



**Rural Health Care Pilot Project
WC Docket No. 02-60**

Application for Funding

from

Adena Health System and **O'Bleness Health System**
Chillicothe, Ohio Athens, Ohio

3 May 2007



Table of Contents

Executive Summary	Page 3
Our Strategy	Page 7
<ul style="list-style-type: none">- The Challenges- Key Advantages of Our Proposal- Build vs. Buy- The Importance of Network Redundancy- Competitively Neutral Telemedicine- Immersive Telemedicine- Continuing Education for Physicians and Allied Health Professionals	
The Service Region	Page 10
<ul style="list-style-type: none">- Socio-Economic Profile- Health Care Providers- Lack of Carrier Commitment	
Members of the Consortium	Page 14
Existing Programs and Innovations	Page 17
<ul style="list-style-type: none">- Neonatal Intensive Care Telemedicine- Psychiatry and Psychotherapy Telemedicine- Store and Forward Telemedicine- Home Health Care Telemedicine- Community Health Record Project- Center for Healthcare Education Innovation- OSCnet Fiber Backbone- Appalachian Regional Informatics Consortium- Emergency Communications	
The Network Design	Page 21
<ul style="list-style-type: none">- Technology Plan- Relationship with OSCnet- Membership Types and Methods of Cost Sharing	
Phase 1 Funding Request and Project Plan	Page 25
<ul style="list-style-type: none">- Phase 1 Budget Summary- "Not to Exceed" Basis of Budget- Proposed Engineering Studies- Telemedicine Infrastructure- Continuing Education Infrastructure- Project Management- Work Plan and Schedule- Sustainability- Assessment- Rules Adjustments Requested	
Facilities Covered by the Proposal	Page 34
Enclosures	
<ul style="list-style-type: none">• Letters of Support• Project Team Qualifications	

Executive Summary

Two rural health systems in southern Ohio, the Adena Health System and the O'Bleness Health System, submit this application for funding under the FCC Rural Health Care Pilot Program to create the Southern Ohio Health Care Network. We appreciate the foresight and leadership of the Commissioners in creating this pilot program to advance the state of health care in rural areas. Our proposal encompasses:

- A service area of fifteen rural counties – home to 579,000 people.
- Equal in size to the entire state of New Jersey (>7,400 square miles).
- Nine of the ten most impoverished counties in Ohio.
- More than fifty health care facilities including:
 - o Nineteen Federally Qualified Health Clinics (FQHC)
 - o Eight Critical Access Hospitals (CAH)
 - o Eleven Rural Health Clinics (RHC)
- Seventeen Federally designated Health Professional Shortage Areas (HPSA).
- Rural-Urban Commuting Area (RUCA) codes as high as 10.



This pilot project provides a model that can be replicated to other rural areas if assessment data supports such expansion.

Project Goals

- Create an inclusive and sustainable broadband health care network open to all providers in the service area.
- Participate in Statewide efforts to build a unified health care information infrastructure and cooperative clinical services.
- Expand telemedicine capacity to broaden the reach of the existing neonatal care and psychiatry programs and to support additional disciplines.
- Enhance sustainability of rural medical practices.
- Develop deeper collaboration among health care providers.
- Deploy immersive telepresence based on high definition video and high fidelity audio to enhance telemedicine.
- Deliver high impact continuing education programs for physicians and allied health professionals.
- Support a progressive community health record project and support efforts to create a regional health information organization (RHIO).
- Enhance emergency communications to improve coordination in the event of a crisis affecting the region or nation.
- Provide capacity for economic development, digital divide and K-20 initiatives.
- Conduct rigorous assessment of the project.

Key Advantages of Our Proposal

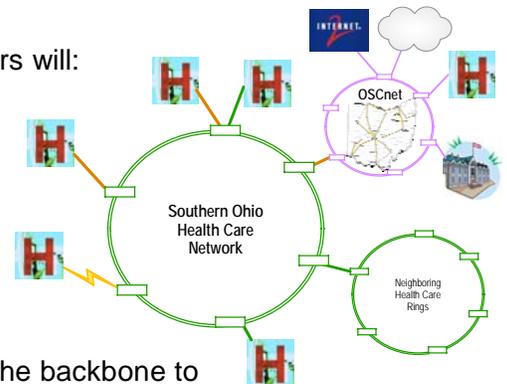
Our proposal to establish the Southern Ohio Health Care Network offers a strong test case for the Rural Health Care Pilot Program because we:

- Provide leadership from within the rural service region, building upon a high level of trust; an essential dimension in achieving success in these communities.
- Offer the commitment of the two largest non-profit health systems in the service area which:
 - o Manage half the health care facilities in the fifteen rural counties.
 - o Leverage established relationships with over two-thirds of physicians practicing in the region.
 - o Generate annual revenue of over \$430 million.
 - o Bring to the table existing service agreements with specialist groups from urban centers.
- Include a strong project team with the experience and expertise required to bring the project to successful completion.
- Enjoy the support of key universities, agencies and the State of Ohio.
- Build upon the tradition of collaboration already established in the region and in the state.

Technology Overview

In creating the Southern Ohio Health Care Network, the partners will:

- Construct or purchase fiber optic rings to create a redundant backbone connecting the largest concentrations of health care facilities.
- Interconnect to the Ohio Supercomputing Center network (OSCnet) for access to urban health care providers, universities, Internet2 and commodity Internet services.
- Establish health care points-of-presence (H-POPs) on the backbone to support connectivity to facilities outside of the reach of the fiber optic rings.
- Deploy the most cost effective solution for “last mile” connections to remaining health care facilities to the nearest H-POP, either by:
 - o Extending private fiber spurs or broadband wireless links.
 - o Utilizing incumbent carriers to provide wired or wireless broadband connectivity.
- Deploy next generation telemedicine and continuing education infrastructure to provide immersive experiences and sophisticated simulations.
- Interconnect with the statewide emergency communications network.
- Activate separate lambdas on the fiber optic network to support economic development, digital divide and K-20 initiatives.



Summary of Phase 1 Funding Request

	Capital	Annual Operating	Funding Share
Rural Health Care Pilot Project	\$12,163,573	\$882,922	85%
Adena and O'Bleness	\$2,146,513	\$155,810	15%
Pilot Project Totals	\$14,310,086	\$1,038,732	100%

“Not to Exceed” Basis of Budget

This budget represents the projected costs for a private network build. We present this as a “not to exceed” budget due to the possibility of financial participation of one of the incumbent carriers. In such a scenario, the Southern Ohio Health Care Network would become an “anchor tenant” for a carrier network build serving broader purposes.

In the event that costs are less than projected, we request the flexibility to expand the scope of Phase 1 by using the remaining Rural Health Care Pilot funding to tackle the top priorities that emerge from the engineering studies (detailed later in this proposal).

Consortium Members

- Adena Health System (Fiduciary Agent)
- O'Bleness Health System
- Southern Consortium for Children
- Columbus Children’s Hospital
- Health Policy Institute of Ohio
- Ohio Supercomputer Center, OSCnet
- Wright State University School of Medicine and College of Nursing and Health
- Ohio State University College of Medicine
- Ohio University College of Osteopathic Medicine

Project Team

Our proposal offers a strong project team made up principally of long-time residents of the service area who have with the experience and expertise to bring the project to successful completion.

- Marcus Bost, CIO, Adena Health System
- Kristine Barr, CIO, O'Bleness Health System
- Tom Reid, President, Reid Consulting Group LLC
- Brian Phillips, CIO, Ohio University College of Medicine
- Lawrence Gabel, Professor and Vice Chair for Academic Affairs, Ohio State University College of Medicine



Authority

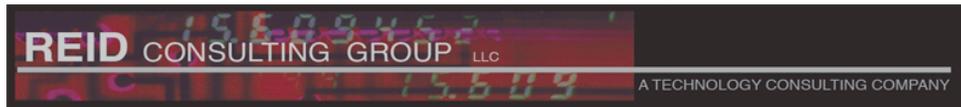
The application is submitted under the authority of:

Mark H. Shutter
Chief Executive Officer
Adena Health System
272 Hospital Road
Chillicothe, Ohio 45601
740-779-7500

Richard F. Castrop
Chief Executive Officer
O'Bleness Health System
55 Hospital Drive
Athens, Ohio 45701
740-593-5551

Primary Contact

This application for funding under the FCC Rural Health Care Pilot Project was prepared and is presented by:



Tom Reid
740-590-0076
tom@reidconsultinggroup.com

4 Elizabeth Drive
Athens, Ohio 45701
www.reidconsultinggroup.com

Mr. Reid will continue as the primary contact for this funding application.

Sources of Data

- Centers for Medicare and Medicaid Services (CMS)
- Health Resources and Services Administration, Bureau of Health Professions
- U.S. Census Bureau
- Flex Monitoring Team

Our Strategy

The Challenges

In southern Ohio we face the daunting but essential challenges to:

- Improve health care delivery in an underserved and impoverished population.
- Help physicians in the area survive the increasingly harsh economic realities of practicing medicine in rural areas.
- Affect change within a rural culture.

Key Advantages of Our Proposal

Our proposal to establish the Southern Ohio Health Care Network offers a strong test case for the Rural Health Care Pilot Program. These key factors put us in a strong position to affect change in health care delivery in the service area:

1. Provides leadership from within the rural service region, building upon a high level of trust; an essential dimension in achieving success in these communities.
2. Offers the commitment of the two largest non-profit health systems in the service area which combined:
 - o Manage half the health care facilities in fifteen rural counties.
 - o Leverage established relationships with over two-thirds of physicians practicing in the region.
 - o Generate annual revenue of over \$430 million.
 - o Bring to the table existing service agreements with specialist groups from urban centers.
3. Includes a strong project team make up principally of long-time residents of the service area who have the experience and expertise required to bring the project to successful completion.
4. Enjoys the support of key universities, agencies and the State of Ohio.
5. Builds upon the tradition of collaboration already established in the region, among the partners and consortium members, and more broadly in the State of Ohio.

“Fostering collaborations is an important piece in the rural HIT puzzle, but oftentimes regional collaborations become metropolitan hub-centered projects and rural providers can be left out of the mix. In these situations there is concern that the rural voice will not be heard in the decision-making process and that technology may not trickle out to rural areas.

Because rural communities tend to be small, they are able to bring all the stakeholders to the table to make collective decisions on HIT. ... there is still a sense of a network among providers that makes the decision-making process more community oriented.”

- The 2006 Report of the National Advisory Committee on Rural Health and Human Services, U.S. Department of Health and Human Services

Build vs. Buy

The partners in this funding proposal are not particularly interested in owning and operating a fiber optic network. However, in seeking solutions to the broadband needs to support health care delivery in southern Ohio, the partners had little success in generating interest from the incumbent carriers in the pursuit of creative and progressive solutions.

However, once it became clear that a private network build was a distinct possibility, the incumbents have shown great interest in partnering for the build. Thus while we have engineered and priced the network as a private build, it is possible that one or more of the incumbents will be the successful bidder. The incumbents in the service area include: Verizon, AT&T, Horizon, United of Ohio, Time-Warner, Cablevision and Windstream Western Reserve.

Other local providers may also enter the picture to offer wired or wireless broadband links to support the project. We seek the flexibility to consider all options for providing the needed bandwidth.

The Importance of Network Redundancy

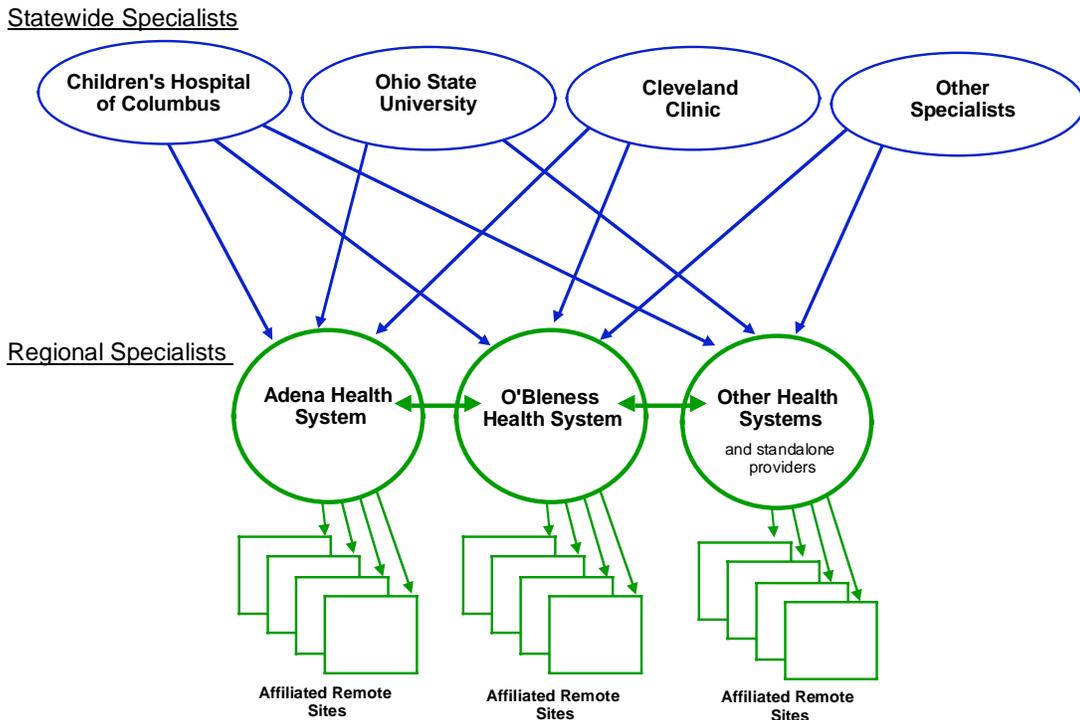
At present, not a single carrier in the region can offer the reliability needed to support mission critical telemedicine and clinical services. As an example, the entire service region recently lost all Internet access for over forty-eight hours when a single fiber optic cable was cut. The cable, owned by American Electric Power, provided the connectivity to the region for Time-Warner, Verizon, OSCnet and several smaller telecommunications and Internet companies.

