

**NEO RHIO and OneCommunity HealthNet Partnership
FCC Rural Health Care Pilot Program**

**NEO
RHIO**



**NEO RHIO and OneCommunity
HealthNet Partnership
FCC Rural Health Care Pilot Program
Fiscal Year 2006**

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I. Introduction

OneCommunity and its Northeast Ohio regional partners propose the creation of HealthNet, a Northeast Ohio Broadband initiative, in support of the Telemedicine and Health Information Exchange (HIE).

OneCommunity and its community partners have invested millions over the last three years to connect education, healthcare, government and non-profit organizations together through fiber and wireless broadband facilities. It now connects over three hundred (300) sites across Northeast Ohio including twenty-eight (28) hospitals and healthcare facilities. This investment has served as a catalyst for collaboration amongst health, education and government and the creation of the Northeast Ohio Regional Health Information Organization (NEO RHIO). Additional investment from our economic development community and the State of Ohio has enabled access to Ohio's Broadband Network and provided national access to Internet 2 (I2) and the National Lambda Rail (NLR).

We would like the FCC to consider the future where;

- broadband is universally available across the rural and urban communities and quality healthcare is available not only in the hospital but to every citizen at their clinic, doctors office or in the comfort of their home;
- access to medical information is immediate and in real-time and used by doctors to improve the quality of the care for their patients ;
- wellness education is enabled by broadband and is part of prevention and disease management;
- patients can be universally monitored and connected to their care givers wherever they are at in a convenient and private fashion and;
- underserved healthcare community has access to the same quality of health services that are readily available in our major urban hospitals.

This is the vision that OneCommunity and Northeast Ohio Regional Health Organization (NEO RHIO) are investing in for Northeast Ohio. OneCommunity has an existing broadband network, a significant healthcare technology coordination role and an established partner network that includes the rapidly growing NEO RHIO, regional urban and rural healthcare providers, and a consortium of vendors, technology researchers and government advisers. OneCommunity and NEO RHIOs creation of HealthNet is made of fiber optic cable, wireless and high quality switching devices that can connect medical facilities. Currently, data from each of the facilities is aggregated for a number of telemedicine applications and record storage in Northeast Ohio.

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With the help of the FCC Rural Health Care Pilot (RHCP) Grant, HealthNet Services will be extended into over twenty-two (22) counties covering the rural communities' needs in Northeast Ohio. With this help OneCommunity and NEO RHIO will be able to gather additional community investment in the development of our regions health, education and workforce development making the rural healthcare initiative a viable and long-term sustainable business model. We encourage the FCC to share our vision of the future and provide the catalyst needed to ensure the deployment of a viable rural community health network.

Why OneCommunity, NEO RHIO and HealthNet?

OneCommunity in three years has successfully developed a collaborative community environment and gathered the resources necessary to implement a proven community broadband network. We have developed the capacity to engage the community and our healthcare and broadband networking partners in a meaningful way for economic development and the proliferation of broadband services within our economically disadvantaged community. We have demonstrated the;

- ability as a neutral party to bring our communities competitive forces together to enhance and improve our broadband, education, healthcare and workforce;
- ability to attract significant community, state and vendor investment for the adoption and use of broadband technology as an economic development tool within Northeast Ohio;
- capability to develop and implement core infrastructure and interoperable interconnections with all the regions common carriers, state and national networks such as Internet 2 and National Lambda Rail;
- capability to collaborate with a competitive healthcare community to develop a regional Health Information Exchange (HIE) through NEO RHIO and;
- sustainability necessary to ensure the success of expanding OneCommunity's core network into the rural communities of Northeast Ohio for the NEO RHIO HealthNet project.

II. Description of NEO RHIO

NEO RHIO with its ten (10) founding medical partners representing thirty-two (32) facilities, twenty-eight (28) of which are connected, stands ready to extend the network and its cost-saving telemedicine, research and patient information to nineteen (19) additional medical facilities in areas designated as rural. Some of these institutions are in rural areas as designated by the Executive Office of the President and the Federal Office of Management and Budget. This unique geographic and hierarchal structure insures the FCC's requirement for applicants to connect urban with rural *and* increase the rural partners to access medical data through multiple

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connections. An additional strength of NEO RHIO's position is that OneCommunity's broadband technology, design, and implementation has already been tested and is widely used by healthcare and other industries that require the same connectivity and security, namely government, public safety and education. OneCommunity and NEO RHIO are recognized globally (see Appendix A) for the successful implementation of a broadband grid among leading technology application concerns. This reputation and tested design make HealthNet a prime option to meet the FCC's financial, connectivity and rural access goals in this Pilot opportunity and to create a sustainable Ohio HealthNet infrastructure.

III. Goals and Objectives of the Proposed Network

The goal of HealthNet is to extend the current network and install additional gigabyte optical fiber connections to hospitals and government health agencies in the rural areas of Northeastern Ohio. In order to provide the levels of broadband that are required for Health information Exchange (HIE) and telemedicine applications, the kinds of services that are routinely available in rural areas are not sufficient. Typically, rural areas may have access to T1 circuits (1.5 Mbps), but generally these service by extremely expensive and there are typically no services faster than T1 available at an affordable and sustainable price. In order to satisfactorily transmit and receive medical imaging, and to improve the quality of medical care that can be provided, speeds in a different order of magnitude are required. NEO RHIO HealthNet will provide 100 Mbps of bandwidth, upstream and downstream, to all locations connected via wireless, and will provide 1 gigabit of bandwidth, upstream and downstream, to all locations connected via fiber. In our proposed network design, over 80% of the locations included in our proposal will have the benefit of at least 1 gigabit.

Specific objectives of the proposal include:

- connecting nineteen (19) rural hospitals located in the Northeast Ohio rural health region over a dedicated broadband network;
- extending the OneCommunity/NEO RHIO broadband services to rural providers;
- providing the connecting framework for a regional repository that employs secure telehealth applications for chronic disease monitoring and continuing education services; and
- implementing sustainable enterprise solutions using HIT for eligible providers in rural and underserved counties. This network is expected to improve the quality and reduce the cost of health care.

In addition to the objectives listed above, the NEO RHIO Health Initiative is designed to offer the following medical delivery and data access benefits:

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- **Better patient care** via comprehensive "real time" medical information delivered electronically to the point of care, including medication management, ePrescribing, laboratory results, radiology images, as well as in-patient and out-patient care tracking to improve the efficiency of clinical and administrative functions.
- **Foster regional collaborations** among health care entities so that a patient's information can be securely stored in the local community but is electronically accessible to those involved with providing their care in that community. A limited number of regional initiatives exist today, but they vary in the ways they approach data sharing and cannot communicate patient information outside their own system.
- **Faster patient registration and service** through the use technologies that help eliminate repetitious form completion and medical history compilation, as well as the processing of Health Savings Account (HSA), Flexible Spending Account (FSA) and health plan claims. Payer and provider administrators are also estimated to save five to ten percent of their administrative costs through the automation of previous manual and paper-based processes.
- **Support the acceleration and diffusion of clinical research** information into the hands of sponsors, researchers and the Food and Drug Administration, as well as the medical community at large. Research findings without adoption accomplish no public good; the discoveries must be translated into useful products and applications for physicians.
- **Consumer access to medical records** and additional patient-specific information that will allow patients to make more informed healthcare choices. Empowering patients nationwide to play a more active role in their healthcare requires supplying them with useful information. This added insight to their personal medical histories will allow them to make improved decisions.
- **Collaboration with Universities and medical institutions** to develop a platform for wellness and health management, generate an informed healthy community, and to train the next generation of healthcare workers and researchers.

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IV. The Network’s Total Costs:

The total cost of the network implementation is as follows:

FCC RHCP Project	
Implementation	Total
Fiber Construction	\$ 12,463,831
Pole Permits	\$ 503,263
Fiber Entrances	\$ 308,812
Facility Leases	\$ 20,040
Equipment Costs	\$ 656,273
Customer CPE	\$ 470,365
Type II expenses	\$ 115,400
Project Management	\$ 495,000
Total	\$ 15,032,983

FCC RHCP Project	
Yearly Operations and Maintenance	Total
Pole/Facility and Maintenance	\$ 706,160
Operational Management	\$ 384,000
Total	\$ 1,090,160

Total Project Cost **\$ 16,123,143**

RHCP Funding Distribution Plan	Contribution	Distribution
FCC Grant Request	70.00%	\$ 11,286,200
OneCommunity in-kind Contribution	12.00%	\$ 1,934,777
Grants	18.00%	\$ 2,902,166

Total Funding Requirements **\$ 16,123,143**

This network will be constructed in an incremental manner over a one year period. Operation expenses will not be incurred until year two. The project implementation will need to be fully funded in year one for the entire project. This will allow for continuity of staffing throughout the entire project implementation.

V. How will for-profit institutions help pay for their fair share?

Ohio Healthcare system is largely non-profit and the initial participants are all non-profit Hospitals. We anticipate that a number of for-profit healthcare providers will join our NEO RHIO which has also filed for 501(c)3 status with the Internal Revenue Service (IRS). There are very few for-profit hospitals in the Northeast Ohio. For-profit healthcare providers, practitioners, care facilities that connect to HealthNet as part of the NEO RHIO Health Information Exchange

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(HIE) will be required to pay membership fees for participation and pay for any construction and services fees associated with the delivery of HealthNet. NEO RHIO HIE Membership model is based on level of participation;

Member Definitions

Individual Practitioner and Associations

- Individual practitioners participating in the NEO RHIO network
- Associations representing institutions, payers and social services representing groups involved in healthcare services

Healthcare Organizations

- Groups of private practitioners, hospice and home care service organizations participating in the NEO RHIO network. A group consists of 7 participants or more.

Insurer/Payer Organizations

- Insurer/Payer organizations involved with group healthcare participating in the NEO RHIO Network

Individual Hospitals

- Independent hospitals not included in systems of three or more major hospitals and clinical service organizations

Hospital Systems

- Hospital and clinical service organizations that form a group of three or more major hospitals and a number of clinical service organizations

Table 1 NEO RHIO Membership Fee Structure

Membership	Annual Fee Structure
Individual Practitioner and Associations	\$1,500
Healthcare Organizations	\$10,000
Insurers and Payors	\$50,000
Individual Hospitals	\$50,000
Hospital Systems	\$225,000

Membership Fee Structure

The membership fees above were established by the NEO RHIO financial workgroup as a result of interviews with other vendors and a comparison to other RHO projects. They have been discussed broadly among NEO RHIO members and other organizations in the community and have been adopted by the founding members. In addition to a statement regarding the perceived value of actual HIE services, membership fees are also viewed as an investment in a commonly-owned enterprise that will have far-reaching mutual benefit.

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While these membership fees represent the major cost to “customers” (members) of the HIE over the first five years of implementation and operation, they will not cover total costs of operation. Instead these are discounted to reflect other revenue streams, to include state and private grants, contracts with public health agencies, and revenues derived from the Administrative Services. As the clinical information exchange performance becomes optimized over time, and as additional information services are added, members are expected to support an increasing fraction of overall costs as the system moves to independent sustainability. The cost per transaction will likely decrease over time, while total member-based revenues will increase, as the volume of transactions, the numbers of users increase.

VI. Financial support and anticipated revenues that will pay for costs not covered by the fund

OneCommunity and NEO RHIO are developing collaborative grants and funding programs to support the expansion of HIE for the rural and urban communities throughout Northeast Ohio. Central to the approach is that both urban and specifically rural hospitals are hearing a consistent message of how the quality of healthcare can be economically improved throughout the region.

- The U.S. Department of Agriculture USDA will offer \$128 million in loans and grants for telemedicine and distance learning in 2007
- Health and Human Services (HHS) National Health Information Network (NHIN) will offer \$28 million for support of the nations Regional Health Information Organizations (RHIOs)
- Ohio Health Department State Medicaid Program will offer between \$4 and \$10 million depending on Federal Matching for the 6 Ohio Regional Health Information Organizations. NEO RHIO is expected to receive between \$1 and \$4 Million in support of it’s HIE activities to provide public health information reporting.
- Ohio Third Frontier (OTF) Fund has committed \$500 million towards research, innovation and high tech economic development. Has just created a new category for health information the total funding support for such activities has not yet been determined.

Expected funds from major economic development organizations

Northeastern Ohio is in the national top tier in philanthropy and supportive economic and business development. OneCommunity has established significant rapport, support and historical funding from these organizations. OneCommunity has received over \$2 million in cash and \$13 million in equipment and in-kind donations. Many of our current funding agencies are behind this project and envision significant momentum with future regional and national funding sources.

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OneCommunity and NEO RHIO anticipate the larger portion of its current funding opportunities to be focused on information rather than the community’s infrastructure and have submitted a number of foundation grants in support of the regional and rural efforts. OneCommunity is currently working on a number of community grants and proposals for HealthNet and our Rural HIE/Telemedicine initiative. Table 2 outlines four initiatives under development along with the current FCC RHCP proposal.

Table 2 HealthNet Funding Requests under Development

Intended Purpose	Under Development	Requested	Pending	Awarded
Columbiana County Economic Development Grant		\$ 750,000		\$ 750,000
Community Support of OneCommunity/HealthNet		\$ 450,000	\$ 350,000	\$ 100,000
Telemedicine Network and Conference Equipment	\$ 1,500,000	\$ -	\$ -	
RHIO HIE Services and Last Mile Access	\$ 500,000	\$ -	\$ -	
Fiber and Equipment		\$ 500,000		\$ 500,000
Wireless Pilot Project		\$ 200,000		
Fiber - Economic Development Zones		\$ 250,000		\$ 250,000
Total	\$ 2,000,000	\$ 2,150,000	\$ 350,000	\$ 1,600,000

Service Revenue

OneCommunity currently has service contracts with over 50 organizations connecting in excess of 300 remote sites to the OneCommunity Regional Intranet. Of these organizations 28 of them are hospitals within our urban core in Akron, Canton, Cleveland, Parma, and Youngstown. These organizations currently pay for construction and service fees for there connection to the OneCommunity network.

The rural community hospitals and healthcare providers do not have the same financial wherewithal and technology capacity that their urban counterparts have. Federal, state, local and private grants will enable OneCommunity to develop a regional infrastructure that allows us to lower the cost for our rural healthcare consumers and still provide them with the same level of access for HIE/Telemedicine that their urban counterparts have. In addition the aggregation of these regional rural healthcare partners provides infrastructure needed to interconnect rural k-12 schools and colleges which will help further reduce the operational expense associated with managing and maintaining a regional network infrastructure. This approach will require our rural community healthcare partners to subscribe to annual operational fees to cover refresh, maintenance and repair services. However, this will be a capped cost and enable our rural community partners to have access to significantly greater broadband capacity for a more financially viable price.

Many agencies such as United Way have discussed using OneCommunity and the NEO RHIO as a lead agent for their developing of healthcare education and service programs. Several Federally Qualified Health Clinics and rural hospitals are exploring technology solutions in the

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areas of electronic medical records, disaster recovery and public health reporting using OneCommunity as a resource and possible partner.

VII. The NEO RHIO Now and in the Future

OneCommunity and NEO RHIO HealthNet Initiative is committed to using technology and materials that meet and exceed the unique requirements of HIE and telemedicine. NEO RHIO is in a position to leverage its resources to be a model for the national health information network the Department of Health and Human Services predicts could save the United States \$140 billion per year.²

Another compelling reason for implementing the network to rural sites is to help reticent medical professionals with administrative costs. NEO RHIO will assist medical professionals increase efficiencies offered through the implementation of technology. A recent study by the Center for Studying Health System Change showed physicians' net incomes from their medical practices declined about 7% on average from 1995 to 2003.³ That trend may have heightened the reluctance of some professionals to install telemedicine services. In 2006, the Bush administration charged that every patient in the country should have an electronic health record by the year 2014. While technology is already entrenched in most care providers' offices and medical systems, the lack of connectivity between software, hardware and the Internet inhibits its effectiveness. As a result, 90 percent of all medical transactions are still paper. According to Mark Ansboury, principal of the NEO RHIO Health Initiative, the network has the potential to reduce telecommunication costs 40 to 60% by the year 2014 while it also takes away the ceiling for the application and use of broadband capacity.

A. OneCommunity HealthNet connected twenty-eight (28) urban hospitals in past 12 months with no related public funding

Should funds for this FCC proposal be awarded, NEO RHIO will be extending services for its ten (10) founding medical partners, representing thirty-two (32) facilities. This will insure a structure for interoperability. OneCommunity's network now located in urban settings and surrounding rural areas, enables different systems to work together.

OneCommunity has developed a collaborative network model that leverages common carriers, cable companies and third party provider networks to create a truly interoperable and consistent quality of service that crosses all the networks that will enable the NEO RHIO (HIE) partners to develop a standard of care between the rural and urban healthcare communities. The HealthNet model already exists with the 28 connected urban healthcare connections.

In general, rural populations are at higher risk than their urban counterparts for many chronic diseases, especially diabetes.¹ one of the factors that shapes the care continuum is the rural-urban interdependencies for healthcare. This is especially true in Northeastern Ohio where many individuals need to travel limited but complicated distances to seek out both primary care because of resource shortages and tertiary care. There are far reaching

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consequences of a “poor health community” A healthy population is essential for the socioeconomic success of the Northeastern Ohio another rural, underserved regions in the United States.

Representing nearly 20 percent of the U.S. population, rural communities, like their urban counterparts, are witnessing change in the provision of healthcare services. However, these smaller, poorer and geographically-isolated communities experience significant challenges in providing viable and high-quality healthcare services. The implementation of a health information technology (HIT) infrastructure will assist the rural community in building healthcare partnerships and resources.²

The OneCommunity NEO RHIO HealthNet includes router systems, managed video conferencing and other products that drive efficiencies. The nonprofit, information-technology service now connects public and nonprofit institutions - including health-care facilities to fast, fiber-optic networks in the Cleveland-Akron/Canton-Youngstown area; that connectivity and its benefits will easily be extended to rural care facilities and physicians. The proposed rural expansion will provide connectivity for nineteen (19) additional rural hospitals and cover twenty-two (22) counties in six regional zones. OneCommunity’s NEO RHIO Health network will reach:

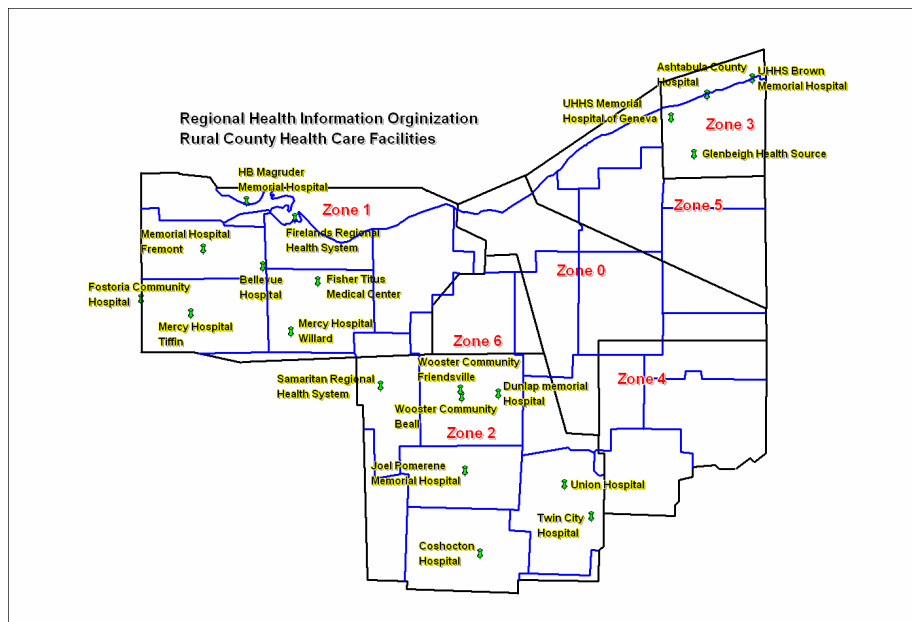


Figure 1. HealthNet Regional Rural County Coverage

The proposed rural expansion will provide connectivity for twenty-one (21) additional rural hospitals and cover twenty-two (22) counties in six regional zones.

Zone 0 – Cuyahoga, Summit, Stark, Portage, Mid Mahoning

Zone 1 – Lorain, Huron, Erie, Sandusky, Seneca

Zone 2 – Ashland, Wayne, Western Stark, Holmes, Tuscarawas, Coschockton

Zone 3 – Ashtabula

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Zone 4 – Carrollton, Columbiana, Eastern Stark, south Mahoning.

Zone 5 – Trumbull, Geauga, Lake.

Zone 6 – Medina

For the past decade Northeast Ohio similar the other national trends has transitioned the healthcare provider landscape into an oligopoly. A number of our regions hospital systems throughout have developed various collaborative “arrangements” with other urban and rural hospitals that have traditionally been competitive. This healthcare system alignment has been brought on because of competition drivers to develop quality healthcare services. Recent grants from a number of organizations such as the Robert Woods Johnson grant for “Aligning Forces for Quality” and others have begun to align a significant portion of the care providers and ancillary services. Over the last two years OneCommunity, now supported through the NEO RHIO has through technology adoption, guided these hospital systems to think regionally and also collaboratively. The end result is that OneCommunity has focused health system “competitors” to contemplate using broadband technology to construct state- and region-wide broadband networks to provide telehealth and telemedicine services. This is a critical and dynamic shift in regional thinking and is central to the OneCommunity and NEO RHIO HealthNet approach.

Some key examples of success within our healthcare community include the;

- collaboration between MetroHealth, University Hospitals, and Cleveland Clinic and federally qualified healthcare partners to align the disease management for diabetes in an effort to align the quality in healthcare services across the region;
- collaboration between the Cleveland Clinic, OneCommunity and the Cleveland Municipal School District to provide broadband services to facilitate real-time interactive educational environment, advanced lab, research and intern opportunities to students as part of health, wellness and development of the next generation of healthcare workers and;
- formation of NEO RHIO to serve as a neutral third party for Health Information Exchange (HIE) between all the hospitals and healthcare providers in Northeast Ohio.

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Table 3. Current hospitals, all nonprofits, connected to NEO RHIO HealthNet

OneCommunity HealthNet Connections(28)

Akron Children's Hospital - Main Hospital
 Akron Children's Hospital - St. Elizabeth Hospital - Youngstown, Ohio
 Akron Children's Hospital Boardman - Youngstown, Ohio
 Akron Children's Hospital Ashland - Ashland Ohio
 Cleveland Clinic – Main
 Cleveland Clinic - Secondary/BTI
 Mercy Medical Center - Carroll County Health Center
 Mercy Medical Center - Jackson Health Center
 Mercy Medical Center - Mercy Health Center
 Mercy Medical Center - Professional Care
 Mercy Medical Center - Professional Medical Equipment
 MetroHealth Systems - Cedar Avenue Service Center
 MetroHealth Systems – South Campus
 Parma Community Hospital Site#1 Main
 Parma Community Hospital Site#2 WellPointe
 Sisters of Charity St. Augustine - St. Vincent Charity Hospital
 Southwest General Hospital Site#1
 Southwest General Hospital Site#2 Strongsville
 Southwest General Hospital Site#3 Pearl Road
 St. John Westshore Family Medicine Center (N. Olmsted)
 St. John Westshore Hospital
 University Hospital Health Systems - Heather Hill
 University Hospital Health Systems - Main
 West Shore Primary Care Associates - Avon - Hale Rd.
 West Shore Primary Care Associates - Avon Lake
 West Shore Primary Care Associates - North Ridgeville
 West Shore Primary Care Associates - Sheffield Village
 West Shore Primary Care Associates - Westlake

Table 4. Current NEO RHIO System Partners

NEO RHIO Member Institutions		
Hospital or System (IDN)	Location	County
Medina General Medical Center	Akron	Summit
Akron Children’s Hospital	Akron	Summit
Summa Health System	Akron	Summit
UHHS/CSAHS	Cleveland/Canton	Cuyahoga and Stark
University Hospitals of Cleveland	Cleveland	Cuyahoga and Regional
Cleveland Clinic Foundation	Cleveland	Cuyahoga and Regional
MetroHealth Medical Center	Cleveland	Cuyahoga
Lake Hospital System	Willoughby	Lake
Aultman Hospital	Canton	Stark
Parma Community Hospital	Parma	Cuyahoga
Southwest Hospitals	Strongsville	Cuyahoga

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A. Extending the NEO RHIO to rural counties.

OneCommunity proposes to extend its HealthNet to an additional nine (9) counties largely designated as rural communities. This expanded network will initially serve nineteen non-profit health care providers, two (2) of which are Federally Qualified Healthcare Providers serving the underserved community. However, HealthNet will serve as the framework for expansion of the health services at no cost to the FCC. NEO RHIO will continue to expand HIE/Telemedicine services throughout the region to individual care facilities, practitioners, healthcare homes, and underserved health centers.

Table 5. Facilities slated for initial inclusion in the NEO RHIO

Counties, addresses, zip code, Rural Urban Commuting Area (RUCA) code, contact information and phone number for each health care facility participating in the network.

System	County	Facility Name & Address	RUCA CODE	HPSA	Contact Names	Phone
	Ashland	Samaritan Regional Health System 1025 Center Street Ashland, OH 44805	4		Danny Boggs, CEO	419-289-0491
CCHS	Ashtabula	Ashtabula County Medical Center 2420 Lake Ave Ashtabula, OH 44004 Glenbeigh 2420 Lake Ave Ashtabula, OH 44004	2	HPSA	Kevin Miller, CEO & Jason Kopczak, CFO	440-997-6520 440-997-6221
			2	HPSA	Pat Weston-Hall	440-563-3400
UHHS	Ashtabula	Conneaut Medical Center 158 West Main Road Conneaut, OH 44030	2	HPSA	Rich Frenchie, CEO	440-593-1131
		Geneva Medical Center 870 West Main Street Geneva, OH 44041	4.2	HPSA	Rich Frenchie, CEO	440-593-1131
Mercy Health Partners	Huron	Mercy Hospital – Willard 10 East Howard St. Willard, Ohio 44890	4.2		Joe Glass	419- 251-8982
CHN & CC5	Erie	Firelands Regional Medical Center 1101 Decatur St. Sandusky, Ohio 44870	1		Chuck Stark, CEO Dan Moncher, CFO	419-557-7400 419- 557-7793
CHN & CC5	Huron	Fisher Titus Medical Center 272 Benedict Ave., Norwalk, OH 44857			Pat Martin, CEO Wendy Melching, CFO	419-668-8101 419- 663-1975
	Holmes MUA	Joel Pomerene Memorial Hospital 81 Wooster Road Millersburg, Ohio 44654	10.5	HPSA	Tony Snyder, CEO	419-557-7400
CC5	Ottawa	H.B. Magruder Memorial Hospital 615 Fulton Street, Port Clinton, OH 43452	4		Dave Norwyne, CEO	419- 557-7793

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System	County	Facility Name & Address	RUCA CODE	HPSA	Contact Names	Phone
CC5	Sandusky MUA	Bellevue 811 NW St. Bellevue, Ohio 44811	7.3	HPSA	Mike Winthrop, CEO Alan Ganci, CFO	419-557-7400 419- 557-7793
CC5		Memorial (Fremont) 715 S. Taft Ave Fremont, OH 43420	4.2	HPSA	Al Gorman, CEO Rick Ruppel, CFO	419-668-8101 419- 663-1975
	Seneca	Fostoria Community 501 Van Buren St. Fostoria, Oh 44830	4	HPSA	Tim Jakacki, CEO	419-435-7734
		Mercy Hospital – Tiffin 2355 Tiffen Avenue Findlay, OH 45840	4	HPSA	Joe Glass	419- 251-8982
	Tuscarawas MUA	Twin City 819 N. First Street Dennison, OH 44621	4	HPSA	Marge Jentes, CEO	740-922-2800
		Union Hospital 659 Boulevard Dover, OH 44622	4	HPSA	Bill Harding, CEO	330-343-3311
	Union	Memorial Hospital of Union County 500 London Avenue Marysville, OH 43040	2		Chip Hubbs, CEO Jeff Ehlers, CFO	937-644-6115 937-644-6115
	Wayne	Dunlap Memorial 832 South Main Street Orrville, OH 44667	7.4		Rod Steiger, Interim CEO	330-682-3010
		Wooster Community 1761 Beall Ave. Wooster, Ohio 44691	4		Bill Sheron, CEO	330-263-8100

**RUCA = Rural Urban Commuting Code
MUA = County with Medically Underserved Areas
HPSA = Health Professional Shortage Area**

VIII. NEO RHIO’s previous experience in developing and managing telemedicine programs.

A. OneCommunity’s and NEO RHIO’s track record makes their Health Initiative a prime candidate for this FCC funding award. The Network model proposed for this Health Initiative leverages an existing grid that already connects literally hundreds of key entities in just a few years across various industries and including deep programming efforts that leverage the power of the network. The success of the existing OneCommunity and NEO RHIO network makes it a good “fit” for the creation of the rural connection strategy. Already OneCommunity has been globally recognized among researchers, vendors, and similar international concerns for its network capabilities in the public, health, and educational sectors. Following are some of its successes.

1. *Government.* OneCommunity has already improved constituent access to critical knowledge and services through Web-based information and interaction. By aggregating government bandwidth demand and related IT services, the nonprofit has

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- reduced expenses. Another advantage to the OneCommunity network, which will serve as a base for NEO RHIO, is its role in increasing productivity of employees who work remotely. Using the OneCommunity Network, City of Cleveland building inspectors have been able file reports from the field using the secure wireless network. Some of the Northeast Ohio communities that have benefited from the use of the OneCommunity Network are the City of Cleveland, Cuyahoga County and Mayfield Village. Solutions of OneCommunity offered to these partner communities include an access to tax credits (Cleveland Housing Network) through an online application. More than \$3 million in tax credits were awarded to low-income residents through this program in 2006.
2. *Public Safety.* The OneCommunity partnership in the area of public safety complements the HealthNet Initiative's goals as medical partners also engage in public emergency response and health service activity throughout the Northeast Ohio region. OneCommunity and its vendor partners are developing opportunities to enable local law enforcement to rapidly access and search content from video surveillance cameras to improve response times and enhance public safety. All of the developments in the public service area allow OneCommunity and NEO RHIO to leverage similar cross-application features to the partners of the HealthNet Initiative.
 3. *Education.* OneCommunity connected 117 Cleveland Public Schools to the community network. In addition, the nonprofit is currently in the process of developing additional broadband initiatives for the Cleveland Clinic Foundation, which delivers a broad range of educational programs to the K-12 students of our community, enhancing public student math and science education and workforce development. OneCommunity has also partnered with *ideastream* to extend the region's ability to deliver digital content and distance learning programs to the K-12 and Library networks of Northeast Ohio. These systems combine the collective strengths of technology, community involvement, vendor management, educational outreach, and teacher professional development, and they connect stakeholders throughout Northeast Ohio, profoundly affecting how children are educated. OneCommunity connects to over 300 schools and plans to connect over 1,500 schools in Northeast Ohio.
 4. *Healthcare.* The broad-based stakeholders participating in NEO RHIO recognize the importance of using information technology to advance healthcare, enable innovation, develop new applications, and develop a system that is self-sustaining. The Northeast Ohio region has been faced with numerous economic challenges in recent years; focusing on the region's strength – healthcare – will not only improve residents' quality of life, but also support economic development. A simple example of using technology on a 7x24 nursing on-line service that can be accessed through the web or via on-line call in.

