout the Term Plan is based on the volume commitment specified by the Customer at the time service is ordered. Customer may terminate any circuit upon 90 days' notice; provided that if termination occurs (i) prior to the Activation Date, Customer shall reimburse Company for all costs of the implementation of such circuit; or (ii) on or after such date, Customer shall pay: (a) all charges for services previously rendered and (b) the amount due through the end of the applicable circuit lease term.

#### 6.2.3 Nonrecurring Charges

Nonrecurring Charges (NRC) are one-time-only charges. NRC's may be waived for certain promotions and under the specific terms of individually negotiated contract services.

Notes to Sections 6.2.1 – 6.2.3

1. Charges not described above will be considered special handling and will be assessed on an Individual Case Basis (ICB).

2. All of the above charges are subject to a 30 day notice.

3. All Special Access ancillary service charges to cities not listed will be priced on an Individual Case Basis and will be subject to the terms and charges of the underlying carrier.

4. Special charges incurred by Company on Customer's behalf from any other Carrier will be passed on directly to the Customer.



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SECTION 6: SPECIAL ACCESS SERVICES

6.2 Application of Rates (cont'd.)

6.2.4 Customer Entrance Facility Charges

Customer Entrance Facility Charges apply to connections between the Company POP and a Customer POP. These facilities may be between two different buildings or between the Company's suite connected to an OTC suite in the same building. Since costs vary widely by location, the Customer Entrance Facility Charges will be determined on an Individual Case Basis. All other construction charges and Individual Case Basis charges incurred by the Company will be passed through to the Customer.

6.2.5 Order Cancellation Policy

The Company will provide an order confirmation after the Customer places an order for service. If the Customer changes the order, a change order charge will apply based on the scope of the change. If the Customer cancels the order, the Customer must reimburse the Company for all costs incurred to that point. The Customer must notify the Company of service date changes 45 days prior to the due date. Service date changes may be extended by the Customer a maximum of thirty days from the due date. Service date changes for OC-3 bandwidths are restricted to one change, after which the order will be subject to all recurring and nonrecurring charges applicable to the service.



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## SECTION 6: SPECIAL ACCESS SERVICES

### 6.3 Service Descriptions

Special Access Service allows a Customer to connect its End User to the Customer's POP for the purpose of originating or terminating interexchange traffic.

#### 6.3.1 DS-0 Voice Grade Services

DS-0 Service is a dedicated Voice Grade channel with a line speed of 64 Kbps. Services that can be provided on a DS-0 channel are multiple types of analog voice lines, including Off Premise Extensions (OPX), 2 wire and 4 wire Tie Lines, Foreign Exchange Services and analog data lines. The local loop may be provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

#### 6.3.2 DS-0 Digital Services

DS-0 Services are dedicated digital services operating at 56Kbps or 64 Kbps. The local loop may be provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

#### 6.3.3 DS-1 Service

DS-1 Service is a dedicated, high capacity channel with a line speed of 1.544 Mbps. The service will support both channelized and unchannelized services with AMI or B8ZS line coding provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

#### 6.3.4 DS-3 Service

DS-3 Service is a dedicated, high capacity channel with a line speed of 44.736 Mbps. The service will support both channelized and unchannelized services provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

## SECTION 6: SPECIAL ACCESS SERVICES

6.3 Service Descriptions (cont'd.)

6.3.5 OC-3 Service

OC-3 Service is a high capacity channel for the full duplex, synchronous, optical transmission of digital data based on the SONET standard at a rate of 155.52 Mbps. The local loop may be provided by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination.

6.3.6 Multiplexing

Multiplexing is the application of electronic equipment which allows two or more signals to pass over one communications circuit.

Multiplexing services can be ordered with DS-0, DS-1, DS-3, or OC-3 listed above. Multiplexing services are offered where facilities exist for the requested combinations.

6.3.6.1 DS-1-DS-0 multiplexing service enables a DS-1 input and 24 dedicated DS-0 outputs in connection with the Company's DS-0 facility service above.

6.3.6.2 DS-3-DS-1 multiplexing service enables a DS-3 input and 28 dedicated DS-1 outputs in connection with the Company's DS-1 facility service above.

6.3.6.3 OC-3-DS-3/DS-1/DS-0 multiplexing enables an OC-3 input and output as DS-0, DS-1 or DS-3, in above combinations.

6.3.7 Special Construction

Special Construction or arrangement for facilities may be undertaken on a reasonable efforts basis at the request of the Customer, and upon a determination by the Company that Special Construction charges should apply in that particular instance. Special Construction is undertaken:

(a) where facilities are not presently available;

(b) where the service is of a type other than that which the Company would normally utilize in the furnishing of its service;

(c) where the service is requested over a route other than that which the Company would normally utilize in the furnishing of its services;

(d) where the service is in a quantity greater than that which the Company would normally provide;



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## SECTION 6: SPECIAL ACCESS SERVICES

6.3 Service Descriptions (cont'd.)

6.3.7 Special Construction (cont'd.)

(e) where service is requested on an expedited basis;

(f) where service is requested on a temporary basis until permanent facilities are available;

(g) where the service requested involves abnormal costs; or

(h) where service is requested in advance of the Company's normal construction schedule.

6.3.8 Time and Material Service

This service provides for the Labor and Material charges associated with installation, maintenance, testing and repair deemed to be associated with equipment ad facilities not provided by the Company or deemed to be non-standard or non-routine.

The Company shall have no responsibility for the maintenance and repair of any kind with respect to equipment and facilities not provided by the Company. The Company will charge the Customer time, materials and charges listed in Section 6.4 for any maintenance visits with respect to service problems which are determined to arise from equipment or facilities not provided by the company.

When a Customer reports a trouble to the Company for clearance and no trouble is found in the Company's facilities, the Customer shall be responsible for payment of Time and Materials Charges as listed in Section 6.4 for the period of time from when the Company personnel were dispatched to the Customer's premises to when the work is completed. Failure of Company personnel to find trouble in Company facilities will result in no charge if the trouble is actually in those facilities, but not discovered at the time.

If the Customer, after being informed that the trouble is not in Company facilities, wishes to have the maintenance work performed by the Company, and the Company agrees to perform the work, the Time and Material Charges listed in Section 6.4 will apply.

At the Customer's request, installation and/or maintenance may be performed outside the Company's regular business hours or in hazardous locations. In such cases, Time and Material Charges listed in Section 6.4 will apply. If installation is started during regular business hours but, at the Customer's request, extends beyond regular business hours into time periods including, but not limited to, weekends, holidays, and/or night hours, additional charges may apply.

## SECTION 6: SPECIAL ACCESS SERVICES

### 6.4 Rates and Charges

#### 6.4.1 Nonrecurring Charges

| | DS-0 | DS-1 | DS-3 | OC-3 |
|---|---|---|---|---|
| New Order Installation | $475.00 | $1,000.00 | $3,000.00 | $8,000.00 |
| Change of Requested Service Date – 1st* | Free | Free | Free | $2,000.00 |
| Change of Requested Service Date – 2nd or more* | $400.00 | $400.00 | $400.00 | 3,000.00 |
| Order Change (Pre-Engineering) | $200.00 | $200.00 | $200.00 | $1,000.00 |
| Order Change (Post-Engineering) | $400.00 | $800.00 | $1,200.00 | $3,000.00 |
| Order Cancellation (Pre-Engineering) | $400.00 | $500.00 | $500.00 | $1,000.00 |
| Order Cancellation (Post-Engineering) | $400.00 | $800.00 | $3,000.00 | $3,500.00 |
| ASR (New or Disconnect) Special Access | $500.00 | $500.00 | $500.00 | $500.00 |
| ASR Supplement | $300.00 | $300.00 | $300.00 | $300.00 |
| Order Expedite | $600.00 | $600.00 | $600.00 | $600.00 |
| Reconfiguration | $400.00 | $800.00 | $2,500.00 | $5,000.00 |

* Customer must notify Pathnet of service date changes 45 days prior to due date. Service date changes can be extended a maximum of 30 days after due date. Service date changes for OC-3 bandwidths are restricted to one change, after which the order will be subject to all recurring and nonrecurring charges applicable to the service billing.



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## SECTION 6: SPECIAL ACCESS SERVICES

6.4 Rates and Charges (cont'd.)

6.4.2 Monthly Recurring Charges

A. DS-0 Service

I. 2-Wire

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $140.79 | $4.22 |
| 2. InterLATA | $133.38 | $4.00 |

II. 4-Wire

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $205.12 | $4.22 |
| 2. InterLATA | $194.33 | $4.00 |

B. DS-1 Service

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $772.24 | $119.74 |
| 2. InterLATA | $731.59 | $113.44 |

C. DS-3 Service (Electrical Interface)

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $6,574.00 | $2,648.60 |
| 2. InterLATA | $6,228.00 | $2,509.20 |

D. OC-3 Service

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | ICB | ICB |
| 2. InterLATA | ICB | ICB |

* All services assume interoffice transport. If no interoffice transport is required, discounts may be offered

## SECTION 6: SPECIAL ACCESS SERVICES

6.4 Rates and Charges (cont'd.)

6.4.2 Monthly Recurring Charges (cont'd.)

E. Other Charges

| A. Multiplexing | Recurring | Nonrecurring |
|---|---|---|
| 1 M 1/0 | ICB | ICB |
| 2 M 1/3 3 OC-3/DS-2 | ICB | ICB |
| 4 OC-3/DS-3 | ICB | ICB |
| | ICB | ICB |

6.4.3 Customer Entrance Facility Charges

Customer Entrance Facility Charges apply to connections between the Company POP and a Customer POP. These facilities may be between two different buildings or between the Company's suite connected to an OTC suite in the same building. Since costs vary widely by location, the Customer Entrance Facility Charges will be determined on an Individual Case Basis. All other construction charges and individual case basis charges incurred by the Company will be passed through to the Customer.

6.4.4 Special Construction

Charges for Special Construction will be determined on an Individual Case Basis, in accordance with the terms set forth in Section 14.1.



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## SECTION 6: SPECIAL ACCESS SERVICES

6.4 Rates and Charges (cont'd.)

6.4.5 Time and Materials Service

| | |
|---|---|
| Monday through Friday<br>8:00 AM to 5:00 PM, excluding<br>Company-recognized holidays | $112.50 per hour, 4 hour minimum |
| All other times and days | $150.00 per hour, 4 hour minimum |

Maintenance Charges

Trouble Assistance Ticket per dispatch (work limited to recovery of downed circuits or equipment, not new installations)

| | |
|---|---|
| Monday through Friday<br>8:00 AM to 5:00 PM | $75.00 per hour, 4 hour minimum |
| After hours | $95.00 per hour, 4 hour minimum |

## SECTION 7: EXCHANGE SERVICES

7.1 Description

Exchange Services are offered to other Local Service Providers (OTCs) and involve the Company's providing link services and transport (Extended Link Service) to the OTC switch. In this offering, the Company will provide DS-0 links or DS-1 links (higher speed if available) from the Company's facility in the serving wire center to the end user premises and will also provide DS-0 or DS-1 (higher speed if available) transport from the Company's facility in the serving wire center to the OTC switch. The local loop facilities would be furnished by the Company, the prevailing Incumbent Local Telephone Company or an alternative local access provider, either solely or in combination. The OTC would be responsible for provision of the switch functionality, including local interconnection trunking, dial tone, vertical features, 911, operator services, etc.

## SECTION 7: EXCHANGE SERVICES

7.2 Nonrecurring Charges

| | DS-0 | DS-1 | DS-3 | OC-3 |
|---|---|---|---|---|
| New Order Installation | $475.00 | $1,000.00 | $3,000.00 | $8,000.00 |
| Change of Requested Service Date – 1st* | Free | Free | Free | $2,000.00 |
| Change of Requested Service Date – 2nd or more* | $400.00 | $400.00 | $400.00 | 3,000.00 |
| Order Change (Pre-Engineering) | $200.00 | $200.00 | $200.00 | $1,000.00 |
| Order Change (Post-Engineering) | $400.00 | $800.00 | $1,200.00 | $3,000.00 |
| Order Cancellation (Pre-Engineering) | $400.00 | $500.00 | $500.00 | $1,000.00 |
| Order Cancellation (Post-Engineering) | $400.00 | $800.00 | $3,000.00 | $3,500.00 |
| ASR (New or Disconneect) Special Access | $500.00 | $500.00 | $500.00 | $500.00 |
| ASR Supplement | $300.00 | $300.00 | $300.00 | $300.00 |
| Order Expedite | $600.00 | $600.00 | $600.00 | $600.00 |
| Reconfiguration | $400.00 | $800.00 | $2,500.00 | $5,000.00 |

* Customer must notify Pathnet of service date changes 45 days prior to due date. Service date changes can be extended a maximum of 30 days after due date. Service date changes for OC-3 bandwidths are restricted to one change, after which the order will be subject to all recurring and nonrecurring charges applicable to the service billing.

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## SECTION 7: EXCHANGE SERVICES

7.3 Monthly Recurring Charges

A. DS-0 Service

I. 2-Wire

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $140.79 | $4.22 |
| 2. InterLATA | $133.38 | $4.00 |

II. 4-Wire

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $205.12 | $4.22 |
| 2. InterLATA | $194.33 | $4.00 |

B. DS-1 Service

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $772.24 | $119.74 |
| 2. InterLATA | $731.59 | $113.44 |

C. DS-3 Service (Electrical Interface)

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | $6,574.00 | $2,648.60 |
| 2. InterLATA | $6,228.00 | $2,509.20 |

D OC-3 Service

| | Monthly Fixed Charge | Per Mile |
|---|---|---|
| 1. IntraLATA | ICB | ICB |
| 2. InterLATA * | ICB | ICB |

* All services assume interoffice transport. If no interoffice transport is required, discounts may be offered.

## SECTION 8: RESOLD LOCAL EXCHANGE SERVICE

8.1 Description

Resold Local Exchange Service is composed of the resale of exchange access lines and local calling provided by other certificated Local Exchange Carriers, in combination with Company-provided usage, transport, miscellaneous services or interstate/international services.

Pathnet does not offer this service at this time.



Richard A. Jalkut, President & CEO
1015 31st Street, NW
Suite 500
Washington, DC 20007

SECTION 9:

RESERVED FOR FUTURE USE

SECTION 10:

RESERVED FOR FUTURE USE



Richard A. Jalkut, President & CEO
1015 31st Street, NW
Suite 500
Washington, DC 20007

## SECTION 11:

RESERVED FOR FUTURE USE



Richard A. Jalkut, President & CEO
1015 31st Street, NW
Suite 500
Washington, DC 20007

## SECTION 12: OTHER SERVICE ARRANGEMENTS

12.0 Other Service Arrangements

This Section reserved for Other Service Arrangements.

## SECTION 13: MISCELLANEOUS SERVICES

13.0 Reserved For Future Use



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1015 31st Street, NW
Suite 500
Washington, DC 20007

## SECTION 13: MISCELLANEOUS SERVICES

### 13.1 Restoration of Service

A restoration charge applies to the re-establishment of service and facilities suspended because of nonpayment of bills and is payable at the time that the re-establishment of the suspended service and facilities is arranged. The restoration charge does not apply when, after disconnection of service, service is later re-established upon payment of all applicable installation charges. The following rates apply per occasion:

| | Non-Recurring |
|---|---|
| Per occasion | $50.00 |

### 13.2 Service Trip Charge

If an on-premise visit by the Company is required for trouble or service difficulties not resulting from Company-provided equipment, a Service Trip Charge and reasonable hourly charges of the technician may be assessed to the Subscriber for the visit by the Company. Rates apply per visit:

| | Non-Recurring |
|---|---|
| Per visit | $50.00, plus hourly charges as set forth in Section 5.4 |

## SECTION 14: SPECIAL ARRANGEMENTS

### 14.1 Special Construction

#### 14.1.1 Basis for Charges

Where the Company furnishes a facility or service for which a rate or charge is not specified in the Company's tariffs, charges will be based on the costs incurred by the Company and may include:

A) non-recurring type charges;

B) recurring type charges;

C) termination liabilities; or

D) combinations thereof.

#### 14.1.2 Basis for Cost Computation

The costs referred to in Section 14.1.1 preceding may include one or more of the following items to the extent they are applicable:

A) cost installed of the facilities to be provided including estimated costs for the rearrangements of existing facilities. Cost installed includes the cost of:
   1) equipment and materials provided or used,
   2) engineering, labor and supervision,
   3) transportation, and
   4) rights of way;

B) cost of maintenance;

C) depreciation on the estimated cost installed of any facilities provided, based on the anticipated useful service life of the facilities with an appropriate allowance for the estimated net salvage;

D) administration, taxes and uncollectible revenue on the basis of reasonable average costs for these items;

E) license preparation, processing and related fees;

F) tariff preparation, processing and related fees;

G) any other identifiable costs related to the facilities provided; or

H) an amount for return and contingencies.



Richard A. Jalkut, President & CEO
1015 31st Street, NW
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Washington, DC 20007

## SECTION 14: SPECIAL ARRANGEMENTS

14.2 Individual Case Basis (ICB) Arrangements

Arrangements will be developed on a case-by-case basis in response to a bona fide request from a Customer or prospective Customer to develop a competitive bid for a service offered under this tariff. Rates quoted in response to such competitive requests may be different than those specified for such services in this tariff. ICB rates will be offered to the Customer in writing and on a non-discriminatory basis.

## SECTION 14: SPECIAL ARRANGEMENTS

14.3 Temporary Promotional Programs

The Company may establish temporary promotional programs wherein it may waive or reduce non-recurring or recurring charges to introduce present or potential Customers to a service not previously received by those Customers.

# EXHIBIT F

## Technical and Managerial Qualifications

# DESCRIPTION OF PATHNET'S MANAGERIAL AND TECHNICAL RESOURCES

Pathnet is a carrier's carrier providing high quality, low-cost, digital telecommunications capacity to under-served and second- and third-tier U.S. markets. Using an integrated strategy, Pathnet is building its digital network employing both wireless and fiber-optic technologies. Pathnet's digital network provides:

- Low Cost: Pathnet gives carriers a low-cost access option.
- High Quality: The network is designed and engineered to deliver greater than 99.999% network reliability on any individual path with an average bit error rate of no greater than $10^{-13}$.
- National Network: Pathnet currently has 2,100 route miles of completed network, 4,600 route miles of network under construction and 7,800 route miles of network under commitment.
- Unique Rights-of-Way: Strong affiliations with owners of telecommunications assets provide Pathnet's unique route paths.
- Access to New Markets: Provides under-served and second- and third-tier markets with a robust digital infrastructure enhancing capacity for telecommunications services.

Founded in 1995, Pathnet's wireless network evolved out of a FCC regulatory action that required hundreds of private microwave network operators to reconfigure their networks by relocating to a different part of the spectrum. Pathnet partnered with owners of telecommunications assets, including utility, pipeline and railroad companies, to upgrade and aggregate existing infrastructure to a state-of-the-art SONET network.

Due to demand and opportunity, Pathnet recently expanded the scope of its initial business strategy to include fiber. The company continues to rely on its traditional partnering approach for rights-of-way throughout the U.S. By broadening these partnering arrangements to include fiber, Pathnet is able to offer customized builds to service providers. Pathnet's fiber product line delivers bandwidth services, as well as dark or dim fiber to customers requiring dedicated network services in under-served and second- and third-tier markets. Pathnet offers telecommunications service to inter-exchange carriers, local exchange carriers, Internet service providers, Regional Bell Operating Companies, cellular operators and resellers.