Health care services simply cannot be built based on such unreliable service. The often-targeted "four nines" of reliability (99.99%) translates into only 52.6 minutes of downtime per year. Even a "three nines" reliability target only allows for 526 minutes of outage per year. In the incident described above, our service region incurred **fifty times** the "four nine" limit and five times the "three nine" limit from a single fiber cut.

Competitively Neutral Telemedicine

Telemedicine holds much promise for further improving health care in southern Ohio; however, for the service to have an impact, it must be seen as increasing rather than decreasing options for referring physicians. In building telemedicine capacity, it is common for a large urban medical center to own and operate the system, offering only their specialists for consultation. While this model has its benefits, such a proprietary approach can result in reduced participation by referring physicians. A competitively neutral network for telemedicine:

- Empowers referring physicians to pick specialists from multiple participating health care providers, thus increasing utilization and spurring healthy competition.
- Encourages telemedicine practices within the southern Ohio health care community. For example, Adena and O'Bleness currently offer in-house and visiting specialists in orthopedics, neurology, pain management, oncology, cardiology and diabetes.



The keys to building such a flexible telemedicine capacity include:

- Focusing on standards based (or de-facto standards based) equipment.
- Deploying codecs supporting multiple protocols.

Immersive Telemedicine

Telemedicine networks in rural areas generally are limited to T-1 speeds. While still a useful service, the quality of the video and audio remains a distraction, creating a barrier between the patient and physician. Next generation solutions that create a more immersive experience require high speed networks. The impact of broadband on image and sound quality dramatically expands the range of diagnostic activities that can take place and also improves the sense of telepresence.

Continuing Education for Physicians and Allied Health Professionals

The proposed network will support the physicians and allied health professionals in their efforts to meet their field's demanding continuing education requirements in three ways:

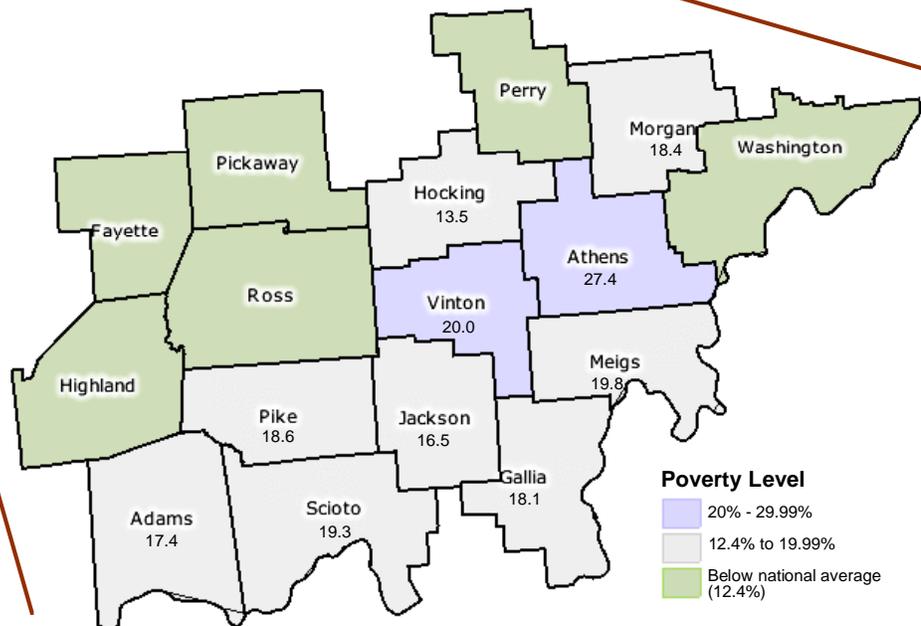
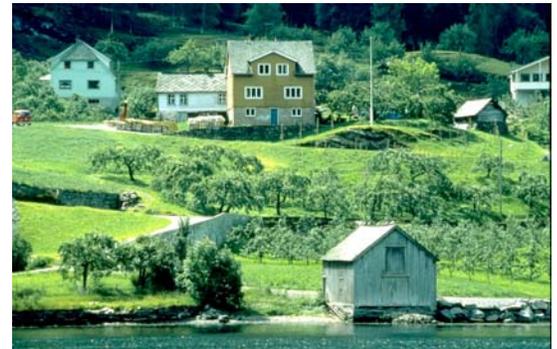
- Extending broadband capacity to support multi-media learning modules and sophisticated simulations.
- Providing video conferencing capabilities for participation in synchronous remote learning opportunities.
- Offering a web conferencing capacity that supports both synchronous and asynchronous collaboration among special interest groups, e.g. communicable diseases. The product would provide "persistent rooms" that participants can enter at any time to retrieve documents, review recordings of previous sessions or participate in real-time discussions.

The Service Region

Socio-Economic Profile

The service region suffers from poverty rates well above the national average and the condition is worsening. In the past ten years, the poverty rate has increased by an average of over 5% in the region with the top rate now standing at over 27% of the population. Our service area spans:

- A service area of fifteen rural counties – home to 579,000 people.
- Equal in size to the entire state of New Jersey (>7,400 square miles).
- Nine of the ten poorest counties in Ohio.



Population of Service Region = 579,000 (2000 Census)

County	Population	Pop/Sq Mile	Median Household
Adams	27,330	46.8	\$30,421
Athens	62,223	122.7	29,116
Fayette	28,433	69.9	39,082
Gallia	31,069	66.2	32,167
Highland	40,875	73.9	36,486
Hocking	28,241	66.8	35,379
Jackson	32,641	77.7	31,943
Meigs	23,072	53.8	27,749
Morgan	14,897	35.6	31,577
Perry	34,078	83.1	35,104
Pike	27,695	62.8	32,894
Ross	73,345	106.6	37,957
Scioto	79,195	129.4	29,134
Vinton	12,806	30.9	30,970
Washington	63,251	99.6	35,162



Natural Resources

- Natural beauty
- Large tracts of National Forest
- Natural gas
- Coal

Economic Drivers

- Manufacturing
- Farming
- Extractive industries
- Health care
- Higher education
- Tourism

Areas of Growth

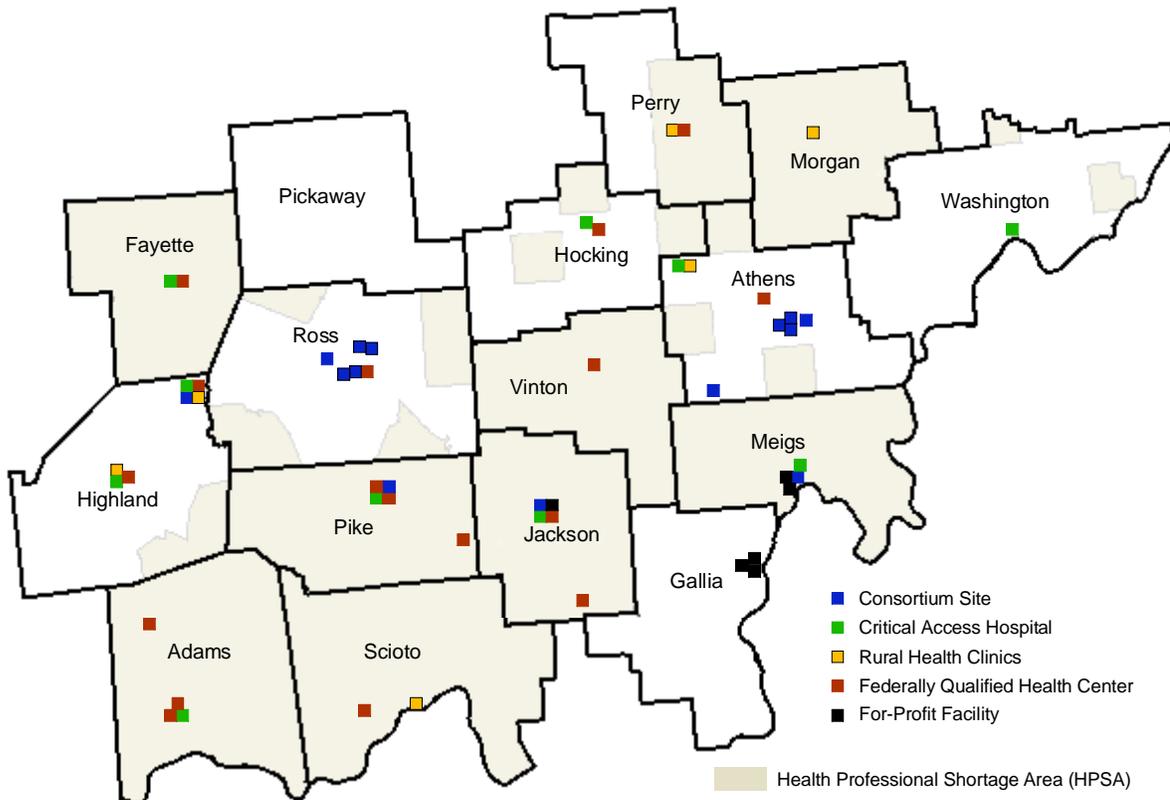
- Biomedical research and development
- Engineering research and development



Health Care Providers

Given the region's low population densities, it is no surprise that many of the health care facilities struggle to remain financially viable. The region's combined service area encompasses:

- Over fifty rural health care facilities, including
 - o Nineteen Federally Qualified Health Clinics (FQHC).
 - o Eight Critical Access Hospitals (CAH).
 - o Eleven Rural Health Clinics (RHC).
- Seventeen Health Professional Shortage Areas (HPSA).



<u>HPSAs in Service Region</u>	
Adams Service Area	Meigs Service Area
Brush Creek Service Area	Morgan Service Area
Colerian Service Area	Paint Service Area
Deerfield Service Area	Pike Service Area
Fayette Service Area	Scioto Service Area
Jackson Service Area	Trimble Service Area
Laurel Service Area	Vinton Service Area
Lawrence Service Area	Ward Service Area
Lodi Service Area	

Lack of Carrier Commitment

At present, our service area suffers the same woes as other rural areas in terms of access to advanced telecommunications services. These symptoms include:

- Weak carrier investment due to low population density (with one notable exception).
- No backbone redundancy.
- Limited, and often cost prohibitive, solutions to satisfy needs beyond T-1 speeds.

Members of the Consortium

The Partners: Adena Health System and O'Bleness Health Systems

Facilities

The Adena and O'Bleness rural health systems operate twenty-four health care facilities from sixteen locations within the service region, serving an economically disadvantaged population.

Budget Summary

	Adena	O'Bleness	Combined
Net Revenue (millions)	\$368	\$62.2	\$430
Charity Care (millions)	\$7.15	\$3.63	\$10.8
Bad Debt (millions)	\$12.06	\$4.66	\$16.7

Payer Mix

Medicare	16%	27%
Medicaid	23%	15%
Uninsured	16%	12%
Medicare/Medicaid/Uninsured	55%	54%

Preserving Critical Services for the Region

In recent years, both Adena and O'Bleness have expanded their health care systems to preserve critical services to the region. For instance, rising malpractice costs and unilateral reductions in reimbursements from insurance companies threatened literally **all** of the OB/GYN practices in the fifteen county rural service area. By incorporating these practices within their health systems, Adena and O'Bleness saved pre-natal and birthing services in the region by streamlining administrative costs and leveraging negotiating power with the insurance companies.



Technological Progress

Despite the obstacles, both Adena and O'Bleness have extended technology services across their facilities, including:

- Multiple T-1's for voice and data connectivity to remote sites.
- OC-3 to OSCnet for telemedicine project.
- Campus fiber optic networks interconnecting neighboring buildings.
- Robust in-building networks both wired and wireless.
- Clinical automation systems providing:
 - o Picture Archiving and Communications Systems (PACS)
 - o Electronic Medical Records (EMR)
 - o Lab Results, etc.

Columbus Children's Hospital

Founded by a determined group of women in 1892, Columbus Children's Hospital began as a local charity to serve a dozen very ill children. Throughout the following century, this tiny community-funded mission matured into a health care system that today spans the Midwest as one of its preferred providers of pediatric health care. Columbus Children's today is ranked as one of the nation's ten largest children's hospitals and pediatric research centers.



Southern Consortium for Children

The Southern Consortium for Children (SCC) was formed in 1988 in response to the closure of a children's state-operated psychiatric hospital. The SCC operates clinical operations enabling children, adolescents, and adults to obtain comprehensive mental health, substance abuse, vocational, and other behavioral health services in their respective communities, appropriate to their individual needs, and in the least restrictive environment.



