



**Norlight.**  
TELECOMMUNICATIONS

**COMMERCIAL SERVICES**

- INTERNET
- FRAME RELAY
- PRIVATE LINE
- LONG DISTANCE

**CARRIER SERVICES**

**SATELLITE & VIDEO**

**ABOUT NORLIGHT**  
**NETWORK MAPS**  
**CAREERS**  
**CONTACT US**  
**V2K**  
**HOME PAGE**

# NORLIGHT TELECOMMUNICATIONS

## ABOUT NORLIGHT

### DIVERSITY AT NORLIGHT

With over 27 years in the telecommunications business, Norlight Telecommunications' vast experience in solving customers' needs with creative solutions is unmatched in the industry.

Norlight owns and operates one of the Midwest's largest fiber optic networks. Our state-of-the-art digital switching platforms provide fast connections and throughput, and our SONET-based network is immediately self-healing in case of a disturbance. The vigilance of our people, combined with the multiple trunk paths of our redundant network, maintain uptime and survivability for all. Fueled by 24-hour-a-day, 7-day-a-week personal attention from our Network Management Center, we've become the Network Guardians for carriers nationwide.

Norlight is a subsidiary of Journal Communications. Employee-owned since 1937, Journal Communications has a tradition of service and innovation in television and radio broadcasting, newspaper publishing, database marketing, printing and telecommunications. In fact, Journal Communications' employee stock plan is a source of pride and ownership, one of the things that makes us successful. Because when you communicate with one of the Network Guardians, you're working with an employee-owner, not just an employee.

With this service-above-all attitude firmly in place, and powered by significant network upgrades and expansions, we're well-positioned for growth. Yet we'll never lose sight of our commitment to providing world class customer care.

Now that you know who the Network Guardians are, why not find out how nice it is to have us on your side.

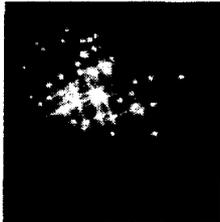
---

To contact Norlight Telecommunications, E-mail: [sales@norlight.com](mailto:sales@norlight.com), or go to a listing of contacts and locations.

# About NorthEast Optic Network

## Overview Overview

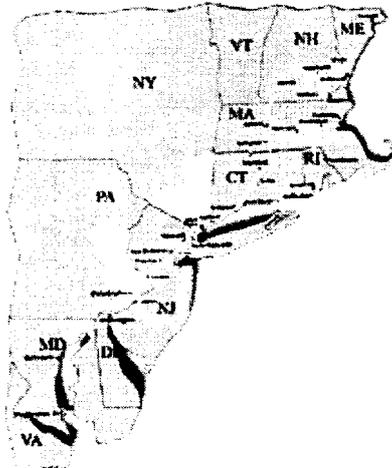
NorthEast Optic Network, Inc. (NEON)<sup>®</sup> owns and operates a technologically advanced fiber optic network in the Northeastern United States.



NEON<sup>®</sup> is an independent "carrier's carrier" providing high bandwidth, fiber optic transmission capacity to certificated communications carriers, who in turn provide fast, reliable connectivity for voice, data/internet, and video to businesses and homes throughout the Northeast.

Major national communications carriers as well as regional voice and data companies are already operating on the NEON<sup>®</sup> Network, which consists of 1,000 route miles and more than 70,000 fiber miles throughout a geographic region that has the highest concentration of communications traffic in the country. The Network blankets 540 cities and towns in six Northeastern states, including Boston and New York City. The network allows an estimated 500,000 businesses and 18 million people to have access to fiber optic communications through the communications carriers that do business with NEON.

NEON<sup>®</sup> offers communications carriers the advantage of interstate, inter-city and local loop high speed bandwidth, all in one super-regional network. The Network's reliability is the result of SNET ring architecture, including Nortel Network's OC-192 system, the leading 10 gigabit per second platform in the industry. NEON<sup>®</sup> also utilizes Nortel Network's latest generation of Dense-Wave Division Multiplexing (D-WDM) technology to provide an initial capacity of up to 160 gigabits-per-second (Gbs) for the operation of its scalable optical transport network.



NEON<sup>®</sup> uses Lucent Technologies Network TrueWave fiber as well as the more recent AllWave fiber to enhance both its metropolitan and long haul capabilities.

## NEON<sup>®</sup> is Ready for the 21st Century



NEON's<sup>®</sup> strategy is to operate and continuously improve our technologically advanced network, and to offer more transport capacity, enhanced capabilities, route diversity and near-ubiquitous coverage.

## History

NorthEast Optic Network, Inc. was originally

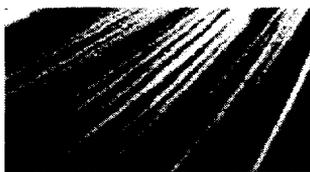
## Home

-  [Company](#)
-  [Fiber Facts](#)
-  [Products/Services](#)
-  [Fiber Map](#)
-  [News](#)
-  [Management](#)
-  [Investor Relations](#)
-  [Employment](#)

NorthEast Optic Network  
2200 West Park Drive  
Suite 200  
Westborough, MA 01581

Toll Free 800-891-5080  
Phone 508-616-7800  
Fax 508-616-7895

In certain locations,  
NorthEast Optic Network,  
Inc. operates through  
subsidiaries.



incorporated as FiveCom in Massachusetts in 1989. The business obtained its first rights-of-way from a regional electric utility in 1994, allowing the Company to use both existing rights-of-way and infrastructure to install fiber optic cables throughout Connecticut, Western Massachusetts and New Hampshire.