Applicant's Management Team:

**Richard A. Jalkut, President and Chief Executive Officer:** Richard Jalkut has over 30 years experience in the telecommunications industry, most recently as President and Group Executive of NYNEX Telecommunications, where he oversaw a team of more than 60,000 employees and more than $12 billion in revenue. Mr. Jalkut began his career in 1966 at New England Telephone and served in a variety of positions, including Executive Vice President and Chief Operating Officer. In 1990, Mr. Jalkut was named Executive Vice President and Chief Operating Officer of New York Telephone Co., Inc.,

the predecessor to NYNEX Telecommunications Group. He was appointed President and Chief Executive Officer in 1991. In 1995, Mr. Jalkut assumed responsibility for the entire NYNEX Telecommunications Group where he served as President and Group Executive. He retired from NYNEX in August 1997. Mr. Jalkut holds a B.A. in Political Science and Economics from Boston College.

**James M. Craig, Executive Vice President, Chief Financial Officer and Treasurer:** James Craig brings 22 years of accounting and finance experience to Pathnet with 15 years specifically in the telecommunications industry. Formerly the Senior Director of Treasury Management for Omnipoint Communications, Mr. Craig was responsible for corporate planning and forecasting. He also served as a point of contact for investment banks, sell-side analysts and rating agencies. Prior to that, Mr. Craig assisted in the launch of two start-up telecommunications companies, UniSite and National Telecom PCS, Inc. As part of his role with UniSite, he established regional and national alliances between UniSite and telecommunications tower owners. Mr. Craig also spent a total of 11 years with MCI, holding positions such as Director of Wireless Communications, Director of Corporate Development, Director of Telecommunications Group Planning and Director of Corporate Treasury Group. Mr. Craig received his undergraduate degree from the State University of New York at Buffalo and a Masters degree from the Northwestern University School of Management.

**Robert A. Rouse, Executive Vice President, President of Network Services:** Robert Rouse joins Pathnet with over 30 years experience in the telecommunications industry. Prior to Pathnet, Mr. Rouse was Executive Vice President of Intermedia responsible for network services, engineering and systems. Prior to that, he spent over 10 years with MCI - the last three as Senior Vice President of Network Services for MCI/Concert. In this position, he was responsible for integrating the network and product functionality between MCI and British Telecom as well as building global networks. Before joining MCI in 1986, Mr. Rouse spent a total of 17 years with Frontier where he was involved in a series of their unregulated start-up business ventures, including a key role in developing Frontier's long distance company. Mr. Rouse received a B.A. in History from the University of Rochester.

**William R. Smedberg V, Executive Vice President of Corporate Development:** William Smedberg joined Pathnet as a consultant in 1996 and was named Vice President, Finance and Corporate Development in January 1997. Before Pathnet, Mr. Smedberg served in various financial planning positions at the James River Corporation of Virginia, Inc., for nine years. In particular, he served as Director, Strategic Planning and Corporate Development for Jamont, a European consumer products joint venture among Nokia Oy, Montedison S.p.A. and James River, where he was responsible for Jamont's corporate finance, strategic planning and corporate development. Earlier, Mr. Smedberg worked in the defense industry as a consultant and engineer for TRW, Inc. Mr. Smedberg received both a B.S. and M.B.A. from the University of Virginia.

**Shawn F. O'Donnell, Senior Vice President of Engineering and Construction:** Shawn O'Donnell joined Pathnet with more than 14 years of engineering experience within the telecommunications industry. Prior to joining the Pathnet team, Mr. O'Donnell served as Director of Transmissions and Facility Standards and Engineering with MCI WorldCom. In his position as Director, he was in charge of a 340+ person team that was responsible for overall transmission and facility engineering for local, long distance and Internet networks. He also held a variety of other positions, including Senior Manager of Transmission Engineering Implementation and Senior Manager of Switched Network Planning. Before that, Mr. O'Donnell was a Control Engineer with Potomac Edison. While there, he was responsible for the management of communications networks associated with high voltage control systems. Mr. O'Donnell holds a B.S. in Electrical Engineering from Pennsylvania State University and a M.S. in Electrical Engineering from Virginia Polytechnic and State University.

**Gerry Sharp, Vice President and Chief Technology Officer:** Gerry Sharp brings to Pathnet over 18 years of telecommunications experience, most recently as Senior Director of Architecture and Strategic Planning with Intermedia Communications. Prior to Intermedia, Mr. Sharp worked with Bell South.net, the State of Florida Division of Communications and USWest. While at Intermedia, Mr. Sharp worked with VOIP implementation and provided design direction for both VPN and IP Internet services. In his prior positions, he also developed a strategic transport service model using DSL, ATM and fiber-based solutions to reduce access cost via common UNE access and shared LATA aggregation, and designed dedicated Internet access links to integrated ATM, voice and data services. Mr. Sharp received his undergraduate degree in Electrical Engineering from Metropolitan State College in Denver, Colorado.

**Chuck Liggett, Senior Vice President and Chief Marketing Officer:** Chuck Liggett comes to Pathnet from Concert Global Communications as its Vice President Portfolio Development and Strategy. In his position with Global Communications, Mr. Liggett was responsible for Concert's next generation programs. His team defined Concert's convergent voice and data portfolio and the infrastructure over which those services would be delivered and was responsible for defining in-country access strategies and migration to electronic web based customer care. Additionally, Mr. Liggett represented Concert in British Telecom deliberations regarding business and technology strategy and was heavily involved in planning for the global venture with AT&T. During his tenure at Concert, he also held the positions of Director of Broadband Services Marketing and Senior Manager of Data and Value Added Services Marketing. Prior to Concert, Mr. Liggett was employed by BT Tymnet/BT North America where he held the position of Northeast Regional Sales Manager. Mr. Liggett holds an undergraduate degree from Dartmouth College and an M.B.A. in Finance from New York University.

**Michael A. Lubin, Vice President, General Counsel and Secretary:** Michael Lubin has served as Vice President, General Counsel and Secretary of Pathnet since its inception. Before joining Pathnet, Mr. Lubin was an attorney-at-law at Michael A. Lubin, P.C., a law firm he founded in 1985. Mr. Lubin has experience in telecommunications matters, regulatory and intellectual property matters, corporate and commercial law, corporate finance, administration and trial work. Earlier, he served as a Federal Prosecutor

with the Fraud Section, Criminal Division, United States Department of Justice. Mr. Lubin received his undergraduate degree from Lafayette College and his J.D. from the University of Miami School of Law.

**Robert C. Ferry, Chief Information Officer:** Robert Ferry brings to Pathnet over 16 years of telecommunications, technology and corporate development experience. Formerly the Chief Technology Officer for Sector Communications, he set the technical direction for two European-based subsidiaries (telecommunications services and systems management software), managed the local area network and data communications systems, and oversaw the North American marketing and sales efforts. Prior to Sector, Mr. Ferry founded and was President of the technology consulting firm, Insight Information, and served as Director of Information Systems for Temps & Co. Mr. Ferry was educated at Purdue University in West Lafayette, Indiana.

**William E. Cotta, Vice President of Operations:** William Cotta has over 25 years experience in the telecommunications industry in the areas of network operations, customer service support, billing system operations, network construction and engineering. Prior to joining Pathnet, Mr. Cotta was Vice President and General Manager at Nynex where he managed a 2,500 person business unit with responsibilities for business and residential service operations, construction, engineering as well as business unit profitability. Mr. Cotta holds a B.S. in Electrical Engineering and an M.B.A. from Northeastern University.

**Joseph A. Mastrogiorgio, Vice President of Marketing:** Joseph Mastrogiorgio is a 19-year telecommunications industry veteran who comes to Pathnet after 10 years at MCI in sales and marketing. At MCI, he served as Managing Director of Enterprise Solutions for MCI Systemhouse and directed business development activities for new product solutions, leveraging MCI and Systemhouse core capabilities. Prior to working with Systemhouse, he was Director of Channel Management for MCI's Integrated Services Division and responsible for managed data network sales. Mr. Mastrogiorgio received a B.A. from Stonehill College and an M.B.A. from Fordham University.

**Michael R. Van Zetta, Vice President of Sales:** Michael Van Zetta joined Pathnet with over 19 years of sales and marketing experience in communications and the media technologies industry. Before joining Pathnet, Mr. Van Zetta was Regional Vice President of Carrier Sales at Frontier Corporation, Vice President of Sales for Winstar and Comsat, and Director of Sales and National Accounts Marketing at MCI. Mr. Van Zetta's media, long distance, wireless and data experience helps Pathnet fill the market demand for SONET-based wireless solutions. Mr. Van Zetta holds a B.S. in Engineering from the United States Military Academy and an M.B.A. from the University of Dallas.

**Tara L. Quinnette, Director of Human Resources:** Tara Quinnette has 10 years experience in human resources and operations in the communications industry. Before joining Pathnet, Ms. Quinnette was Director of Human Resources at CNN-Washington, DC and Operations Manager for Potomac Televisions Services, Inc. at CNN. A Certified Professional in Human Resources (PHR), she has a broad range of

experience in line management, employee/labor relations, training development, benefits and payroll administration. Ms. Quinnette received her undergraduate degree from Indiana University-Bloomington.

Applicant's Technical Resources:

Pathnet is engineering its network for maximum system reliability by using only the best system components and incorporating the latest technological standards. Applicant's network is designed and engineered to achieve greater than 99.999% network reliability on any individual path with an average bit error rate of no greater than $10^{-13}$ and conforms to the most stringent industry standards. All of Applicant's vendor partners have passed Pathnet's stringent quality threshold requirements. Applicant's two primary vendors are Lucent Technologies and NEC.

