

The Finger Lakes Regional Telecommunications Development Corporation

OVERVIEW

Issues:

- Telecommunications in the region is segmented and diverse (numerous phone companies, 2 area codes, inconsistent development of the infrastructure and issues with redundancy, reliability, competition and affordable connectivity)
- Telecommunications infrastructure is critical to technology-led economic development
- Our region needs access to numerous high speed networks for research, development and general business applications as well as competition to reduce costs, enhance services and provide connectivity options

Background:

- Numerous studies have been compiled supporting the open access model solution
- Business, education, health care and local government region-wide have shared support for the solution
- Project supports the local Economic Development Strategic Plan (Technology-led Economic Development)

Solution:

- Use a Local Development Corporation (not Government) to manage the infrastructure
- Create a regional open access fiber optic ring (180 miles) connecting the following:
 - Healthcare (Hospitals as well as major clinics)
 - Education (Primary schools as well as Colleges)
 - Local Government (including Police, Fire and Homeland Defense)
 - Critical businesses and potential business locations
 - Research Facilities (Infotonics Tech Center and the Cornell Ag & Food Tech Park)
- Project Principles:
 - Fiber will be open to everyone to lease
 - Fiber will touch all municipalities and all adjacent regions
 - Fiber will be backbone, dark fiber only, no services thus will not compete with private sector services
 - Use the private sector to design, build, operate and maintain the infrastructure
 - Costs will not be subsidized by the taxpayers – revenues generated by leasing must cover all expenses to include debt payments and operating expenses
- Potential connectivity to other networks/regions

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- BOCES Regional Information Center – Wayne County
- Monroe County Municipal Network (Municipalities, education and healthcare)
- Seneca County, Cornell University and also Yates County
- NYSERNet (NY State Education Network)
- NLR – National LambdaRail/Internet2 (education and high end research network)

Current Situation:

- Ontario County Board of Supervisors unanimously established Local Law 3 of 2005 authorizing the County Administrator to take the necessary steps to create a local development corporation based on recommendation of Business Plan
- Corporation established (10/25/2005), recognized by NY State
- Certificate of Public Convenience and Necessity (CPCN) approved by the NY State Public Service Commission January 2007 authorizing the Corporation to operate as a telephone company (common carrier).

Cost & Timing:

- Total cost of the project is approximately \$7.5 M and should take 2 years to build
- Ontario County has provided \$2.5M in initial funding (part loan and part pre-payment for use of the infrastructure) with the remainder of the funds available by bonding (costs covered by OCIDA PILOT revenue)
- Project Fully Funded

Current Actions:

- First Phase (40 miles) completed in August 2008
- Second Phase (20 miles) to be completed by April 2008
- Partnership with Marcus Whitman Central School District will build 8 additional miles to be completed by June 2009
- Entire 180 miles should be completed by end of year 2010
- Currently Marketing First Phase – County is using the fiber to connect their buildings
- Negotiations are ongoing with Bond Counsel – Bonding anticipated by first quarter 2009
- Carriers are reviewing Master Agreements to establish themselves as service providers
- WavHost (wireless broadband), Finger Lakes Technology Group (broadband, data and telephone) and Clarity Connect (wireless broadband) have signed Master Agreements

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The Finger Lakes Regional Telecommunications Development Corporation will support, enhance and be the cornerstone for technology-led Economic Development. The project will connect two very prestigious Research Facilities enhancing their collaborative initiatives as well as provide connectivity to the academic and research worlds for a robust Virtual Collaboration Network. This project will further establish the Finger Lakes Region as a leader in innovative ways to make life better for its residents and businesses. This project will provide the opportunity to significantly increase education, healthcare, public safety and economic development opportunities region-wide thus enhancing not only Technology-led Economic Development but also “Quality of Life for the Technical Worker”. With the necessary Community, Local, State and Federal support, **the Finger Lakes Region will position itself as a Premium Location for High Tech Businesses, the Technical Worker and World Class Technical Collaboration.**

The fiber ring is a true regional project. The ring will connect to the Monroe County Municipal Fiber Ring (Monroe County Colleges, other Education, Health Care and Municipality Connections), connect into Wayne County to provide connectivity to the BOCES Regional Information Center, establish a connectivity option into Yates County (Penn Yan and Keuka College), anticipate connection to Seneca County with eventual connection (Public/Private Partnership) to Ithaca and Cornell University, and we anticipate to link to the ION (Independent Optical Network), NYSERNet (New York State Education and Research Network) and the National LambdaRail/Internet2 Network making the Infrastructure not only regional but provide connectivity options throughout NY State as well as Nationally.

The Problem: Anyone who uses the Internet has certainly noticed increasing performance problems – it takes longer and longer to transfer files (see table at the end of this paper), there are sometimes long pauses in interactions, and broken connections are becoming more frequent. The problem exists because of two basic issues; first – the Internet is severely overloaded due to the explosion in Internet usage; second – the amount of data being transferred has increased greatly over the last few years and will continue to grow. Commercial and recreational traffic is increasingly preempting research and educational use of the Internet. To address this problem, regional and national private research-oriented networks are being built to meet the specific needs of research and education.