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NEO RHIO was conceived as a response to an Office of the National Coordinator for Health Information Technology Nationwide Health Information Network Request for Proposal (ONC NHIN RFP), released in September 2005. This effort brought together the CEOs and CIOs of several large hospitals in the Cleveland-Akron-Canton metropolitan area (Akron General Health System, Aultman Hospital, Children’s Hospital Medical Center of Akron, Cleveland Clinic Foundation, Mercy Medical Center, MetroHealth, Summa Health System, and University Hospitals), along with multiple physician groups, pharmacies, and vendors, to discuss HIT and HIE for the region. Although the funding was not awarded, this collaboration has given rise to a network that has garnered statewide regional support, recognition among network engineering publications like Grid magazine and global awareness of its success in partnership efforts and digital collaboration.

B. NEO RHIO is a broadband network already designed and implemented to meet FCC application requirements for telemedicine.

The superior architecture of the OneCommunity Core Network is achieved by a three tiered approach to connectivity from the currently installed urban network to the new rural sites: (1) The network is made up of the highest quality, massive broadband capability using fiber optic cables. (2) Flexible connectivity and interoperability between sites and users is designed around a regional zone concept; and (3) Rural sites will be able to make multiple connections to central hubs within these zones, giving the network a local presence. This three-tiered, zone approach enables OneCommunity to leverage existing common carrier, cable and private provider networks to create a highly integrated and interoperable Health network that can also be used to support other community network needs such as education, workforce and economic development.

1. *Superior design and engineering.* The OneCommunity core network uses path protected Dense Wave Division Multiplexing (DWDM) architecture. This facilities-based design enables OneCommunity’s network to interconnect to all the common carriers, cable companies, fiber, and wireless providers across the region and provides a consistent quality of service connection transparent of the individual last mile provider. This provides full diversity extending high capacity access to rural community health care providers and offers physicians and medical facilities the ability to move real-time data and to access metadata across there local access to the 6.4 terabit massive capacity broadband network supported by the OneCommunity NEO RHIO Health network.

As shown in the figure below, OneCommunity’s design enables NEO RHIO and our healthcare community to have access to other facilities based services such as local and regional data centers for disaster recovery and offsite storage. The aggregation of multiple links inherent in the system increases network capacity to the rural health facilities enabling broadband health applications and the delivery of digital health

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images such as x-ray's, CT and MRIs, patient records, telemetry and real-time telemedicine consultation. In addition the aggregation lowers overall network costs enabling rural health care providers the ability to participate in the NEO RHIO Health Information Exchange (HIE).

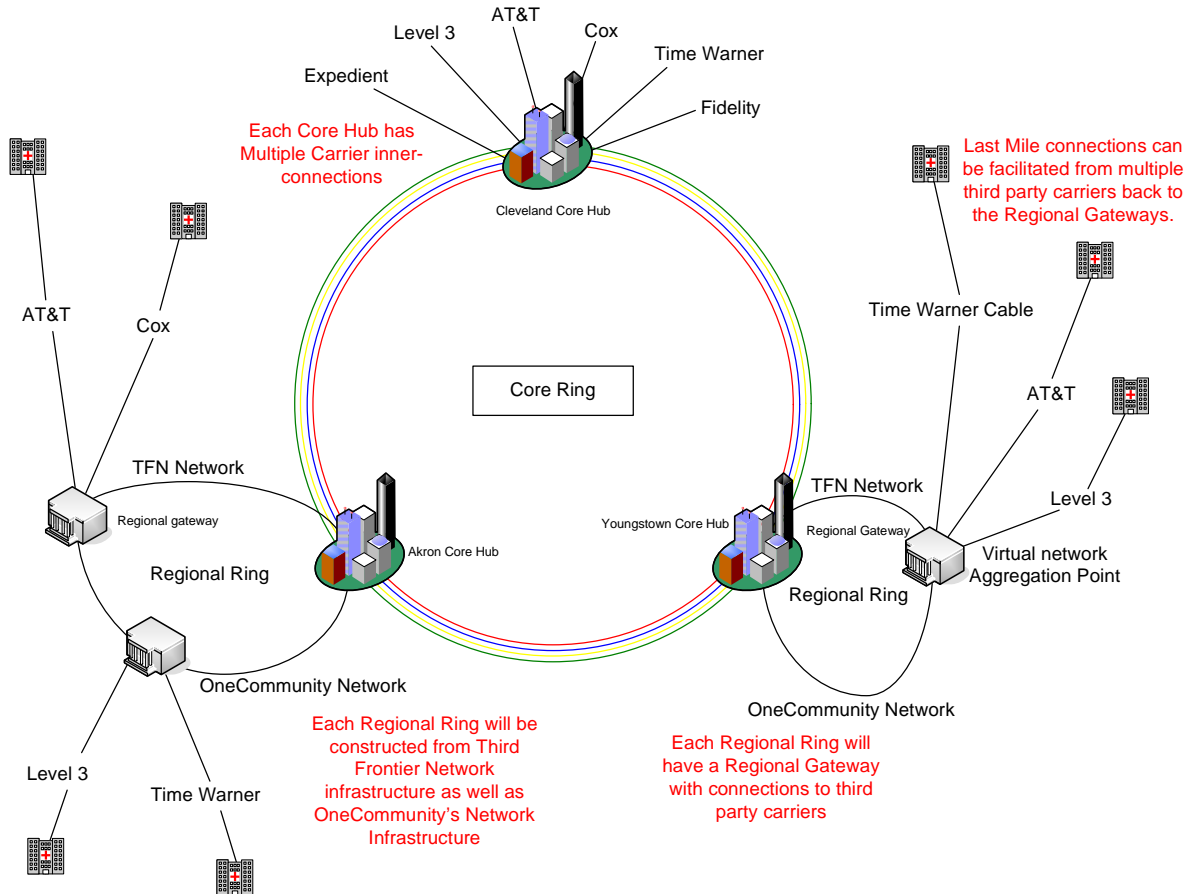


Figure 2 – OneCommunity Core Network

2. *Regional Hubs Ensure Connectivity and Interoperability among zones.* Regional hubs provide numerous connectivity functions throughout the Northeast Ohio Region. First, they allow multiple rural areas to be aggregated into a protected network structure, and they permit each rural site to connect back to a single geographically close location. Second, the regional hub concept is to provide a connecting point for the rural networks to link back to NEO RHIO's core network. Third, the regional hub insures connectivity between rural sites, offering multiple paths for data to travel to and from multiple points throughout the network—the paths can be between regional hubs, from rural to regional and from rural to regional to another rural location.

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Strategically placing regional hubs also allow NEO RHIO numerous options to choose the best and most economical path to add additional hubs or connect new rural sites. Multiple hubs also serve as alternative connection paths for all sites in a network in the event of an individual path failure.

3. *Inclusion of Rural Sites.* Additional hub areas will be designated in rural areas to aggregate traffic among specific facilities in a common geographic location. Some benefits of this strategy include the economical and shorter last-mile builds to the most remote sites, providing rural communities with their own network presence, and allowing multiple rural hubs to connect through diverse connections for exceptional reliability. The rural hubs will also function as neutral facilities encompassing multiple carriers for last-mile applications.

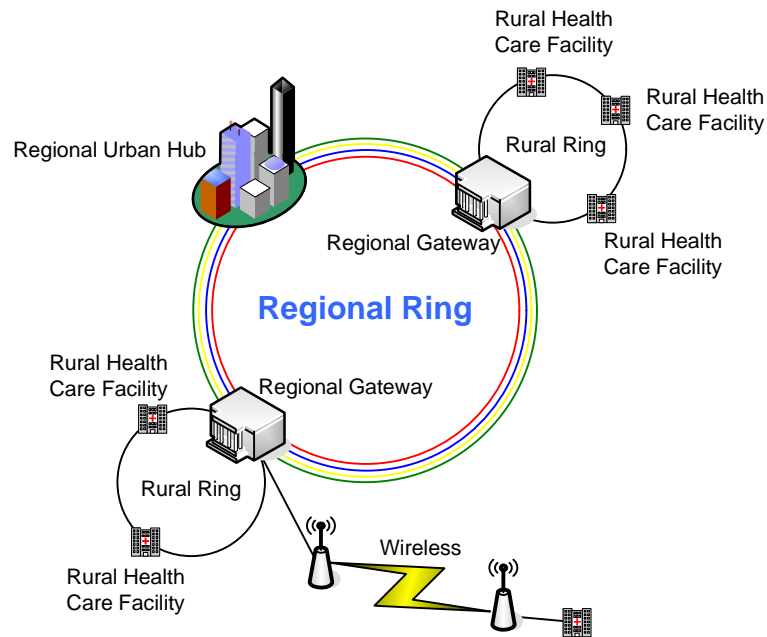


Figure 3. A close-up view of a regional ring.

4. *Regional Intranet provides on-ramp to local, state and national networks,* The OneCommunity NEO RHIO Health Network also provides physical connections to the State of Ohio's Broadband Network formally known as the Third Frontier Network (TFN), and have on-ramps to the National Lambda Rail (NLR) and Internet 2 (I2), and multiple state operators as well as various carriers and applications.

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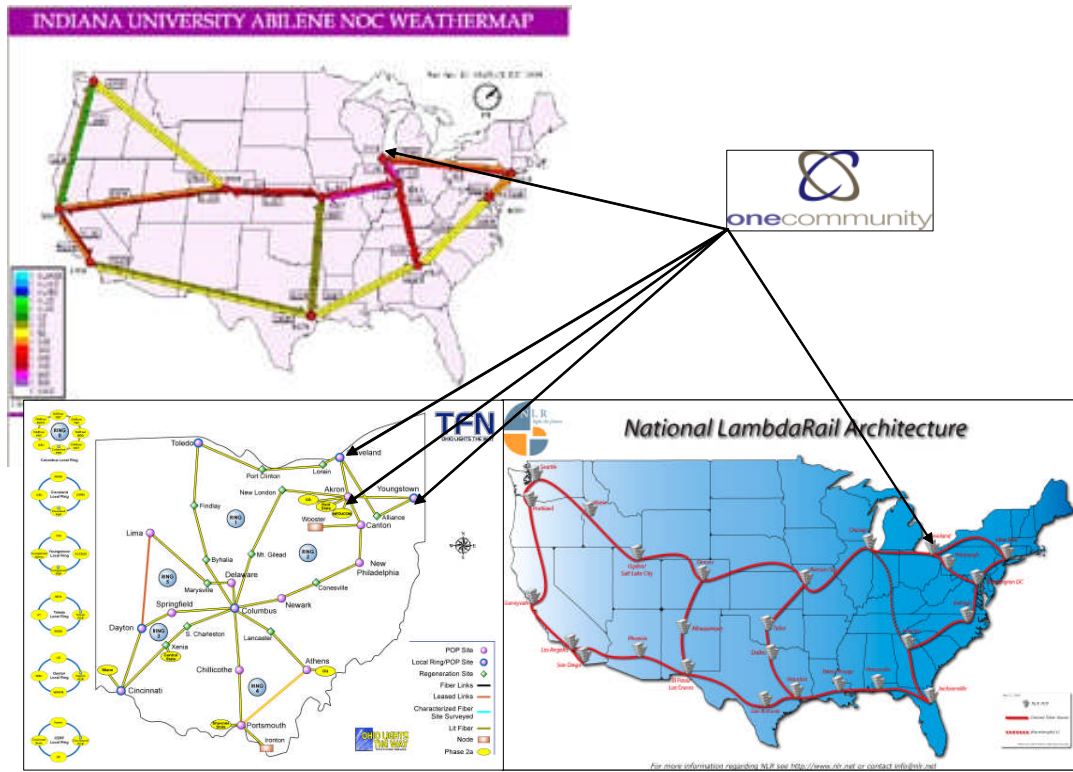


Figure 4. The U. S. – HealthNet Connection

OneCommunity proposes to partner with the FCC to connect our existing urban, state and national network connections to our new rural healthcare partners National Lambda Rail and Internet 2.

IX. Project Management, Deployment, Timelines, Personnel Roles, and Budget

The management team of OneCommunity NEO RHIO HealthNet is an experienced mix of business, technical and medical personnel. In their efforts to create a network that facilitates connectivity throughout the state, they have strategically leveraged their knowledge and partnered their efforts with the appropriate organizations. OneCommunity will be providing their experience and expertise in constructing the network architecture and infrastructure that will bring Northeast Ohio to the forefront for high speed connectivity. The HealthNet network will enable not only health care facilities in northeast Ohio, but also bring the communities together for a better symbiotic network infrastructure and enable cohesion throughout the Northeast Ohio region.

A. HealthNet Organization and Personnel Roles

OneCommunity and NEO RHIO have developed a proven management with a track record of successfully implement large scale local, regional and national projects. The team identified for the RHCP project includes the executive management of OneCommunity and

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NEO RHIO. HealthNet currently provides connectivity to 28 Northeast Ohio Hospitals. The program includes two main components: the development of the network and the coordination between the Health care systems and NEO RHIO for Telemedicine and Health Information Exchange (HIE). Listed below are the FCC RHCP Program Organization chart and chief personnel for the project. Biographies are included in Appendix D.

Mark Ansbury – Serves as the Chief Operating Officer for OneCommunity and Acting Chief Technology Officer for NEO RHIO. He will have full program accountability and serve as the FCC RHCP Program Manager responsible for all administrative, financial and partnerships associated with the FCC RHCP project.

Chuck Girt – Serves as Director of Engineering for OneCommunity and has management responsibility for all technical, deployment and operational aspects of the OneCommunity network. He will be responsible for all engineering, vendor management and field engineering related to the deployment of HealthNet.

Larry Voyten – Serves as Program Director for all health initiatives and application programs associated with OneCommunity and NEO RHIO. He will serve as liaison and program coordinator for the rural healthcare partners that will be connecting to HealthNet and NEO RHIO for HIE/Telemedicine.

Ron Forster – Serves as outside plant project manager for OneCommunity and is responsible for fiber plant, facilities and site preparation; He will serve as the Construction Manager for the FCC RHCP outside plant deployment.

Jonathan M. Gairing – Serves as field engineer, equipment installer and provides configuration support along with supporting field maintenance and repair services. He will manage the site and equipment installation and initial configuration for the HealthNet network.

Mark Dulma – Serves as OneCommunity's operational support, test and certification engineer in addition to providing field engineering, installation and maintenance support. He will support the site and equipment installation and initial configuration for the HealthNet network and conduct field site and operational testing and certification.

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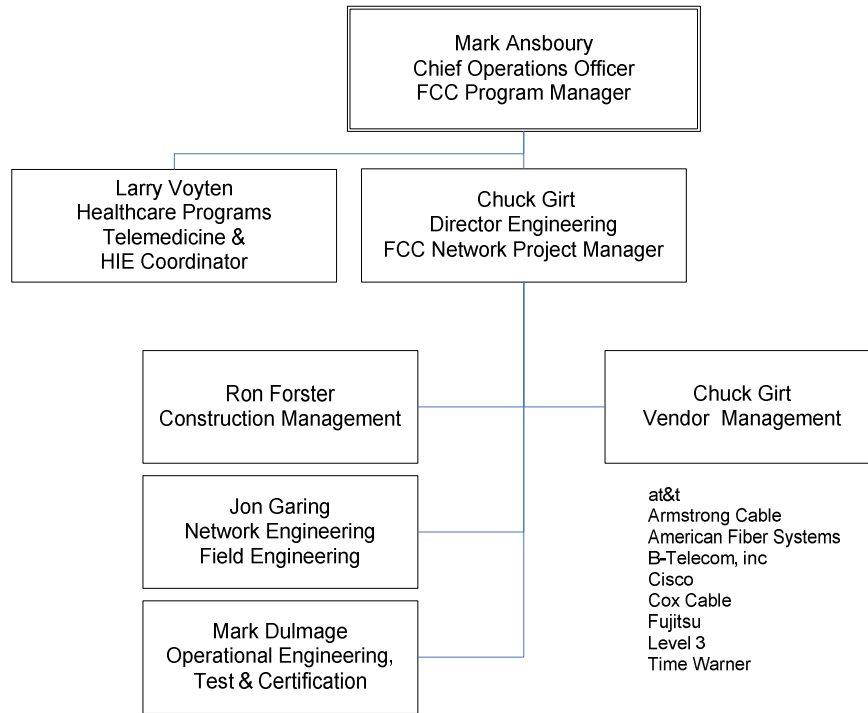


Figure 5. HealthNet and FCC RHCP Program Organization

C. Deployment Plan.

OneCommunity and NEO RHIO have created an infrastructure devised to provide connectivity to health care facilities using a common infrastructure to reduce the costs of individual high speed connections and to provide transport to areas that are devoid of high speed connectivity. The overall goal of the HealthNet infrastructure is to construct a diverse, high availability network to meet the needs of the health care community as well as the communities themselves.

The proposed design focuses on fiber infrastructure and includes the ability to incorporate wireless technology. Option 1 provided in the main body of the proposal includes 90% fiber based infrastructure connecting the 19 core rural healthcare facilities via fiber. Option 2 in Appendix B Budget Information includes a change in the design to incorporate alternative wireless connectivity. Option 2 is based on 50% core fiber and 50% wireless connectivity. The proposed wireless connections will deliver 100 Mbps services.

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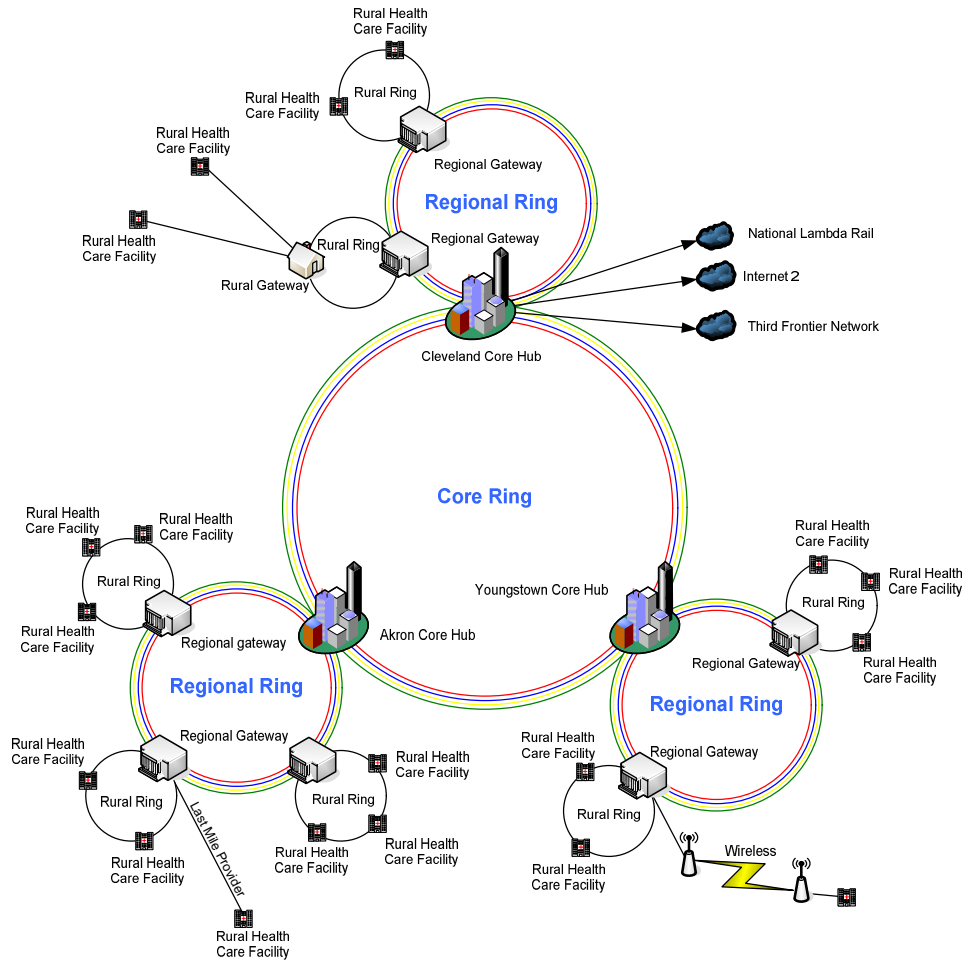


Figure 6. HealthNet Architecture

HealthNet, Figure 7, as designed by OneCommunity will have three layers to its network infrastructure. The Primary or ‘Core’ layer as it will be referred too, has a series of Core hubs, which are located in Cleveland, Akron, Canton, and Youngstown. This core infrastructure is built on a DWDM platform with a MPLS core for Ethernet connectivity. This design of Core network will have the ability to pass 6.4 terabits of data throughput. The second layer in the RHIO network is the ‘Regional Gateways’. Regional gateways are the connection or ‘gateway’ from the rural and urban areas back to the core of the network. This layer is also built on a DWDM infrastructure with MPLS for Ethernet connectivity. Every regional gateway will have an MPLS master node as well as access devices for customer interfaces. Each Regional gateway will have 80 gigabit to 6.4 terabits of data throughput. The third layer in this network is the rural fiber rings and ‘Rural Gateways’. Fiber infrastructure will be constructed in the rural areas that will be connected back to the strategically located Regional Gateways. If needed, ‘Rural Gateways’ will be placed in strategic areas to aggregate traffic back through the rural fiber infrastructure. The rural hubs will connect back to the regional gateways using a combination of CWDM and DWDM technologies. Each

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Rural hub will have an access device for customer connectivity. By enabling various technologies in the three layers, the OneCommunity network design provided the greatest redundancy and availability while offering flexibility to the end users.

B. Executing the Work Plan and Deployment through Zones

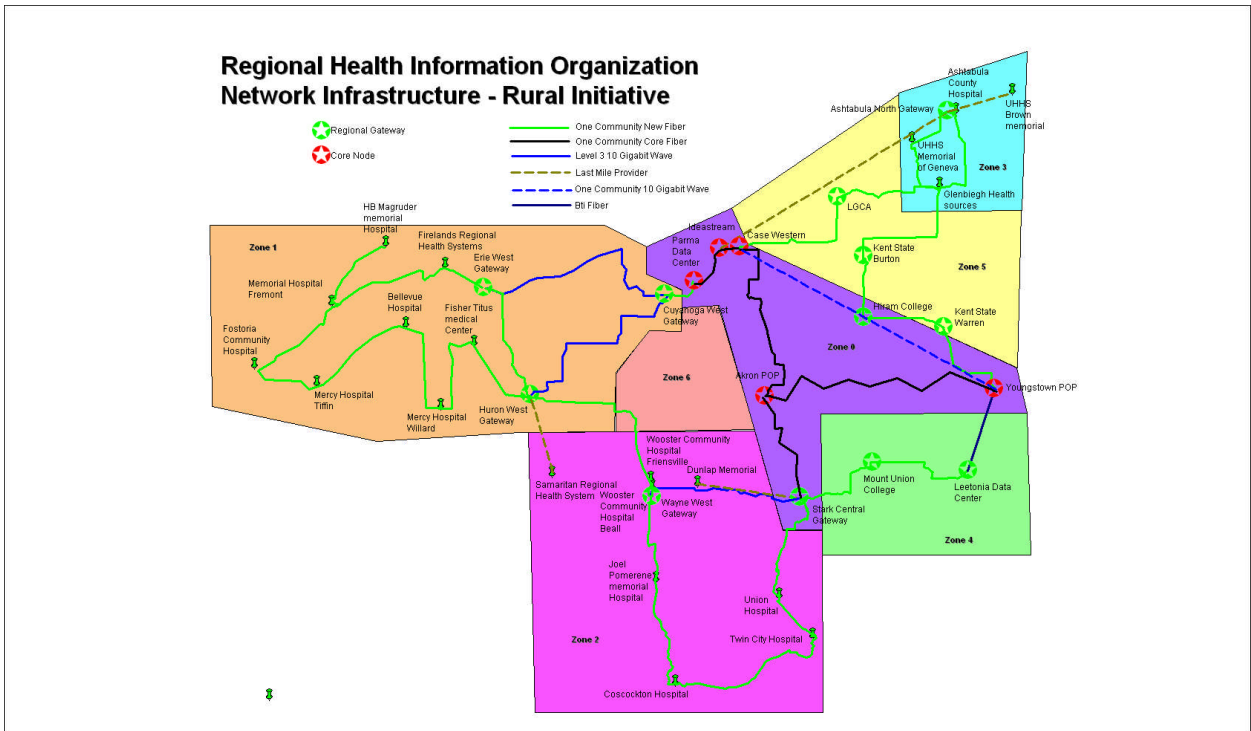


Figure 7. NEO RHIO’s Network Infrastructure for Rural Expansion

Now that the different layers of the HealthNet infrastructure have been defined, the NEO RHIO with its partner OneCommunity has designed the network within 6 individual zones that will encompass twenty-two (22) counties. Zone 0 is the core of the network and has already been implemented by OneCommunity. This zone covers Cuyahoga, Columbiana, Mahoning, Summit and Stark counties. Zone 1 will encompass the Northeast portion of Ohio, including the counties of Sandusky, Seneca, Erie, Huron, and Lorain. Zone 2 is the southern portion of Northeast Ohio including counties, Ashland, Wayne, Western Stark, Holmes, Tuscarawas, and Coshocton. Zone 3 will be comprised mostly of Ashtabula County. Zone 4 will entail the counties of Carroll, Columbiana, eastern stark and south Mahoning; Zone 5 will include the counties of Trumbull, Geauga, and lake. Finally, zone 6 will cover the Medina County area. These zones bring together the 22 counties in Northeast Ohio that will comprise the core of the HealthNet infrastructure.

- *Zone 1.* With OneCommunity’s expertise in deployment of large-scale optical networks, Zone 1 will be built using 155 miles of level 3, Time Warner and new

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fiber. This initial fiber will be used to connect 9 rural hospital locations back to two regional gateways. The two regional gateways, referred to as the “Erie West Gateway” and “Huron West Gateway,” will connect back to the core network using Level 3 10G waves. Each of these gateways will have a DWDM system for transport and a MPLS master node for Ethernet connectivity back to the Core. The Rural rings will consist of a hybrid solution of CWDM/DWDM technologies.

The expected cost for Zone 1 is \$6,520,476. Below is a model budget for Zone 1. The One Community contribution to this total zone budget is \$1,956,143.

FCC RHCP Project Implementation		Zone 1
Fiber Construction	\$	4,882,838
Pole Permits	\$	250,402
Fiber Entrances	\$	131,500
Facility Leases	\$	8,020
Equipment Costs	\$	322,692
Customer CPE	\$	213,738
Type II expenses	\$	58,400
Project Management	\$	165,000
Total	\$	6,032,591

FCC RHCP Project Yearly Operations and Maintenance		Zone 1
Pole/Facility and Maintenance	\$	367,885
Operational Management	\$	120,000
Total	\$	487,885

Total Project Cost	\$	6,520,476
OneCommunity and Grant Contribution	\$	1,956,143
FCC RHCP Grant Request	\$	4,564,333

- *Zone 2.* OneCommunity’s design of Zone 2 will bring 120 miles of Time Warner, at&t and new fiber to the southern portion of Northeast Ohio. The initial Fiber Build will connect six (6) rural hospitals back to two regional gateways. The Regional gateways in this zone will be referred to the “Wayne West Gateway” and “Stark Central gateway.” The connection back to the core network will happen through the OneCommunity’s already existing backbone at the “Stark Central Gateway.” “Wayne West Gateway” will connect back to the “Stark Central gateway” by a 10G wave from Third Frontier Network. Each gateway will be deployed with DWDM for transport and an MPLS master node for Ethernet connectivity back to the core. The Rural Fiber ring will consist of a combination of CWDM/DWDM technologies.

The expected cost for Zone 2 is \$7,394,330. Below is the Budget for Zone 2. The One Community contribution to this total zone budget is \$2,218,229.

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FCC RHCP Project Implementation		Zone 2
Fiber Construction	\$	6,133,216
Pole Permits	\$	181,356
Fiber Entrances	\$	105,600
Facility Leases	\$	8,020
Equipment Costs	\$	230,452
Customer CPE	\$	167,674
Type II expenses	\$	13,000
Project Management	\$	165,000
Total	\$	7,004,318

FCC RHCP Project Yearly Operations and Maintenance		Zone 2
Pole/Facility and Maintenance	\$	270,012
Operational Management	\$	120,000.00
Total	\$	390,012

Total Project Cost	\$	7,394,330
OneCommunity and Grant Contribution	\$	2,218,299
FCC RHCP Grant Request	\$	5,176,031

- Zone 3* from the OneCommunity design will encompass the Northeast portion of the state. *Zone 3* will bring 50 miles of new fiber to the OneCommunity/RHIO network. The initial Fiber build will include 4 new sites in this area back to one regional gateway. The regional gateway in this area will be referred to as the ‘Ashtabula North Gateway’ and will also have a DWDM infrastructure for transport and a MPLS Master node for Ethernet connectivity back to the Core. The “Ashtabula North Gateway” will be connected back to the OneCommunity core network through a connection with Time Warner Cable.

The expected cost for Zone 3 is \$ 2,196,337. Below is the Budget for Zone 3. The One Community contribution to this total zone budget is \$658,901.

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FCC RHCP Project Implementation		Zone 3
Fiber Construction	\$	1,447,776
Pole Permits	\$	71,505
Fiber Entrances	\$	71,712
Facility Leases	\$	4,000
Equipment Costs	\$	103,128
Customer CPE	\$	88,953
Type II expenses	\$	44,000
Project Management	\$	165,000
Total	\$	1,996,074

FCC RHCP Project Yearly Operations and Maintenance		Zone 3
Pole/Facility and Maintenance	\$	68,263
Operational Management	\$	132,000
Total	\$	200,263

Total Project Cost	\$	2,196,337
OneCommunity and Grant Contribution	\$	658,901
FCC RHCP Grant Request	\$	1,537,436

- *Zone 4.* The OneCommunity Design in Zone 4 is to connect Zone 2 to the core infrastructure and service counties in the Southeastern portion of Northeast Ohio. This build will include 63 miles of new fiber and connect Stark County to One Communities core in Youngstown through DWDM. One Regional Gateway, ‘Stark East Gateway’ will be added for connection into the surrounding counties. The Network will utilize the One Community’s Leetonia Data Center to create connectivity into the surrounding areas.

A breakdown of Zone 4 is provided in Appendix B.