***Lucent Technologies TrueWave® RS Fiber***
***Application Based Fiber Design for Long Distance, High Bit Rate Systems***

Lucent Technologies TrueWave® RS (reduced slope) single optical fiber with reduced dispersion slope is the industry's first nonzero-dispersion fiber (NZDF) designed specifically for long distance, high bit rate systems supporting the maximum number of channels operating in both the third and fourth wavelength windows. Today's optically amplified dense wavelength division multiplexing (DWDM) systems operate in the 1530 to 1620 nm window while emerging systems are also likely to utilize the 1565 to 1620 nm window.

The low dispersion slope of TrueWave RS fiber allows both today's and emerging systems to take maximum advantage of the intrinsic capacity of fiber by supporting the largest number of channels in each wavelength band over very long distances.

With TrueWave RS Fiber, Lucent Technologies continues its technology innovation Wave that began with the patented and award winning TrueWave fiber. Specifically, TrueWave RS fiber is unique from other nonzero-dispersion fibers by having:

- Lowest dispersion slope across the third and fourth windows
- Half the dispersion variation of large area NZDF's
- Best performance for long distance systems with large numbers of channels

These characteristics translate into greater information capacity for the network. When installing for today's network, you need fiber that can optimally operate with transmission systems available today and those being demonstrated in research laboratories. Lucent Technologies has demonstrated 1000 Gb/s transmission on TrueWave fiber using wavelengths up to 1620 nm.

*TrueWave® is a registered trademark of Lucent Technologies Inc*

*NEC 2000 Series SONET Digital Microwave Radios*

NEC's 2000 Series SONET digital microwave radios have a unique implementation of a protection scheme which provides the most capacity available in the smallest amount of space. Commonly referred to as 1xN, this protection scheme utilizes one RF channel to back-up multiple operational channels. NEC's implementation of this protection scheme provides one protection channel for seven operational channels in just two bays of equipment. One radio bay only occupies a 23" x 12" footprint. Each operational channel carries an OC-3 signal, or the equivalent of 2,016 simultaneous voice channels. In a 1x7 configuration, this translates to 14,112 simultaneous voice channels.

Another feature that attracted Pathnet to the NEC 2000 Series is its unique cross polarization interference canceller (XPIC) feature. Through proprietary engineering advancements, NEC's digital microwave radio provides greater cross polarization discrimination, allowing for the transmission of two OC-3 signals on the same frequency pair by using opposite polarities. Now, instead of being limited to seven RF channels carrying one OC-3 per channel in the 6GHz band, NEC's radios provide up to 14 OC-3s, doubling capacity in an already small space.

- SONET/SDH platform
- Greater than 99.999% path reliability, Bellcore Industry Standard
- More cost effective than fiber in certain target markets
- 1xN protection creating maximum availability and survivability
- Modular system, allowing for easy upgrades and maintenance while providing multiple OC-3 RF channels in one standard bay
- Each node, which is typically 25 miles apart, is capable of drop/insert multiplexing
- Both frequency and space diversity is incorporated into the network
- The network platform is designed for maximum flexibility for voice, data and video services

Network Operations Center

Once a network is operational, Pathnet's 24-hour, 7-day-a week Network Operations Center (NOC) begins monitoring each route. The installed surveillance and alarm system ensures the equipment operates with maximum reliability

- Single point of contact with technical service consultant
- Tier 2 technical support utilizing co-located equipment lab
- Tier 3 technical help desk
- Both fault and performance analysis positions staffed in the NOC
- Proactive customer notification and network events

START

OF

RETAKE

*NEC 2000 Series SONET Digital Microwave Radios*

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- Single point of contact with technical service consultant
- Tier 2 technical support utilizing co-located equipment lab
- Tier 3 technical help desk
- Both fault and performance analysis positions staffed in the NOC
- Proactive customer notification and network events

- TMN Compliant Element Management System
- Redundant Data Telemetry Network
  - Monitored from NOC
  - Frame relay/Cisco routers
- NOC supported by dedicated onsite backup generator
- Disaster Recovery NOC established

TC00-018

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PIERRE, SD 57501-5070

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THIS DOCUMENT CONTAINS A VERIFICATION FEATURE. HOLD AT AN ANGLE TO VIEW.

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END

OF

RETAKE

South Dakota Public Utilities Commission

# WEEKLY FILINGS

For the Period of February 10, 2000 through February 16, 2000

If you need a complete copy of a filing faxed, overnight expressed, or mailed to you, please contact Delaine Kolbo within five business days of this filing.
Phone: 605-773-3705 Fax: 605-773-3809

## CONSUMER COMPLAINTS

**CT00-036 In the Matter of the Complaint filed by Fred Prahl on behalf of Windows, Inc., DeSmet, South Dakota, against Inacom Communications, Inc. and U S WEST Communications, Inc. Regarding Unauthorized Switching of Services.**

On February 10, 2000, the Commission received a complaint regarding unauthorized switching of service against Inacom Corp. and U S WEST. Windows, Inc. discovered that their phone service had been switched from 6 phone lines with hunting capabilities to the U S WEST Centrex 21 system on December 2, 1999. The complainant alleges Inacom obtained their signature to "verify that US West was the phone carrier for Windows, Inc." not to authorize a change in their telephone service. The complainant is requesting "to see this practice ended by taking away the licenses of the companies misrepresenting themselves in this manner and to prosecute persons representing these companies."

Staff Analyst: Heather Forney
Staff Attorney: Keren Cremer
Date Docketed: 02/10/00
Intervention Date: NA

**CT00-037 In the Matter of the Complaint filed by Cheryl Plucker, Chancellor, South Dakota, against MCI WorldCom Regarding Unauthorized Switching of Services.**

On February 11, 2000, the Commission received a complaint from Cheryl Plucker, Chancellor, South Dakota, against MCI regarding unauthorized switching of services. The complainant alleges that her long distance provider was switched to MCI without her authorization.

Staff Analyst: Keith Senger
Staff Attorney: Karen Cremer
Date Docketed: 02/14/2000
Intervention Date: N/A

**EL00-003 In the Matter of the Filing by Montana-Dakota Utilities Co. for Approval of Waiver of Fuel Clause Rate 58 to Include Arbitration Costs.**

Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc., petitions the South Dakota Public Utilities Commission for a waiver of Fuel Clause Rate 58. The waiver is

**TC00-012** **In the Matter of the Filing by U S WEST Communications, Inc. for Approval of Revisions to its Exchange and Network Services Tariff.**

On February 10, 2000, U S WEST Communications, Inc. (U S WEST) filed an application for approval of revisions to its exchange and network services tariff. The purpose of the filing is to clarify the meaning of a fully assisted operator call and a partially assisted operator call. Rates will not be increased by this filing.

Staff Analyst: Heather Forney
Staff Attorney: Camron Hoseck
Date Docketed: 02/10/00
Intervention Date: 03/03/00

**TC00-013** **In the Matter of the Application of Adelphia Business Solutions Operations, Inc. for a Certificate of Authority to Provide Local Exchange Services in South Dakota.**

Adelphia Business Solutions Operations, Inc. is seeking a Certificate of Authority to provide resold and facilities-based local exchange telecommunication services in South Dakota. Adelphia does not intend to provide service in the territories of rural telecommunication companies.

Staff Analyst: Keith Senger
Staff Attorney: Camron Hoseck
Date Docketed: 02/10/00
Intervention Date: 03/3/00

**TC00-014** **In the Matter of the Application of Comm South Companies, Inc. for a Certificate of Authority to Provide Local Exchange Services in South Dakota.**

Comm South Companies, Inc. seeks to provide resold basic local exchange telecommunication services in areas of South Dakota currently served by U S WEST Communications and any other relevant incumbent facilities-based LEC or other authorized local exchange carrier, excluding service areas of rural telephone companies. A majority of the applicant's customers are residential consumers who are unable to obtain local telecommunication services from other local exchange carriers due to credit problems or prior disconnection. Services will include local calling, access to 911 emergency and 800 number services to residential customers on a prepaid basis. Applicant does not permit its customers of its local service to access usage-based services, such as direct-dial long distance calls, collect calls, operator-assisted calls and third-number billed calls.

Staff Analyst: Keith Senger
Staff Attorney: Camron Hoseck
Date Docketed: 02/10/00
Intervention Date: 03/03/00

TC00-018 **In the Matter of the Application of Pathnet, Inc. for a Certificate of Authority to Provide Telecommunications Services in South Dakota.**

Pathnet, Inc. is seeking a Certificate of Authority to provide resold and facilities-based interexchange telecommunication services in South Dakota. Pathnet intends to provide point to point private line and data services.

Staff Analyst: Keith Senger
Staff Attorney: Camron Hoseck
Date Docketed: 02/16/00
Intervention Date: 03/03/00

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MWILLIAMS@COV.COM

March 10, 2000

RECEIVED
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SOUTH DAKOTA PUBLIC
UTILITIES COMMISSION

VIA FEDERAL EXPRESS
Mr. William Bullard
Executive Director
South Dakota Public Utilities Commission
500 E. Capitol Avenue
Pierre, SD 57501-5070

**Re: SD PUC Dockets TC00-017 and TC00-018**
**Applications of Pathnet, Inc. for Certificates of Authority to Provide Local Exchange and Interexchange Telecommunications Services**

Dear Mr. Bullard:

Submitted herewith for filing, on behalf of Pathnet, Inc. ("Pathnet"), are an original and three (3) copies of Pathnet's response to the March 1, 2000 data request of Keith Senger, Utility Analyst. The questions and suggested changes included in the data request, followed by Pathnet's responses, are set forth below:

1. In order to protect South Dakota customers, the South Dakota Public Utilities Commission (SD PUC) requires applicants with unknown or marginal financial capabilities to submit a bond naming the South Dakota Public Utilities Commission and the consumers of South Dakota as beneficiaries. Based on the financial information received, the applicant has not demonstrated adequate financial capability; therefore, I am requesting that the applicant submit a $25,000 surety bond. The bond requirement will be placed in the Commission order granting authority. The applicant is free to apply to the Commission for removal of the bond requirement once financial capability improves or is made known.

   Pathnet does not object to the inclusion of a $25,000 surety bond requirement in the order granting the requested Certificates of Authority. However, as stated in the data request, Pathnet reserves the right to apply to the Commission for removal of the bond requirement upon demonstration of adequate financial ability.

2. The applications state that marketing material will be submitted once the Applicant has finalized its marketing plan. The applications can not be processed until that information is received or until the Applicant submits a written request for waiver. When will the marketing plan be finalized? I suggest that the applicant request a waiver from ARSD 20:10:24:02(11) and 20:10:32:03(15) with reasons as stated in the application as justification if it will be more than 30 days before the plan is finalized.

**With respect to its Application for a Certificate of Authority to Provide Local Exchange Service, Pathnet hereby requests a waiver of the requirement in ARSD 20:10:32:03(15) that it provide a description of its plans for marketing its services in South Dakota. Pathnet is still in the process of refining its business and marketing plan with respect to South Dakota, and accordingly is not yet in a position to submit its marketing plan to the SD PUC. Once Pathnet has finalized its marketing plan, it will provide the PUC with a description of its plans.**

**With respect to its Application for a Certificate of Authority to Provide Interexchange Service, Pathnet hereby requests a waiver of the requirement in ARSD 20:10:24:02(11) that it provide a description of its plans for marketing its services in South Dakota. Pathnet is still in the process of refining its business and marketing plan with respect to South Dakota, and accordingly is not yet in a position to submit its marketing plan to the SD PUC. Once Pathnet has finalized its marketing plan, it will provide the PUC with a description of its plans.**

3 ARSD 20:10:24:02(12) and ARSD 20:10:32:03(14) ask for cost supports for all noncompetitive or emerging competitive services. The applications state that Pathnet's proposed services are competitive and ask for a waiver. It is my opinion that you adequately addressed ARSD 20:10:24:02(12) and ARSD 20:10:32:03(14) and no waiver is necessary. With your permission, I would like to present your application without the requested waivers. Does the applicant agree?

**If, as stated, no waiver of the cost support requirements is necessary, Pathnet has no objection to its applications being submitted to the PUC without the above-described waiver requests.**

4 To clarify, is the Applicant seeking authority to provide local exchange services in the area of a rural telephone company (currently any area other than U S WEST territory)? If no, the Commission will place language in the order stating that the authority is subject to rural safeguards. Does the applicant agree?

**Pathnet does not object to the inclusion of language in the order stating that the authority granted is subject to rural safeguards. Should Pathnet seek in the future to provide service in the area of a rural telephone company, it will seek authority to do so through appropriate channels at the PUC.**

5 Item 10 of the local exchange application (TC00-017) states:

> *At this time, Applicant does not intend to offer local exchange dial tone services directly to end users, and thus will not be responsible for providing access to emergency services, such as 911 or enhanced 911, operator service, directory assistance, and telecommunications relay services. If Applicant offers dial tone services at any point in the future, it will take all necessary steps to ensure that its customers have access to*

*emergency services, operator services, directory assistance and telecommunications relay services.*

Please provide a written request for waiver of ARSD 20:10:32:03(10). Additionally, because this language is not provided, the Commission will place language in its order restricting Applicant from offering "dial tone services." Applicant is free to apply to the Commission for removal of this restriction once the information is provided.

**With respect to its Application for a Certificate of Authority to Provide Local Exchange Service, Pathnet hereby requests a waiver of the requirement in ARSD 20:10:32:03(10) that it include information describing how it will provide emergency services, operator services, directory assistance and telecommunications relay services. Pathnet will not be providing dial tone service to end users, and accordingly will not be in a position to provide these services. Pathnet does not object to the inclusion of language in the order restricting Pathnet from offering "dial tone services." However, Pathnet reserves the right in the future to request the removal of this restriction upon provision of the required information.**

6. Please increase the customer dispute period in Section 2.8.2.G of the proposed tariff from 30 to 180 days.

**Attached please find Page 30 of Pathnet's proposed South Dakota Tariff No. 1. Section 2.8.2(G) has been revised to increase the customer dispute period from 30 to 180 days.**

7. Please include a paragraph(s) in section 2 of the tariff that specifically addresses disputed charges. This language should include a statement informing the customer of their right to file a complaint with the Commission. Please also include the Commission's address and both toll free numbers as listed on our letterhead. The section should give the customer a minimum of 180 days to dispute charges on bills.

**Attached please find Page 30 of Pathnet's proposed South Dakota Tariff No.1. Section 2.8.2.(G) has been revised to include in the information requested.**

8. Pathnet's proposed tariff attempts to limit the liability of the company. Under South Dakota law found at 49-13-1 and 49-13-1.1, a person has the right to claim damages from a telecommunications company by coming before the Commission or a court of competent jurisdiction. Please remove sections 2.2.A, 2.2.H and the last two sentences from section 2.2.E. Additionally, please strike section 2.9.1.D from the tariff. If you have any questions or concerns regarding this issue, please contact Camron Hosedk, staff attorney.

**Attached please find Pages 15, 18 and 35 of Pathnet's proposed South Dakota Tariff No. 1. Sections 2.2(A), 2.2(E), 2.2(H) and 2.9.1(D) have been revised to comply with South Dakota law found at 49-13-1 and 49-13-1.1.**

Enclosed is an additional copy of this response. Please stamp the additional copy and return it to me in the enclosed stamped, self-addressed envelope as an acknowledgement of receipt.

Please direct any questions to the undersigned.

Respectfully submitted,

Gerard J. Waldron
Mary Newcomer Williams
*Attorneys for Pathnet, Inc.*

Enclosures

cc: Keith Senger, Utility Analyst (via facsimile and FedEx)
Camron Hoseck, PUC Staff Attorney (via facsimile and FedEx)

## SECTION 2: REGULATIONS

2.8 Payment Arrangements (cont'd.)

2.8.2 Billing and Collection of Charges (cont'd.)

D) Billing of the Customer by the Company will begin on the Service Commencement Date, which is the day on which the Company notifies the Customer that the service or facility is available for use, except that the Service Commencement Date may be postponed by mutual agreement of the parties, or if the service or facility does not conform to standards set forth in this tariff or the Service Order. Billing accrues through and includes the day that the service, circuit, arrangement or component is discontinued

E) If any portion of the payment is received by the Company after the date due, or if any portion of the payment is received by the Company in funds which are not immediately available upon presentment, then a late payment penalty shall be due to the Company. The late payment penalty shall be the portion of the payment not received by the date due, multiplied by a late factor. The late factor shall be the lesser of:

1) a rate of 1.5 percent (1.5%) per month; or

2) the highest interest rate which may be applied under state law for commercial transactions.

F) The Customer will be assessed a charge of twenty-five dollars ($25.00) for each check submitted by the Customer to the Company which a financial institution refuses to honor.

G) Customers have up to 180 days (commencing 5 days after remittance of payment) to initiate a dispute over charges or to receive credits. In the event the Company and the Customer are not able to resolve a dispute, the Customer has the right to file a complaint with the South Dakota Public Utilities Commission, State Capital Building, 500 East Capital Avenue, Pierre, SD 57501-5070, (800) 332-1782 (Consumer Hotline) or (800) 877-1113 (TTY Through Relay South Dakota).

H) If service is disconnected by the Company in accordance with Section 2.8.3 following and later restored, restoration of service will be subject to all applicable installation charges.

I) All state and local taxes (i.e., gross receipts tax, sales tax, municipal utilities tax) are listed as separate line items and are not included in the quoted rates.

## SECTION 2: REGULATIONS

2.2 Liability of the Company

A) Except as otherwise stated in this tariff, the liability of the Company for damages arising out of the furnishing of its services, including but not limited to mistakes, omissions, interruptions, delays, or errors, or other defects, representations, or use of these services or arising out of the failure to furnish the service, whether caused by acts or omission, shall be limited to the extent permitted under applicable South Dakota law.

B) The Company shall not be liable for any delay or failure of performance or equipment due to causes beyond it control, including but not limited to: acts of God, fire, flood, explosion or other catastrophes; any law, order, regulation, direction, action, or request of the United States Government or of any other government including state and local governments having or claiming jurisdiction over the Company, or of any department, agency, commission, bureau, corporation, or other instrumentality of any one or more of these federal, state, or local governments, or of any civil or military authority; national emergencies; insurrections; riots; wars; unavailability of rights-of-way or materials; or strikes, lock-outs, work stoppages, or other labor difficulties.

C) The Company shall not be liable for:

1) any act or omission of any entity furnishing to the Company or to the Company's Customers facilities or equipment used for interconnection with the Company's network; or

2) the acts or omissions of common carriers or warehousemen.

D) The Company shall not be liable for any damages or losses due to the fault or negligence of the Customer or due to the failure or malfunction of equipment or facilities provided by the Customer or third parties.



Richard A. Jalkut, President & CEO
1015 31st Street, NW
Suite 500
Washington, DC 20007

## SECTION 2: REGULATIONS

2.2 Liability of the Company (cont'd.)

E) The Company does not guarantee nor make any warranty with respect to installations it provides for use in an explosive atmosphere. The Company reserves the right to require each Customer to sign an agreement acknowledging acceptance of the provisions of this Section 2.2(E) as a condition precedent to such installations.