Also in the '90s, the Company reached additional agreements with other regional utilities, allowing for further expansion of the Network into New England, and as far north as Maine. Service on the Network began in 1998. Now a continuous fiber link from Portland, Maine to Boston and on to New York City, the NEON® footprint blankets 540 cities and towns in six Northeastern states.

NorthEast Optic Network, Inc. became a public company in July of 1998 with an Initial Public Offering of 4.5 million shares of common stock and \$180 million of 12.75% Senior Notes. The common stock is traded on the NASDAQ under the symbol NOPT.

### ***Mission***

**To become any carrier's preferred provider of optical bandwidth in the Northeast.**

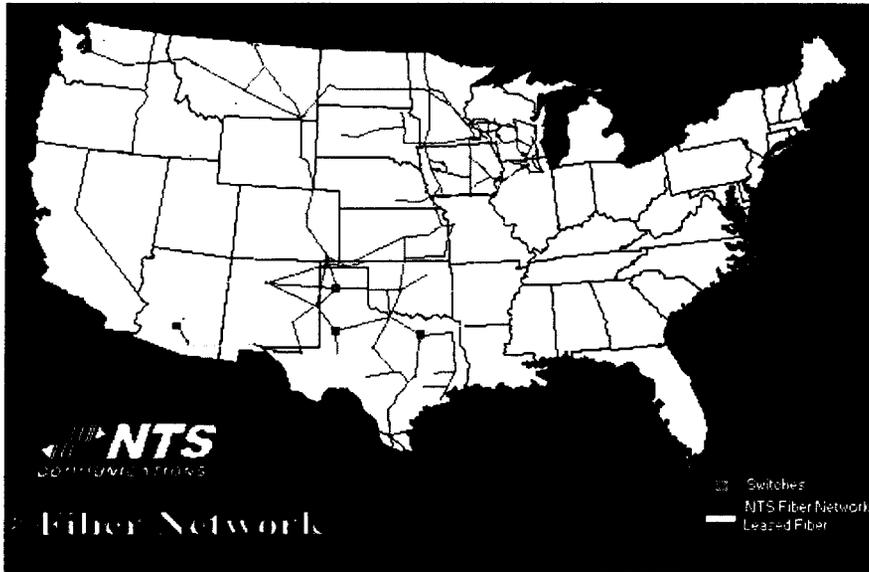
<b>NorthEast Optic Network, Inc.</b>	<b>Toll Free 800-891-5080</b>	<b>2200 West Park Drive</b>
<b>Don't feel like surfing? Try our QuickPage ►</b>	<b>Phone 508-616-7800</b>	<b>Suite 200</b>
	<b>Fax 508-616-7895</b>	<b>Westborough, MA 01581</b>

Copyright © 1998, NorthEast Optic Network, Inc. All rights reserved. The NorthEast Optic Network name and logo are trademarks of NorthEast Optic Network, Inc. NEON® is a registered service mark of NorthEast Optic Network, Inc.

[Home](#) | [Company](#) | [Network Specifications](#) | [Products/Services](#) | [Fiber Map](#) | [News](#) | [Contacts](#) | [Investor Relations](#)

NTS

Sources: [http://www.ntscom.com/bus\\_pgs/nts\\_carrier\\_services\\_network.html](http://www.ntscom.com/bus_pgs/nts_carrier_services_network.html)