OSCnet

OSCnet is the most advanced statewide research and education network in the nation, serving K-12, colleges and universities, hospitals and public television stations. OSCnet is a dedicated high-speed fiber-optic network with over 1,600 miles of fiber to create the network backbone. OSCnet, a technology initiative of the Ohio Board of Regents, is operated by OARnet, Ohio Supercomputer Center's (OSC) networking division.



Health Policy Institute of Ohio

The Health Policy Institute of Ohio (HPIO) is an independent, nonpartisan, statewide center that informs Ohio health policy by forecasting health trends, analyzing key health issues, and communicating current research to policymakers, state agencies and other decision-makers.



HPIO has become the focal point within Ohio for coordination and collaboration among the various stakeholders and regional consortiums to build a common vision and interoperable infrastructure.



Internet2

Internet2 is the foremost U.S. advanced networking consortium. Led by the research and education community since 1996, Internet2 promotes the missions of its members by providing both leading-edge network capabilities and unique partnership opportunities that together facilitate the development, deployment and use of revolutionary Internet technologies.



By bringing research and academia together with technology leaders from industry, government and the international community, Internet2 promotes collaboration and innovation that has a fundamental impact on the future of the Internet.

Wright State University School of Medicine and College of Nursing and Health

The Boonshoft School of Medicine at Wright State University in Dayton, Ohio, offers academic excellence and diversity in a full range of educational programs. Their hallmarks include a focus on generalist physician training, dynamic partnerships with our community and collaborative research initiatives.



The Wright State University College of Nursing and Health is committed to excellence in nursing education. The Bachelor of Science in Nursing (BSN) program has a four-year program for pre-licensure students, a completion program specifically for registered nurse students and an accelerated post baccalaureate program (BEACON). The Master of Science in nursing (MS) program provides advanced preparation for nurses in a variety of specialty areas.

Ohio University College of Osteopathic Medicine

The College of Osteopathic Medicine is accredited by the American Osteopathic Association and is one of 23 osteopathic medical schools in the United States and the only osteopathic program in Ohio. Fifty-five percent of OU-COM graduates are practicing in primary care, the highest percentage of any medical school in Ohio. The focus of instruction at OU-COM has always been a holistic approach to practicing family-oriented, primary care medicine.



Ohio State University College of Medicine

For nearly 90 years, The Ohio State University College of Medicine has helped medical students and residents discover the fascination of medicine and research, achieve academic and professional success, and lead tomorrow's quest for advancing the quality of life across the globe. Ranked 7th among public university medical programs, OSU brings great depth in specialty areas and research.



Existing Programs and Innovations

Neonatal Intensive Care Telemedicine

With the support of the Ohio Board of Regents, Columbus Children's Hospital and the Adena Health System launched a neo-natal intensive care telemedicine program in late 2004. The program provides specialists to consult with Adena physicians regarding neonatal patients and also provides a link to the neonatal intensive care unit in Columbus for family members to "visit" infants that require treatment at Children's. Care and consultations include subspecialties such as pediatric cardiology. The link provides live audio and video feeds plus an electronic stethoscope.



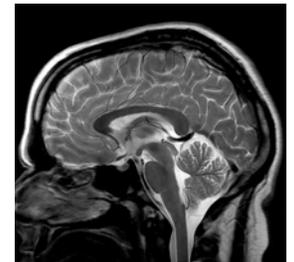
Psychiatry and Psychotherapy Telemedicine

For the Southern Consortium for Children (SCC), providing psychological services across ten sparsely populated rural counties proved daunting, leaving many in need without service. In 2003, the SCC and Ohio University created a ground breaking telepsychiatry and telepsychotherapy program that dramatically improved service delivery using a video-conferencing network. Due to the success, the network was expanded to a total sixteen sites in 2005. The SCC also delivers continuing education for area behavioral health professionals across the network.

Store and Forward Telemedicine

Numerous physicians practicing in the area take advantage of store-and-forward telemedicine options. For instance:

- Radiology images from PACS are routinely transmitted to multiple remote sites for interpretation and/or treatment planning.
- Cardiology consults are performed using store and forward of EKG data and other diagnostic information.



Home Health Care Telemedicine

Both Adena and O'Brienness operate home health care agencies within their systems. Great efficiencies have been demonstrated in pilot projects to equip the chronically ill with monitoring technology that collects vital signs and symptoms, which are reported to a central repository for clinician review. After reviewing the data the clinician can then follow-up with a revised treatment plan with the patient.

Such monitoring systems enable comprehensive home-based disease management for a broad range of diagnostic groups including: Heart Failure, Chronic Obstructive Pulmonary Disease, Diabetes Mellitus, Hypertension, and Major Depressive Disorder.

Community Health Record Project

Adena Health System embarked on an ambitious and industry leading effort to create a community wide health record. The five-year, \$16.2 million project to create full Electronic Medical Records (EMR) for all health care organizations and all area physicians. The services include:

- Unified regional electronic medical record (EMR)
- Integrated health care information system (HCIS)
- Clinical decision support system (CDSS)
- Computer physician order entry system (CPOE)
- Picture archiving and communications system (PACS)
- Quality outcome measures
- Scheduling
- Billing
- Physician office automation offered to ALL physicians in the community offering:
- Patient access via secure web site.



“What is beyond dispute is that this disaggregated information regime is an important reason the American health care system ranks a mere 37th in the world in quality and a sobering 48th in life expectancy.”

- Technology CEO Council Report, October 2005

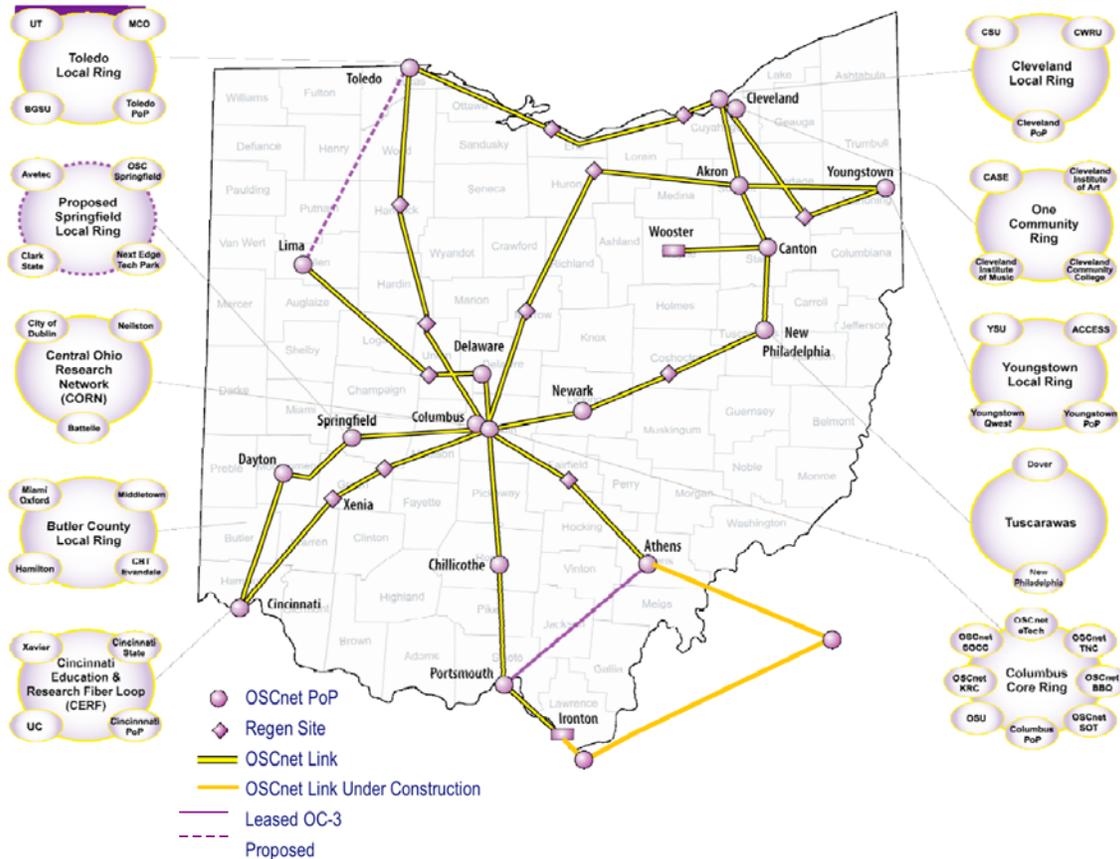
Center for Healthcare Education Innovation

The Adena Health System, Wright State University and Ohio University launched a joint effort to build the Center for Health Care Education Innovation on the Adena campus in Chillicothe, Ohio. The Center will address the critical shortage of health professionals by offering academic programs and outreach including:

- Nursing education
- Allied health profession programs
- Continuing education
- Outreach to 5th and 6th graders about career opportunities in the health care field

OSCnet Fiber Backbone

The OSCnet backbone passes through the service region with POPs in Chillicothe and Athens. Several local and regional rings have already been constructed and interconnected to OSCnet. A link currently under construction will complete the southern Ohio ring, reaching into Kentucky and West Virginia.



Appalachian Regional Informatics Consortium

One of the greatest opportunities of emerging health information technology is the ability to share clinical resources in a community. Sharing information resources through a secure network will empower providers and patients to improve health care quality and enhance research to develop new therapies and promote wellness. The quality and availability of health care in rural communities is a cornerstone for economic development and public safety.

In 2004, the Appalachian Regional Informatics Consortium (ARIC) received funding for its planning phase from an Integrated Advanced Information Management Systems (IAIMS) grant from the National Library of Medicine (NLM). Since that time, the Ohio University College of Osteopathic Medicine (OU-COM) and its health care partners in

Southeastern Ohio have worked under ARIC to improve rural health care quality by planning for a comprehensive community-based health information system.

The goals of ARIC are highlighted in its three primary projects: the development of an electronic health information interchange (a project supported by Appalachian Regional Commission grant funds), the collection of secure health information for research purposes and the creation of a rural regional health information organization (RHIO). The goal of a RHIO is to coordinate health care information for improved regional health care. The goal of the *rural* RHIO, such as the effort evolving under ARIC, is to connect hospitals and clinics in isolated rural areas while overcoming limited resources and infrastructure, high poverty rates and diverse system needs.

To date, 17 providers have expressed an interest in developing the Southeastern Ohio RHIO with ARIC. These providers are predominantly hospitals in rural and/or small communities that refer patients to urban and tertiary care facilities for escalated care.

Emergency Communications

MARCS is the nation's first statewide voice and data communication system for first responders. The voice and data communications system enables police, fire and emergency management crews throughout the state to coordinate with each other to more efficiently and effectively serve and respond to Ohioans during everyday operations and in the event of an emergency. MARCS uses wireless technology to connect with:

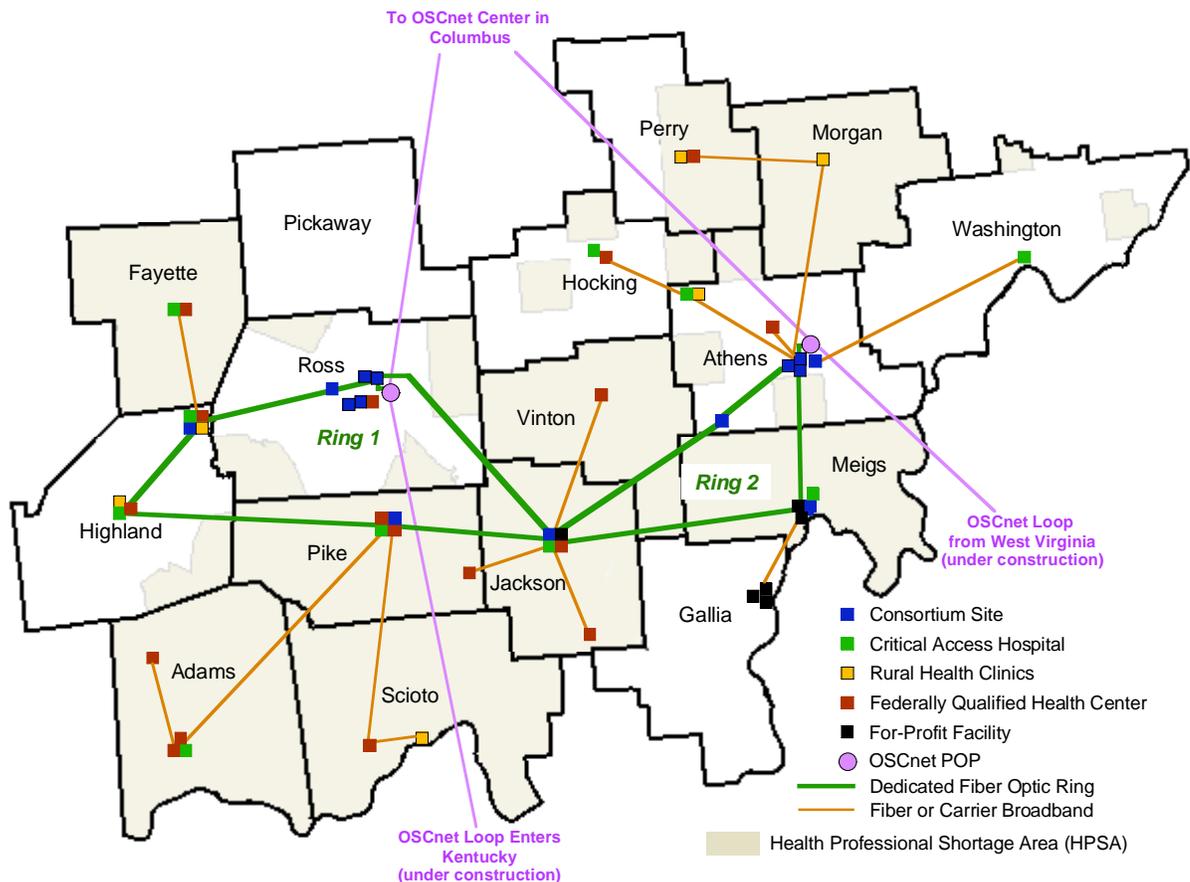
- First responders
 - o Police Departments
 - o Sheriff Departments
 - o Fire Departments
 - o EMR Providers
- County Health Departments
- City Health Departments
- County Emergency Management Agencies