F) The Company is not liable for any defacement of or damage to Customer premises resulting from the furnishing of services or equipment on such premises or the installation or removal thereof, unless such defacement or damage is caused by negligence or willful misconduct of the Company's agents or employees.

G) The Company shall be indemnified, defended and held harmless by the Customer from and against all loss, liability, damage and expense, including reasonable attorneys' fees, due to claims for libel, slander, invasion of privacy or infringement of copyright in connection with the material transmitted over the Company's facilities; and any other claim resulting from any act or omission of the Customer or patron(s) of the Customer relating to the use of the Company's facilities.

H) Any action or proceeding against the Company shall be commenced within the timeframe required under applicable South Dakota law.

I) THE COMPANY MAKES NO WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED EITHER IN FACT OR BY OPERATION OF LAW, STATUTORY OR OTHERWISE, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR USE, EXCEPT THOSE EXPRESSLY SET FORTH HEREIN.

SECTION 2: REGULATIONS

2.9 Allowances for Interruptions in Service (cont'd.)

2.9.2 Limitations on Allowances

No credit allowance will be made for:

A) interruptions due to the negligence of, or noncompliance with the provisions of this tariff by, the Customer, authorized User, Joint User, or other common carrier providing service connected to the service of the Company;

B) interruptions due to the negligence of any person other than the Company, including but not limited to the Customer or other common carriers connected to the Company's facilities;

C) interruptions due to the failure or malfunction of non-Company equipment or facilities;

D) interruptions of service during any period in which the Company is not given full and free access to its facilities and equipment for the purpose of investigating and correcting interruptions;

E) interruptions of service during a period in which the Customer continues to use the service on an impaired basis;

F) interruptions of service during any period when the Customer has released service to the Company for maintenance purposes or for implementation of a Customer order for a change in service arrangements;

G) interruptions due to circumstances or causes beyond the control of the Company; and

H) interruptions that occur or continue due to the Customer's failure to authorize replacement of any element of special construction.

COVINGTON & BURLING

1201 PENNSYLVANIA AVENUE NW WASHINGTON, DC
WASHINGTON, DC 20004-2401 NEW YORK
TEL (202) 662-6000 LONDON
FAX (202) 662-6291 BRUSSELS
WWW.COV.COM SAN FRANCISCO

GERARD J. WALDRON
TEL 202-662-5550
FAX 202-778-5550
GWALDRON@COV.COM

April 13, 2000

RECEIVED

APR 14 2000

SOUTH DAKOTA PUBLIC
UTILITIES COMMISSION

**VIA FEDERAL EXPRESS**
Mr. William Bullard
Executive Director
South Dakota Public Utilities Commission
500 E. Capitol Avenue
Pierre, SD 57501-5070

Re: **SD PUC Dockets TC00-017 and TC00-018**
**Applications of Pathnet, Inc. for Certificates of Authority to Provide Local Exchange and Interexchange Telecommunications Services**

Dear Mr. Bullard:

Submitted herewith for filing, on behalf of Pathnet, Inc. ("Pathnet"), are an original and three (3) copies of an indemnity bond to the South Dakota Public Utilities Commission and the consumers of South Dakota in the amount of $25,000. The bond is filed in response to the March 1, 2000 and March 17, 2000 requests of Keith Senger, Utility Analyst.

Enclosed is an additional copy of this letter. Please stamp the additional copy and return it to me in the enclosed stamped, self-addressed envelope as an acknowledgement of receipt.

Please direct any questions to the undersigned.

Returned bond for correction.

Respectfully submitted,

Mary Newcomer Williams

Gerard J. Waldron
Mary Newcomer Williams
*Attorneys for Pathnet, Inc.*

Enclosures

cc: Keith Senger, Utility Analyst (via FedEx)
Camron Hoseck, PUC Staff Attorney (via FedEx)

TC00-018

APR 14 2000

SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

# INDEMNITY BOND
to the
# PEOPLE OF THE STATE OF SOUTH DAKOTA

**Bond No. 10BSBAK5900**

**We, Pathnet Inc., the principal and applicant for a CERTIFICATE OF AUTHORITY to resell long distance telecommunications services within the State of South Dakota, and Hartford Fire Insurance Company, as an admitted surety insurer, bind ourselves unto the Public Utilities Commission of the State of South Dakota and the consumers of South Dakota as Obligee, in the sum of $25,000.00**

**The conditions of the obligation are such that the principal, having been granted such CERTIFICATE OF AUTHORITY subject to the provision that said principal purchase this Indemnity Bond and if said principal shall in all respects fully and faithfully comply with all applicable provisions of South Dakota State Law, and reimburse customers of Pathnet Inc. for any prepayment or deposits they have made which may be unable or unwilling to return to said customers as a result of insolvency or other business failure, then this obligation shall be void, discharged and forever exonerated, otherwise to remain in full force and effect.**

**This bond shall take effect as of the date hereon and shall remain in force and effect until the surety is released from liability by the written order of the Public Utilities Commission, provided that the surety may cancel this Bond and be relieved of further liability hereunder by delivering thirty (30) days written notice to the Public Utilities Commission. Such cancellation shall not affect any liability incurred or accrued hereunder prior to the termination of said thirty 30) day period.**

Dated this 6th day of April 2000.
To be effective this 6th day of April 2000.

Countersigned for South Dakota

Resident Agent
J.M. SCHERSCHLIGT

Pathnet Inc.

BY Mary McDermott

Hartford Fire Insurance Company

BY Pamela K. Rife
Pamela K. Rife, Attorney-In-Fact

Original bond
Returned to
Lisa Agrimonti

# HARTFORD FIRE INSURANCE COMPANY

Hartford, Connecticut

POWER OF ATTORNEY

Know all men by these Presents, That HARTFORD FIRE INSURANCE COMPANY, a corporation duly organized under the laws of the State of Connecticut, and having its principal office in the City of Hartford, County of Hartford, State of Connecticut, does hereby make, constitute and appoint

PAMELA K. RIFE, MARK FITZGERALD, ELISABETH MARRERO AND CHRISTINE V. MORENNA OF NEW YORK, NEW YORK

its true and lawful Attorney(s)-in-Fact, with full power and authority to each of said Attorney(s)-in-Fact, in their separate capacity if more than one is named above, to sign, execute and acknowledge any and all bonds and undertakings and other writings obligatory in the nature thereof on behalf of the Company in its business of guaranteeing the fidelity of persons holding places of public or private trust; guaranteeing the performance of contracts other than insurance policies; guaranteeing the performance of insurance contracts where surety bonds are accepted by states and municipalities; and executing or guaranteeing bonds and undertakings required or permitted in all actions or proceedings or by law allowed, in penalties not exceeding the sum of

UNLIMITED

and to bind HARTFORD FIRE INSURANCE COMPANY thereby as fully and to the same extent as if such bonds and undertakings and other writings obligatory in the nature thereof were signed by an Executive Officer of HARTFORD FIRE INSURANCE COMPANY and sealed and attested by one other of such Officers, and hereby ratifies and confirms all that its said Attorney(s)-in-Fact may do in pursuance hereof.

This Power of Attorney is granted under and by authority of the By-Laws of HARTFORD FIRE INSURANCE COMPANY ("the Company") as amended by the Board of Directors at a meeting duly called and held on July 9, 1997, as follows:

ARTICLE IV

SECTION 7. The President or any Vice President or Assistant Vice-President, acting with any Secretary or Assistant Secretary shall have power and authority to sign and execute and attach the seal of the Company to bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and such instruments so signed and executed, with or without the common seal, shall be valid and binding upon the Company.

SECTION 8. The President or any Vice-President or any Assistant Vice President acting with any Secretary or Assistant Secretary, shall have power and authority to appoint, for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, one or more resident Vice Presidents, resident Assistant Secretaries and Attorneys-in-Fact and at any time to remove any such resident Vice-President, resident Assistant Secretary, or Attorney-in-Fact, and revoke the power and authority given to him.

Resolved, that the signatures of such Officers and the seal of the Company may be affixed to any such power of attorney or to any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

In Witness Whereof, HARTFORD FIRE INSURANCE COMPANY has caused these presents to be signed by its Assistant Vice-President, and its corporate seal to be hereto affixed, duly attested by its Secretary, this 17th day of September, 1997.

HARTFORD FIRE INSURANCE COMPANY

Paul A. Bergenholtz, Assistant Secretary

SEAL

Robert L. Post, Assistant Vice President

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss.

On this 17th day of September, A.D. 1997, before me personally came Robert L. Post, to me known, who being by me duly sworn, did depose and say: that he resides in the County of Hartford, State of Connecticut; that he is the Assistant Vice-President of HARTFORD FIRE INSURANCE COMPANY, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that he signed his name thereto by like order.

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss.

Jean H. Wozniak
Notary Public
My Commission Expires June 30, 2004

CERTIFICATE

I, the undersigned, Secretary of HARTFORD FIRE INSURANCE COMPANY, a Connecticut Corporation, DO HEREBY CERTIFY that the foregoing and attached POWER OF ATTORNEY remains in full force and has not been revoked; and furthermore, that Article IV, Sections 7 and 8 of the By-Laws of HARTFORD FIRE INSURANCE COMPANY, set forth in the Power of Attorney are still in force.

Signed and sealed at the City of Hartford. Dated the 6th day of April, 2000.

