



1985 - Beginnings

In June, a meeting of representatives of New York State's leading academic institutions convenes at Cornell University to discuss the creation of a statewide electronic network to connect New York's major research universities and corporations to each other, to the supercomputer facilities at Cornell and Princeton, and to the embryonic National Science Foundation network, NSFnet.

The meeting establishes three working committees: to address administrative policy and funding, technical design, and users' applications and other requirements. Incorporating these groups' suggestions, a steering committee drafts articles of incorporation and bylaws for a non-profit consortium, the New York State Education and Research Network (NYSERNet), to be chartered by the state's Education Department.

When NYSERNet's Steering Committee meets that fall with representatives of AT&T, Corning, GE, Grumman, IBM, Kodak and Xerox, they receive enthusiastic industry backing for their planned network. The State's Director of Economic Development separately requests that the committee prepare a proposal detailing university cost-sharing, industry support, and the network's potential for job creation and state economic development.

1986 - Gathering Support

As this nascent organization's structure takes form, a conceptual network design also emerges, and the Science and Technology Foundation manages an RFP for its implementation with proposals due by March 1986 and selection by April 4. Participating universities expect to share a 5-year operating cost of about \$18M with additional funding sought from the NSF and New York State.

The newly incorporated NYSERNet's Executive Committee meets early in 1986 at NYU, elects a President and Chairman of the Board, and then turns its attention to funding and management issues. Fascinatingly, at this meeting the committee discusses using newly laid optical fiber along the Thruway, but discards this notion as prohibitively expensive.

By August, New York Telephone and Rochester Telephone have committed \$3.15M (some in kind), the State Urban Development Corp. \$600K, NSF \$1.2M, and various corporate affiliate members about \$400K. NYSERNet's member institutions, 14 universities and Brookhaven National Laboratory, also pledge their ongoing support.

1987 - The First Network

A 56Kb/s network, operational by midyear 1987, makes NYSERNet the first entity outside of the United States Government to use the Internet protocol (IP) to transfer data and catalyzes national deployment of what will someday become the Internet. New York Telephone and Rochester Telephone provide carrier facilities and Proteon furnishes gateway routers. NYTEL initially provides network operations as well, but NYSERNet soon ramps up its technical staff and assumes full network operations responsibility.

Mid-80's - Seminal Contributions

NYSERNet's technical staff make seminal contributions to the embryonic Internet by co-developing both the SGMP and SNMP network management protocols and the X.500 distributed directory system. NYSERNet also serves as prime contractor for the DARPA-funded multi-agency National Networking Testbed, which includes TWBNET, DARTNET, and ESnet.

1989 - Enhanced Network & First Spin-Off

Burgeoning participation in the network and the desire to facilitate such applications as teleconferencing and the transfer of large data sets leads to network upgrades. By 1989, the entire network backbone has been upgraded from 56 Kb/s to T1 (1.54 Mb/s).

Anticipating the broader potential of the Internet, both as a commercial resource and as a tool for the education community, and wanting to move from under the burden of operating and managing a statewide network, NYSERNet creates a commercial company, Performance Systems International (PSI, later PSInet). PSI assumes operational responsibility for the NYSERNet network, furnishing services to NYSERNet under the terms of a five-year contract.

1991 - New Connections

NYSERNet's New Connections program provides grant money to schools, libraries and other institutions across the state for 9.6 Kbps dial-up connections to the NYSERNet network. Among the participants in the program are American Museum of Natural History, the Russell Sage Foundation, and the New York Public Library.

1992 to 1994 - The NYSERNet Annual Conference

As participation in NYSERNet grows beyond the root community of universities, the need for and interest in educational services likewise grows. NYSERNet responds to the demand with a series of annual, two-day conferences. The first, called Network Access for All: Learn, Teach, Collaborate, is held in New York City in 1992. In 1993, the conference, this time called Access to the World's Information Resources, moves to Rochester. NYSERNet's 1994 conference, Connecting the New New York, a reference to the planned launch of NYSERNet's T3-based network, is held in Albany.

1992 - New Providers

The Internet industry's quantum expansion creates market conditions that make a single supplier inadequate for NYSERNet customers. In 1992, as alternatives to PSI, NYSERNet also begins reselling access from Sprint and ANS.

1993 - Project GAIN

NYSERNet garners national attention for its efforts to develop understanding about issues related to successful adoption of the Internet by rural libraries. The project and resulting report, The Project Gain Report, are widely cited by groups and individuals working to develop community-based networks. (In 1995, NYSERNet engages in similar though not so widely known study, Project CARE, relative to adoption of the Internet by rural schools.)

1994 - First Internet Training Center

To successfully expand use of the Internet beyond the government, research and education domains, it becomes clear that effective, application-specific user training is essential. So, in 1994, NYSERNet establishes NITEC, the NYSERNet Internet Training and Education Center, widely credited as being the first training center in the world dedicated to providing Internet training. Within three years, NITEC will train more than 10,000 individuals, hastening adoption of the Internet by New York's leading educational and corporate institutions.

1994 - Adoption by K12

Spurred on by the recognition of the growing value of the Internet as a resource for education, New York's BOCES (Boards of Cooperative Educational Services) partner with NYSERNet to provide Internet access to the state's BOCES and technical and user training for BOCES staff. BOCES, in turn, provides downstream Internet services and training to New York's schools and school districts.

1994 - A New Network

Growing demands on the network by NYSERNet's member institutions drive the need to upgrade. NYSERNet partners with NYNEX, Frontier, and Sprint to deploy a redundant 45 Mb/s backbone throughout New York. The project involves the migration of more than 100 existing member network connections to the new network.

1996 - Another Spin-off

The commercial potential of the Internet and the Web explodes. NYSERNet forms another for-profit company, AppliedTheory, to market commercial Internet and Web hosting services. NYSERNet again outsources its entire network services requirements, this time to AppliedTheory.

1999 - Internet2 & Another New Network

When the national networking community conceives Internet2, a high-performance research network distinct from the commodity Internet, NYSERNet launches plans for this network's New York State component, NYSERNet 2000. Commercial partners collaborate in implementation of NYSERNet 2000 with Broadwing as carrier and Newbridge Networks providing the ATM switching gear. The network goes operational in April with POPs in Buffalo, Rochester, Syracuse, Albany, and New York City, and gateways to Internet2's Abilene network and the NSF's vBNS. The network backbone operates at OC12 speed (622 Mb/s) and local loops to participating institutions at OC3 (155 Mb/s).

2000 to 2003 - New York City Dark Fiber Project

The NYSERNet Board directs NYSERNet management to determine the feasibility of developing and operating a private fiber optic interconnection facility in Manhattan to supplant local loops provided by common carriers. After an exhaustive study, NYSERNet determines that the combination of user needs and the soft optical fiber market suggest that NYSERNet construct its own facilities.

By spring 2002, requirements are refined sufficiently to issue an RFP for optical fiber infrastructure and an associated colocation facility, and Lextent Metroconnect submits the winning bid. In late spring 2003, construction begins. In early 2004, the American Museum of Natural History became the first institution to cut over its Internet access from local loop to optical fiber; by year's end, all 20 remaining sites are in production.

Today, many consider 32 Avenue of the Americas, NYSERNet's vendor neutral colocation facility (providing points of egress to NYSERNet's NYCDFN and its statewide optical transport, also to the commodity Internet, MAN LAN, ESnet, CA*Net, and, soon, to National Lambda Rail), the foremost such facility in the Northeast, perhaps the country.

2004 to 2005 - Statewide Fiber Network

NYSERNet next turns attention to deploying dark fiber to the rest of the state. At its fall 2004 meeting, NYSERNet's Board authorizes acquisition of a twenty-year IRU for a pair of optical fibers spanning the state from Buffalo to New York City. Engineering and contract negotiation for this project proceeded rapidly, and in April of 2005, NYSERNet lights its latest network: a statewide, all-optical fiber network, utilizing Dense Wave Division Multiplexing (DWDM). Deployment of the network catalyzes metropolitan dark fiber projects by NYSERNet members in Rochester, Syracuse and Albany.

2005 to 2007 - Business Continuity Center

In June 2005, NYSERNet's Board of Directors commission a project designed to leverage the NYSERNet optical network infrastructure to enhance member institutions' disaster recovery and business continuity strategies. A two-year effort to design and construct a state-of-the-art, commercial-grade data center ensues. The objective of the project is to create a Tier III facility, which NYSERNet members can use to mirror critical information and communication systems. The 70-cabinet facility goes live in Syracuse in June 2007. The American Museum of Natural History becomes the first member to deploy services from the center that same month.