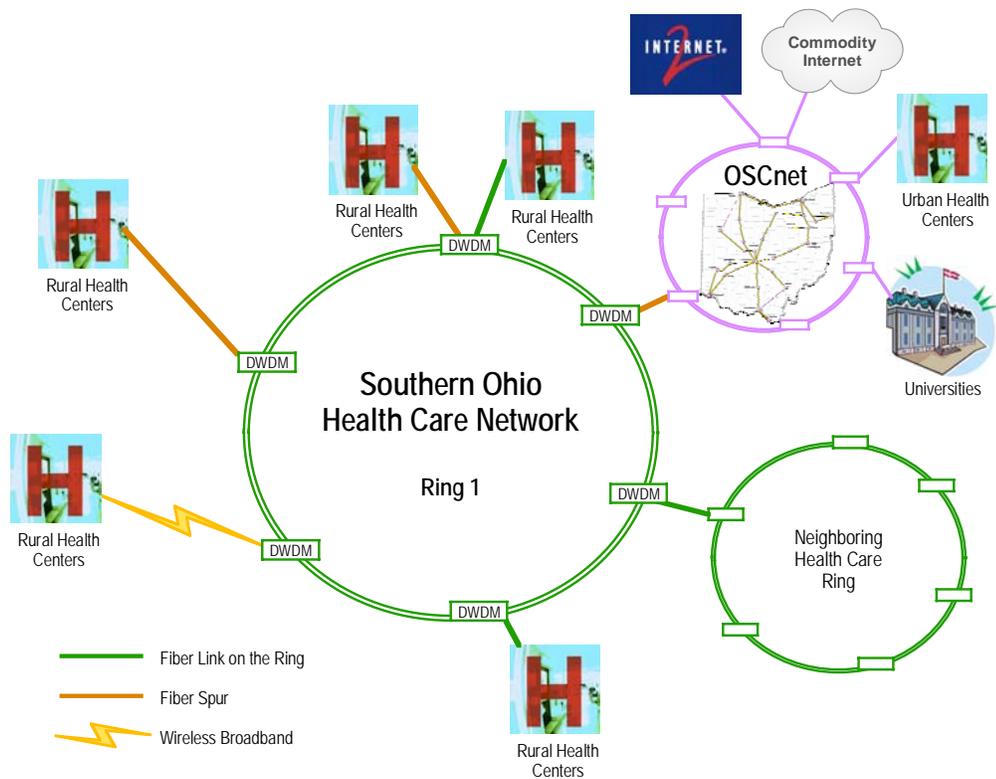
The Network Design

Technology Plan

- Construct or purchase fiber optic rings to create a redundant backbone connecting the largest concentrations of health care facilities.
 - o Ring 1: South-central Ohio
 - 175 miles of six-strand fiber optic cable.
 - Fault tolerant dense wave division multiplexing (DWDM) electronics.
 - Establish five health care points-of-presence (H-POP).
 - Gigabit Ethernet (1 Gbps) connections to facilities on the ring.
 - o Ring 2: Southeastern Ohio
 - 140 miles of six-strand fiber optic cable.
 - Fault tolerant dense wave division multiplexing (DWDM) electronics.
 - Establish three health care points-of-presence (H-POP).
 - Gigabit Ethernet (1 Gbps) connections to facilities on the ring.



- Interconnect the Southern Ohio Health Care Network to the Ohio Supercomputing Center network (OSCnet) for access to urban health care providers, universities, Internet2 and commodity Internet services. The interconnection will occur in two locations:
 - o O'Bleness to OSCnet Fiber Spur in Athens
 - 1 mile of six strand fiber optic cable in Athens to OSCnet POP.
 - Gigabit Ethernet electronics.
 - o Adena to OSCnet in Chillicothe
 - Fiber already in place.
 - Upgrade existing OC-3 to Gigabit Ethernet.



- Connect health care facilities not located on a ring to the nearest H-POPs using the most cost effective solution for each location from among the following options:
 - o Privately owned fiber spurs running Gigabit Ethernet (1 Gbps).
 - o Private wireless links at minimum of Fast Ethernet (100 Mbps).
 - o Carrier provided wired broadband services at a minimum of:
 - Fast Ethernet (100 Mbps) for hospitals and clinics.
 - Ethernet (10 Mbps) for small practices.
 - o Carrier provided wireless broadband links at minimum of:
 - Fast Ethernet (100 Mbps) for hospitals and clinics.
 - Ethernet (10 Mbps) for small practices.

- Deploy next generation telemedicine and continuing education infrastructure to provide immersive experiences and sophisticated simulations.
- Interconnect with the statewide emergency communications network (MARCS).
- Support economic development, digital divide and K-20 initiatives in the service region by activating additional fiber wavelengths on the fiber rings through the addition of DWDM transceivers.

Relationship with OSCnet

The proposed network builds upon the model established by OSCnet with the statewide backbone connecting to local and regional fiber rings. OSCnet will also provide key technical guidance in the engineering of the network. Further, if the bidding process results in a private network build, OSCnet is willing to partner with the Southern Ohio Health Care Network for the on-going maintenance, operations and help desk support of the network its affiliated health care providers.



Membership Types and Methods of Cost Sharing

Given the great need for broadband in the service region, we anticipate sharing the bandwidth of the DWDM infrastructure for a wide variety of purposes. We envision at least four types of members of the network, each operating on their own dedicated DWDM lambda.

- Health Care
- Economic Development
- Digital Divide
- K-20

Each member type would be responsible for funding the cost of the incremental electronics needed to “light their lambda” on the DWDM infrastructure and other related hardware and network management.

As for the cost of the fiber itself, our proposal intends for the capital and maintenance costs to be covered by the Rural Health Care Program. Given the population density and the size of the communities, attempting to amortize the fiber costs in the connection fees would price the network out of range for most of the target audience.

In providing connectivity to the health care facilities, we see the following categories of cost:

- Fiber optic backbone
- “Lighting the Lambda”
- Last mile connection
- Local router

In all cost categories, there will be both capital and operating costs. Our intent is to pay much of the capital costs through the Rural Health Care Pilot Program funding, thus delivering low recurring costs that reflect operational costs rather and amortization of capital costs. On the health care lambda, we envision the following membership sub-types and cost sharing arrangement:

- Federally designated, e.g. FQHC and CAH, pays for:
 - o Fiber optic backbone [no capital : no operating]
 - o "Lighting the Lambda" [no capital : no operating]
 - o Last mile costs [no capital : partial operating]
 - o Local router costs [no capital : full operating]
- Non-profit qualified health care entity without Federal designation:
 - o Fiber optic backbone [no capital : no operating]
 - o "Lighting the Lambda" [no capital : no operating]
 - o Last mile costs [no capital : full operating]
 - o Local router costs [full capital : full operating]
- Other non-profit health care entities: e.g. nursing homes, hospices, etc.:
 - o Fiber optic backbone [no capital : no operating]
 - o "Lighting the Lambda" [no capital : no operating]
 - o Last mile costs [partial capital : full operating]
 - o Local router costs [full capital : full operating]
- For-profit health care entities:
 - o Fiber optic backbone [no capital : no operating]
 - o "Lighting the Lambda" [no capital : partial operating]
 - o Last mile costs [full capital : full operating]
 - o Local router costs [full capital : full operating]

Phase 1 Funding Request and Project Plan

Rather than attempting to tackle the entire network scope at one time, we are proposing a phased approach. This application seeks funding for what we have defined as Phase 1 with later phases to be determined from the engineering studies with funding requested in subsequent years. Matching funds will be from capital reserves and existing allocations for telecommunications services.

Phase 1 Budget Summary

	Capital	Annual Operating	Funding Share
Rural Health Care Pilot Project	\$12,163,573	\$882,922	85%
Adena and O'Bleness	\$2,146,513	\$155,810	15%
Pilot Project Totals	\$14,310,086	\$1,038,732	100%

Phase 1 Budget Components

Activity	Capital	Annual Operating
Ring 1: Fiber Build	\$9,990,000	\$336,000
Ring 1: Lighting the Ring	\$1,920,000	\$192,000
O'Bleness to OSCnet Fiber Spur	\$89,086	\$5,120
Engineering Studies	\$429,000	\$0
Internet2 Memberships	\$0	\$50,000
Telemedicine Technology	\$560,000	\$140,000
Continuing Education Technology	\$412,000	\$103,000
Project Management	\$910,000	\$82,612
OSCnet Interconnection Fees	\$0	\$130,000
Grand Totals	\$14,310,086	\$1,038,732

“Not to Exceed” Basis of Budget

This budget represents the projected costs for a private network build. We present this as a “not to exceed” budget due to the possibility of financial participation of one of the incumbent carriers. In such a scenario, the Southern Ohio Health Care Network would become an “anchor tenant” for a carrier network build serving broader purposes.

In the event that Ring 1 costs are less than projected, we request the flexibility to expand the scope of Phase 1 by using the remaining Rural Health Care Pilot funding to tackle the top priorities that emerge from the engineering studies (detailed later in this proposal).

Proposed Engineering Studies

The intent of the engineering studies is to design, price and prioritize the remaining phases of the proposed Southern Ohio Health Care Network.

Ring 1 Last Mile Design	\$120,000
Ring 2 Design	\$60,000
Ring 2 Last Mile Design	\$90,000
MARCS Emergency Network Interconnection Design	\$24,000
Economic Development, Digital Divide and K-20 Design	\$45,000
Study Utilization Barriers for Existing Program	\$90,000
Total Engineering Studies	\$429,000

Ring 1 Last Mile Design: For the health care facilities outside the reach of the fiber ring, determine the most cost effective approach for providing “last mile’ connectivity to the nearest H-POP. Options to consider include:

- o Extending private fiber spurs or broadband wireless links.
- o Utilizing incumbent carriers to provide wired or wireless broadband connectivity.

Ring 2 Design – This engineering study would focus on the design of the second fiber ring and identify the facilities to host H-POPs.

Ring 2 Last Mile Design: For the health care facilities outside the reach of the fiber ring, determine the most cost effective approach for providing “last mile’ connectivity to the nearest H-POP. Options to consider include:

- o Extending private fiber spurs or broadband wireless links.
- o Utilizing incumbent carriers to provide wired or wireless broadband connectivity.

MARCS Emergency Network Interconnection Design – This engineering study would determine the most effective means for connecting the health care network to the MARCS network.

Economic Development, Digital Divide and K-20 Design – This engineering study would investigate the opportunities to interconnect with existing networks and/or support the establishment of new network supporting economic development, digital divide and K-20 needs.

Study of Utilization Barriers for Existing Program – As we move forward with this pilot project, we have an excellent opportunity to assess why utilization of the existing Rural Health Care program is so low. In early discussions we found considerable confusion on the part of health care organizations that knew of the program and total lack of awareness on the part of others. This report would help inform efforts to reach out to rural health care providers to increase utilization of the existing program.

Telemedicine Infrastructure

We request that the Pilot also fund the basic equipment necessary for the audio and video transmissions to complete the infrastructure needed for telemedicine. The requested funding would **not** provide the diagnostic add-on equipment.

The telemedicine site kit will support high definition (HD) and high fidelity audio, adding much flexibility to the telemedicine environment. The specific technology selected remains to be determined. Clinical diagnostic add-on equipment would be funded from other sources.

Few of the rural practitioners could afford such an investment. Thus without the funding for additional telemedicine infrastructure, this aspect of the project will grow slowly as additional grants are sought.

Telemedicine Equipment

	Each	Qty	Total	Annual
Site Kit	\$35,000	16	\$560,000	\$140,000

The sixteen telemedicine site kits proposed in this funding request would provide one unit in each service area. The recipients will be determined based on interest, applicability and commitment to collaborate with other neighboring health care providers.

Continuing Education Infrastructure

We request that the Pilot also fund the basic equipment necessary for the audio and video transmissions to complete the infrastructure needed for continuing medical education for physicians and allied health professionals. The “video kits” would provide video conferencing and computer hardware to support training, simulations and on-line collaboration sessions. The specific technology selected remains to be determined. The possibilities include the emerging Internet 2 Digital Video Transport System (DVTS) and the AccessGrid technology.

In addition, we propose providing a web conferencing capacity that supports both synchronous and asynchronous collaboration among special interest groups, e.g. communicable diseases. The product would provide “persistent rooms” that participants can enter at any time to retrieve documents, review recordings of previous sessions or participate in real-time discussions.

Without the funding for the continuing education infrastructure, this aspect of the project will grow slowly as additional grants are sought.