SEAL

Richard L. Waregne, Jr., Assistant Secretary

J. Dennis Lane, Assistant Vice President

# Hartford Fire Insurance Company

## Hartford, Connecticut

## *Financial Statement, December 31, 1998*

(Statutory Basis)

| ASSETS | | LIABILITIES | |
|---|---|---|---|
| U.S. Government Bonds | $ 151,267,751 | Reserve for Claims and Claim Expense | $ 4,253,661,508 |
| Bonds of other Governments | 356,611,680 | Reserve for Unearned Premiums | 973,071,313 |
| State, County, Municipal and Miscellaneous Bonds | 3,435,224,095 | Reserve for Taxes, Licenses and Fees | 50,971,924 |
| Stocks | 7,495,204,043 | Miscellaneous Liabilities | 902,436,463 |
| Short Term Investments | 287,174,556 | Total Liabilities | $ 6,180,141,208 |
| | $ 11,723,482,125 | | |
| Real Estate | $ 145,104,185 | Capital Paid In ..... $ 55,000,000 | |
| Cash | 51,563,702 | Surplus ..... 8,601,211,052 | |
| Agents' Balances (Under 90 Days) | 0 | | |
| Other Invested Assets | 55,266,834 | Surplus as regards Policyholders | $ 8,417,320,645 |
| Miscellaneous | 2,622,045,007 | Total Liabilities, Capital and Surplus | $ 14,597,461,853 |
| Total Admitted Assets | $ 14,597,461,853 | | |

STATE OF CONNECTICUT
COUNTY OF HARTFORD
CITY OF HARTFORD } ss.

Ramani Ayer, President of the Hartford Fire Insurance Company, being duly sworn, does hereby certify that the foregoing is a correct statement of the assets and liabilities of the said Company as of December 31, 1998, and in witness whereof said President has hereunto signed and caused the corporate seal to be affixed hereto.

Acknowledged and sworn to before me
this 24th day of March, 1999

Jean H. Woznick
*Notary Public*
*My commission expires June 30, 2004*

Attest:

Ramani Ayer, *Chairman & CEO*

Donald J. LaValley, *Assistant Vice-President*

Form CS-10-98 M F Printed in U.S.A.

COVINGTON & BURLING

1201 PENNSYLVANIA AVENUE NW
WASHINGTON, DC 20004-2401
TEL 202.662.6000
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WASHINGTON, DC
NEW YORK
LONDON
BRUSSELS
SAN FRANCISCO

GERARD J. WALDRON
TEL 202.662.5360
FAX 202.778.5360
GWALDRON@COV.COM

April 21, 2000

VIA FEDERAL EXPRESS
Mr. William Bullard
Executive Director
South Dakota Public Utilities Commission
500 E. Capitol Avenue
Pierre, SD 57501-5070

RECEIVED
APR 24 2000
SOUTH DAKOTA PUBLIC
UTILITIES COMMISSION

**Re: SD PUC Dockets TC00-017 and TC00-018**
**Applications of Pathnet, Inc. for Certificates of Authority to Provide Local Exchange and Interexchange Telecommunications Services**

Dear Mr. Bullard:

Submitted herewith for filing, on behalf of Pathnet, Inc. ("Pathnet"), are an original and three (3) copies of an indemnity bond to the South Dakota Public Utilities Commission and the consumers of South Dakota in the amount of $25,000. This bond replaces the bond Pathnet originally filed with the Commission on April 14, 2000. At the request of Keith Senger, Utility Analyst, the replacement bond has been revised to clarify that Pathnet is applying for certificates of authority to provide resold and facilities-based local exchange and interexchange service in South Dakota.

Enclosed is an additional copy of this letter. Please stamp the additional copy and return it to me in the enclosed stamped, self-addressed envelope as an acknowledgement of receipt.

Please direct any questions to the undersigned.

Respectfully submitted,

Gerard J. Waldron
Mary Newcomer Williams
*Attorneys for Pathnet, Inc.*

Enclosures

cc: Keith Senger, Utility Analyst (via FedEx)
Camron Hoseck, PUC Staff Attorney (via FedEx)

RECEIVED
APR 24 2000
SOUTH DAKOTA PUBLIC
UTILITIES COMMISSION

# INDEMNITY BOND
to the
# PEOPLE OF THE STATE OF SOUTH DAKOTA

**Bond No. 10BSBAK5900**

**We, Pathnet Inc., the principal and applicant for CERTIFICATES OF AUTHORITY to provide resold and facilities-based local exchange and interexchange telecommunications services within the State of South Dakota, and Hartford Fire Insurance Company, as an admitted surety insurer, bind ourselves unto the Public Utilities Commission of the State of South Dakota and the consumers of South Dakota as Obligee, in the sum of $25,000.00**

**The conditions of the obligation are such that the principal, having been granted such CERTIFICATE OF AUTHORITY subject to the provision that said principal purchase this Indemnity Bond and if said principal shall in all respects fully and faithfully comply with all applicable provisions of South Dakota State Law, and reimburse customers of Pathnet Inc. for any prepayment or deposits they have made which may be unable or unwilling to return to said customers as a result of insolvency or other business failure, then this obligation shall be void, discharged and forever exonerated, otherwise to remain in full force and effect.**

**This bond shall take effect as of the date hereon and shall remain in force and effect until the surety is released from liability by the written order of the Public Utilities Commission, provided that the surety may cancel this Bond and be relieved of further liability hereunder by delivering thirty (30) days written notice to the Public Utilities Commission. Such cancellation shall not affect any liability incurred or accrued hereunder prior to the termination of said thirty 30) day period.**

Dated this 20th day of April 2000.
To be effective this 6th day of April 2000.

Countersigned for South Dakota

Resident Agent
J. J. SCHEINSCHLIGT

Pathnet Inc.

BY Mary McDermott

Hartford Fire Insurance Company

BY Elizabeth Marrero
Elizabeth Marrero
Attorney-in-Fact

Original Bond to Delaine Kolbo

# HARTFORD FIRE INSURANCE COMPANY

Hartford Connecticut

POWER OF ATTORNEY

Know all men by these Presents, That HARTFORD FIRE INSURANCE COMPANY, a corporation duly organized under the laws of the State of Connecticut, and having its principal office in the City of Hartford, County of Hartford, State of Connecticut, does hereby make, constitute and appoint

PAMELA K. BIFE, MARK FITZGERALD, ELIZABETH MARRERO AND CHRISTINE V. MOREIRA OF NEW YORK, NEW YORK

its true and lawful Attorney(s)-in-Fact, with full power and authority to each of said Attorneys-in-Fact, in their separate capacity if more than one is named above, to sign, execute and acknowledge any and all bonds and undertakings and other writings obligatory in the nature thereof on behalf of the Company in its business of guaranteeing the fidelity of persons holding places of public or private trust, guaranteeing the performance of contracts other than insurance policies, guaranteeing the performance of insurance contracts where surety bonds are accepted by states and municipalities, and executing or guaranteeing bonds and undertakings requires or permitted in all actions or proceedings or by law allowed, in UNLIMITED

and to bind HARTFORD FIRE INSURANCE COMPANY thereby as fully and to the same extent as if such bonds and undertakings and other writings obligatory in the nature thereof were signed by an Executive Officer of HARTFORD FIRE INSURANCE COMPANY and sealed and attested by one other of such Officers, and hereby ratifies and confirms all that its said Attorney(s)-in-Fact may do in pursuance hereof.

This Power of Attorney is granted under and by authority of the By-Laws of HARTFORD FIRE INSURANCE COMPANY ("the Company") as amended by the Board of Directors at a meeting duly called and held on July 9, 1997 as follows:

ARTICLE V

SECTION 1. The President or any Vice President or Assistant Vice-President, acting with any Secretary or Assistant Secretary, shall have power and authority to sign and execute and attach the seal of the Company to bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and such instruments so signed and executed, with or without the common seal, shall be valid and binding upon the Company.

SECTION 2. The President or any Vice-President or any Assistant Vice President acting with any Secretary or Assistant Secretary, shall have power and authority to appoint, for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, one or more resident Vice Presidents, resident Assistant Secretaries and Attorneys-in-Fact and at any time to remove any such resident Vice-President, resident Assistant Secretary or Attorney-in-Fact, and revoke the power and authority given to him.

Resolved, that the signatures of such Officers and the seal of the Company may be affixed to any such power of attorney or to any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

In Witness Whereof, HARTFORD FIRE INSURANCE COMPANY has caused these presents to be signed by its Assistant Vice-President, and its corporate seal to be hereto affixed, duly attested by its Secretary, this 17th day of September, 1997.

HARTFORD FIRE INSURANCE COMPANY

SEAL

Paul A. Bergenholtz, Assistant Secretary

Robert L. Post, Assistant Vice President

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss.

On this 17th day of September A.D. 1997, before me personally came Robert L. Post to me known, who being by me duly sworn, did depose and say: that he resides in the County of Hartford, State of Connecticut; that he is the Assistant Vice-President of HARTFORD FIRE INSURANCE COMPANY, the corporation described in and which executed the above instrument; that he knows the seal of the said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that he signed his name thereto by like order.

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss.

Jean H. Wozniak
Notary Public
My Commission Expires June 30, 2004

CERTIFICATE

The undersigned Secretary of HARTFORD FIRE INSURANCE COMPANY, a Connecticut Corporation, DO HEREBY CERTIFY that the foregoing and attached POWER OF ATTORNEY remains in full force and has not been revoked; and furthermore, that Article V, Section 7 and 8 of the By-Laws of HARTFORD FIRE INSURANCE COMPANY, set forth in the Power of Attorney are now in force.

Signed and sealed at the City of Hartford, this 20TH day of APRIL, 2000.

SEAL

Richard L. Martin, Jr., Assistant Secretary

J. Dennis Lang, Assistant Vice President

Form S-3907-9 (Rev. 7-97)

# HARTFORD FIRE INSURANCE COMPANY

Hartford, Connecticut

## POWER OF ATTORNEY

Know all men by these Presents, That HARTFORD FIRE INSURANCE COMPANY, a corporation duly organized under the laws of the State of Connecticut and having its principal office in the City of Hartford, County of Hartford, State of Connecticut, does hereby make, constitute and appoint

PAMELA K. RIFE, MARK FITZGERALD, ELIZABETH MARRERO AND CHRISTINE V. MCKENNA OF NEW YORK, NEW YORK

its true and lawful Attorney(s)-in-Fact, with full power and authority to each of said Attorney(s)-in-Fact, in their separate capacity if more than one is named above, to sign, execute and acknowledge any and all bonds and undertakings and other writings obligatory in the nature thereof on behalf of the Company in its business of guaranteeing the fidelity of persons holding places of public or private trust; guaranteeing the performance of contracts other than insurance policies; guaranteeing the performance of insurance contracts where surety bonds are accepted by states and municipalities; and executing or guaranteeing bonds and undertakings required or permitted in all actions or proceedings or by law allowed, in an amount not exceeding Unlimited.

AND DO HEREBY HARTFORD FIRE INSURANCE COMPANY hereby ratifies and confirms all that the said Attorney(s)-in-Fact may do in pursuance hereof.

This Power of Attorney is granted under and by authority of the By-Laws of HARTFORD FIRE INSURANCE COMPANY ("the Company") as amended by the Board of Directors meeting duly called and held on July 9, 1997, as follows:

ARTICLE IV

SECTION 1. The President or any Vice President or Assistant Vice-President, acting with any Secretary or Assistant Secretary shall have power and authority to sign and affix to each thereto the seal of the Company to bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof, and such instruments so executed, with or without the common seal, shall be valid and binding upon the Company.

SECTION 2. The President or any Vice-President or any Assistant Vice President acting with any Secretary or Assistant Secretary, shall have power and authority to appoint, constitute and appoint, by writing, any person or persons as attorneys-in-fact and at any time to remove any such resident Vice-President, resident Assistant Secretary, or Attorney-in-Fact, and revoke the power and authority given to him or her.

Resolved, That the signatures of such Officers and the seal of the Company may be affixed to any such power of attorney or to any certificate relating thereto by facsimile, and any such power of attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signatures and facsimile seal shall be valid and binding upon the Company in the future with respect to any bond or undertaking to which it is attached.

In Witness Whereof, HARTFORD FIRE INSURANCE COMPANY has caused these presents to be signed by its Assistant Vice-President, and its corporate seal to be hereto affixed, duly attested by its Secretary, this 17th day of September, 1997.

HARTFORD FIRE INSURANCE COMPANY

SEAL

Paul A. Bergamotto, Assistant Secretary

Robert L. Post, Assistant Vice President

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss.

On this 17th day of September A.D. 1997, before the personally came Robert L. Post to me known, who being by me duly sworn, did depose and say: that he resides in the County of Hartford, State of Connecticut; that he is the Assistant Vice President of HARTFORD FIRE INSURANCE COMPANY, the corporation described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that he signed his name thereto by like order.

STATE OF CONNECTICUT }
COUNTY OF HARTFORD } ss.

CERTIFICATE

Notary Public
My Commission Expires June 30, 2004

I, the undersigned, Assistant Secretary of HARTFORD FIRE INSURANCE COMPANY, a Connecticut Corporation, DO HEREBY CERTIFY that the foregoing and attached POWER OF ATTORNEY remains in full force and has not been revoked; and furthermore, that Article IV, Section 1 and 2 of the By-Laws of HARTFORD FIRE INSURANCE COMPANY, as set forth in the Power of Attorney, are now in force.

Signed and sealed at the City of Hartford this 17th day of APRIL, 2000.

SEAL

Barbara A. Marino, Assistant Secretary

Barbara A. Marino, Assistant Secretary

# Hartford Fire Insurance Company

## Hartford, Connecticut

## *Financial Statement, December 31, 1998*

(Statutory Basis)

| ASSETS | | LIABILITIES | | |
|---|---|---|---|---|
| U.S. Government Bonds | $ 151,267,751 | Reserve for Claims and Claim Expense | | $ 4,253,661,508 |
| Bonds of other Governments | 356,611,680 | Reserve for Unearned Premiums | | 973,071,313 |
| State, County, Municipal and Miscellaneous Bonds | 3,433,224,095 | Reserve for Taxes, Licenses and Fees | | 50,971,924 |
| Stocks | 7,495,204,043 | Miscellaneous Liabilities | | 902,436,463 |
| Short Term Investments | 287,174,556 | Total Liabilities | | $ 6,180,141,208 |
| | $ 11,723,482,125 | | | |
| Real Estate | $ 145,104,185 | Capital Paid In | $ 55,000,000 | |
| Cash | 51,563,702 | Surplus | 8,601,211,052 | |
| Agents' Balances (Under 90 Days) | 0 | | | |
| Other Invested Assets | 55,266,834 | Surplus as regards Policyholders | | $ 8,417,320,645 |
| Miscellaneous | 2,622,045,007 | Total Liabilities, Capital and Surplus | | $ 14,597,461,853 |
| Total Admitted Assets | $ 14,597,461,853 | | | |

STATE OF CONNECTICUT
COUNTY OF HARTFORD
CITY OF HARTFORD } ss.

Ramani Ayer, President of the Hartford Fire Insurance Company, being duly sworn, does hereby certify that the foregoing is a correct statement of the assets and liabilities of the said Company as of December 31, 1998, and in witness whereof said President has hereunto signed and caused the corporate seal to be affixed hereto.

Acknowledged and sworn to before me
this 24th day of March, 1999

Jane H. Wozniak
Notary Public
My commission expires June 30, 2004

Attest:

Ramani Ayer, Chairman & CEO

Donald J. LaValley, Assistant Vice-President

Form 03-0-02 R F Printed in U.S.A.

# BEFORE THE PUBLIC UTILITIES COMMISSION
# OF THE STATE OF SOUTH DAKOTA

| | |
|---|---|
| IN THE MATTER OF THE APPLICATION OF PATHNET, INC. FOR A CERTIFICATE OF AUTHORITY TO PROVIDE TELECOMMUNICATIONS SERVICES IN SOUTH DAKOTA | ORDER GRANTING CERTIFICATE OF AUTHORITY<br><br>TC00-018 |

On February 16, 2000, the Public Utilities Commission (Commission), in accordanc with SDCL 49-31-3 and ARSD 20:10:24:02, received an application for a certificate o authority from Pathnet, Inc. (Pathnet).

Pathnet intends to offer point-to-point private line services ranging from DS-0 t OC-n, using TDM technology. Pathnet further plans to offer TDM-based special acces services. Pathnet also plans to offer data services, including digital subscriber line (xDSl services. Pathnet intends to offer these private line, special access and data service primarily to other carriers and to Internet service providers. Pathnet further plans to offe exchange services in which it will provide link and extended link (including transpor services connecting other telecommunications providers' switches to their end users. . proposed tariff was filed by Pathnet. The Commission has classified long distance servic as fully competitive.

On February 17, 2000, the Commission electronically transmitted notice of the filin and the intervention deadline of March 3, 2000, to interested individuals and entities. N petitions to intervene or comments were filed and at its June 20, 2000, meeting, th Commission considered Pathnet's request for a certificate of authority. Commission Sta recommended granting a certificate of authority, subject to a continuous $25,000 suret bond. Commission Staff further recommended a waiver of ARSD 20:10:24:02(11).

The Commission finds that it has jurisdiction over this matter pursuant to SDC Chapter 49-31, specifically 49-31-3 and ARSD 20:10:24:02 and 20:10:24:03. Th Commission finds that Pathnet has met the legal requirements established for the grantin of a certificate of authority. Pathnet has, in accordance with SDCL 49-31-3, demonstrate sufficient technical, financial and managerial capabilities to offer telecommunication services in South Dakota. Further, the Commission finds that there is good cause to waiv subparagraph (11) of ARSD 20:10:24:02. The Commission approves Pathnet's applicatio for a certificate of authority, subject to a continuous $25,000 surety bond. As th Commission's final decision in this matter, it is therefore

ORDERED, that Pathnet's application for a certificate of authority is hereby grantec subject to a continuous $25,000 surety bond. It is

FURTHER ORDERED, that the Commission finds good cause to waiv subparagraph (11) of ARSD 20:10:24:02. It is

FURTHER ORDERED, that Pathnet shall file informational copies of tariff changes with the Commission as the changes occur.

Dated at Pierre, South Dakota, this 22nd day of June, 2000.

CERTIFICATE OF SERVICE

The undersigned hereby certifies that this document has been served today upon all parties of record in this docket, as listed on the docket service list, by first class mail, in properly addressed envelopes, with charges prepaid thereon.

By Kristie Kallis

Date 6/22/00

(OFFICIAL SEAL)

BY ORDER OF THE COMMISSION:

JAMES A. BURG, Chairman

PAM NELSON, Commissioner

LASKA SCHOENFELDER, Commissioner

# SOUTH DAKOTA PUBLIC UTILITIES COMMISSION

## *CERTIFICATE OF AUTHORITY*

To Conduct Business As A Telecommunications Company
Within The State Of South Dakota

Authority was Granted June 20, 2000
Docket Nos. TC00-017 and TC00-016

*This is to certify that*

**PATHNET, INC.**

*is authorized to provide telecommunications services in South Dakota.*

This certificate is issued in accordance with SDCL 49-31-3 and ARSD 20:10:24:02, and is subject to all of the conditions and limitations contained in the rules and statutes governing its conduct of offering telecommunications services.

Dated at Pierre, South Dakota, this 22nd day of June, 2000.

SOUTH DAKOTA PUBLIC
UTILITIES COMMISSION:

JAMES A. BURG, Chairman

PAM NELSON, Commissioner

LASKA SCHOENFELDER, Commissioner