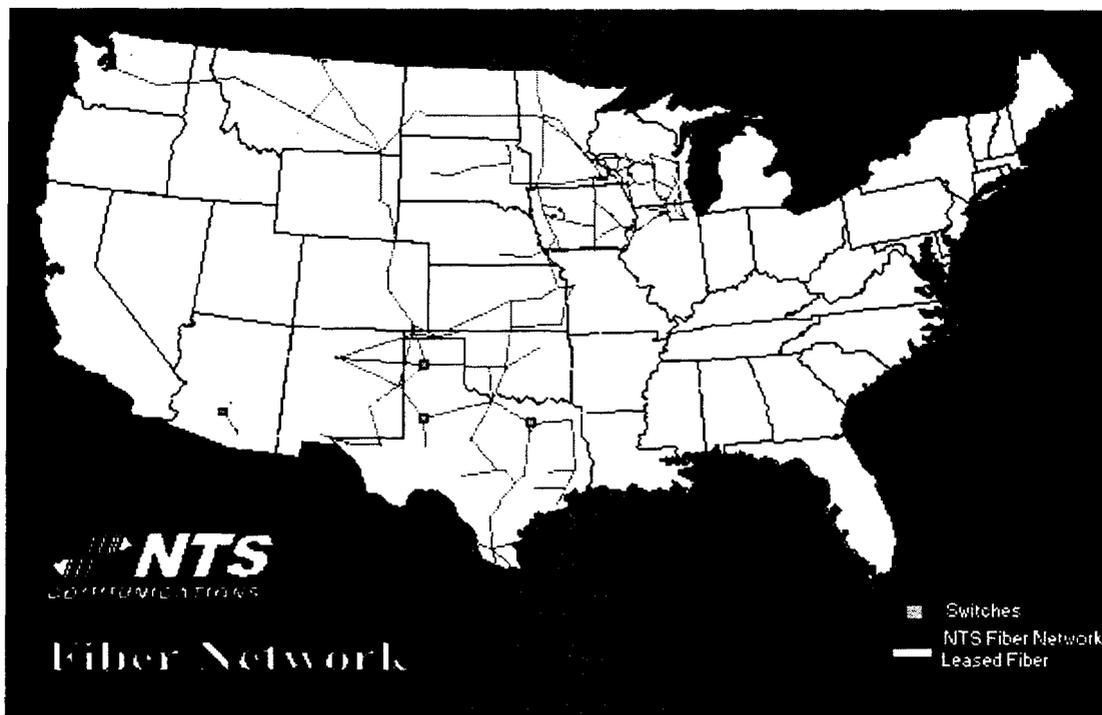


This map shows where both owned and leased fiber exists in the NTS network.



## NTS Carrier Services

### The NTS Network



With the sophistication of the NTS fiber facilities and leased network, we have assembled a digital, state-of-the-art facility capable of providing digital service at any required level. This includes voice grade, digital data, video or high capacity networking.

NTS' intelligent networks are tailored to meet the dynamically changing telecommunications requirements of commercial, governmental, cellular, and local exchange carrier customers. NTS currently provides critical voice and data circuits for the Federal Aviation Administration (FAA) in the Southwest and was the first non- AT&T interexchange carrier to be awarded a sole contract for these circuits for an Air Route Traffic Control Center (ARTCC). NTS is instrumental in providing medical transmission networks including facilities for a major university's Health Sciences Center and a state prison system.

NTS Communications is the marketing and network monitoring partner for the longest point-to-point OC-48 SONET fiber optic network in the United States. Spanning over 4,000 miles, this network is tailored to meet the needs of state and federal governmental agencies, most of the major interexchange and cellular carriers, as well as local telephone cooperatives. The expertise NTS has gained through its association with this network provides NTS with opportunities to design and build SONET fiber networks in various locations nationwide.

The NTS Network Control Center (NCC) utilizes IBM hardware and a custom ACD software platform to provide network monitoring capability for the NTS Fiber Network, NTS Switching systems and customer networks. Based on a Mega Array Neural Processing System utilizing syntactical scanners, the NCC performs surveillance, control and analysis of all

network circuit faults, identifying service threatening trends before they become system problems. Transmission quality is tested in a non-intrusive manner every three seconds on every circuit. Together, the NCC, three DSC DEX switching systems, including DEX600E and DACS and multiplexing equipment nationwide, support NTS with one of the most sophisticated networks in the nation.

**[Return to NTS' Homepage](#)**

Teleglobe

Sources: [http://www.teleglobe.com/engl/digital\\_arch/digital\\_cont1m.html](http://www.teleglobe.com/engl/digital_arch/digital_cont1m.html)



This map from Teleglobe's site shows each US city in which Teleglobe has a POP.

TELEGLOBE

Home

## Navigation

- [GlobeSystem](#)
- [Global Broadband Services By Market](#)
  - [Internet Services](#)
  - [Content Distribution Services](#)
  - [Carriers Services](#)
  - [Business Services](#)
    - [USA](#)
    - [Canada](#)
  - [Value-Added Services](#)

- [Français](#)
- [Site Help](#)
- [Contact Us](#)

Teleglobe Inc. is a leading global provider of broadband services with the most extensive global Internet network. Delivering advanced broadband applications to customers in more than 100 countries - matching global reach with global depth of service - Teleglobe is the premier communications architecture for the digital economy.



**Our Global  
Digital Network**

This leadership is being consolidated through GlobeSystem<sup>SM</sup>, a \$5 billion strategic initiative to provide 160 GlobeCities around the world with scalable broadband service platforms. Each of these GlobeCities is integrated seamlessly with Teleglobe's ubiquitous global communications system of fiber-optic cables and satellite facilities, already one of the world's most extensive intercontinental telecommunications networks.

GlobeSystem<sup>SM</sup> is the world's first globally integrated Internet, data, video and voice network. Based on an open platform, it lets customers connect from business centers worldwide, regardless of their underlying network technology or the amount of capacity required. Customers will also be able to specify the quality of service and transmission speed. By the end of 1999, 40 GlobeCities will be operating, and 60 will be in service by the end of 2000.

Another key feature of GlobeSystem<sup>SM</sup> is scalable and modular architecture. As each GlobeCity is connected to the global network, Teleglobe can offer an array of broadband services immediately, including collocation. Service capacity can be expanded simply by adding more people and equipment to meet new customer needs.

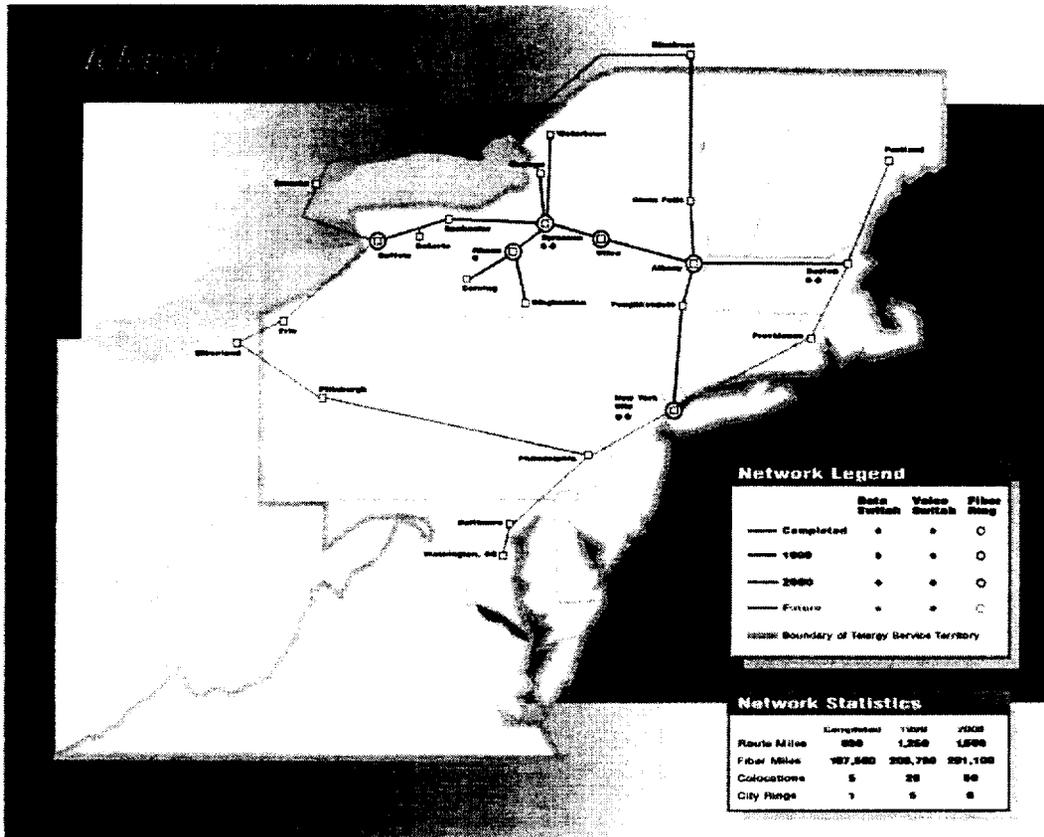
With GlobeSystem<sup>SM</sup>, Teleglobe is deploying the premier communications architecture for the digital economy.

GlobeSystem<sup>SM</sup> Update - February 22, 2000

Visit our [GlobeSystem<sup>SM</sup> site](#)

Telergy

Sources: <http://www.telergy.net/new/fiberwatch.cfm>



This map shows the Telergy network and the cities where it owns POPs.

## ABOUT TELERGY



PRODUCTS

CONTACT

HEADLINES

NEWS

CAREERS

SUPPORT

PHOTOS

HOME

**light.speed**  
HIGH-SPEED INTERNET ACCESS

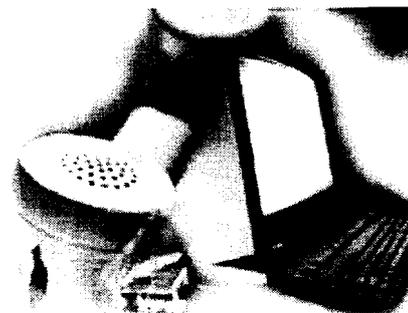
Telergy® is building a high-speed fiber optic communications network throughout the northeastern United States with connections to Canada. The new network is being built largely along electric utility rights of way. The extensive, door-to-door reach of utility rights of way has allowed Telergy to construct its network at a per-mile cost that is among the industry's lowest. This makes the Telergy network attractive to customers looking for a high-speed platform to move their voice/data/video communications.

Telergy was founded in 1995 by brothers Brian, Kevin and William Kelly. The Telergy family is comprised of several companies with relationships with various electric and gas utilities. In Upstate New York, Telergy has partnered in Telergy Central with Plum Street Enterprises, a subsidiary of Niagara Mohawk Power Corporation. In the Southern Tier, Telergy has partnered with Energy East, a subsidiary of New York State Electric and Gas. And in New York City, Telergy has a relationship with Consolidated Edison Company of New York, Inc. Telergy controls or manages the Telergy corporate family.

The first element of the network--a 350-mile fiber optic backbone from Buffalo to Albany-- was placed in operation in the fall of 1997.

This year, the Telergy family is installing fiber backbones from Albany to Dutchess County, in the Southern Tier, to and throughout New York City and to Montreal. In addition, Telergy will build fiber access rings around Syracuse, Buffalo and Albany. Other spur routes will be built from the backbone to Watertown, Oswego, Glens Falls, Batavia, Guilderland and Utica. This will connect end users directly with the network and provide faster delivery of voice/video/data.