CME Equipment

	Each	Qty	Total	Annual
Video Kit	\$22,000	16	\$352,000	\$88,000
Web Conferencing	\$60,000	1	\$60,000	\$15,000
CME Totals			\$412,000	\$103,000

The sixteen video and data conferencing packages proposed in this funding request would provide one unit in each service area. The recipients will be determined based on interest, applicability and commitment to collaborate with other health care providers.

Project Management

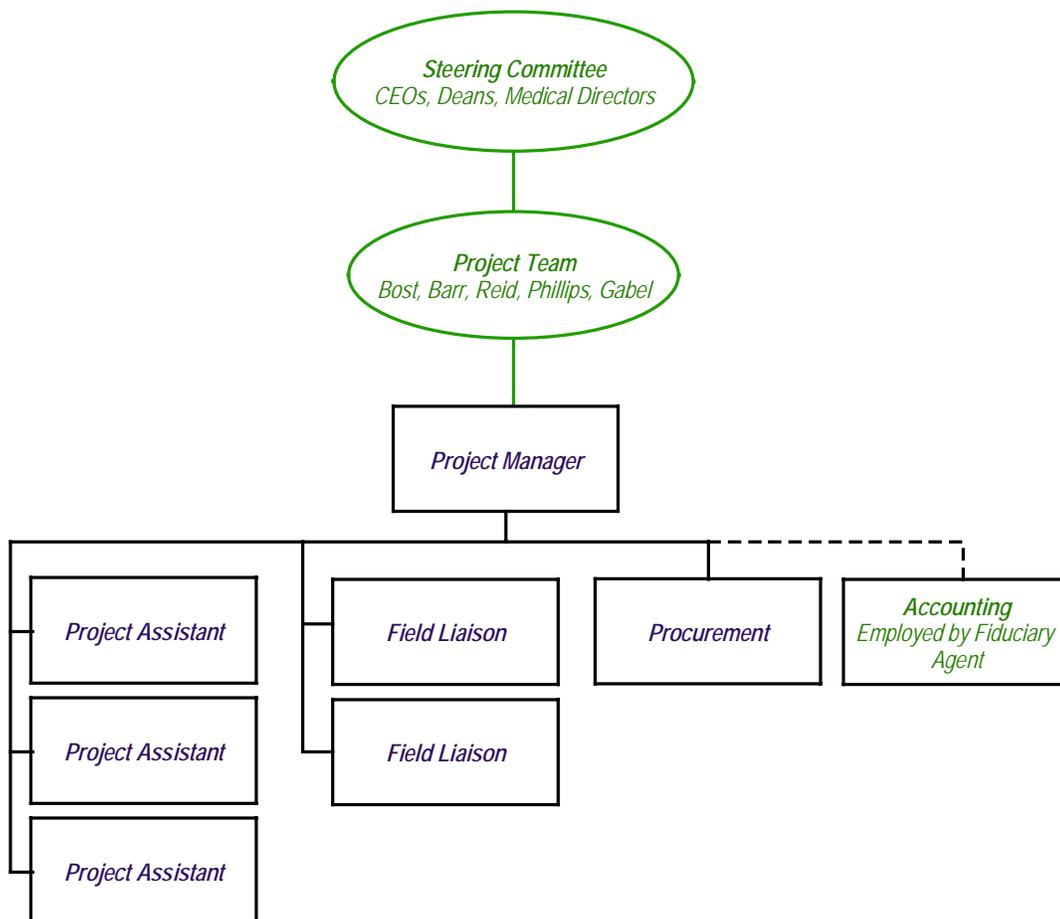
This project would require additional dedicated staff for the duration of the project. We propose hiring a consulting company to provide these services except for the accounting support, which would come from the fiduciary agent – Adena Health System.

Project Management - Contracted	\$275,000
Project Assistants - Contracted (3)	\$285,000
Field Liaisons - Contracted (2)	\$190,000
Accounting Support - Internal to Adena	\$65,000
Procurement Support - Contracted	\$95,000

Total Project Management and Admin.	\$910,000
-------------------------------------	-----------

Management Structure

The management structure would provide a collaborative and deliberative process for driving the project and for coordinating telemedicine initiatives. Keeping the accounting function under the fiduciary agent would provide the needed financial oversight.



Project Team

The Southern Ohio Health Care Network offers a strong project team made up principally of long-time residents of the service area who have with the experience and expertise to bring the project to successful completion.

- Marcus Bost, CIO, Adena Health System
 - o 15 years experience in the field.
 - o 15 years management experience on the carrier side of the house.
 - o Tech company start-up experience.
 - o Project leader for the community health record effort.

Lifelong resident of the service region.
- Tom Reid, President, Reid Consulting Group LLC
 - o 25 years experience in the field.
 - o 15 years consulting experience.
 - o Numerous multi-year, multi-million dollar projects.
 - o Statewide leadership on several high profile projects.

Resident of the service region for 27 years.
- Kristine Barr, CIO, O'Bleness Health System
 - o 8 years experience in the field.
 - o 7 years as CIO of growing health care system.
 - o Strong track record with clinical automation.

Lifelong resident of the service region.
- Brian Phillips, CIO, Ohio University College of Medicine
 - o 27 years experience in the field.
 - o Executive Director of Ohione telemedicine project.
 - o Organizer of regional RHIO.
 - o Statewide involvement in HIT planning.

Resident of the service region for 30 years.
- Lawrence Gabel, Professor and Vice Chair for Academic Affairs, Ohio State University College of Medicine
 - o 31 years experience in the field.
 - o Pioneer in telemedicine research and application.
 - o Faculty member in the Department of Family Medicine
 - o Statewide involvement in HIT planning.

Lives outside the service region.

Work Plan and Schedule

Retain Project Management Consultants

	Start	End
Bid	1-Jul-07	28-Jul-07
Award	28-Jul-07	7-Aug-07
Ramp-up	7-Aug-07	7-Sep-07

Ring 1: Build

	Start	End
Bid	15-Jul-07	15-Aug-07
Award	15-Aug-07	7-Sep-07
Construct	7-Sep-07	7-Jan-08
Light	7-Jan-08	22-Feb-08
OSCnet Interconnection	15-Feb-08	28-Feb-08
Facility Cut-Overs	1-Mar-08	15-Apr-08

Ring 1: Last Mile Design

	Start	End
Bid	15-Jul-07	15-Aug-07
Award	15-Aug-07	7-Sep-07
Report	7-Sep-07	7-Dec-07

Ring 1: Last Mile Connections (if funding remains)

	Start	End
Prioritize	7-Dec-07	22-Dec-07
Bid	1-Jan-08	28-Jan-08
Award	28-Jan-08	12-Feb-08
Construct	12-Feb-08	12-May-08
Light	12-May-08	30-May-08
Facility Cut-Over	30-May-08	15-Jul-08

Ring 2: Design

	Start	End
Bid	7-Sep-07	28-Sep-07
Award	28-Sep-07	7-Oct-07
Report	7-Oct-07	22-Nov-07

Ring 2: Last Mile Design

	Start	End
Bid	22-Nov-07	20-Dec-07
Award	20-Dec-07	10-Jan-08
Report	10-Jan-08	15-Apr-08

Utilization Barriers Study

	Start	End
Bid	1-Oct-07	28-Oct-07
Award	28-Oct-07	14-Nov-07
Report	14-Nov-07	15-Mar-08

MARCS Interconnection Study

	Start	End
Bid	1-Oct-07	28-Oct-07
Award	28-Oct-07	14-Nov-07
Report	14-Nov-07	22-Dec-07

Telemedicine Infrastructure

	Start	End
Bid	1-Feb-08	28-Feb-08
Award	28-Feb-08	15-Mar-08
Facility Selection	1-Feb-08	15-Mar-08
Install, Test and Train	30-Mar-07	30-May-08

Continuing Education Infrastructure

	Start	End
Bid	1-Feb-08	28-Feb-08
Award	28-Feb-08	15-Mar-08
Facility Selection	1-Feb-08	15-Mar-08
Install, Test and Train	30-Mar-07	30-May-08

Economic Development, Digital Divide, K-20 Design

	Start	End
Bid	1-Feb-08	28-Feb-08
Award	28-Feb-08	15-Mar-08
Report	1-Feb-08	20-Apr-08

Year 2 Funding Application

	Start	End
	15-Mar-08	5-May-08

Sustainability

The Southern Ohio Health Care Network, as proposed, will be sustainable due to:

- Support from the two largest non-profit health care systems in the region.
- Buy down of capital costs to keep recurring costs within the budget range of the rural providers.
- Existing expenses for T-1's and other communications facilities will remain committed to the overall project.
- Increased reimbursement for telemedicine services.
- More effective sharing of expertise within the region.
- Continued support from the Rural Health Care program.



Assessment Plan

Rigorous assessment will be essential to gauge the effectiveness of the Southern Ohio Health Care Network as a model for replication in other rural areas. As the Commission acknowledges, two years is not a very long period of time for such ambitious plans to demonstrate their full results, but trend data will begin to emerge in the study period that will be useful. Longitudinal capture of data sets will enrich the assessment over time, outside of the pilot program's timeline.

Initial factors for assessment will include:

- Compliance with stated objectives and network architecture.
- Numbers of connections made to health care facilities.
- Operational stability of the network and services.
- Growth in telemedicine services.
- Change in patient satisfaction with telemedicine.
- Utilization of continuing education network.

Rule Adjustments Requested

The partners in this proposal request that several rules of the existing Rural Health Care program be waived for the Southern Ohio Health Care Network pilot project.

Number of Locations on a Form 465

Normally, one Form 465 is filed per location. We request the ability to file requests for multiple locations on a single Form 465 to better address the creation of fiber rings and exploration of last mile solutions.

Disbursements of Funds

Our proposal for the Pilot program involves large capital investments and payments to consultants and engineers. Thus we request the ability to have capital disbursements based on agreed upon milestones, ideally paid directly to contractors, consultants and engineers.

Retaining Consultants and Engineers

We propose retaining a consulting company to provide project management and engineering firms to provide design work. We request the ability to either use the established Form 465 process for bidding this work, or alternately the ability to locally bid and award these contracts and then be reimbursed by the Pilot Program.

Common Carrier Requirement

We request that the Commission waive the requirement that service providers be common carriers. This will increase the competitive options for meeting the service needs. For instance, the fiber rings may be private networks owned by the health care consortium and operated by OSCnet. As another example, a local wireless provider may be the best solution for some last mile connections. The funding and flexibility for the Southern Ohio Health Care Network to consider private build options will keep the carriers from being complacent.

Equipment Charges: Capital and Operating

Generally the Rural Health Care project does not fund equipment costs. We request a waiver of this rule so that the Pilot funding can be used to pay both capital and recurring costs for:

- DWDM hardware
- Telemedicine site kits
- Continuing education site kits



Health Care Facilities in the Service Area

Name	Phone	Address	City	ZIP	Desig	RUCA
Seaman Health Center	937-386-1379	218 Stern Dr.	Seaman	45679	FQHC	10.4
Family Health Care, Inc.	740-596-5249	31891 State Route 93 North	McArthur	45651	FQHC	10
Crooksville Family Clinic	740-982-6872	712 China St.	Crooksville	43731	RHC	9.2
Meigs Medical Clinic	740-992-9158	113 East Memorial Dr.	Pomeroy	45769		9.2
CAC of Pike County - Family Health Centers	740-682-6758	350 Charlotte Ave, PO Box 294	Oak Hill	45656	FQHC	9
Oak Hill Community Medical Center	740-682-7717	350 Charlotte Ave.	Oak Hill	45656		9
Beaver Health Center	740-226-1924	7046 State Route 335	Beaver	45613	FQHC	8
CAC of Pike County - Family Health Centers	866-470-8129	7777 State Route 23	Piketon	45661	FQHC	8
Community Health Clinic	937-840-0180	1440 N High St.	Hillsboro	45133	RHC	8
Highland District Hospital	937-393-6100	1275 North High St.	Hillsboro	45133	CAH	8
Hillsboro Health Center	937-393-5781	104 Erin Ct.	Hillsboro	45133	FQHC	8
Adena Urgent Care - Waverly	740-941-5150	12340 State Route 104	Waverly	45690		7.4
CAC of Pike County - Family Health Centers	740-947-7726	227 Valleyview Dr.	Waverly	45690	FQHC	7.4
Doctors Hospital of Nelsonville	740-753-1931	1950 Mount Saint Mary's Dr.	Nelsonville	45764	CAH	7.4
Family Health Care, Inc.	740-380-3730	1383 West Hunter St.	Logan	43138	FQHC	7.4
Family Health Care, Inc.	614-342-4192	409 Lincoln Dr.	New Lexington	43764	FQHC	7.4
Greenfield Area Medical Center	937-981-9400	550 Mirabeau St.	Greenfield	45123	CAH	7.4
Greenfield Family Health Center	937-981-7707	1075 North Washington	Greenfield	45123	FQHC	7.4
Greenfield Medical Services	937-840-6587	1092 West Jefferson St.	Greenfield	45123	RHC	7.4
Hocking Valley Community Hospital	740-380-8000	601 State Route 664 North	Logan	43138	CAH	7.4
Nelsonville Family Practice	614-753-4436	222 Myers St.	Nelsonville	45764	RHC	7.4
North Street Medical Center (CAC)	740-947-2131	215 W. North St.	Waverly	45690	RHC	7.4
Perry County Family Practice	740-342-5158	1625 Airport Rd, P.O. Box 596	New Lexington	43764	RHC	7.4
Pike Community Hospital	740-947-2186	100 Dawn Ln.	Waverly	45690	CAH	7.4
Adams County Hospital	937-544-5571	210 N. Wilson Dr.	West Union	45693	CAH	7.3
Panhandle Health Center	513-544-3502	9137 St Rt 136	West Union	45693	FQHC	7.3
West Union Family Health Center	513-544-5536	150 Chestnut Ridge	West Union	45693	FQHC	7.3
Adena Urgent Care - Jackson	740-395-8050	1000 Veterans Dr.	Jackson	45640		7
CAC of Pike County - Family Health Centers	740-286-2826	14590 State Route 93	Jackson	45640	FQHC	7