- *Zone 5* in the OneCommunity network will close the eastern portion of the OneCommunity Network. This zone will go from One Community’s Youngstown POP up to Zone 3 and back to the Cleveland Core at Ideastream. This build will bring 120 miles of new fiber and provide a complete DWDM ring for the Eastern portion of Northeast Ohio. There will be 4 “Regional Gateways” created to ensure coverage of eastern Ohio. These gateways will be “Trumbull South Gateway,” “Portage Central Gateway,” “Geauga South Gateway,” and “Lake South Gateway.” These gateways will extend the RHIO services into Trumbull, Portage, Geauga, lake, and surrounding counties.

A breakdown of Zone 5 is provided in Appendix B.

- *Zone 6* is one community’s last zone and will complete the western portion of the One Community Network. This will bring DWDM connectivity from the Erie West

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gateway to the “Huron West Gateway” a new Gateway will be created in Medina County called the “Medina West Gateway.” The Medina gateway will be connected via DWDM to the “Wayne West Gateway.” This entire build will bring on 68 miles of new fiber and close the western portion of the Ring.

A breakdown of Zone 6 is provided in Appendix B.

- *Zone Design Offers a New Level of Connectivity.* The RHIO network with the partnership of OneCommunity will bring Northeast Ohio to a new level of network connectivity and expectation. The RHIO, with the existing knowledge of One Community and its network, will have the ability for customers to have any-to-any connectivity in Northeast Ohio. The One Community Core network will also allow customers to reach various other providers as well as peering to National Lambda Rail and Internet2 gateways. The One Community network is fully monitored 24x7 by the One Community Network Operations center, which will ensure the best in network reliability. RHIO with the expertise of One Community can offer Ethernet services from 1 megabit to 10 gigabit, Northeast Ohio SONET transport, and dark fiber solutions. One community also brings to the table various data centers and applications that customers can use to better their business productivity and transform their networks into high availability with lower capital expense. The RHIO not only benefits health care organizations, but will allow connectivity to Universities, K-12, and Workforce development. With the assistance of the RHIO's partners including One Community, TFN, Level 3, Time Warner, and various other partners will enable the RHIO network to bring all the communities in Northeast Ohio to a new digital frontier.

D. HealthNet Project Deployment Schedule

The formation of the NEO RHIO organization and HealthNet currently serves the urban centers with health network relationships that extend into the MUAs and Safety Net providers in the rural communities. The project plan, as provided, enables NEO RHIO and HealthNet to reach over nineteen (19) MUA Hospitals with the help of the FCC RHCP project, and Port Authority Financing. Additional health care providers will have the opportunity to connect to HealthNet increasing the ability of the NEO RHIO to work with local providers to increase the quality of Health care in the rural communities. Phase 2 (Zone 1), Phase 3 (Zone 2) and Phase 4 (Zone 3) will be enabled by funding received through this FCC RHCP Grant. Additional grant and financing will be required to extend HealthNet into Zones 4 through 5. Zone 6 will be funded through a partnership with Medina County Economic Development Corporation and the Medina County Port Authority.

Figure 8 provides the project deployment plan for HealthNet. The following descriptions detail the work break-down structure associated with the deployment of HealthNet.

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Path Engineering – Path engineering involves walking the fiber routes to survey poles, railroad crossings, and bridge under/over passes. This process is to ensure that the fiber path chosen can be physically built on the structures available. During this process all available poles will surveyed and recorded, any underground spans are measured for distance and public utilities are noted, and any obstructions are surveyed and recorded. After this process all information should be gathered for the permitting process.

Permits – This process involves filing all the appropriate paperwork with the various facility providers for access to poles and utility right of ways. This process involves filing the proper paperwork with the utilities as well as with the various counties the infrastructure will pass.

Materials – This step involves ordering all the materials to bring the project together. This includes Cables, hardware, and equipment. This process will involve interaction with the vendors to nail down delivery dates and material availability.

Construction Preparation – This part of the process involved getting all items ready for construction. This would include make ready on utility poles, right away agreements for undergrounds spans, and closing any issues with materials needed to construct the infrastructure. This process would also include a final review of all construction plans and maps and checking to ensure all paperwork was filed and received.

Construction – This is the step in which the physical fiber infrastructure is placed on the utility poles and/or buried underground. This process will involve interaction with construction project managers and outside plant crews.

Site Preparation – This involves a few different steps depending on the type of sites. Site surveys will need to be performed on all locations to determine available space, power, and environmental requirements. Collocation agreements will have to be established between the vendors and One Community. This would also involve and pre-site installation work that is required to bring the site to operational status.

Site Constructions – This process involves physically installing the equipment and hardware to support the network infrastructure. This will also include any site entrances and cabling required connecting outside plant into the physical space.

Equipment Installation – This includes physically installing the equipment at the Physical customer locations. This process will entail all items needed to attach the customer premise to the network infrastructure.

Regional Health Care Partner (RHCP) Pilot Turn-Up and testing – This will include creating connectivity from the customer premise back to the appropriate gateway and turning up the service the partners have requested. In the phase the network will be tested for reliability and performance. This will be done using various testing tools and methods to ensure the customer will have peak performance back to the network.

Regional Health Care Partner (RHCP) Certification – Once the testing is complete this process will be the certification from both One Community and the customer that the services are active and delivered per the customer expectations.

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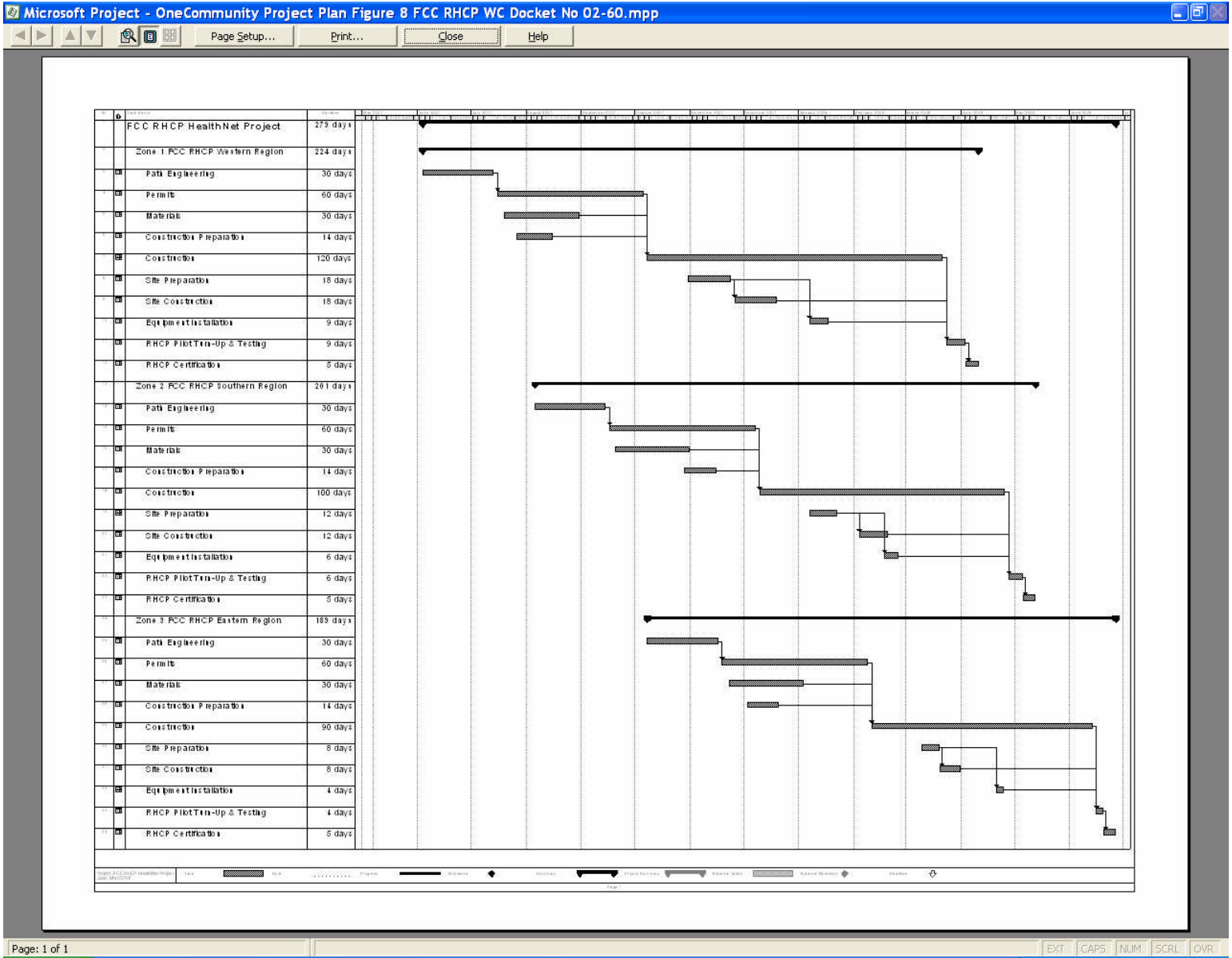


Figure 8. Project Schedule

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X. NEO RHIO and the Application of a Telemedicine Network in Ohio

Ohio is a relatively large state with an extremely diverse population. Each region includes population centers that vary in size and sophistication from rural to urban and high-tech to Appalachian. Statewide HIT and HIE planning must accommodate this reality. It is generally believed that implementing HIT and HIE efforts through regional entities with statewide coordination will allow these diverse communities to address their own needs before reaching out to other communities.

A. Potential Impact to the Populations in 22 Counties Slated for Networking.

NEO RHIO will provide a model and eHealth system that can be extended beyond the planned sites to the following State entities that promote access to quality healthcare for Ohio Residents. Each entity represents an applicable use case.

Use Case #1. NEO RHIO Connecting Stakeholders and a Model for other Ohio Regions

In 2004, the Health Policy Institute of Ohio (HPIO) (<http://www.healthpolicyohio.org/>), a supporter of NEO RHIO, began acting as a neutral convener for Ohio stakeholders interested in the development of health information exchange (HIE). The group of stakeholders has expanded significantly such that it now includes participants representing consumers, payers, pharmacies, hospitals, physicians, state government, behavioral health, long term care, and public health. NEO RHIO has played a leadership role in this effort.

The HPIO process confirmed widespread support for public and private sector policies that would enable adoption of health information technology and more effective electronic exchange of health information. In February 2006, these partners agreed that Ohio needed its own roadmap for health information technology and exchange. That Roadmap was released in October 2006.

The roadmap outlines policy recommendations in four areas: organizational structure; adoption of health information technology; interoperability (ability of sharing information among different technologies); and health information exchange. The entire plan is available at <http://www.healthpolicyohio.org/publications/HITRoadmap.html>.

The Central and Southern Ohio chapters of the Health Information and Management Systems Society (HIMSS) established a RHIO roundtable forum to support the activities of the RHIOs and Health Information Exchange (HIE). NEO RHIO and extension to rural health care entities will provide the THIMSS Chapter RHIO Roundtable Liaisons a model system for local, state, and national HIT activities. In addition NEO RHIO working with the HPIO and Other OHIO RHIOs has created the Ohio Health Information

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Partnership (OHIP) to focus on development of best practices, education and advocacy. *The NEO RHIO Rural Healthcare Initiative will provide the rural health providers a framework to participate in the state and regional efforts to improve the standard of care.*

All recommendations are consistent with the actions contemplated by the NEO RHIO business plan. *NEO RHIO serves as the principal Regional Health Information Organization in Northeast Ohio serving twenty-two counties with over four (4) million local residents and over (1) million residents of our rural communities.*

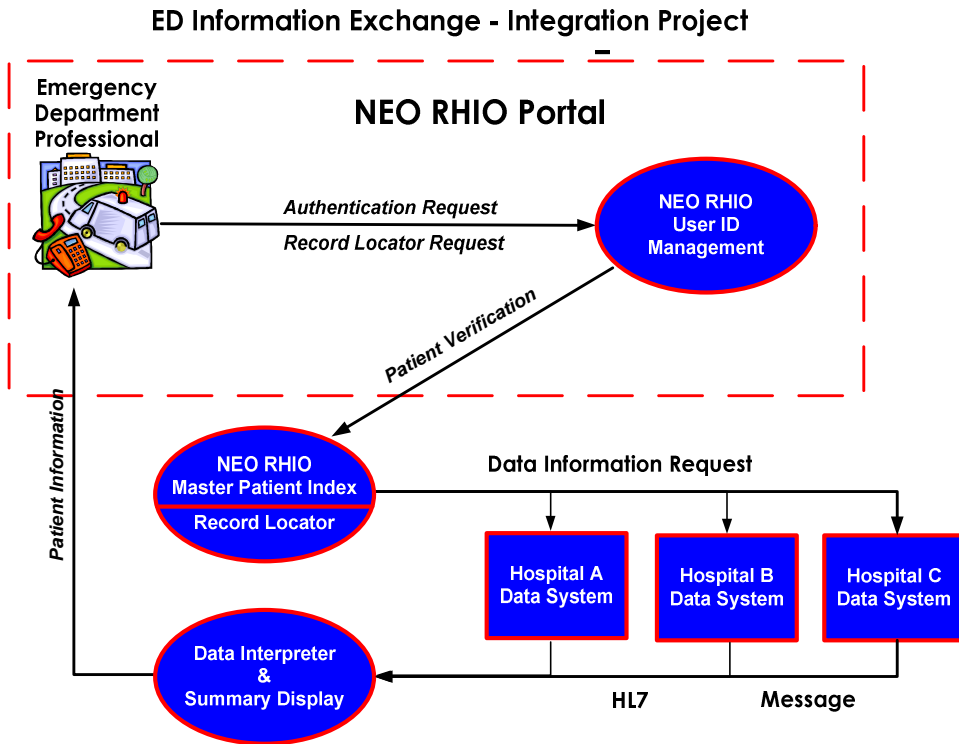


Figure 9. Emergency Department Exchange.

The NEO RHIO information exchange will provide a secure, high capacity connection between the rural and urban health facilities providing the rural communities access to the same standard of care that the urban communities provide. This conceptual drawing illustrates how data is securely transmitted from the point of care and accessed by emergency care providers. Funding from the FCC Rural Health Pilot will allow NEO RHIO to extend this type of telemedicine medical care to regional residents in rural communities.

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Use Case #2. Physician Use of HIT

Ohio KēPRO, Ohio's Medicare Quality Improvement Organization performed an environmental scan to gain insight into the prevalence of information technology use in the Ohio healthcare industry. The review found that over the past year, HIT has begun gaining momentum in Ohio. A large portion of Ohio's physician practices are using HIT solutions for practice management functions, and the number of practices implementing e-prescribing is growing. Working with the healthcare community and the Aligning Forces for Quality, funded by a Robert Wood Johnson Grant for \$500,000, *NEO RHIO is helping to develop a standard of care for the use of health information. The creation of the NEO RHIO HIE provides the urban and rural communities access to the same standard of care for health information.*

Use Case #3. Health Information Security and Privacy Collaboration (HISPC)

In May 2006, the Health Policy Institute of Ohio received a federal contract to study how Ohio's privacy and security laws and business practices would affect the exchange of electronic health information, and to develop an implementation plan to address those issues which impede interoperable health information exchange. This is an integral component of efforts to develop the Nationwide Health Information Network (NHIN). *NEO RHIO has been working on the HISPC as part of the State of Ohio's efforts to ensure that HIE in Northeast Ohio will follow the guidelines for HISPC. These efforts will ensure that our rural telemedicine efforts will not compromise the security of privacy of our regions healthcare consumers.*

Use Case #4. Academic Research and Public Entity Connections

OneCommunity provides a public/private network that currently interoperates with a variety of public/private networks. The Third Frontier Network (TFN), a publicly funded effort to promote development and dissemination of cutting-edge technology across the state of Ohio, has established the capabilities to efficiently transfer information from research laboratories, universities, and government entities within the State. OneCommunity serves as an on-ramp to the State network and plans on providing on-ramps to the National Lambda Rail (NLR) to facilitate interconnection for academic Clinical Medical Education (CME), public and private health research, and access to public and private healthcare services. *NEO RHIO will serve as the gateway for the rural community for the same level of access that the urban healthcare facilities enjoy today.*

Use Case #5. Linking Statewide Health Services

NEO RHIO is in collaboration with the State of Ohio, RHIOs and Public Health Organizations, and it will serve as a gateway for health information and services to the rural health providers in Northeast Ohio. Following are descriptions of a few of those regional organizations.

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1. *HealthBridge*. Healthbridge is a health information exchange serving in the Greater Cincinnati Tri-State Area, seeks to improve the quality and efficiency of healthcare in the community. HealthBridge works with participating healthcare stakeholders to facilitate the creation of an integrated and interoperable community healthcare system. Their efforts include the adoption of community standard technologies and various work processes. The HealthBridge system connects thousands of providers, as well as linking with community healthcare facilities, like nursing homes, independent labs, and radiology centers. HealthBridge provides participants with access to over 60 hospital-based critical care systems including radiology images, fetal heart monitoring, hospital-based electronic medical records, and chart completion, among others. Additionally, HealthBridge operates the largest secure, community-based, clinical messaging system in the country – serving as an outsourcing solution for participating hospitals and ancillary facilities.

2. *The Office of Ohio Health Plans (OHP)*, within the Ohio Department of Job and Family Services (ODJFS), administers the Ohio Medicaid program, which is the sixth largest public purchaser of health coverage in the country. The Ohio Medicaid program covers an estimated 2.1 million Ohioans at varying times during each year. The program also covers an additional 1.6 million Ohioans through a fee-for-service system and another 500,000 individuals through a managed care system. Ohio Medicaid provides healthcare coverage for one in three births, one in four children, one in four seniors over the age of 85, and seven in ten institutional long-term care recipients.

This large program comes at a high cost to the state. The State Fiscal Year (SFY) 2006/2007 budget appropriated \$22.3 billion for Medicaid services. This spending accounts for 20.7 percent of Ohio's total budget spending, or 18 percent of state general revenue fund spending in program management and in patient care arenas. The Ohio Medicaid program has many technology-based initiatives in place and in planning. Because of its size and importance to the Ohio economy, it is anticipated that the program will be a major participant in RHIO activities throughout the state.

Use Case #6. The Value of Remote Medicine- An Application for Patients with Special Needs

A major medical center within the NEO RHIO network, through a HRSA rural funding opportunity, has implemented a telemedicine network for patients with special needs. A survey based on a nationally representative sample of working mothers or family caretakers showed that only 39% have someone they could call to help them with a patient with special needs when that individual becomes ill.¹ Forty-nine percent of these caretakers reported they need to miss work when their family member becomes ill. Seven percent report they don't know what to do when this situation arises. Time lost from work can jeopardize a caretaker's employment. Since patients with special needs may also

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require multiple visits to sub specialists and ancillary health care providers, additional caretaker absences from work to access health care for acute illnesses for their caretakers may be particularly important to minimize. Patients may not receive treatment for acute illnesses until their condition worsens so that they then seek emergency care.

Telemedicine improves access to the medical home - research has shown that using telemedicine in this way provides care that is as effective and as reliable as or better than usual care,ⁱⁱ and we will provide services and systems to assure quality of care. Use of telemedicine services are likely to provide more timely care, reduced morbidity, reduced absence from school/programming, reduced caretaker work absence and reduced household stress and should promote the health of patients with special needs.

Telemedicine particularly provides a unique approach to improve access to acute care for patients with special needs in rural areas and to reduce the morbidity, financial, logistical and psychological burdens borne by patients with special needs, their families and their communities. An established telehealth network in two rural counties in northeast Ohio through the use of this telehealth network has improved acute illnesses among special needs patients. The network also has the potential to reduce the costs of medical treatment for families and healthcare providers alike.

The success of this telemedicine program includes:

- Timely, same-day access to quality health care for acute illnesses
- Continuity of care within the child's medical home
- Privacy protection of medical records

This project, implemented by the major hospital, and NEO RHIO subscriber is currently in the process of evaluating this telehealth network in a two-county rural region of northeast Ohio:

- Reduce emergency department visits of rural patients with special needs by 30%.
- Reduce absenteeism due to illness of patients with special needs in their preschool/school program by 30%.
- Reduce parent absenteeism from work due to need to seek medical care for their patients with special needs by 20%.

Use Case #7. Applications to Public Health Programs for the Uninsured

The Health Information Exchange capabilities provided by NEO RHIO will support connecting to data repositories such as the one now in place through the Dayton Center for Healthy Communities: HealthLink Miami Valley Project. Established in 2000, the HealthLink Miami Valley project is a community-wide coalition of health and human services providers dedicated to improving access to and quality of care for Dayton's uninsured population. The project assists over 10,000 uninsured residents annually,

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enrolling 40 percent of participants in public health programs such as Medicaid. The HealthLink Information Exchange provides a web-based central repository of data for the uninsured population. The data includes demographic information and self-reported utilization information. Providers from multiple sites can access patient information electronically and query the system for eligibility data.

Use Case #8. Public Security and Biosurveillance

The Ohio Department of Health has used federal funds to implement a bioterror/disease tracking system. The Real-time Outbreak and Disease Surveillance (RODS) system provides emergency departments and other public service providers with software, which identifies certain symptom complexes and trends, and automatically reports potential bioterrorist or disease outbreaks to public health officials. *The NEO RHIO network will insure the access to the latest public health updates, disease and bio-terror alerts.* It will also maximize interoperability so crucial among the first response medical teams, investigators, and emergency health providers in the event of a bio-disaster.

Another approach that NEO RHIO is proposing is to have live streams from a number of its hospital members for the purpose of creating a biosurveillance and public reporting platform. These streams are dependent on network capacity rather than institutional systems. This approach requires access to high availability communications systems and will require scalable network capacity between the member institutions. OneCommunity is already providing connectivity to a large number of the initial RHIO membership and has the ability to scale capacity on demand for the RHIO members without adding significant cost.

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**Aggregate Reports
Biosurveillance, Public Reporting and Other Uses**

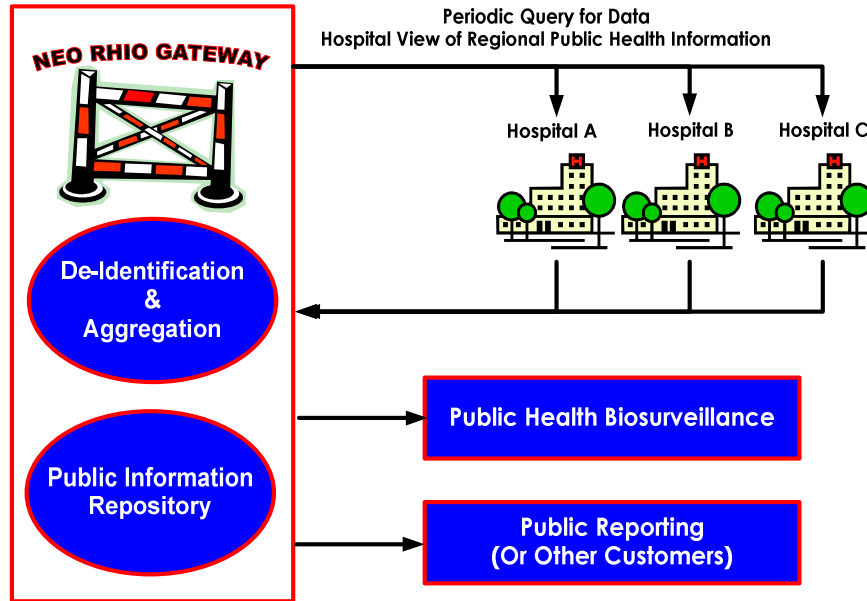


Figure 10. NEO RHIO Biosurveillance and Public Reporting

The aggregation and de-identification of data as it is transmitted across a network will make patient information accessible, yet secure. NEO RHIO will provide surveillance information to public health authorities. This will include de-identified, aggregated records for the purpose of outbreak detection, and legally-mandated individual disease reports for case management.

Use Case #9. Consumer Focus Net Wellness

The FCC Rural Pilot Grant offers extraordinary opportunity to demonstrate the potential for consumer engagement in telemedicine projects. Including patients by providing health information that they can understand and use is vital for all initiatives that seek to improve health and achieve the best health outcomes. This is particularly true for both prevention and management of chronic disease conditions. In this pilot, rural health systems and providers will use HealthNet infrastructure to bridge the health information gap between provider systems and patients that has long been a barrier to care. Together with NetWellness and existing high-speed library networks, OPLIN (Ohio Public Library Information Network) and INFOhio (Ohio's information network for K-12 schools), rural providers will have a *continuous consumer health information system*, linking health systems and community sites.

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The benefit to providers and their teams is that they can use the trusted NetWellness resource as an adjunct to care in the office, providing patients understandable information and an ongoing health information source once they leave the office. Through the state-wide reach of OPLIN & INFOhio, providers are assured that all patients and their families have access to NetWellness through the broad-band connectivity so important for most effective use of the Internet. An “electronic filing cabinet” in the office and a ready resource at home, NetWellness can support health care goals, engaging consumers in prevention and self care objectives.

XI. Sustainability and Future Expansion of the NEO RHIO to Rural Health Care Facilities

There are a number of reasons healthcare stakeholders in Northeast Ohio have established a RHIO. NEO RHIO provides the opportunity to share health information and to increase the efficiency of the community’s healthcare delivery system as described in the preceding case studies. This saves costs while improving the health of individuals in the community. In addition NEO RHIO directly supports the continued development of healthcare as a leading industry in the region that already shines in the areas of healthcare, education, and industry. By bring these services to the rural community the NEO RHIO will enable everyone within rural and urban communities throughout the region to have access to quality health care.

A. NEO RHIO Members Have Existing Health Practice Partnerships with MUAs

Most of the MUAs in Northeast Ohio have existing practice relationships with multiple health practices and hospitals in within the Northeast Ohio RHIO. These service relationships typically require transfers within the health network without the benefit of e-Medical Record or the transfer of a health consumer’s medical file. By providing broadband services to the MUAs ; NEO RHIO will enable them to have access to the same medical information, telemedicine diagnostic support and disease management services.

B. Aligning Quality for Health Forces in Underserved and MUAs

The expansion of NEO RHIO would place this region at the forefront of efforts to advance safety, quality, and efficiency of healthcare, as well as improve access through health information technology.

In Northeast Ohio, several employer, payer and foundation-led supported efforts are underway to implement cost containment / quality improvement programs. The Health Action Council of Northeast Ohio (HAC) (<http://www.healthactioncouncil.org/>) is a Cleveland-based non-profit group led by purchasers that offer health benefits to employees, dependents and retirees. HAC members provide healthcare benefits for more than 1.5 million lives. They provide value to members by working together, and with community stakeholders (physicians, hospitals and health plans), to improve the quality and moderate the cost of health care. HAC has lead multiple quality initiatives including

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the Cleveland Health Quality Choice program, encouraging Leapfrog patient safety reporting among hospitals in Northeast and Central Ohio, and coordinating the Plan Performance Project, using eValue8, an RFI through the National Business Coalition on Health, to focus Ohio health plans on quality of care.

In Summit County, the Northern Ohio Health Care Summit has convened stakeholders to explore potential solutions to the rising cost and shrinking access to healthcare. The Employer Health Purchasing Corporation of Ohio (EHPCO) (www.ehpco.com) is a Canton-based organization of over 100 member companies representing over 400,000 covered lives. It blends traditional purchasing activities with programs that provide financial incentives to physicians who participate in quality initiatives that improve the care of patients with chronic diseases while limiting the variability and cost of their care.

In addition, Robert Wood Johnson has funded the Aligning Forces For Quality effort which is a combined community effort with the underserved, safety net, MUAs and healthcare providers in Northeast Ohio.

C. Professional Development and Wellness Education

By connecting the designated rural and MUAs and underserved communities to NEO RHIO; we intend to provide the rural healthcare community to have access to medical professional development, diagnostic support, and disease management continuing education. In addition it is the belief of the health community that continued wellness education and disease management for the community will reduce the demands on the existing health care system and lower the cost of health care in the future.

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Notes

- ¹ Center for Disease Control and Prevention, U.S. Department of Health and Human Services. “Profiling the Leading Causes of Death in the United States: Heart Disease, Stroke, and Cancer; Chronic Diseases: The Leading Causes of Death, Ohio.” Atlanta: U.S. Department of Health and Human Services, November 2005. p. 4.
- ² Institute of Medicine of the National Academies. “Quality Through Collaboration: Quality Chasm Series. Washington: The National Academies Press, 2005. p. 21. Supported by <http://www.oucom.ohiou.edu>
- ³ Ha T. Tu, Paul B. Ginsburg. Center for the Studying of Health System Change. Losing Ground: Physician Income, Tracking Report No. 15, June 2006. <http://www.hschange.com/CONTENT/851/?words=physicians%25>
- ⁴ Wyn R, Ojeda V, Ranji U, Salganicoff A. Women, work and family health: a balancing act. Issue Brief, April 2003, Kaiser Family Foundation
- ⁵ MConnochie KM, Effectiveness in replacing office visits. Telemedicine Journal and e-health, June 2002

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**APPENDIX A
NEO RHIO and OneCommunity's Information**

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Current NEO RHIO Partners

For the past decade Northeast Ohio similar the other national trends has transitioned the healthcare provider landscape into an oligopoly. There are six to seven key hospital systems throughout the region with various “arrangements” with urban and rural hospitals. This alignment brought on because of competition drivers has also aligned a significant portion of the care providers and ancillary services. Over the last two years OneCommunity, now supported through the NEO RHIO has through technology adoption, guided these hospital systems to think regionally and also collaboratively. The end result is that OneCommunity has focused health system “competitors” to contemplate using broadband technology to construct state- and region-wide broadband networks to provide telehealth and telemedicine services. This is a critical and dynamic shift in regional thinking and is central to the OneCommunity approach.

Table 1: Current hospitals, all nonprofits, currently connected to NEO RHIO

The table below is a list of subscribers to the NEO RHIO. Currently, these are the facilities rural residents come to for emergencies or serious illnesses or conditions. Under the proposed NEO RHIO FCC expansion, these hospitals will serve as tertiary sites that will connect to the rural facilities.

Hospital or System (IDN)	Location	County
*University Hospitals of Cleveland	Cleveland	Cuyahoga
Rainbow Babies and Children's Hospital	Cleveland	Cuyahoga
UHHS Bedford Medical Center	Bedford	Cuyahoga
UHHS Brown Memorial Hospital	Conneaut	Ashtabula
UHHS Geauga Regional Hospital	Chardon	Gauga
UHHS Heather Hill Hosp. & Health Partnership	Chardon	
UHHS Memorial Hospital of Geneva	Geneva	Ashtabula
UHHS Richmond Heights Hospital	Richmond Heights	Cuyahoga
Southwest General Hospital	Middleburg	Cuyahoga
*Cleveland Clinic Foundation	Cleveland	Cuyahoga
Fairview Hospital	Cleveland	Cuyahoga
Lakewood Hospital	Lakewood	Cuyahoga
Lutheran Hospital	Cleveland	Cuyahoga
Marymount Hospital	Garfield Heights	Cuyahoga
Euclid Hospital	Euclid	Cuyahoga
Hillcrest Hospital	Mayfield Heights	Cuyahoga
Huron Hospital	Cleveland	Cuyahoga
South Pointe Hospital	Warrensville Hgts.	Cuyahoga
*Summa Health System	Akron	Summit
Akron City Hospital	Akron	
Cuyahoga Falls General Hospital	Cuyahoga Falls	Summit
St. Thomas Hospital	Akron	Summit
*MetroHealth Medical Center	Cleveland	Cuyahoga
*Medina General Hospital	Medina	Medina

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*Akron General Medical Center	Akron	Summit
Lodi Community Hospital	Lodi	Medina
*Aultman Hospital	Canton	Stark
*CSA / UHHS		
St. John West Shore Hospital	Westlake	Cuyahoga
St. Vincent Charity Hospital	Cleveland	Cuyahoga
Mercy Medical Center	Canton	Stark
Lake Hospital System	Willoughby	Cuyahoga
Lake Hospital System East - Painsville	Painsville	Lake
Lake Hospital System West - Willoughby	Willoughby	Cuyahoga
Allen Medical Center	Oberlin	Lorraine
Forum Health		
Hillside Rehabilitation Hospital	Warren	Trumbull
Northside Medical Center	Youngstown	Trumbull
Tod Children's Hospital	Youngstown	Trumbull
Trumbull Memorial Hospital	Warren	Trumbull
HM Health Partners		
St. Elizabeth	Youngstown	Trumbull
St. Joseph	Warren	
Wadsworth-Rittman Hospital	Wadsworth	Medina
Parma Community General	Parma	Cuyahoga
*Akron Children's Hospital	Akron	Summit
Barberton Citizens Hospital	Barberton	Stark
(Triad Hospitals Inc)		
Ashtabula County Medical Center	Ashtabula	Ashtabula
Community Health Partners	Lorain	Lorain
EMH Regional Medical Center	Elyria	Lorain
Robinson Memorial Hospital	Revena	Portage
Alliance Hospital	Alliance	Ashland
Wooster Community Hospital	Wooster	Wayne
Grace Hospital - CCF	Cleveland	Cuyahoga

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Company History and Background

OneCommunity is an ultra broadband high-speed information technology network. This network connects subscribers to each other and the Internet at gigabit speeds that are hundreds if not thousands of times faster than typical speeds. The bandwidth and speed of connection create opportunities for development of new applications and collaborative relationships that will result in organizational innovation. The current partners in this network include Cleveland area nonprofit, government and higher education institutions that share a common vision and commitment to increase access to education, cultural activities, research, health care and government services. The partners also share a commitment to utilizing the network in ways that will increase effectiveness and efficiency of their organizations and contribute to economic development.

The groundwork has been laid for OneCommunity to expand throughout Northeast Ohio and become a regional network with the temporary name “OneCommunity”. This transformation to “OneCommunity” will bring the benefits of the network to a broader community of organizations and enhance efforts to advance economic development through regional cooperation. “OneCommunity” is poised to become more than an ultra broadband fiber network; rather it is an information technology platform for changing the future of individual organizations and the region as a whole.

“OneCommunity” has been working with a number of partners to design the network including; Case Western Reserve University, the City of Cleveland, Cuyahoga County Community College, the Cuyahoga County Public Library, The Cleveland Museum of Art, MetroHealth Hospital System, and WVIZ/WCPN ideastream. In addition, we have been working with the Greater Akron Chamber, INFOLINE, the National Inventors Hall of Fame, SUMMA Health System, and the University of Akron to identify ways in which the network will change the future of individual organizations and allow the region to be recognized as a model of excellence in developing programs and service innovations that are enhanced by the technology.

OneCommunity’s Founder organizations have provided the drive to initiate this effort. Each Founder organization has agreed to provide thought leadership, organizational capacity, influence, and IT related resources that directly benefit OneCommunity. Resources include academic content, connections to other networks and resources, pooled granting opportunities, technology expertise and currently owned fiber and equipment.

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Founders & Board



OneCommunity's value proposition to its organizations is that it will provide a high-speed data network that meets organizations' current and future data transmission needs, enabling the creation of new value and new services not otherwise possible, all at a price well below what could be realized by acting individually to secure similar capabilities.

Board of Directors

- Dorothy C. Baunach, President of NorTech
- Robert W. Briggs, Chairman Fund for our Economic Future, Director GAR Foundation, Former CEO/Chairman Buckinham, Doolittle and Burroughs
- Jeanette Grasselli Brown, Ohio Board of Regents
- Paul Clark, President, National City Bank Northern Ohio
- Sari Feldman, Executive Director, Cuyahoga County Public Library
- Lev Gonick, VP and CIO, Case Western Reserve University
- Dr. Lois M. Nora, President, Northeastern Ohio Universities College of Medicine/ Pharmacy
- John O'Donnell, Ph.D., President, Stark State College of Technology
- Dr. Luis Proenza, President, The University of Akron
- Dr. Michael Schoop, President, Cuyahoga Community College Metro Campus

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- Dr. Michael Schwartz, President, Cleveland State University
- Robert C. Smith, President, Spero-Smith Investment Advisors, Inc., Port Authority
- Raymond Voelker, CIO, Progressive Insurance
- Jerrold Wareham, President, ideastream (PBS and NPR)

OneCommunity's Mission

OneCommunity is a 501(c)3 organization dedicated to advancing the adoption of technology. OneCommunity's mission is to improve the Economic Vitality and Global Competitiveness of the region by Connecting, Enabling and Transforming our Community which leads to improving;

Quality of Life

- Arts and Culture
 - Healthy Community
 - NEO RHIO
 - Aligning Forces for Quality
 - HealthNet
- Enhanced Community Services
 - Public Safety
 - Public Transportation
 - Public Libraries
 - Collaboration, Regionalism and Shared Services

Lifelong Learning

- Education (Pre-K to 20)
 - OneClassroom
 - Workforce Development
 - Senior Living

Economic Development

- Access, Adoption, and Inclusion
- Capacity Building and Enablement of Community Services
- Attract and retain Jobs, Businesses and Investment
- Research and Innovation
- Regional Marketing

National and International Recognition

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Leading the Global IT Revolution



THE TOP SEVEN INTELLIGENT COMMUNITIES OF 2006:

in alphabetical order are:

- **Cleveland & N.E. Ohio, USA**
- **Gangnam District, S. Korea**
- **Ichikawa, Japan**
- **Manchester, UK**
- **Taipei, Taiwan**
- **Tianjin, China**
- **Waterloo, Ontario, Canada**



THE COMPUTERWORLD
HONORS PROGRAM

*"Honoring World
Leaders Using IT to
Benefit Society"*

Awarded by Top 100 Global
Tech CEO's

Intel Corp. proclaims OneCommunity and Northeast Ohio:



**"Top 4 Worldwide
Digital Community"** (8/05)



Key Partnerships

Unprecedented public private partnerships means scale, sustainability,
investment, jobs, and innovation



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Business Model and Funding Sources

OneCommunity's business model is based on the ability to: Connect, Enable and Transform.

The fundamental revenue streams for OneCommunity are derived from the ability to connect and service subscribers. The revenues generated from these services are used to fund capital expansion and network operations. OneCommunity has a fully funded budget for 2006 and current financial projections demonstrate the ability for the network to reach breakeven in fiscal year 2007. These projections are based on:

1. Revenue - OneCommunity subscriber service revenues
2. Infrastructure Support - OneCommunity has raised approximately \$13MM to cover initial capital and operational capacity requirements during the formation of the regional network
3. Community Program Support – \$ 2MM to cover staffing and program support needed to develop community collaboration in the development of government, education, healthcare and social inclusion applications using the OneCommunity network.

Revenue and Funding Sources – Sustaining Mission

OneCommunity revenue comes from three sources; subscriber revenue, subscribers pass through revenue and from donations and grants.

- Subscriber Revenue – Specific subscriber services associated with community ultra-broadband networking and ISP services.
- One-time subscriber membership
- Fiber maintenance fee
- Annual subscriber service fee
- Pass Through Revenue – Specific one-time expenditures required to facilitate a subscriber's ability to physically connect to the OneCommunity network.
- Last mile access to OneCommunity network
- Subscriber one-time connection costs
- Donations & Grants (FY2005/FY2006) – A variety of capital donations from vendors; cash and in-kind services from foundations, vendors and community partners.

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REFERENCES

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**APPENDIX B
NEO RHIO HealthNet Budget**

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OneCommunity FCC RHCP Option 2 Detail

FCC RHCP Option 1 Zone Capital Detail

Capital Breakdown	FCC RHCP Project			OneCommunity Network Expansion		
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Fiber Construction	\$ 4,882,838	\$ 6,133,216	\$ 1,447,776	\$ 3,317,424	\$ 6,344,976	\$ 4,704,480
Pole Permits	\$ 250,402	\$ 181,356	\$ 71,505	\$ 102,075	\$ 195,230	\$ 144,753
Fiber Entrances	\$ 131,500	\$ 105,600	\$ 71,712	\$ 13,200	\$ 77,850	\$ 77,850
Facility Leases	\$ 8,020	\$ 8,020	\$ 4,000	\$ 4,010	\$ 8,000	\$ 2,000
Equipment Costs	\$ 322,692	\$ 230,452	\$ 103,128	\$ 341,156	\$ 8,000	\$ 148,146
Customer CPE	\$ 213,738	\$ 167,674	\$ 88,953	\$ -	\$ -	\$ -
Type II expenses	\$ 58,400	\$ 13,000	\$ 44,000	\$ -	\$ -	\$ -
Project Management	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000
Total	\$ 6,032,591	\$ 7,004,318	\$ 1,996,074	\$ 3,942,865	\$ 6,799,056	\$ 5,242,230

Project Capital Breakdown	Total Capital
FCC RHCP Project	\$ 15,032,983
OneCommunity Expansion	\$ 10,741,921
Medina Expansion	\$ 5,242,230
Total	\$ 31,017,134

FCC RHCP Option 1 Zone Operational Detail

Operational Breakdown	FCC RHCP Project			OneCommunity Network Expansion		
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Operational	\$ 487,885	\$ 402,012	\$ 200,263	\$ 178,056	\$ 220,088	\$ 161,313
	\$ 487,885	\$ 402,012	\$ 200,263	\$ 178,056	\$ 220,088	\$ 161,313

Project Operational Breakdown	Annual
FCC RHCP Project	\$ 1,090,160
OneCommunity Expansion	\$ 398,144
Medina Expansion	\$ 161,313
Total	\$ 1,649,617

FCC RHCP Project Captial Expense Zone 1 Option 1

Project Breakdown	Firelands Health System	Memorial Hospital Fremont	Fostoria Community	Memorial Hospital of Tiffin	Bellvue Hospital	Mercy Hospital Willard	Fisher Titus Medical	Smaratian Health Systems	HB Magruder
Fiber Construction	\$ 542,538	\$ 542,538	\$ 542,538	\$ 542,538	\$ 542,538	\$ 542,538	\$ 542,538	\$ 542,538	\$ 542,538
Pole Permits	\$ 27,822	\$ 27,822	\$ 27,822	\$ 27,822	\$ 27,822	\$ 27,822	\$ 27,822	\$ 27,822	\$ 27,822
Fiber Entrances	\$ 12,500	\$ 14,200	\$ 18,200	\$ 14,200	\$ 14,200	\$ 16,500	\$ 17,000	\$ 12,200	\$ 12,500
Facility Leases	\$ 891	\$ 891	\$ 891	\$ 891	\$ 891	\$ 891	\$ 891	\$ 891	\$ 891
Equipment Costs	\$ 35,855	\$ 35,855	\$ 35,855	\$ 35,855	\$ 35,855	\$ 35,855	\$ 35,855	\$ 35,855	\$ 35,855
Customer CPE	\$ 26,865	\$ 26,865	\$ 26,865	\$ 26,865	\$ 26,865	\$ 26,865	\$ 26,865	\$ 12,842	\$ 12,842
Type II expenses	\$ 6,489	\$ 6,489	\$ 6,489	\$ 6,489	\$ 6,489	\$ 6,489	\$ 6,489	\$ 6,489	\$ 6,489
Project Management	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333
Total	\$ 671,293	\$ 672,993	\$ 676,993	\$ 672,993	\$ 672,993	\$ 675,293	\$ 675,793	\$ 656,970	\$ 657,270

Zone 1 Total	Total Capital
FCC RHCP Project	\$ 6,032,591
Total	\$ 6,032,591

FCC RHCP Project Captial Expense Zone 2 Option 1

Project Breakdown	Joel Pomerene	Coscockton	Twin City Hospital	Union Hospital	Wooster Community Friendsville	Wooster Community Beall	Dunlap Memorial
Fiber Construction	\$ 876,174	\$ 876,174	\$ 876,174	\$ 876,174	\$ 876,174	\$ 876,174	\$ 876,174
Pole Permits	\$ 25,908	\$ 25,908	\$ 25,908	\$ 25,908	\$ 25,908	\$ 25,908	\$ 25,908
Fiber Entrances	\$ 13,200	\$ 14,200	\$ 19,500	\$ 22,300	\$ 18,200	\$ 18,200	\$ -
Facility Leases	\$ 1,146	\$ 1,146	\$ 1,146	\$ 1,146	\$ 1,146	\$ 1,146	\$ 1,146
Equipment Costs	\$ 32,922	\$ 32,922	\$ 32,922	\$ 32,922	\$ 32,922	\$ 32,922	\$ 32,922
Customer CPE	\$ 26,865	\$ 26,865	\$ 26,865	\$ 26,865	\$ 24,991	\$ 26,865	\$ 8,359
Type II expenses	\$ 1,857	\$ 1,857	\$ 1,857	\$ 1,857	\$ 1,857	\$ 1,857	\$ 1,857
Project Management	\$ 23,571	\$ 23,571	\$ 23,571	\$ 23,571	\$ 23,571	\$ 23,571	\$ 23,571
Total	\$ 1,001,643	\$ 1,002,643	\$ 1,007,943	\$ 1,010,743	\$ 1,004,769	\$ 1,006,643	\$ 969,936

Zone 2 Total	Total Capital
FCC RHCP Project	\$ 7,004,318

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OneCommunity FCC RHCP Option 2 Detail

FCC RHCP Option 2 Zone Capital Detail

Project Breakdown	FCC RHCP Project			OneCommunity Network Expansion		
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Fiber Construction	\$ 4,240,051	\$ 558,022	\$ 1,359,600	\$ 3,317,424	\$ 6,344,976	\$ 4,704,480
Pole Permits	\$ 135,964	\$ 12,277	\$ 39,094	\$ 102,075	\$ 195,230	\$ 144,753
Fiber Entrances	\$ 57,400	\$ 36,400	\$ 56,412	\$ 13,200	\$ 77,850	\$ 77,850
Facility Leases	\$ 4,010	\$ 8,020	\$ 4,000	\$ 4,010	\$ 8,000	\$ 2,000
Equipment Costs	\$ 339,146	\$ 586,052	\$ 280,928	\$ 341,156	\$ 8,000	\$ 148,146
Customer CPE	\$ 176,725	\$ 93,648	\$ 70,447	\$ -	\$ -	\$ -
Type II expenses	\$ 90,646	\$ 96,100	\$ 58,500	\$ -	\$ -	\$ -
Project Management	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000	\$ 165,000
Total	\$ 5,208,943	\$ 1,555,520	\$ 2,033,981	\$ 3,942,865	\$ 6,799,056	\$ 5,242,230

Project Capital Breakdown	Total Capital
FCC RHCP Project	\$ 8,798,444
OneCommunity Expansion	\$ 10,741,921
Medina Expansion	\$ 5,242,230
Total	\$ 24,782,595

FCC RHCP Option 2 Zone Operational Detail

Operational Breakdown	FCC RHCP Project			OneCommunity Network Expansion		
	Zone 1	Zone 2	Zone 3	Zone 4	Zone 5	Zone 6
Operational	\$ 371,199	\$ 397,723	\$ 350,069	\$ 178,056	\$ 220,088	\$ 161,313
Total	\$ 371,199	\$ 397,723	\$ 350,069	\$ 178,056	\$ 220,088	\$ 161,313

Project Operational Breakdown	Annual
FCC RHCP Project	\$ 1,118,991
OneCommunity Expansion	\$ 398,144
Medina Expansion	\$ 161,313
Total	\$ 1,678,448

FCC RHCP Project Captiol Expense Zone 1 Oprion 2

Project Breakdown	Firelands Health System	Memorial Hospital Freemont	Fostoria Community	Memorial Hospital of Tiffin	Bellvue Hospital	Mercy Hospital Willard	Fisher Titus Medical	Smaratian Health Systems	HB Magruder
Fiber Construction	\$ 471,117	\$ 471,117	\$ 471,117	\$ 471,117	\$ 471,117	\$ 471,117	\$ 471,117	\$ 471,117	\$ 471,117
Pole Permits	\$ 15,107	\$ 15,107	\$ 15,107	\$ 15,107	\$ 15,107	\$ 15,107	\$ 15,107	\$ 15,107	\$ 15,107
Fiber Entrances	\$ 12,500	\$ 14,200	\$ -	\$ -	\$ 14,200	\$ -	\$ 16,500	\$ -	\$ -
Facility Leases	\$ 446	\$ 446	\$ 446	\$ 446	\$ 446	\$ 446	\$ 446	\$ 446	\$ 446
Equipment Costs	\$ 37,683	\$ 37,683	\$ 37,683	\$ 37,683	\$ 37,683	\$ 37,683	\$ 37,683	\$ 37,683	\$ 37,683
Customer CPE	\$ 26,865	\$ 26,865	\$ 8,359	\$ 26,865	\$ 26,865	\$ 8,359	\$ 26,865	\$ 12,842	\$ 12,842
Type II expenses	\$ 10,072	\$ 10,072	\$ 10,072	\$ 10,072	\$ 10,072	\$ 10,072	\$ 10,072	\$ 10,072	\$ 10,072
Project Management	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333	\$ 18,333
Total	\$ 592,122	\$ 593,822	\$ 561,116	\$ 579,622	\$ 593,822	\$ 561,116	\$ 596,122	\$ 565,600	\$ 565,600

Zone 1 Total	Total Capital
FCC RHCP Project	\$ 5,208,943
Total	\$ 5,208,943

FCC RHCP Project Captiol Expense Zone 2 Option 2

Project Breakdown	Joel Pomerene	Coscockton	Twin City Hospital	Union Hospital	Wooster Community Friendsville	Wooster Community Beall	Dunlap Memorial
Fiber Construction	\$ 79,717	\$ 79,717	\$ 79,717	\$ 79,717	\$ 79,717	\$ 79,717	\$ 79,717
Pole Permits	\$ 1,754	\$ 1,754	\$ 1,754	\$ 1,754	\$ 1,754	\$ 1,754	\$ 1,754
Fiber Entrances	\$ -	\$ -	\$ -	\$ -	\$ 18,200	\$ 18,200	\$ -
Facility Leases	\$ 1,146	\$ 1,146	\$ 1,146	\$ 1,146	\$ 1,146	\$ 1,146	\$ 1,146
Equipment Costs	\$ 83,722	\$ 83,722	\$ 83,722	\$ 83,722	\$ 83,722	\$ 83,722	\$ 83,722
Customer CPE	\$ 8,359	\$ 8,359	\$ 8,359	\$ 8,359	\$ 24,991	\$ 26,865	\$ 8,359
Type II expenses	\$ 13,729	\$ 13,729	\$ 13,729	\$ 13,729	\$ 13,729	\$ 13,729	\$ 13,729
Project Management	\$ 23,571	\$ 23,571	\$ 23,571	\$ 23,571	\$ 23,571	\$ 23,571	\$ 23,571
Total	\$ 211,997	\$ 211,997	\$ 211,997	\$ 211,997	\$ 246,830	\$ 248,704	\$ 211,997

Zone 2 Total	Total Capital
FCC RHCP Project	\$ 1,555,520

**NEO RHIO and OneCommunity HealthNet Partnership
FCC Rural Health Care Pilot Program**

**APPENDIX C
Project Personnel**

**NEO RHIO and OneCommunity HealthNet Partnership
FCC Rural Health Care Pilot Program**



MARK ANSBOURY

Chief Operations Officer
FCC Program Manager

Mark Ansboury is a veteran telecommunication professional with years of community development, information technology and telecommunications leadership experience in the private and public sectors. As Chief Operations Officer for the NEO RHIO and OneCommunity HealthNet Partnership, Mark is responsible for coordination of the Federal Communications Commission pilot project. He currently serves as Chief Operating Officer and Chief Technology officer of OneCommunity where he manages the technical, operational and business development of OneCommunity's ultra broadband community network.

Most recently, Mark served as Vice President of managed services and chief technology officer for Telsource Managed Network Services of Fairfield, New Jersey. He was executive vice president of engineering, chief technology officer and director of ClearData Communications where he was responsible for the national deployment of an IP/ATM/WDN network. Prior to that, Mark was President and Founder of NGT Partners, LLC a technology and financial consulting firm and Information Technology Partners (ITECH Partners), responsible for the development of wireless and national IP/ATM, and wireless strategies for AT&T, Intermedia Communications, Bell South and Optus Communications and network deployment and management for OPTUS Communications/Advanced Radio Telecom, and Winstar.

In addition, Mark served as Director for Telecommunications at the State of Texas Department of Information Resources where he was responsible for the Texas Statewide IP and Telemedicine network. He also served as co-chair on the state's Telemedicine Strategic Plan and led the development of the State of Texas Telecommunications Plan. During this period Mr. Ansboury also served as a legislative consultant on the Texas Telecommunications Reform Act of 1996.

Mark holds a M.S. in systems management from the University of Southern California and B.S./B.A. from Hawaii Pacific College. He served nine years in the U.S. Navy and earned an IEE Certification in Communications. Additionally, Mark is certified as a Security CISSP and Disaster Recovery Planner.

Active in the workforce development and nonprofit community, Mark supports a number of community collaborations including serving as a Team Leader for Aligning Forces for Quality in Health Care, serving as an Advisor for the Ohio Health Information Partnership, serving as an Advisor for the to the Health Policy Institute of Ohio for the HISPC Grant, and as a Trustee for the Cleveland Ingenuity Festival.

**NEO RHIO and OneCommunity HealthNet Partnership
FCC Rural Health Care Pilot Program**

LAWRENCE VOYTEN

Healthcare Programs
Telemedicine & HIE Coordinator

In his role, Lawrence Voyten brings 30-years of strategic healthcare information experience to the Federal Communications Commission pilot project.

Lawrence currently works as a Project Coordinator, Manager and Consultant for OneCommunity. Historically, he has directed a national consulting service practice supporting service and software sales. This included large scale outsourcing and application development projects along project management. He is skilled working with senior management in decision-making, project planning, project implementation and financial impact analysis. He has a comprehensive knowledge of identifying business drivers and matching strategy with tactical objectives. He created new and adapted existing service products creating marketing plans, sales education programs and delivery teams, and supported software product sales and implementation with client adaptation, market analysis and project planning.

Prior to working with OneCommunity, Lawrence has managed multiple consulting assignments and worked as a Vice President at Marconi Communications, a global communications and information technology company supporting North American operations where he was responsible for development and management of healthcare technology security products and services and created and executed sales strategy for product and service solutions. Additionally, he has worked for Keane, Inc., a billion dollar applications development, software sales, outsourcing and integration services firm. At Keane he was as a national director responsible for development, delivery, coordination and sales of services on a national level. He directed a team of national healthcare industry experts and managed several large engagements, coordinated national presentations, forums and conferences on industry issues and challenges, and developed and monitored national account strategy.

Lawrence has provided operational leadership in several tertiary teaching hospital settings where he has managed various large physician group practices and clinical operations. He has been a project manager for several MSO/PHO development projects that facilitated organizational structure changes that linked the medical staff and the hospital business drivers and community mission.

Lawrence holds an M.B.A. from Baldwin-Wallace College, a B.S. in nursing from Case Western Reserve University, and a B.A. in biology from Hiram College. Truly involved in the healthcare information industry, Lawrence is the Regional Past President of HIMSS, and serves as a current Board Member, Member National Nursing Informatics and American College of Healthcare Executives – Faculty and Consultant.

NEO RHIO and OneCommunity HealthNet Partnership FCC Rural Health Care Pilot Program

CHUCK GIRT

Director Engineering
FCC Network Project Manager

A master telecommunications network engineer, Chuck's contribution to the FCC Pilot Project will be to oversee the architectural design, network infrastructure and vendor partnerships of the program.

Chuck is responsible for the development, growth, and management of the One Community ultra-broadband network infrastructure by working with all staff members to develop cases and meet the needs of subscribers. He manages the daily operation and engineering of all technical aspects associated to the network design, implementation and maintenance of the One Community infrastructure.

Recently, Chuck served as Director of Engineering and Operations for Adelphia Commercial Services (Previously Adelphia Business Solutions) for the nation. He assisted in developing Adelphia into a competitive local exchange carrier and commercial internet provider. Previously, he was director of Midwest operations and core developer for Northpoint DSL where he was responsible for designing and deploying a DSL infrastructure in 54 U.S. cities. Prior to that, Chuck worked for MCI for 14 years starting out as a field engineer completing fiber installations and maintenance as well SONET system turn-up. Through MCI, he worked up to Senior Network Engineer for MCI, responsible for all outside plant, equipment installation and maintenance, SONET and DWDM deployment for MCI-Metro for Northeast United States.

Chuck holds a Ph.D. in theoretical physics, an M.S. in quantum physics, and a B.E. in electrical and mechanical engineering from the University of California at Berkley. He holds numerous technical certifications including: Juniper Network Certified Internet Expert (JNCIE), Cisco Certified Network Professional (CCNP), SONET Optical Specialist (SOS), Advanced Optical Transport Systems (AOTS) and various others.

**NEO RHIO and OneCommunity HealthNet Partnership
FCC Rural Health Care Pilot Program**

RONALD FORSTER

Construction Management

A veteran project management, fiber-build and construction supervisor in the telecommunication industry, Ron Forster will bring his experience to the role of the Construction Management for the FCC Rural Health Care Pilot Program.

Ron has been responsible for the development and growth of the One Community network and fiber infrastructure. He is responsible for the design and deployment by working with One Community's partners to plan and construct the fiber infrastructure. Ron is also responsible for project management and coordination. He brings to One Community years of outside plant experience from the public sectors.

Ron has worked 27 years in the cable industry with Adelphia Communications Corporation. Ron was involved in the original fiber infrastructure build for all Northeast Ohio and surrounding areas. He assisted other territories within Adelphia in the design and construction of their fiber infrastructure. He has vast knowledge of outside plant construction and all other carrier's fiber plants.

**NEO RHIO and OneCommunity HealthNet Partnership
FCC Rural Health Care Pilot Program**

JONATHAN GAIRING

Network Engineering
Field Engineering

Jon brings a solid track record of network support and field infrastructure engineering to the FCC Rural Health Care Pilot Program. Currently, he serves as Network Field Engineer for OneCommunity's ultra broadband network.

In his role, he is responsible for the ongoing support and operation of the One Community network infrastructure. Duties include any move, add, or changes (MAC) required to the network to support the current and future user population. Additionally, he is responsible for troubleshooting and resolution of any network related issues, and perform any required OS upgrades on network equipment resulting from discovered bugs or security vulnerabilities. Jon is also charged with the daily monitoring and management of the network infrastructure including reviewing the network performance, device logs, and overall network performance and recommendations.

Most recently, Jon served as operations engineer at Time Warner Cable Business Class and senior operations technician of Adelphia Commercial Services where he was responsible for maintaining the central office, installation and maintenance of various Ethernet and SONET networks, evaluation of new equipment and technologies, and handling new customer requirements. In addition, he designed switched and routed networks to support a variety of IP traffic for custom network requirements.

Previously, Jon was the senior network engineer for Network Systems Engineering, responsible for troubleshooting network performance, planning and design of network upgrades and expansion, designing custom IT implementations to meet specific needs, and training in both IT and installation procedures to respective department employees.

He holds numerous technical certifications including: Microsoft Certified Professional (MCP), Microsoft Certified Systems Administrator (MCSA), Microsoft Certified Systems Engineer (MCSE), and a Cisco Certified Network Associate (CCNA).

**NEO RHIO and OneCommunity HealthNet Partnership
FCC Rural Health Care Pilot Program**

MARK DULMAGE

Operations Engineering
Test & Certification

Mark is an information technology and operations engineer who will contribute to the FCC Rural Health Care Project by overseeing network testing, initialization, connectivity, and verification for customer use.

Mark is responsible for the ongoing support and operation of the OneCommunity network infrastructure. Duties include any move, add or changes (MAC) required to the network to support the current and future user population. In addition his responsibilities include troubleshooting and resolution of any network related issues, and required OS upgrades on network equipment resulting from potential security vulnerabilities. Mark is also responsible for the daily monitoring and management of the network infrastructure. His duties include the review of network performance, device logs, and overall network performance and reporting of potential issues and recommendations.

Most recently, Mark served as an operations engineer for Network Systems Engineering where he was responsible for troubleshooting network performance, planning and design of network upgrades. In addition, he managed expansion plans, design, and custom implementations and training in both IT and installation procedures to department employees.

Prior to that, Mark was the IT director for ADR Investigation & Protection Corporation where he was responsible for installation, maintenance, expansion, planning, and development of their national video and access monitoring network.

Mark holds numerous technical certifications including: Microsoft Certified Professional (MCP), Microsoft Certified Systems Administrator (MCSA), Microsoft Certified Systems Engineer (MCSE), and a Cisco Certified Network Associate (CCNA).

**NEO RHIO and OneCommunity HealthNet Partnership
FCC Rural Health Care Pilot Program**

**APPENDIX D
Legal Contact Information**

Attention FCC Review Committee:

Following is our attorney:

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Thank you,

Mark Ansboury
Chief Operating Officer
NEO RHIO and OneCommunity

APPENDIX E

Letters of Support

Ohio Governor Strickland
National Lambda Rail (NLR)
Internet 2
Ohio Broadband Network/Third Frontier Network
Northeast Ohio Regional Health Information Organization (NEO RHIO)
Health Policy Institute of Ohio (HPIO)
Hiram College
Case Western Reserve University (NetWellness)
Information Network for Ohio Schools (Info Ohio)
Ohio Public Library Information Network (OPLIN)
United Way
Ohio KeyPro
Akron Children's Hospital
Bellevue Hospital
Fisher Titus Hospital
McGruder Hospital
CC5 Community Hospitals
Ashtabula Hospital
Memorial Hospital
University Hospital
Mercy Medical Center

(See Separate Files for Actual Letters)