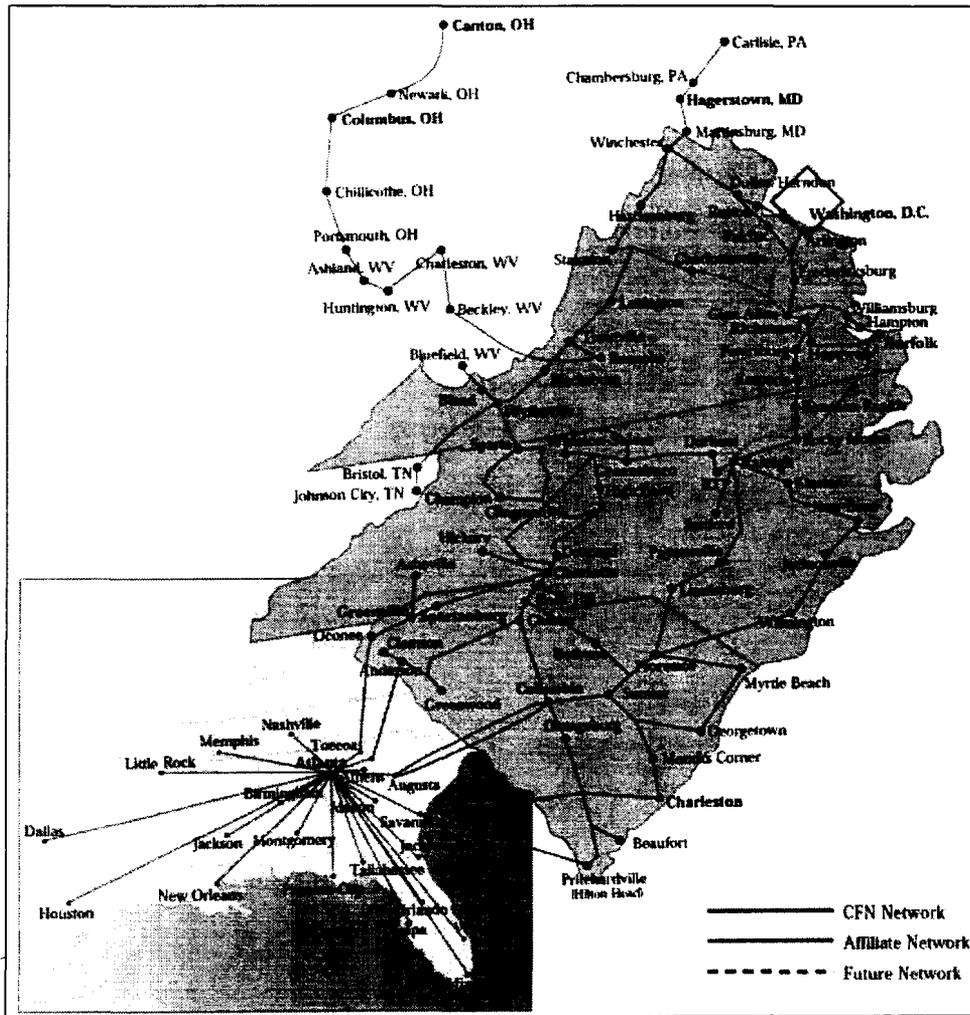
Telergy markets communication services across the Northeast. The company's sales and technical teams are committed to delivering the best solutions for your communication needs. Every Telergy client is backed by personalized technical support and customer service.



Telergy specializes in bringing the benefits of

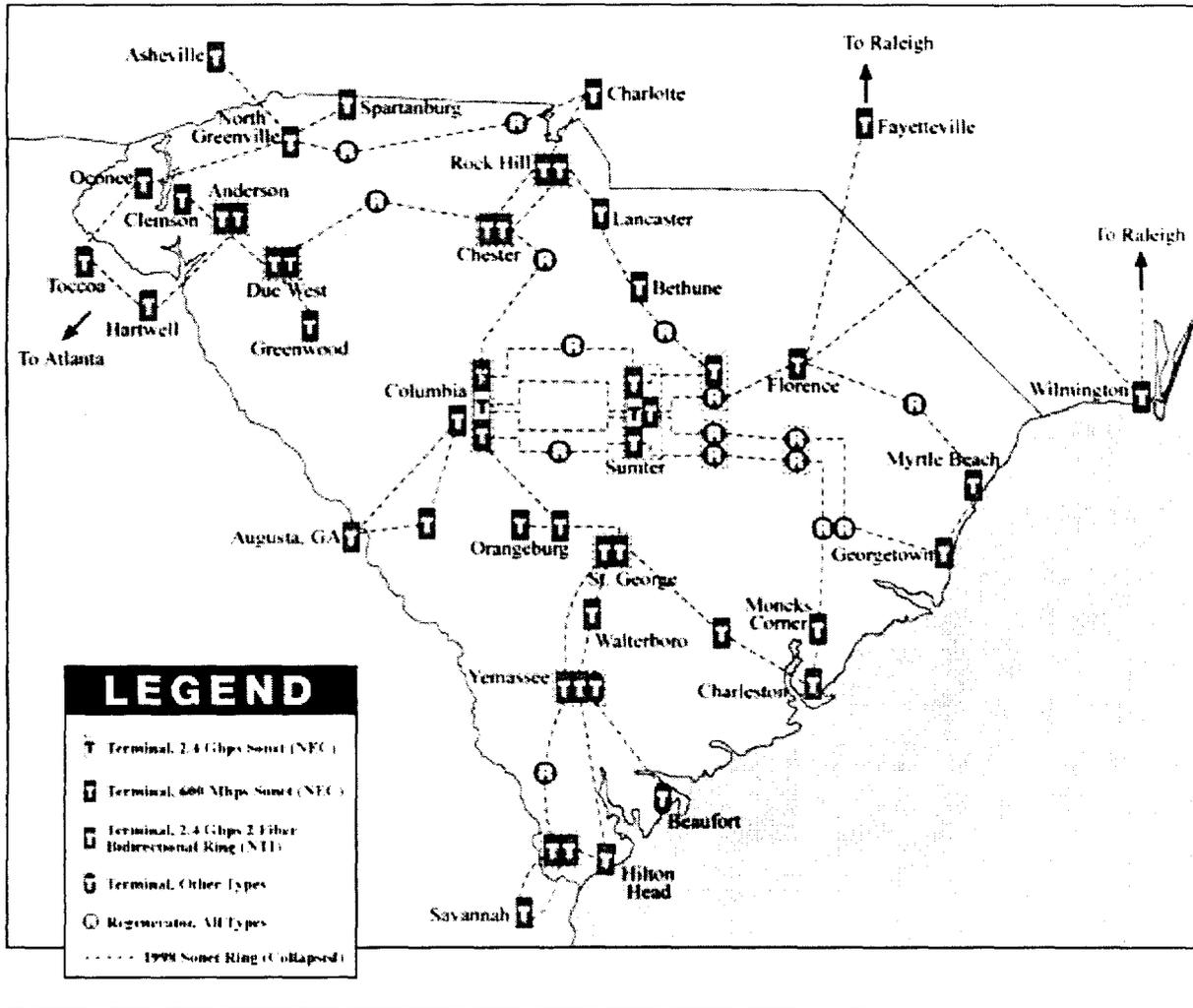
# PalmettoNet

Sources: <http://www.palmettonet.com/internet/networkmap.html>



This map from PalmettoNet's web site shows what fiber is owned by the company (solid red), as well as the proposed extensions to its existing network.

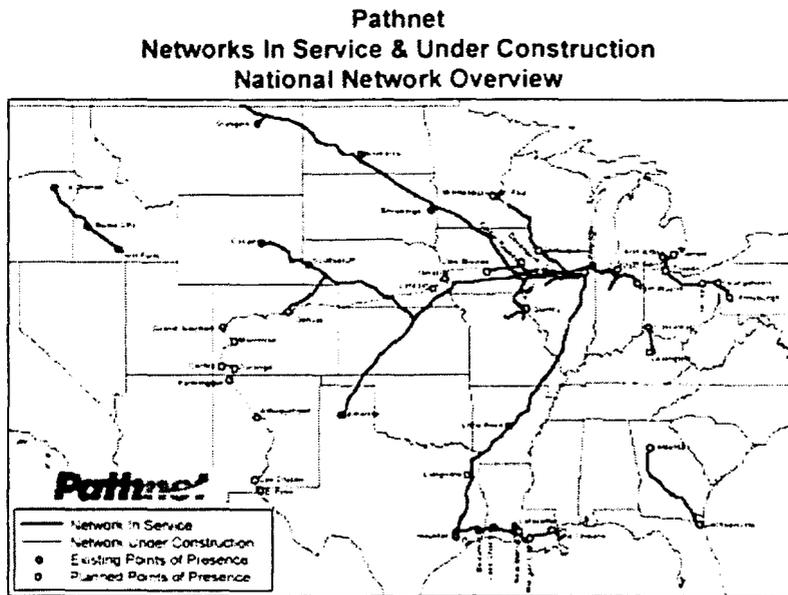
# PALMETTONET INTRA NETWORK



Copyright © 1998-1999 PalmettoNet. All rights reserved. Return to Top of Page or PalmettoNet Home.

Pathnet

Sources: <http://www.pathnet.net/netopp/corpfact.html>



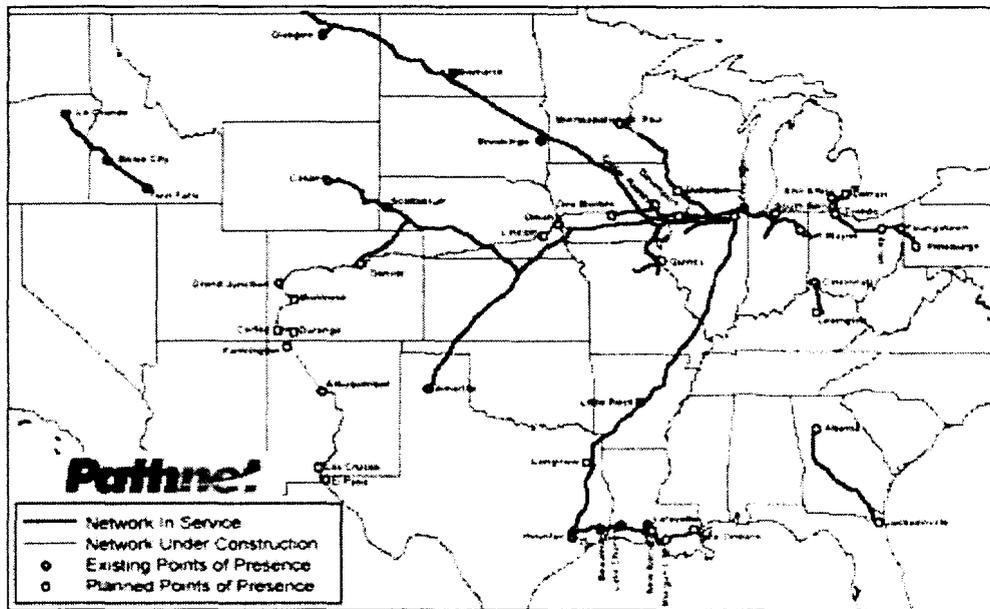
This map illustrates Pathnet's current and planned network structure.



# corporate FACT SHEET

- CORPORATE overview
- BUILDING the network
- network TECHNOLOGY
- the pathnet TEAM

## Pathnet Networks In Service & Under Construction National Network Overview



### significant Pathnet milestones:

- 6,800 route miles of completed network
- 700 route miles of network under construction
- Announced \$5.2 million dark fiber contract with top global telecommunications provider
- Signed master services agreements with three top global telecommunications carriers
- Developing a 400-mile fiber-optic network from Grand Junction to Albuquerque, passing through Durango, Colorado and Farmington, New Mexico
- Building an 1,100-mile fiber-optic network between Chicago and Denver, passing through Des Moines, Iowa; Omaha, Nebraska; and Lincoln, Nebraska
- Business strategy expanded to incorporate fiber and wireless
- \$350MM High Yield Units offering completed in 1998

HOME | SITE INDEX | JOB OPPORTUNITIES | CONTACT  
CORPORATE OVERVIEW | MEDIA ROOM | INVESTOR RELATIONS  
PRODUCTS + SERVICES | STRATEGIC PARTNERS

PSINet

Sources: [http://www.psinet.com/network/bigmap\\_namerica.html](http://www.psinet.com/network/bigmap_namerica.html)



This map, which can be viewed with far greater detail on the web site, shows PSINet's extensive coverage. However, PSI's fiber is leased.



Access

PSINet IntraNet

**Company Information**

- Our Company
- Our Network
- Investor Relations
- Newsroom
- Employment
- Customer Support
- Partnerships
- Carrier ISP
- Contact Us

TNS

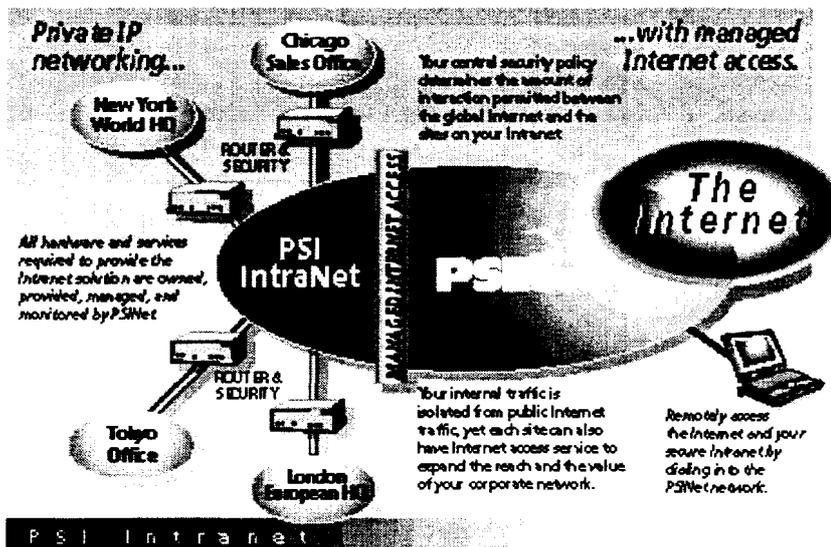
**Products & Services**

- PSINet Access
- PSINet Web Hosting
- PSINet eCommerce
- PSINet Communications
- Managed Services
- PSINet Consumer Services
- PSINet Testimonials
- Self Assessment

search

**PSI IntraNet**  
*Secure, Fully Managed Private Networking for Less*

PSINet IntraNet is a unique service that securely links together each of your organization's sites to create a private wide area network while also providing access to the public Internet. Offering the features, performance, and security that business information requires, PSINet IntraNet includes pre-configured hardware, network management, and security services, yet costs much less than traditional WAN solutions.



"The clients that we deal with demand the same technical proficiency that they possess. Because the entire firm is connected with PSINet's IntraNet service and every STUDIOS employee has permanent Internet access, we have a very strong position in the marketplace."

*-Scott Williams, MIS director, STUDIOS Architecture*

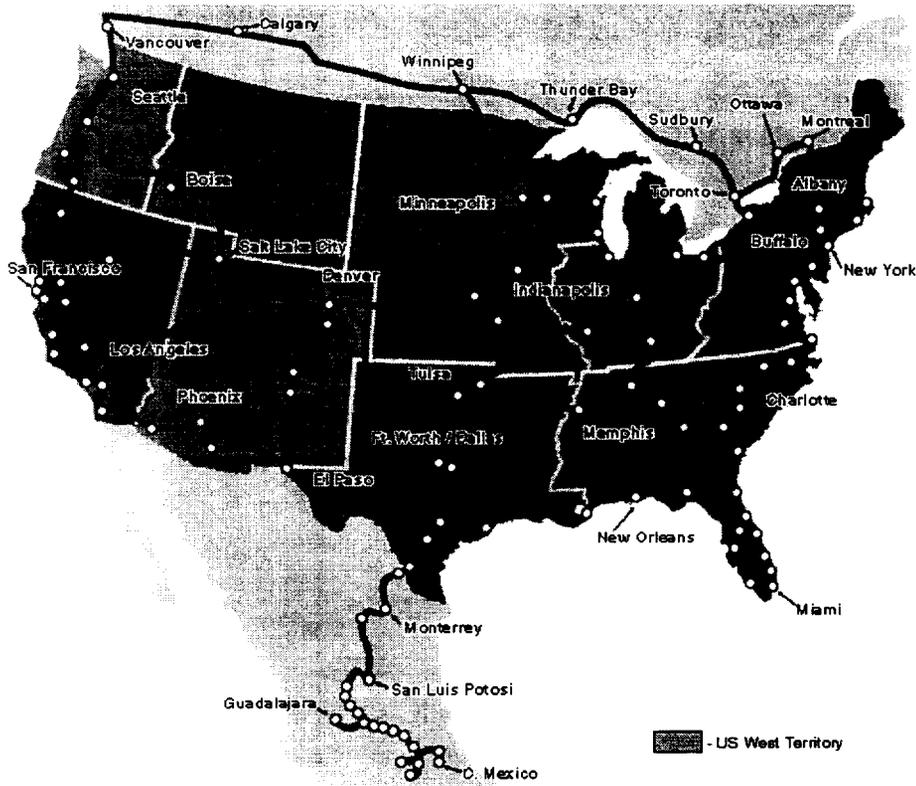
- Offers the benefits of private networking without the burden of network management, investment in Internet-access hardware, and obsolete equipment
- Provides mediated access to the public Internet in conjunction with private site-to-site connectivity
- Enables users to access files and applications from any location on the IntraNet as if the network were a LAN; workers and workgroups anywhere in the world can more efficiently share information and collaborate on computer-based projects
- Service guarantees assure the performance and reliability you need for your highest priority information
- Lets you give customers and business partners controlled access to your internal resources for strategic and tactical advantage
- Quickens the delivery of internal e-mail, file transfers, and other intranet traffic by avoiding the public Internet

For more information, please download our PSINet IntraNet data sheet. Call 1-800-395-1056 to speak with a PSINet representative.

Qwest:

Sources: <http://www.qwest.com/about/inside/network/northamerican.html>

### 1998 LATA Data



This map from the Qwest site shows owned and operated Qwest POPs. A few additional POPs were evidenced in the 1998 LATA data.



[Residential](#) | [Small Business](#) | [Large Business](#)  
[Partners](#) | [Wholesale](#)

**Qwest**  
*product finder*  
 Select a Category

**About Qwest**  
 Media Center  
 Investor Relations  
 Qwest Careers



**The Qwest Macro Capacity<sup>®</sup> Fiber Network**

**Inside Qwest**  
 Management Team  
 Board of Directors  
 Qwest Network  
 Strategic Relationships  
 Innovative Solutions

Route	Miles	Active
U.S. Network	18,500	as of 2Q99
Additional U.S. Miles	315	as of 4Q99
Mexico Network	1,400	as of 2Q99
Transatlantic Route	11,500	as of 3Q99
Transpacific Route	13,125	2000
Broadband capacity		48+ fibers
Network speed		10 gigabit (OC-192)
IP network speed		2.4 gigabit (OC-48)
Right of way		Primarily railroad

**Qwest Network Maps**

[Qwest Unified Global Broadband Network](#)

[Qwest North American Broadband Network](#)

[Mexico Network](#)

[KPNQwest EuroRings Network](#)

[Qwest Nationwide IP Infrastructure](#)

[Qwest Global](#) | [Qwest Cyber Solutions](#) | [Contact Qwest](#) | [Site Map](#) | [Site Help](#)  
[Copyright](#) | [Privacy Policy](#) | [Acceptable Use Policy](#)

## Sho-Me Power

Sources: <http://www.shomepower.com/fiber.htm>

[http://www.shomepower.com/fiber\\_map.htm](http://www.shomepower.com/fiber_map.htm)

The first of these web pages explains where and why this power company is laying fiber optics. The second shows the map we pulled our Sho-Me Power data from. The map is not transferable to this document.

Southern California Edison

Sources: Known from MCI internal data

Southern California Edison

Sources: Known from MCI internal data

Sprint

Sources: 1998 LATA Data