For example: Cornell University has committed to a National LambdaRail (goal of the NLR project is to establish a fiber-based infrastructure allowing computational science to be performed and the resulting massive amounts of data to be shared across next-generation networks) connection and with a public/private partnership fiber link between Cornell and the Cornell Agriculture and Food Technology Park, the NLR could be available to entities connected to the Finger Lakes Regional Fiber

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Infrastructure. The Cornell Agriculture and Food Technology Park in Geneva, as well as the Infotonics Technology Center in Canandaigua would benefit immensely from access to the NLR and other high-speed networks. Other educational entities such as the colleges in the region as well as regional economic initiatives would potentially benefit from partnering with the Cornell University initiative. This Project will provide an excellent foundation to support the development and expansion of the NLR throughout the Finger Lakes Region and eventually all of Western New York.

The lack of affordable broadband is a nation-wide issue. FCC Commissioner Michael J. Copps in a Washington Post Article dated November 8, 2006 stated, "America's record in expanding broadband communication is so poor that it should be viewed as an outrage by every consumer and businessperson in the country. Too few of us have broadband connections, and those who do pay too much for service that is too slow. It's hurting our economy, and things are only going to get worse if we don't do something about it. The United States is 15th in the world in broadband penetration, according to the International Telecommunication Union (ITU). When the ITU measured a broader "digital opportunity" index (considering price and other factors) we were 21st -- right after Estonia. Asian and European customers get home connections of 25 to 100 megabits per second (fast enough to stream high-definition video). Here, we pay almost twice as much for connections that are one-twentieth the speed." He continues, "The stakes for our economy could not be higher. Our broadband failure places a ceiling over the productivity of far too much of the country. Should we expect small-town businesses to enter the digital economy, and students to enter the digital classroom, via a dial-up connection? The Internet can bring life-changing opportunities to those who don't live in large cities, but only if it is available and affordable. Even in cities and suburbs, the fact that broadband is too slow, too expensive and too poorly subscribed is a significant drag on our economy. Some experts estimate that universal broadband adoption would add \$500 billion to the U.S. economy and create 1.2 million jobs. Future generations will ultimately pay for our missteps. Albert Einstein reportedly quipped that compound interest is the most powerful force in the universe. Investment in infrastructure is how a nation harnesses this awesome multiplier. Consider that 80 percent of the growth in fiber-to-the-home (super-high-speed) subscribers last year was not in the United States but in Japan. One does not need Einstein's grasp of mathematics to understand that we cannot keep pace on our current trajectory." Commissioner Michael Copps also recently called broadband "the most central infrastructure challenge facing the country right now."

Facts: An Ontario County Telecommunications Study defined telecommunications within Ontario County as segmented and diverse (5 phone companies, 2 area codes, inconsistent development of

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the telecommunications infrastructure to include issues with availability of redundant, reliable and affordable connectivity). During the study, focus groups representing education, public safety, healthcare, business, economic development and municipalities, each cited the diverse telecommunications culture as a major issue. The study concluded that in many areas of the County telecommunications is having a major negative impact on the ability to retain business as well as develop and grow healthcare and educational programs. This study could be duplicated in most areas of the Finger Lakes Region and probably both state-wide and nationally. **Telecommunications is a critical factor in the economic development future of the region.**

The Fiber Optic Ring Project consists of fiber optic cable installed throughout the region. The Project serves as a foundation to support technologies capable of providing the “last mile” deployment throughout the entire region. The Project will provide the backbone infrastructure to establish Fiber-to-the-Business (FTTB), Fiber-to-the-home (FTTH) and Wireless Community initiatives.

The Project will interconnect county facilities, town and village offices, schools, colleges, health care facilities, fire stations, public safety facilities and communications towers, larger industries and economic development sites (current and anticipated). The Finger Lakes Regional Telecommunications Development Corporation (TDC) is responsible for all aspects of the Project. The TDC has the oversight of a Board of Directors. Qualified contractors operating in the region will design, build, operate and maintain the infrastructure.

A Business Plan anticipates revenue from the Project will be very capable of meeting operating costs as well as repayment of debt. Projected cost of the project is \$7.5M for the 180 miles of fiber to be built and leased segment by segment with a final infrastructure consisting of 3 diverse rings with anticipated operating costs of \$500k per year. The TDC was incorporated on October 25, 2005. The Board of Directors began meeting in January 2006. The construction has started with an anticipated completion (for the entire project) of December 2010. The project was designed using the following assumptions and principles:

- Fiber to be open to everyone to lease
- Fiber will touch all municipalities (to include police, fire and communications towers)
- Backbone dark fiber infrastructure only, no services (thus no competition with the private sector service providers)
- TDC will manage the infrastructure with private sector contractors building, operating and maintaining the infrastructure

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- Costs not subsidized by taxpayer funds
- Funding: Public Sector Grants, revenue bonds, loans and lease revenues

Summary: This Local Development Corporation is the first of its kind in the State of New York. The Board of Directors has paved the way for others to follow. The Finger Lakes Regional game plan is to be competitive not only nationally but also globally, thus we need a fiber optic ring infrastructure to support "advanced" connectivity region-wide. The infrastructure being built will provide the backbone for significant telecommunications services for the next quarter of a century. The "genius" of our fore fathers to request and receive four NY State Thruway exits for Ontario County in 1954 has proven to be a "huge" economic development edge. The deployment of this Fiber Optic Ring is likely to be viewed 50 years from now as another "genius" milestone in this region's history. The lack of affordable broadband is a nation-wide issue. Ontario County is actively addressing this critical issue.

Speed Test:

