

**Leatherstocking Telecommunications Consortium  
Advanced Telecommunication Project  
1998 Executive Summary**

This project builds on the extensive work of Consortium members to improve telecommunications in a nine county region. Members have applied for and received funding to develop distance learning, health care and public access services. Local funding commitments have sustained created networks. The intent of the project is accomplish the following;

- (1) Further tie together the existing networks in the region
- (2) Expand to more sites within the extended region
- (3) Expand the services offered over the network
- (4) Foster integration with the state intranet, the NYT
- (5) Tie the expanded network to other advanced telecommunications project networks with geographic or service ties to the region

The Leatherstocking region is centered by Delaware, Otsego and Schoharie counties surrounded by Chenango and Broome counties to the west, Schenectady and Albany counties to the east, Fulton, Montgomery (extended to Hamilton) and Oneida counties to the north and Greene county to the south. The major applications include the two distance learning networks of the Capitol Region BOCES and the Otsego-Northern Catskill BOCES and the telecommunications network of Bassett Healthcare. SUNY Oneonta is a part of the Otsego-Northern Catskill network and SUNY Cobleskill is a part of the Capitol region network. Expansion into project eligible areas is described.

It is the intent of this project to link all of the above major Consortium networks converting protocols where necessary, to expand the Otsego-Northern Catskill BOCES and Capitol Region BOCES distance learning networks through the addition of more school districts, and to expand the services, increasing health education, improving Internet access in the region, delivering education to the handicapped and homebound through links to PEG channels at Schopeg and SUNY Oneonta and tying in government services by coordination with the NYT. Already tested technological solutions are expected to be used.

The most important long term benefit of the project will come from coordination with other advanced telecommunications projects. Four area networks, Adirondack Area Network, Leatherstocking Telecommunications Consortium, Mohawk Valley/North Country Coalition, and South Central Area Network, have agreed upon a common set of goals which will allow for integration of services offered over the networks and coordination for network expansion.

As the existing networks all have experienced technical and program staff, the project director will serve as coordinator with a manager from each network serving on the management committee. Both the project director and management committee members will be involved with coordination among advanced telecommunications projects.

**Leatherstocking Telecommunications Consortium  
Advanced Telecommunication Project  
1998 Proposal**

**Introduction**

The Leatherstocking Telecommunications Consortium was established in 1994 to meet a need for coordination identified by projects funded to the Southern Tier East Regional Planning Development Board and to Schopeg Access, Inc by the Appalachian Regional Commission. Independent efforts to improve the availability of services had not generated enough volume to interest telecommunication vendors.

Major participants in the Consortium are:

Capitol Region Board of Cooperative Educational Services includes 24 school districts and in 1993 implemented a full motion distance learning network in Schoharie County which has been expanded into school districts in the capitol region and Hamilton Fulton Montgomery Region BOCES. Telecommunication services for this network are to be rebid in 1998.

Schopeg Access, Inc, a 501C3 corporation manages the Schoharie area public, educational and government (PEG) channel. Schopeg received ARC funding to link cable programming with the distance learning project, add SUNY Cobleskill to the distance learning network and bring Internet access to the County including public libraries. The board of directors has representatives from the health, education, government and private sectors. Schopeg also has satellite downlink capabilities.

SUNY Cobleskill, in addition to being a link on the distance learning network is a part of a technical college consortium composed of the SUNY colleges at Canton, Cobleskill, Delhi, Morrisville and Utica which will offer courses over distance learning. The college serves the community college function for Schoharie county and provides many degree programs and special courses matched with the needs of county residents and businesses.

The Otsego Northern Catskill Board of Cooperative Education Services runs a thirteen school distance learning network with plans to add four more schools and connect with other BOCES distance learning networks.

Bassett Healthcare runs its own CO for voice, data and video among its hospitals and clinics in Otsego, Schoharie, Delaware, Chenango and Herkimer counties and has plans for further expansion. Bassett is currently establishing video connections to schools and to county governments. It has received grants from the Rural Electrification Administration, Health Resources And Services Administration and New York State Department of Health to further its efforts.

SUNY Oneonta was the administrator of a 1995-96 grant to the Leatherstocking Telecommunications Consortium from the Appalachian Region Commission. In addition to being a part of the Otsego Northern Catskill distance learning network, the college manages the local PEG channel, is a major user of Internet services in the area, offers video conferencing facilities to businesses and organizations in the area and provides advice to the Telecommuting Center (designed to provide high speed connections for telecommuters in the Oneonta area).

The Consortium meets regularly to share progress and conduct joint planning. As there are several independent phone companies in the area, some of the consortium efforts have gone toward trying to generate similar services across providers.

**Project Goals**

There are two sets of goals for this project; those aimed directly at the region and those developed jointly with other projects in order to further state wide coordination.

Regional Goals

- (1) Further tie together the existing networks in the region
- (2) Expand to more sites within the extended region
- (3) Expand the services offered over the network

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(4) Foster integration with the state intranet, the NYT

### Regional Activities

(1) Further tie together the existing networks in the region. The major regional networks have been described above. Consortium members have worked out many of the details of services that could be provided were these networks linked, but have been faced with a lack of available and affordable technology to actually make the necessary linkages at the speeds desired. Advanced Telecommunication Project infrastructure deployment is requested to meet this need. Project participants are prepared to work with Bell Atlantic on specific strategies. The consortium is also aware of businesses too large to quality for the project, but which are likely to be interested in these services and should be considered in terms of an overall strategy. The following are existing sites on the networks.

#### Bassett Healthcare Network

- X Butternut Valley Health Center, Gilbertsville, Otsego County
- X Cherry Valley Health Center, Otsego County
- X Edmeston-Burlington Health Center, Otsego County
- X Mary Imogene Bassett Hospital, Cooperstown, Otsego County
- X Oneonta Health Center, Oneonta, Otsego County
- X Richfield Springs Health Center, Otsego County
- X Herkimer Health Center, Herkimer County
- X Cobleskill Health Center, Schoharie County
- X Schoharie County Community Hospital, Cobleskill
- X O'Connor Division, Delhi, Delaware County
- X Delhi Family Medicine Center, Delaware County
- X Riverside Health Center, Stamford, Delaware County
- X Walton Medical Group, Walton, Delaware County
- X Norwich Medical Office, Norwich, Chenango County
- X Mid-York Family Health Center of Sherburne, Chenango County

#### Otsego Northern Catskill BOCES

- |   |  |                                   |
|---|--|-----------------------------------|
| X | Cherry Valley School, Otsego County      | Cooperstown School, Otsego County |
| X | Edmeston School, Otsego County           | Laurens School, Otsego County     |
| X | Milford School, Otsego County            | Morris School, Otsego County      |
| X | Oneonta School, Otsego County            | Schenevus School, Otsego County   |
| X | SUNY Oneonta, Otsego County              |                                   |
| X | Charlotte Valley School, Delaware County | Stamford School, Delaware County  |

#### Capital Region BOCES and Hamilton Fulton Montgomery Region BOCES

- |   |   |  |
|---|---|--|
| X | Cobleskill-Richmondville Central School, Schoharie County |  |
| X | Middleburgh School, Schoharie County                      | Schoharie Vo-Tech Center, Schoharie County |
| X | Sharon Springs School, Schoharie County                   | SUNY Cobleskill, Schoharie County          |
| X | Duanesburgh School, Schenectady County                    | Schenectady City Schools                   |
| X | Albany Vo-Tech, Albany County                             | Berne-Knox-Westerlo School, Albany County  |
| X | Cohoes School, Albany County                              | Vooreesville School, Albany County         |
| X | Johnstown School, Fulton County                           | Gloversville School, Fulton County         |

(2) Expand to more sites within the extended region. The following are targeted as expansion sites in project eligible areas. Other sites have been identified that will be joined to the network but are not in eligible areas. More sites in eligible areas will be identified and added as the project progresses.

