



PROJECT OVERVIEW

Current Status:

- Initial 200+ mile (over 16,000 fiber strand miles) project completed and fully operational on Dec 27, 2010
- Currently Marketing Available Fiber
 - County is using the fiber to connect their buildings
 - Service Providers leasing fiber (Finger Lakes Technology Group, tw telecom, OneStream Networks, Integrated Systems and Layer 8)
 - Verizon Wireless is leasing fiber to connect their Cellular Towers
 - Partnered with Wayne Finger Lakes BOCES and Marcus Whitman Central School District to connect their elementary schools to their main campus (8 miles completed)
 - Thompson Health under contract to connect their facilities
 - FLCC using fiber to connect to their new Victor Campus
- Project Fully Funded (\$12M committed to project over the next 25 years)
- Completed RFI submission to Google for Fiber for Communities Test Project

Impact on Citizens and Local Business:

- Business locations close to the fiber ring now have competitive, cost-effective alternatives to the traditional incumbent telephone and cable TV providers
- Businesses with multiple locations within the county can now create high-speed private networks at a competitive price compared with leasing data lines from incumbent providers
- Citizens will eventually see the following benefits
 - High-speed wireless Internet to provide a cost-effective alternative and fill dead spots
 - Cellular service (providers using fiber) should be more robust with the latest technology
 - Possibly fiber to the home to provide an alternative option for TV, Phone and Internet
 - Generally, competition should bring pricing down

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

Solution:

- Use a Local Development Corporation to build and manage the infrastructure
- Create a regional open-access, fiber optic ring (200+ miles – over 16,000 fiber strand miles) connecting the following:
 - Healthcare (hospitals as well as major clinics); Education (primary schools as well as colleges); 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

Corporation History:

- 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 – corporation established (10/25/2005)
- 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).

Funding:

- Original estimate was \$7.5M – first 200+ miles completed for \$5.5M (**\$2M under budget**)



Access Ontario 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 throughout the region, 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 (Village of Penn Yan and Keuka College); establish a connection with the Southern Tier Network (Schuyler, Steuben and Chemung Counties), 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 New York 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 & Food Technology Park, the NLR could be available to entities connected to the Finger Lakes Regional Fiber Infrastructure. The Cornell Agriculture & Food Technology Park in Geneva, as well as the Smart System Technology & Commercialization Center (College of Nanoscale Science & Engineering at University at Albany) 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.

On March 16, 2010, the Federal Communications Commission released its national broadband strategy, a year in the making. The document is as inspiring as it is broad-reaching — envisioning a dramatic nationwide expansion of truly high-speed (gigabit) Internet access, the world's best wireless broadband systems, and completing next-generation networks supporting health care, public safety and community institutions, as well as business and government. The executive summary includes the following: “Broadband is the great infrastructure challenge of the early 21st century. Like electricity a century ago, broadband is a foundation for economic growth, job creation, global competitiveness and a better way of life. It is enabling entire new industries and unlocking vast new possibilities for existing ones. It is changing how we educate children, deliver health care, manage energy, ensure public safety, engage government, and access, organize and disseminate knowledge. ... But broadband in America is not all it needs to be. Approximately 100 million Americans do not have broadband at home. Broadband-enabled health information technology (IT) can improve care and lower costs by hundreds of billions of dollars in the coming decades, yet the United States is behind many advanced countries in the adoption of such technology. Broadband can provide teachers with tools that allow students to learn the same course material in half the time, but there is a dearth of easily accessible digital educational content required for such opportunities. A broadband-enabled Smart Grid could increase energy independence and efficiency, but much of the data required to capture these benefits are inaccessible to consumers, businesses and entrepreneurs. And nearly a decade after 9/11, our first responders still lack a nationwide



public safety mobile broadband communications network, even though such a network could improve emergency response and homeland security.”

Facts: An Ontario County Telecommunications Study defined telecommunications within Ontario County as segmented and diverse (5 phone companies, 2 area codes, inconsistent development of 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 statewide 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, healthcare facilities, fire stations, public safety facilities and communications towers, larger industries and economic development sites (current and anticipated). Access Ontario is responsible for all aspects of the Project. It 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. Cost of the project was \$5.5M for the 200 miles of fiber (approximately 16,000 fiber strand miles) to be built and leased, segment by segment, with a final infrastructure consisting of three diverse rings with anticipated operating costs of \$500k per year. Access Ontario was incorporated on October 25, 2005. The Board of Directors began meeting in



January 2006. The construction was completed December 2010. The project was designed using the following assumptions and principles:

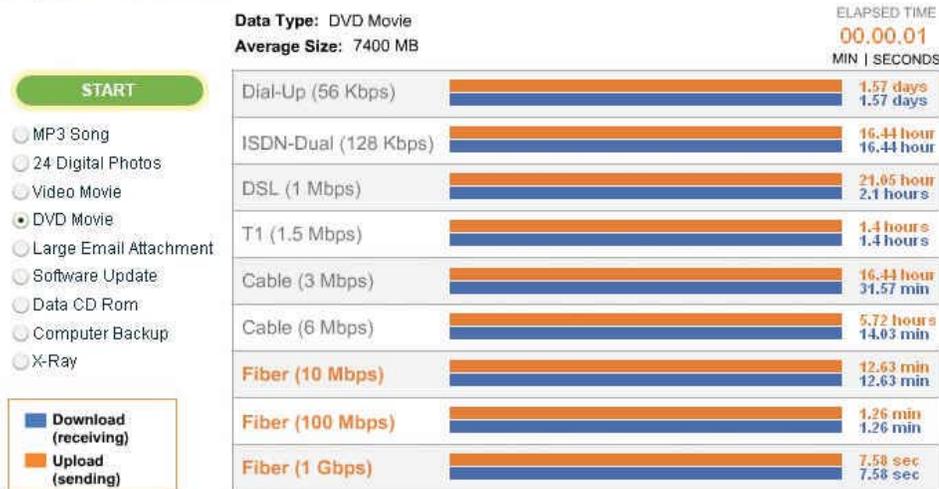
- Fiber to be open to everyone to lease
- Fiber will touch all municipalities (to include police, fire and communications towers)
- Backbone dark fiber infrastructure only, no services (thus no competition with the private-sector service providers)
- Access Ontario will manage the infrastructure with private-sector contractors building, operating and maintaining the infrastructure
- Costs not subsidized by taxpayer funds
- Funding: 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 forefathers to request and receive four NY State Thruway exits for Ontario County in the 1950s 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 nationwide issue. Ontario County is actively addressing this critical issue and has established a National Model, which supports the FCC's National Broadband Strategy.



providing advanced connectivity

Speed Test:



Example of Ontario County Google Fiber for Communities RFI Responses:

Other significant features of your community that could be relevant for this project:

We have a not-for-profit Public Benefit Corporation that is building a 180-mile, open-access fiber ring, representing 16,000 miles of middle-mile infrastructure around the county. On schedule for completion in December 2010, this fiber connects police, fire, education, municipalities and key business locations. This corporation has NY State Public Service Commission certification as a common carrier, thus we have access to all public rights of way to include utility poles. We also have contracts with design, engineering and construction experts, which will expedite the Google process. Our open access ring has interconnects to a number of high capacity local, national and international fiber backbones.

Describe any current or planned programs in your community to accelerate and expand adoption and use of broadband Internet access: (there does not seem to be a character limitation)

We certainly expect our fiber ring to expand broadband adoption, use and reduce cost. We have continuously maintained an aggressive communications and marketing campaign to increase awareness and support of our community-based technology initiatives. We have international recognition as a progressive, technology-led community. We have developed partnerships with leading marketing groups to communicate our success stories locally, nationally and internationally. Our citizens understand and value the importance of broadband within our community. Schools are developing collaborative programs based on broadband technologies that will expand the learning experience beyond the classroom and include learning opportunities at home and abroad.



Collaborative initiatives with universities and healthcare are allowing the expansion of respective services into areas once not possible. Ontario County consciously developed a plan six years ago to educate and involve residents and corporate members down a pathway for technology-led development. We are seeing major gains in community support, as well as economic interest from companies desiring to relocate into the area. In a sense, Ontario County has been able to create a competitive advantage that enables us to compete globally.

Additional reasons why you believe that Google should select your community for this project: (there does not seem to be a character limitation)

Ontario County has a strong commitment to technology-led-economic development. This is the cornerstone of our decision to build the 180-mile, open-access fiber ring. Our community understands and embraces this culture. Many of our residents work in computer-related industries. Ontario County fosters and develops professionals working internationally from home offices. Our educational system is among the top in the country and is supported by two internationally known research centers. We are a fiscally well-managed community that is not looking for investment to survive; we are looking for investment to grow. We believe our pro-active commitments make our county a strong partner with Google to ensure a successful experiment and long-term partnership.

Describe how you ascertained or plan to ascertain the level of community support for this project (e.g., surveys, public hearings, meetings with community groups, etc.):

Use all methods. Given our extensive outreach for our fiber ring, we have a significant level of community support already. In creating our business plan, we met with target groups in healthcare, government, business and education. We also stay active in the technical and business community. Access Ontario also has a partnership with a national leading public relations firm providing great access to the press. With our economic development outreach, we have had 54 companies ask for more information on the fiber ring. At least six companies have indicated that access to the fiber ring was a critical factor in their decision to move to, or within, Ontario County.

Please describe your community's level of support for this project:

Very, very high. Given that \$12M of public funds (over 25 years) has been committed to provide the fiber backbone, it certainly shows a high level of support. The County Board of Supervisors also unanimously approved a technology-led economic development strategic plan in 2004 (resolution 298-2004). This strategic plan provided the foundation for the establishment of the fiber ring local development corporation. The County Board of Supervisors unanimously established the local development corporation by resolution 524-2005 and provided \$2.5M in funding to get it started.



Please briefly summarize any additional comments or suggestions you would like to make to Google on behalf of your community:

Ontario County is unique in many ways. We have a vibrant community overall with growing high-tech companies combined with some metro areas and very rural hamlets that are struggling with “digital divide” issues. We have three well-established hospitals, as well as a rural Community Health Center (Rushville). We have five incumbent phone companies, as well as a 180-mile, open-access fiber infrastructure. We border a very urban area to our northwest (third-largest city in NY State – Rochester), as well as the third-most rural county to our southeast (Yates). We have areas where ISPs can provide GB Internet service and other areas where there is only dial-up with no cell phone coverage.

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