- X Fox Hospital & Clinic, Oneonta, Otsego County (Video connection to Albany Med on AAN)
- X Hartwick College, Oneonta Otsego County (Internet Access)
- X Link to SUNY technical college consortium (Cobleskill, Canton, Delhi, Morrisville, Utica)
- X Telecommuting Center, Oneonta, Otsego County (High Speed access for business)

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### Otsego-Northern Catskill BOCES

- X Gilboa Conesville School, Schoharie County (Distance Learning already funded )
- X Jefferson School, Schoharie County (Distance Learning \$50,000 requested for cpe) Redundant Entry to Network loop site
- X Hunter Tannersville School, Green County (Distance Learning \$50,000 requested for cpe)
- X Worcester School (Distance Learning, not in Economically Disadvantaged Area, EDA)
- X Windam Ashland Jewett School, Green County (Distance Learning \$50,000 requested for cpe) use fiber to Grand Gorge

### Capital Region BOCES and Hamilton Fulton Montgomery BOCES

- X Albany City Schools (Distance Learning, \$50,000 requested for cpe)
- X Amsterdam School, Montgomery County (Distance Learning, \$50,000 requested for cpe)
- X Broadalbin-Perth School, Fulton County (Distance Learning, not in EDA)
- X Fonda School, Montgomery County (Distance Learning, not in EDA)
- X Northville School, Fulton County (Distance Learning, not in EDA)
- X Schoharie Central School, Schoharie County (Distance Learning, not in EDA)
- X Voorheesville School, Albany County (Distance Learning, not in EDA)
- X Wells School, Hamilton County (Distance Learning, not in EDA)

(3) Expand the services offered over the network. An expanded network is encouragement for expanding services. Specifically, the following are some of the services planned:

- X Use the network and the PEG channels to deliver education, and training to the homebound
- X Pinpoint medical services into areas of need including child care, independent living centers, and senior citizen sites.
- X Increase the course offerings into colleges and high schools and over the PEG channels
- X Link with other regions to provide training to businesses
- X Improve emergency response coordination among governments and support organizations

(4) Foster integration with the state intranet, the NYT. The NYT is intended to tie together State and local governments in New York State. It consists of a private high speed fiber backbone from New York City to Buffalo and public carrier based connections from Buffalo through the Southern Tier and back to New York City. The State has a heavy investment in frame relay circuits to its own remote sites as well as to county governments. The majority of these circuits now carry only data. IP is the protocol of choice for the network. Voice and video are planned for the future as circuits are consolidated. Integration with this intranet will make the full range of government information available to network members, foster the development of electronic government and improve the coordinated delivery of services across government entities.

### State Wide Goals

Four projects, recognizing the artificial nature of geographical boundaries, have agreed upon a set of common goals designed to take advantage of infrastructure development under the Advanced Telecommunication Project. These project are; the Adirondack Area Network, the Leatherstocking Telecommunications Consortium, Mohawk Valley/North Country Coalition, and the South Central Area Network. These projects will work cooperatively to achieve the following common goals.

- (1) Establish the infrastructure to allow interconnection among the existing networks
- (2) Establish connections for existing networks to the infrastructure
- (3) Establish connections for new sites to the infrastructure
- (4) Establish connections to existing Advanced Telecommunications Project networks to fill in components for the ultimate Statewide network
- (5) Define a Statewide management structure to ensure effective and efficient implementation, operation and evaluation of these networks.

### State Wide Activities

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In order to establish the infrastructure to allow interconnection among the existing networks cooperatively, the projects will collectively work with Bell Atlantic to plan and design the services and facilities necessary both for the project period and to accommodate future expansion.

In order to establish connections for existing networks to the infrastructure, similarities among networks will be analyzed and collaborative specifications of necessary customer premise equipment carried out to take advantage of bulk purchasing.

In order to establish connections for new sites to the infrastructure the projects will work together to identify the needs of new sites, specify the most cost-effective way to meet those needs and support acquisition and installation of needed equipment.

As part of joint planning, to establish connections to existing Advanced Telecommunications Project networks to fill in components for the ultimate Statewide network, the projects will jointly work to develop and plan with existing networks the most cost-effective manner to make those connections and utilize the improved service offering then available.

The projects will work together to define a Statewide management structure to ensure effective and efficient implementation, operation and evaluation of these networks. A cooperative management structure is envisioned, which addresses the following areas;

- X Infrastructure planning
- X Site location
- X Circuit ordering
- X Cooperative purchasing
- X Cooperative technical support
- X Coordinated identification of programming offered

### **Mandatory Criteria and Preferential Factors**

The project is described below in terms of the mandatory criteria and preferential factors.

#### Mandatory Criteria

##### 1. Network infrastructure, customer premise equipment and related training

The Leatherstocking Telecommunications Consortium is requesting the enhancement of telecommunications infrastructure in the region such that existing high speed networks in the region can be tied together and further that these networks can be linked seamlessly with other region's networks. Except for funding for distance learning rooms, participants will handle most costs of equipment from the edge in. Currently the main networks are; the Otsego-Northern Catskill BOCES distance learning network, the Capitol Region BOCES distance learning network and the Bassett Healthcare network.

2. Assistance to public institutions and/or non-profit organizations, and/or small businesses are the focus of this project and the management of it will include only those types of entities. However, it should be noted that nonqualifying entities such as large businesses are also looking for this level of infrastructure and are likely customers of Bell Atlantic.

3. Undertaken for lawful purposes The missions and actions of the members of the Consortium are and have been to the best of our knowledge lawful.

4. Accommodation of needs of persons with disabilities is a focus of this project. Two organizations, the Capitol Area Consortium on Aging and Disabilities (CACAD) and the NYS Institute on Disability will be involved in the project. One application will involve use of PEG channels to deliver special services to the homebound.

5. Relevance to goal of Advanced Telecommunication Project. That this region suffers from a lack of advanced telecommunications infrastructure has been demonstrated by past efforts of the Consortium to bring together the telecommunications providers in the area in a cooperative venture. Current resources are inadequate to support the

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Internet needs of the colleges, the full motion distance learning linkages needed and the switching capabilities to allow point to point switched connections for video conferencing.

6. Technical sustainability should be possible as the technologies and protocols, IP over frame and ATM necessary to support the network have been successfully demonstrated in other Advanced Telecommunication Projects. The H320 video standard has been found successful in a variety of situations.

7. Designable within the qualifying technologies/services. While the overall design has not been worked through with Bell Atlantic, the anticipated solutions have been successfully applied elsewhere. This is not expected to be a problem.

### Preferential Factors

8. (a) Meet an array of advanced telecommunications needs. This project focuses on tying together high speed interactive video, data, and to a lesser extent, voice networks. The existing networks are both analog and digital. The services that can be provided under this project are required if the existing networks are to grow to the extent necessary. The Otsego Northern Catskill BOCES distance learning network will need to exceed its current capacity in order to add the schools it wishes to add (Jefferson, Gilboa-Conesville, Hunter-Tannersville) and to make the links to other distance learning networks. The Capital Region BOCES currently has thirteen schools on its network and is planning the addition of six more. SUNY Oneonta and Hartwick College both need increased Internet capabilities. Businesses in the area looking for high speed connections have been identified.

This project is deliberately designed, based on experience of the Consortium, to serve the health, education, government and private sectors. Coordination and delivery across sectors has already been demonstrated with ongoing efforts. This project will further those uses allowing for broader and more flexible delivery of services.

(b) Use new Bell Atlantic network infrastructure. To the best of our knowledge, Bell Atlantic does not have DS-3, OC-3, SONET, Multi-Channel Video or Asynchronous Transfer Mode services in the full project region.

9. Meaningfully benefit an economically disadvantaged area. In Delaware County, Franklin town, Hancock town, Hobart village, Margaretville village, Stamford town and Stamford village are part of the project. In Otsego County, Cherry Valley village, Laurens village, Richfield town, Richfield Springs village, Schenevus village and Worcester town are part of the project. In Schoharie County zip codes 12076 Gilboa, 12093 Jefferson, 12149, Richmondville and 12175 Summit are part of the project. The Capitol Region BOCES also serves all zip codes in Albany and Schenectady counties. Bassett Healthcare's network reaches into Herkimer County including zip code 13350. In Greene County Hunter town and village, Tannersville village and Ashland town will be served. In Montgomery County 12010, Amsterdam will be served. As government services get added to the NYT and these are tied into the network, all eligible areas within these counties will receive services.

10. Accessibility to persons with disabilities. The project will work with two organizations, CACAD, the Capitol Area Consortium on Aging and Disabilities and the NYS Institute on Disability to develop special connections to and uses for the network explicitly for persons with disabilities. Efforts will be made to extend services into special sites such as ARC's group homes and senior centers. Programs will focus on delivering information to and establishing interaction with the homebound over PEG channels with audio feedback and using special Internet type connections.

11. Resources and experience to capably manage the project. Consortium members have consistently demonstrated to the satisfaction of a variety of funding sources that they have the resources and experience to capably manage the project. The Project Director, Dr. Stanley France, Vice President, Schopeg Access, Inc. has been involved with telecommunications since 1992, carried out much of the work under the ARC grant to Schopeg, has presented at several conferences on telecommunications, formed the Local Side Advisory Telecommunications Planning Effort, a state wide organization, conducted the analysis of the State's circuits, is an ex-officio member of the Governance Council for the NYT and prepared the analysis of state circuits for the NYT. Other consortium members have significant time and experience in managing networks. The major members of the management team are:

X      Dr. Stanley France, Project Director, Vice President Schopeg Access, Inc; Director Central      Data

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- Processing Schoharie County
- X Dr. Chester Burton, Dept Chair Business and Computer Technologies Department
  - X David Courtright, Director Regional Information Center Capital Region BOCES
  - X Dr. David Hornick, Past President, Capital Area Consortium on Aging and Disabilities
  - X Roger Oesterle, Director of Instructional Technology Otsego Northern Catskill BOCES
  - X Charles Taylor, Bassett Healthcare, Director, Communications and Network Engineering
  - X Eric Wilson, Director of Computer Services SUNY Oneonta

The management team is charged with:

- X Working with Bell Atlantic (and other providers as necessary) to tie the networks together
- X Integrating new sites into the network
- X Identifying additional sites to use services or connect to the network
- X Expanding existing services over the network
- X Identifying and developing new opportunities to use the network
- X Fostering integration with the NYT
- X Working with other networks to integrate activities and services
- X Developing public awareness of the network and use of its services

12. Resources for sustainability. The funds used to pay for existing networks are part of the regular budgets for each of the major participants. Considerable and multiple program and technical personnel are available from the Consortium members to continue the capability of services delivered and maintenance of the network.

13. Significance and commitment of funds and resources. A steady stream of funds now exists with the distance learning networks, the SUNY colleges, and Bassett Healthcare for telecommunication services. These participants are desirous of expanding and coordinating their networks. Adequate technical staff is available already within network participants.

14. Organization of the project. The project is organized to take advantage of the experience of Consortium members. The project director is Vice President of Schopeg Access, Inc. which balances the interests of the health, education, government and private sectors. Each of the major participants in the network bring considerable management skill to the project. This skill will be utilized in the management team which will plan and execute the integration of the network. The project director will provide the main point of contact as well as coordinate with other advanced telecommunications projects.

15. Support and value to community and region. Past projects have received major support from the community. For example the Consortium project funded by ARC in 1995 contained fifty four letters of support from County governments, private businesses, health organization and educational institutions. Funding sources have responded favorably to this support and been satisfied with the success of projects. Telecommunications, because of the relatively large distances and rural nature of major portions the region is viewed as a major need and as a necessary condition for improving the economic state as well as the quality of life in the area.

16 Concentration in an area of need. One of the problems that the area has had is that despite the commitment of the area to telecommunications, convincing providers to put resources into the area has been difficult. When the need to have the same services as large metropolitan areas and to interact with those areas are considered, the entire region, which contains significant metropolitan EDA's as well as large rural areas, consistently suffers from a lack of integrated high speed telecommunications services.