Family Health Service	740-962-5266	442 S Main St.	Malta	43758	RHC	7
Holzer Medical Center	740-395-8801	500 Burlington Rd.	Jackson	45640	CAH	7
Jenkins Memorial Health Clinic	740-384-2167	140 Jenkins Rd.	Wellston	45692	RHC	7
Albany Medical Clinic	740-698-1900	2364 Blizzard Ln.	Albany	45710		5
CAC of Pike County - Family Health Centers	740-858-1063	23030 State Route 73	West Portsmouth	45663	FQHC	5
Holzer Medical Center	740-446-5411	100 Jackson Pike	Gallipolis	45631		5
ACVNA	740-594-8226	30 Herrold Ave.	Athens	45701		4
Adena Counseling Center	740-779-4888	455 Shawnee Ln.	Chillicothe	45601		4
Adena Home Care Services	740-779-4663	111 West Water St.	Chillicothe	45601		4
Adena Medical Office Building	740-779-7500	4439 State Route 159	Chillicothe	45601		4
Adena Regional Medical Center	740-779-7500	272 Hospital Rd.	Chillicothe	45601		4
Adena Rehabilitation & Wellness Center	740-779-7661	445 Shawnee Ln.	Chillicothe	45601		4
Adena Urgent Care - Chillicothe	740-779-8440	55 Centennial Blvd.	Chillicothe	45601		4
Athens Cancer Center	740-566-4600	75 Hospital Dr., Suite 230	Athens	45701		4
Athens Medical Laboratory	740-593-8240	400 East State St.	Athens	45701		4
Athens Perry WIC Program Family Healthcare	740-594-8143	88 N. Plains Rd. STE 1	The Plains	45780	RHC	4
Athens Surgery Center	740-566-4500	75 Hospital Dr., Suite 100	Athens	45701		4
CAO of Scioto County Health Clinic	614-353-3173	411 Second St.	Portsmouth	45662	RHC	4
Cornwell Center	740-566-4850	65 Hospital Dr.	Athens	45701		4
Dr John Ditraglia Pediatrics	614-354-6605	717 5th St.	Portsmouth	45662	RHC	4
Family Health Care, Inc.	740-594-8143	315 1/2 West Union St.	Athens	45701	FQHC	4
Family Health Care, Inc.	740-773-1006	1049 Western Ave.	Chillicothe	45601	FQHC	4
Family Health Care, Inc.	740-385-2555	88 N. Plains Rd.	The Plains	45780	FQHC	4
Family Practice Clinic	740-566-4925	444 West Union St., Suite E.	Athens	45701		4
Health First	740-594-7979	510 West Union St.	Athens	45701		4
O'Bleness Memorial Hospital	740-593-5551	55 Hospital Dr.	Athens	45701		4
River Rose	740-594-8819	75 Hospital Dr., Suite 260	Athens	45701		4
Ross County Ambulatory Clinic	614-773-4366	425 Chestnut St.	Chillicothe	45601	FQHC	4
Southern Ohio Medical Center	740-356-5000	1805 27th St.	Portsmouth	45662		4
Washington Court House Family Health Center	740-335-8608	1450 Columbus Ave, Ste 203	Washington Ct Hs	43160	FQHC	4
Marietta Memorial Hospital	740-374-1400	401 Matthew St.	Marietta	45750		1
Selby General Hospital	740-568-2000	1106 Colegate Dr.	Marietta	45750	CAH	1

Letters of Support

WC Docket No. 02-60





TED STRICKLAND
GOVERNOR
STATE OF OHIO

May 7, 2007

Mr. Jeremy Marcus
Chief, Telecommunications Access Policy Division
Wireline Competition Bureau
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Re: Rural Health Care Pilot Project, WC Docket 02-60

Dear Mr. Marcus:

I am pleased to offer my support and endorsement of the Southern Ohio Health Care Network proposed by the Adena and O'Bleness Health Systems for funding under the Rural Health Care Pilot Project. Covering a geographic area the size of New Jersey, the Southern Ohio Health Care Network will bring inclusive and sustainable broadband services to the dozens of rural health care facilities in the service area. These include thirty-eight federally designated clinics and hospitals serving seventeen Health Professional Shortage Areas.

The Southern Ohio Health Care Network fits perfectly with two top priorities for my administration:

- The Broadband Ohio Initiative and
- The Turnaround Ohio Program.

I took office just five months ago and, as set forth during the campaign, we are committed to expanding broadband coverage to ensure that all Ohioans can benefit from the health care services, job opportunities and educational resources that depend on access to high speed networks. In our southern rural communities, this imperative carries extra weight due to the persistent poverty suffered in these counties. Overcoming physical isolation with broadband networks offers the chance to transform the rural economies.

The Adena and O'Bleness Health Systems built a collaborative team to create this proposal. In the process they:

- United the two largest non-profit health systems in the region.
- Garnered the support of nationally prominent urban health care providers.
- Coordinated on the State level with:
 - o The Ohio Supercomputer Center (OSC)
 - o The Health Policy Institute of Ohio (HPIO)
 - o The State Office of Information Technology (OIT)
 - o The Governor's Office

Page Two
May 7, 2007
Mr. Jeremy Marcus

The Southern Ohio Health Care Network is part of a cohesive health information technology planning effort coordinated by the HPIO. Local and regional projects that tie into the overall State strategy give us the best of both worlds:

- Leadership from within the service region.
- Interoperability with the statewide vision.

This Administration and our state agencies look forward to working with the Adena-O'Bleness project team should the Commission elect to fund this worthwhile project.

The Southern Ohio Health Care Network offers a compelling model that could help inform policy and strategy for expanding broadband services in rural areas across the country. Should there be any questions regarding our support or this letter, please do not hesitate to contact my office.

Sincerely,



Ted Strickland
Governor, State of Ohio

May 3, 2007

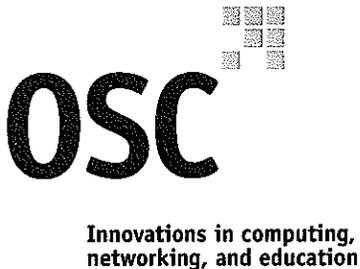
Jeremy D. Marcus
Chief, Telecommunications Access Policy Division
Wireline Competition Bureau
Federal Communications Commission
445 12 Street, SW
Washington, DC 20554

Dear Mr. Marcus:

On behalf of State of Ohio Broadband network, I am pleased to write in strong support of the proposal that is being submitted jointly by the Adena and O'Brien Health Systems to the Federal Communication Commission in response to the Rural Health Care Support Mechanism, WE Docket No. 02-60.

This proposal's strengths include its:

- Consortium of nine members, including non-profit health systems, academic medical centers, health care organizations, and the Ohio Supercomputer Center;
- Focus on 15 rural counties (including 9 of the 10 most impoverished areas in Ohio), 17 federally designated Health Professional Shortage Areas, and areas with Rural-Urban Community Area codes as high as 10;
- Inclusion of more than 50 health care facilities, including 17 Federally Qualified Health Clinics, 9 Critical Access Hospitals, and 6 Rural Health Clinics;
- Creation of a pilot project to serve as a model for other rural areas;
- Leadership derived from within the rural service region and commitment of the two largest non-profit health systems to leverage resources and health professional relationships;
- Linkages to the statewide emergency communications network and K20 initiatives;
- Use of Internet2's high bandwidth network to provide access to unmatched content and support; and
- Likelihood of enhancing telehealth in Ohio through a unified, inclusive, and sustainable network, enhancing collaboration among health care providers, enhancing continuing education efforts, improving access to specialty medical care (particularly in the areas of neonatal and psychiatric care), enhancing the timely and accurate delivery of health care records and creating a regional health information organization (RHIO),



Stanley C. Ahalt, Ph.D.,
Executive Director

Ohio Supercomputer Center
1224 Kinnear Road
Columbus, OH 43212-1163

(614) 292-9248 *phone*

(614) 292-7168 *fax*

www.osc.edu *website*

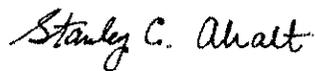
improving emergency communications, and cost-effectively improving statewide health care.

The proposal will work in conjunction with the State of Ohio Broadband Network to expand the telehealth infrastructure and provide high speed connections to all participants. By utilizing the State of Ohio Broadband Network, this proposal will be able to take advantage of State of Ohio's current \$30M investment in development of a next generation network. This network represents a high speed fiber optic design, utilizing dense wave division multiplexing platform which offers almost unlimited bandwidth to serve as the gateway to both urban and rural areas of the state, as well as access to national networks such as Internet 2 and National Lambda Rail. State of Ohio Broadband Network has a significant history of working with carriers and community groups to expand access to broadband services while driving down operational costs. The use of Ohio Broadband Network will provide an effective, secure environment to facilitate the exchange of reliable data, and digital image, voice, and video transmissions with quality to enhance real-time clinical consultation.

We feel that the State of Ohio Broadband Network, Adena and O'Bleness Health Systems' proposal represent a unique combination of networking and services that when taken together will provide the type of synergy and impact being sought by these grants. We also feel that with emphasis being placed on the sustainability of these efforts after the initial grant is expended is greatly enhanced by the State investments in networking and our desire to continue these efforts.

We are pleased to offer our strong support for this innovative proposal, which will enhance the provision of telehealth and telemedicine services regionally and nationwide.

Sincerely,

A handwritten signature in cursive script that reads "Stanley C. Ahalt".

Stanley C. Ahalt, Ph. D.
Executive Director, Ohio Supercomputer Center
Co-Chair, Ohio Broadband Network



OHIO
UNIVERSITY

College of Osteopathic Medicine

May 2, 2007

Office of the Dean
Grosvenor Hall 204
Athens OH 45701-2979

T: 740.593.9350
F: 740.593.0761

Jeremy D. Marcus
Chief, Telecommunications Access Policy Division
Wireline Competition Bureau
Federal Communications Commission
445 12 Street, SW
Washington, DC 20554

Dear Mr. Marcus:

This letter is written in support of the application for funding submitted by Adena Health System and O'Bleness Health System to the Federal Communications Commission's Rural Health Care Pilot Program. The Ohio University College of Osteopathic Medicine (OU-COM) believes that the Pilot Program has the potential to significantly improve health care in rural communities through "the creation of a nationwide broadband network dedicated to health care, connecting public and private non-profit health care providers in rural and urban locations." Given the Appalachian Ohio region's high poverty rates and limited healthcare infrastructure, such access to health information will be invaluable for community wellness.

OU-COM supports the goals of the Southern Ohio Health Care Network proposal to increase the regional information infrastructure which will enable improved inter-physician communication, allow for increased telemedicine encounters and benefit homeland security by a connection to the statewide emergency communications network. This proposal aligns with the multidisciplinary goals of OU-COM as our staff, faculty and graduates go into the field to serve the health needs of people within the Appalachian region.

OU-COM is pleased to endorse the application submitted by the Adena and O'Bleness Health Systems. The coordination of regional and statewide health information technology partnerships is essential to developing new economic opportunities and growth in the Appalachian region. We strongly support the favorable consideration of this project by the Federal Communications Commission and look forward to the opportunities for improving healthcare that this project will provide.

Sincerely,

John A. Brose, D.O., FAAFP

Dean

Ohio University College of Osteopathic Medicine



Internet2
Office of the President & CEO
1000 Oakbrook Drive, Suite 300
Ann Arbor, MI 48104
(734) 913-4250
(734) 913-4255 (fax)
www.internet2.edu

May 1, 2007

Jeremy D. Marcus
Chief, Telecommunications Access Policy Division
Wireline Competition Bureau
Federal Communications Commission
445 12 Street, SW
Washington, DC 20554

Dear Mr. Marcus:

On behalf of Internet2, I am pleased to write in strong support of the proposal that is being submitted jointly by the Adena and O'Bleness Health Systems to the Federal Communication Commission in response to the Rural Health Care Support Mechanism, WE Docket No. 02-60.

This proposal's strengths include its:

- Consortium of nine members, including non-profit health systems, academic medical centers, health care organizations, and the Ohio Supercomputer Center;
- Focus on 15 rural counties (including 9 of the 10 most impoverished areas in Ohio), 17 federally designated Health Professional Shortage Areas, and areas with Rural-Urban Community Area codes as high as 10;
- Inclusion of more than 50 health care facilities, including 17 Federally Qualified Health Clinics, 9 Critical Access Hospitals, and 6 Rural Health Clinics;
- Creation of a pilot project to serve as a model for other rural areas;
- Leadership derived from within the rural service region and commitment of the two largest non-profit health systems to leverage resources and health professional relationships;
- Linkages to the statewide emergency communications network and K20 initiatives;
- Use of Internet2's high bandwidth network to provide access to unmatched content and support; and
- Likelihood of enhancing telehealth in Ohio through a unified, inclusive, and sustainable network, enhancing collaboration among health care providers, enhancing continuing education efforts, improving access to specialty medical care (particularly in the areas of neonatal and psychiatric care), enhancing

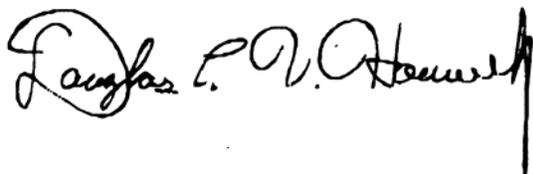
the timely and accurate delivery of health care records and creating a regional health information organization (RHIO), improving emergency communications, and cost-effectively improving statewide health care.

The proposal will utilize the new Internet2 Network and the regional networks to expand the telehealth infrastructure and provide high speed connections to all participants. By incorporating Internet2's middleware, security, and performance measurement tools, it also will provide secure exchange of medical records, permit remote access to expert diagnosis and treatment, increase cost-efficiencies by reducing costs associated with travel, and enhance training and research collaboration with secure multi-site videoconferencing. The use of Internet2's network not only will provide an effective, secure, and system for statewide and national telehealth and telemedicine, but also will ensure that training and other integrated resources will be incorporated to optimize the network's utility. In doing so, the regional network that will be created will facilitate the exchange of reliable data, and digital image, voice, and video transmissions with quality to enhance real-time clinical consultation.

Internet2 is the foremost U.S. advanced networking consortium. Led by the research and education community since 1996, Internet2 promotes the missions of its members by providing both leading-edge network capabilities and unique partnership opportunities that together facilitate the development, deployment and use of revolutionary Internet technologies. The Internet2 Network and its member community innovations in middleware, security, educational networking, and partnerships with premier federal agencies such as NIH are uniquely positioned to deliver high performance, flexible, low-cost connectivity in support of healthcare needs on a sustained basis on the local, regional, state, and national levels. In the process, these partnerships are likely to expand technological capabilities, increase the range of geographical access to sophisticated treatment modalities, and redefine the parameters of disease diagnosis, treatment, and management.

We are pleased to offer our strong support for this innovative proposal, which will enhance the provision of telehealth and telemedicine services regionally and nationwide.

Sincerely,

A handwritten signature in black ink, reading "Douglas E. Van Houweling". The signature is written in a cursive style with a long vertical line extending downwards from the end.

Douglas E. Van Houweling
President and CEO, Internet2

Project Team Qualifications

WC Docket No. 02-60



Marcus J. Bost

Marcus J. Bost is the Chief Information Officer and Director of Information Technology for Adena Health System, Chillicothe, Ohio. His career has been diverse, with positions at all levels and across several industries and has included key IT positions with UPS, Boehringer Ingelheim and Horizon TELCOM.

Some of his major accomplishments have included the start-up of Horizon Technology, a division of Horizon TELECOM. Horizon Technology's focus was on the future of telecommunications including VoIP, wireless networks, and multimedia applications. The division reached profitability within its third year of business.

Marcus was Project Director for Ohio TeleHELP, an innovative pilot program that leverages technology to deliver healthcare services to the underserved in both urban and rural communities. The pilot project has already received Legislative approval for Medicare and commercial insurance coverage for procedures and consultations delivered via video. Ohio TeleHELP currently has 12 locations throughout central Ohio providing care to 150 patients daily. Fully implemented, TeleHELP could help the state save \$14 million annually in transportation to and from retirement facilities.

Marcus earned his degree in sociology from Ohio University while serving in the Ohio Air National Guard. He is certified in PMP, CNE, MCSE, Sonic Wall Security Expert; Apple certified Technician and Polycom video expert. He is an active community member and leader, serving as Treasurer for the Ross County Junior Achievement, Campaign Support Chair for the annual United Way Campaign and Technology Chair at Bishop Flaget School. His greatest joy is being a husband to Amy and father to Michael, Spencer, Fletcher and Mary Elizabeth.

Adena Health System is a multi-hospital, integrated healthcare delivery system located 45 miles south of Columbus, Ohio. Founded in 1895, the health system began as a sole community hospital serving Ross County. Today, Adena serves more than 160,000 people across eight counties with two hospitals, integrated physician practices, urgent care centers, ambulatory care centers, inpatient physical rehabilitation and home care services.

Thomas Reid

4 Elizabeth Drive
Athens, Ohio 45701

Tom@ReidConsultingGroup.com
(740) 590-0076

Top Skills

- Track record of leading complex, multi-year projects on-time and on-budget.
 - Success in tailoring technology solution to meet critical business needs.
 - Independent review of multiple technology options.
 - Accuracy in interpreting industry trends and forecasting real world impact.
 - Analysis of financial implications of technology options, including multi-year capital and lifecycle projections.
 - Negotiation of agreements with vendors and suppliers.
 - Success in recruiting and retaining top notch technology professionals.
 - Strategic and tactical planning.
-

Professional Experience

President, Reid Consulting Group LLC, 1992 - Present

(Company previously called Communication Network Engineering)

Director, Communication Network Services, Ohio University, 1994 - 2006

Associate Professor, McClure School of Information and Telecommunication Systems,
Ohio University, 2004 –

Lecturer, Management Information Systems, College of Business, Ohio University, 1988 –

Assistant Director, Computing and Technology Services, Ohio University, 1990-1994

Manager, Communication Network Services, Ohio University, 1985-1990

Manager, Academic Computing, Ohio University, 1984-1985

Public Relations Coordinator, Parks & Recreation Department, Columbus, Ohio, 1978-80

Education

M.A. Ohio University, Telecommunications, 1984
Computer Science emphasis.

B.A. Ohio State University, Honors College, 1980
American Character through Literature and Film (*magna cum laude*)

State Leadership Roles

- Co-Chair, Third Frontier Network, Implementation Committee, Ohio Board of Regents, 2003-04
- Project Leader, Bridging the Digital Divide, Governor's Office of Appalachia, 2000-02
- Telecommunications Advisory Council, Governor's Office, 1994-96
 - Chairman of Subcommittee to Define Scope of Universal Service
 - Member representing large businesses
- Chairman, Internetworking Task Force for Universities, State Agencies, K-12 and Community Colleges, Governor's Office, 1992-93
- OhioLINK Library Automation Project, Ohio Board of Regents, 1988-91
 - Chairman of Networking Task Force
 - Member of Site Visit and Vendor Selection Team

Selected Presentations and Publications

"Trends in Network Security," Graphics, Game and Simulation Design Conference at Washington State Community College, December 2003, Marietta, Ohio

"Wireless Frontiers," Associate of Telecommunications Professionals, August 2003, Columbus, Ohio

"Community Networking Solutions to the Digital Divide Challenges in Appalachian Ohio," Governor's Access Appalachia Task Force, September 2001, Columbus, Ohio

"Digital Divide Challenges in Appalachian Ohio," Access Appalachia Steering Committee, December 2000, Chillicothe, Ohio

"Strategic Collaborations," Ohio Supercomputer Center External Board of Visitors, February 1998, Columbus, Ohio

"Precision Partnerships," Ericsson National Sales Meeting, January 1998, Jacksonville, Florida

"Forging an Enterprise Technology Strategy," National Trust and Systems Association Annual Convention, June 1994, Washington D.C.

Recommended Changes to Universal Service Policy, Governor's Telecommunications Advisory Council, Report to the Legislature, April 1994

"State Government's Role in Advocacy of Information Technology," Governor's Telecommunications Committee, February 1993, Columbus, Ohio

"Computer Communications in Purchasing Strategies," Ohio Educational Buyers Association Annual Convention, October 1992, Athens, Ohio

"Ethernet Today," Communications Networks National Convention, January 1991, Washington, D.C.

"Treating the Communications Diseases," Michigan-Ohio Telecommunications Association Biannual Meeting, September 1989, Toledo, Ohio

Managing Ethernet Sprawl, Data Communications Magazine, May 1989

Examples of Project Management Successes at Ohio University

Wireless Data Network	6 campuses	\$2.6 million	2003-2006
Student Computing Environment	4,600 computers	\$8.2 million	1999-2006
Integrated Building Projects	36 buildings	\$5.7 million	1986-2006
Classroom Technology Project	30 buildings	\$2.3 million	2005-2006
Blackboard Learning Management	6 campuses	\$1.6 million	2001-2006
Student Lifecycle Project			2005-2006
Earlier OAK ID (Creating on-line credentials for admitted students)			2006
Degree Finder	http://technology.ohio.edu/degreefinder		2005
Network Security Initiatives			2002-2006
Single Sign-On Central Authentication			1999-2006
University Wide Calendaring Initiative			2003-2004
Social Security Minimization Project			2002-2004
Go Mobile Laptop Program			2005-2006
Regional Data Network Upgrade	6 campuses	\$0.6 million	2004-2005
NetOhio	4,600 connections	\$3.0 million	1995-1999
ResNet	4,500 connections	\$1.9 million	1994-1998
Telephone Network and Wiring	8,000 connections	\$5.6 million	1985-1988
ID Card Network	60 buildings	\$1.4 million	1992-1995
Infrastructure Rebuild	108 buildings	\$2.4 million	1989-1994
Video Conference Network	6 campuses	\$1.2 million	1997-1998
Telephone Network and Wiring	8,000 connections	\$5.6 million	1985-1988
Infrastructure Rebuild	108 buildings	\$2.4 million	1989-1994
Video Conference Network	6 campuses	\$1.2 million	1997-1998
Regional Data Network	6 campuses	\$0.6 million	1995
Regional Distance Learning Network	6 campuses	\$1.2 million	1997-1998
Long Distance Billing Software Development			1985-1987
Customer Service Web Development	http://www.ohio.edu/technology		2005

Income Generating Programs at Ohio University

Student Long-Distance Resale	\$17.2 million in income	1986-2006
Dialnet (SLIP/PPP)	\$1.2 million in income	1994-2006
Travel Card	\$1.7 million in income	1993-2006
Bobcat Off-Campus	\$6.6 million in income	1995-2002
Direct Termination	\$5.3 million in income	1988-2000

Portfolio of Responsibilities as Director of CNS at Ohio University

- **Resources**
 - \$9.8 million budget
 - 75 Full-time Staff
 - 50 Student Employees
- **Support Services**
 - Residence Hall Computing Program
 - Help Desk via Phone and E-Mail
 - On-site Technical Response
 - Security Analysts
 - Self-Help Web Site
- **Data Network & Internet**
 - Wired Network
 - Wireless Network
 - Regional Campus Interconnection
 - Internet Access
 - Cabling: Fiber optic and copper
- **Telephone Network**
 - On-campus Telephone Service
 - Long Distance Services
 - Cabling: Fiber optic and copper
- **OAK Universal Applications Environment**
 - E-Mail
 - Calendaring
 - Network File Storage
 - Identity Management and Authentication
 - eDirectory
- **Learning Management**
 - Blackboard
- **Remote Presence**
 - Web conferencing
 - Streaming
- **ID Cards**
 - Issuing ID cards
 - Optim Card Reader Network
- **Classroom Technology**

Career Synopsis

- 1983: Appointed as Graduate Research Assistant, Telecommunications Research Center, School of Telecommunications, College of Communications
- 1984: Appointed as Manager, Academic Software
- 1985: Promoted to start new department as Manager of Communication Network Services (CNS). CNS began with a staff of me, a work study student and a contracts with multiple vendors. My initial mission was to lead the communications overhaul of the entire Athens campus, a three year, \$5.6 million project affecting 108 buildings. During the course of the project, I built a staff to take over responsibility for the new voice and data networks.
- 1987: Technical Services group put under my direction in re-organization. Responsibility for providing microcomputer and other technical services.
- 1988: Appointed as Lecturer in Management Information Systems, College of Business to teach a senior level network design class.
- 1988: Appointed by the Ohio Board of Regents to participate in the OhioLINK library automation project. Selected as the Chairman of the Networking Task Force, and Member of the Site Visit and Vendor Selection Team.
- 1990: Promoted to Assistant Director, Computing and Technology Services. I simultaneously retained the title of Manager of CNS.
- 1992: Appointed by the Governor of the State of Ohio as Chairman of the Internetworking Task Force for Universities, State Agencies, K-12 and Community Colleges.
- 1992: Formed a small independent consulting practice, Communication Network Engineering, with the approval of Provost.
- 1992: ID Card group put under my direction in re-organization. Responsibility for issuing ID cards and installation of associated network of card readers.
- 1994: Promoted to Director, Communication Network Services
- 1994: Appointed by the Governor of the State of Ohio to represent large businesses on the Telecommunications Advisory Council. Selected as Chairman of the Subcommittee to Define the Scope of Universal Service.
- 1994: Selected to implement residence hall data network.
- 1999: Selected to implement the residence hall computing program (SCE), responsible for deploying 4,600 computers in every room in 41 buildings.
- 1999: Support Center group put under my direction in re-organization. Responsible for help desk and software support university-wide.

- 1999: E-Mail and Identity Management Group put under my direction in re-organization.
- 2000: Selected by Governor's Office of Appalachia to support efforts to address the lack of broadband services in rural areas.
- 2001: Selected to lead implementation of Blackboard course management system for university-wide adoption.
- 2002: Created the Security Team on my own authority by reallocating two vacant positions from other parts of CNS.
- 2003: Appointed to lead the Social Security Minimization Project in effort to reduce the exposure of SSNs throughout the university.
- 2003: Appointed by the Ohio Board of Regents to co-chair the Implementation Committee of the Third Frontier Network.
- 2004: Selected to implement the university-wide wireless network.
- 2004: Appointed as Associate Professor, McClure School of Information and Telecommunications Systems, College of Communications, to teach a senior level project management class.
- 2005: Selected to co-chair the Student Lifecycle Project. Mapped out key student record software elements, mapped activities to recruitment timeline, developed new capabilities to enhance enrollment and developed strategy for future.
- 2005: Classroom technology group put under my direction in re-organization. Developed and deployed standard technology packages for classrooms. Conducted faculty focus groups to refine standard package and assess overall classroom technology needs.
- 2006: Promoted to Director of Computing and Network Services (CNS2) which included the re-organization of approximately fourteen people to my management.

Brian O Phillips, CIO

Ohio University
College of Osteopathic Medicine
343 Building 20 The Ridges
Athens, Ohio 45701

Phone: 740-593-2170
Fax: 740-593-2402
Email: phillips@ohio.edu

Professional Experience

Chief Information Officer (CIO): Ohio University College of Osteopathic Medicine, December 2001-present

Serves as the Chief Information Officer (CIO) for academic and administrative technology for the College of Osteopathic Medicine and the Centers for Osteopathic Research & Education.

Executive Director, OhiONE: Centers for Osteopathic Research & Education, 1996-present

Directs the operations of the Ohio Osteopathic Network of Excellence (OhiONE), a statewide voice, data and real-time video telehealth and distributed learning network. In 1996, was appointed by the Centers for Osteopathic Research & Education's executive board to develop a statewide network that would provide advanced telecommunications technologies for the College of Osteopathic Medicine and fourteen (14) hospitals in the state of Ohio. This challenge included developing a budget, designing the technical infrastructure and hiring a support staff. The network allows students, interns and residents across the state to actively participate in educational programs consisting of grand rounds, journal clubs and live surgical procedures, regardless of the distance between their training sites. Today, the network has grown to include four (4) additional colleges of medicine, four (4) public library sites and four (4) telemedicine sites for the delivery of physiological services for youth and adolescents in Southeastern Ohio. The system logs hundreds of hours of educational programming each year and is directly connected to the State of Ohio Multi Agency Communications System (SOMACS), which provides connectivity to statewide services including the Ohio Department of Health and Human Services, SchoolNet and the Southern Consortium for Children (SCC) mental health network.

Assistant Professor (adjunct): Ohio University College of Communications, 1997-2007

Adjunct Assistant Professor for the J. Warren McClure School of Information and Telecommunication Systems teaching introductory technology courses for approximately 400 undergraduate students per year. Prepared class materials, lectures and provided tutorial services to students. Development of the course includes integration of traditional teaching materials, extensive use of PowerPoint presentations, class demonstrations and development of a course Web page to provide course information and support resources. Courses traditionally rated very well in student assessment. Personal satisfaction is gained by taking complex technical systems and theories and translating them into understandable concepts appropriate for a diverse class of students with varying levels of technical understanding.

Director, Information Technology: Ohio University College of Osteopathic Medicine, 1997-2001

Directed the Office of Information Technology including planning and development, establishing policies and procedures for the procurement, implementation and support for advanced information systems, instructional technology and biomedical communications for the Ohio University College of Osteopathic Medicine, Centers of Osteopathic Research & Education and the University Osteopathic Medical Center. Responsibilities included administration of 14 full-time technical and instructional professionals with responsibility for a \$1.2 million operating budget and over \$7.5 million of instructional and clinical services information technology infrastructure. Other duties included consultation with faculty to develop appropriate instructional technology for curriculum delivery, service on college and university technology committees, resource identification to support existing programs and resource generation for new technology initiatives.

Professional Experience, (continued)

Communications Consultant: Private Consulting, 1995-1998

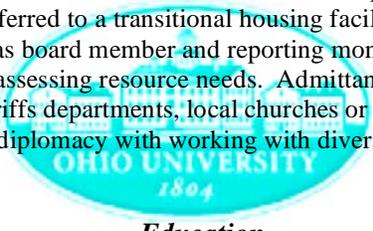
Provided consultation services for the development of information technology for use in higher education and professional development applications. Clients have included Ohio University's School of Interpersonal Communication and the West Virginia School of Osteopathic Medicine. Services included facilities and infrastructure evaluation, development of short- and long-term planning documents, development of technical assessment plans and designing policies and procedures including acceptable usage policies, disaster recovery procedures and staff professional development planning. Consulting services were primarily targeted to institutions of higher education, professional schools and not-for-profit institutions.

Coordinator, Technical Services Educational Development and Resources: Ohio University College of Osteopathic Medicine, 1985-1997

Coordinated technical support services as a member of the Ohio University College of Osteopathic Medicine's Educational Development and Resources (ED&R) unit. The ED&R unit was comprised of the Faculty Development, Instructional Development, Library Resources, Technical Services and Curriculum Development offices. This unit directed all support aspects of the medical curriculum including planning, logistics, faculty development and media support. As Coordinator of Technical Services, responsibilities included biomedical engineering, instructional television services, audio/visual services and instructional facilities design and support. As a team member, contributions included providing significant consultation regarding the integration of new technologies for teaching, database management, test-banking and early adoption of new and effective teaching strategies using instructional technologies. Computer Services, Information Systems and the Technical Services offices were combined to create the Information Technology Office.

Resident Manager: Good Works, Inc. Athens, Ohio, 1985-1986

Served as the Manager in Residence of a regional residential homeless shelter for individuals and families. The Good Works homeless shelter is a not-for-profit homeless facility serving Athens County, Ohio and the surrounding Southeastern Ohio area. Residents were admitted on a short-term basis depending on need and resources. Residents requiring long-term housing were transferred to a transitional housing facility also run by the Good Works organization. Duties included serving as board member and reporting monthly statistics and status reports to the director, processing new residents and assessing resource needs. Admittance to the shelter required a referral from an agency including the police and sheriffs departments, local churches or agencies such as the Red Cross. This position required organizational skills, diplomacy with working with diverse groups of people and maintaining controlled compassion.



Education

Undergraduate

Ohio University
Bachelors of Science, Communications (B.S.C.) 1992

Post-Graduate

Ohio University
Masters of Education (M.Ed.) 2003

Professional Appointments

RHIOhio: Bridging the Digital Divide in Rural Ohio: Conference Chair, 2006-present

The Ohio University College of Osteopathic Medicine, in partnership with the Ohio Department of Health's State Office of Rural Health, will host "RHIOhio: Bridging the Digital Divide in Rural Ohio" in Athens, Ohio Sept. 17-18, 2007. This statewide conference will bring together healthcare professionals and educators, governmental officials, policy makers and industry representatives to discuss the opportunities and challenges of creating regional health information organizations (RHIOs) and deploying health information technologies in rural Ohio communities.

Health Policy Institute of Ohio: Steering Committee, 2006-present

The Health Policy Institute of Ohio (HPIO) seeks to enhance the effective adoption of health information technology and exchange of health information in Ohio. HPIO, at the behest of the Governor's Office, has applied for and received one of the Health Information Security and Privacy Collaboration (HISPC) contracts. The Steering Committee oversees the work of all state working groups, reviews and comments on all deliverable reports, and submits final deliverables to the federal contractor for HISPC.

Professional Appointments, (continued)

Governor Taft: Ohio Medicaid Administrative Study Council, 2005-2007

Appointed to serve on the Governor's Medicaid Administrative Study Council to provide input on and to issue a report regarding the scope and structure of a new Medicaid department. Also served as the Chair of the Information Technology Subcommittee. The report included a business plan to direct the transition of the Medicaid program's administration from the Ohio Department of Job and Family Services and other state agencies to a new cabinet-level department. The final report was issued by December 31, 2006. The General Assembly will enact a law establishing the new department by July 1, 2007.

Governor Voinovich: Task Force on Telemedicine, 1995-1997

Appointed to serve on the Governor's Task Force on Telemedicine to provide technical consulting on the use of telecommunications technologies in medical applications for rural and underserved populations. As Executive Director of the OhiONE network, this appointment also provided valuable information to the committee on consortium building in medical education and the development of a statewide healthcare network. The committee made recommendations to the Governor on telemedicine research, economic climate, technical implementation and patient acceptance of virtual medical services.

American Association of Colleges of Osteopathic Medicine (AACOM): Grant Reviewer, 1995

Sponsored by the Smith/Kline Beecham Foundation, the American Association of Colleges of Osteopathic Medicine (AACOM) solicited request for proposals for developing excellence and innovation in osteopathic medical education and integration of advanced instructional technologies. As a member of the peer review panel, duties included making comments and recommendations on technical feasibility, budgetary prudence and appropriateness of applied technology given the stated educational goals and objectives.

Publications

Co-Author: "Challenges for Developing RHIOs in Rural America: A Case Study in Appalachian Ohio", Journal of Healthcare Information Management. Submitted March 2007.

Co-Author: "Ohio Osteopathic Network of Excellence; establishing a statewide telehealth consortium", Journal of the American Osteopathic Association. Vol. 101: No. 12. December 2001, pp. 720-722.

Co-Author: "The Anatomy of an OPTI: Part 2, The CORE System", Journal of the American Osteopathic Association. Vol. 97. No. 11. November 1997, pp. 686-691.

Grants & Research Activity

Appalachian Regional Commission: Principal Investigator, 2006-present

The purpose of the Appalachian Regional Commission grant is to develop an Electronic Data Interchange (EDI) to facilitate the secure transfer of electronic health information among providers in Southeastern Ohio. The EDI will foster the development of a community of healthcare providers in Athens, Meigs and Vinton counties. The new system will improve health care in Appalachia Ohio by enabling access to healthcare resources and health information technologies over an extensive network. Award: \$139,000.00.

National Institutes of Health, National Library of Medicine Integrated Advanced Information Management Systems (IAIMS) Planning Grant: Principal Investigator, 2004-2007

The purpose of the National Library of Medicine planning grant was to develop a blueprint for creating a regional, consortium-based, Integrated Advanced Information Management System (IAIMS) to serve as a model for the Appalachian Region and healthcare providers serving rural populations. Phase I project funding facilitated the following two aims: 1) To design a formalized organizational structure of diverse healthcare providers to govern the development and management of a shared regional electronic medical information system; and, 2) To create a comprehensive technical plan for a regional electronic medical information system, identifying the required technical infrastructure and systems integration. Award: \$300,000.00.

Grants & Research Activity, (continued)

National Institutes of Health, Year-Two Infrastructure Supplement to IAIMS Planning Grant: Principal Investigator, 2005-2007

An appropriation from the National Library of Medicine's supplemental infrastructure fund developed a healthcare corridor fiber-optic backbone. This created a central physical network topology establishing a high-speed, high-capacity information infrastructure to promote the exchange of medical information to the Appalachian Regional Informatics Consortium (ARIC) members. The aims of the project included: 1) To establish a secured shared network backbone to connect ARIC members, ensuring infrastructure parity and long-term sustainability of network services by eliminating costly tariffed telecommunication services; and, 2) To create the foundation for a medical Intranet for shared information in a secure telecommunications medium and provide for future growth of advanced data services, medical imagery, telecommunications services and telemedicine applications. Award: \$100,000.00.

Southern Consortium for Children (SCC) OAT Grant from HRSA Titled: Rural Health Telemedicine Grant Program 2003 - 2007

Partnered with SCC to create the Southern Ohio Telepsychiatric Network as a part of an expanded and improved Ohione network. Award \$190,855.00.

U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration: Program Contractor, 1997-2000

Served as Program Contractor to provide technical and educational instruction, consultation and video teleconferencing services for the Southern Consortium for Children (SCC), Athens, Ohio. Grant funding was through the Substance Abuse and Mental Health Services Administration Center for Mental Health Services. Building on the Department of Health and Human Services Health Resources and Services Administration program, this collaborative development effort of a quality system-of-care for children with mental health challenges in Southern Ohio is expanded to include clinical services, administrative support and continuing education to mental healthcare professionals. The program contractor provided technical, logistical and educational program consultation to the SCC, Tri-County Mental Health and Counseling Services, Inc., and other mental healthcare professionals served by the SCC in 10 Southeastern Ohio counties. Award: \$117,186.00.

Ohio Department of Public Safety: Principal Investigator, 1998-1999

Served as Principal Investigator to develop video teleconferencing services for the Emergency Medical Services Continuing Education Project. The program included a statewide initiative to link emergency medical technicians, fire safety and medical services professionals to extend training via two-way compressed video teleconferencing technologies. The grant was funded through the Ohio Department of Public Safety. Award: \$8,552.00.

Department of Health and Human Services, Health Resources and Services Administration: Program Contractor, 1997-1999

Served as Program Contractor to provide technical consultation and video teleconferencing services for the Southern Consortium for Children, Athens, Ohio; Southern Ohio Telemedicine Program. Grant was funded through the Health Resources and Services Administration, Office of Rural Health. This program was a collaborative development effort of a quality system-of-care for children with mental health challenges in Southern Ohio. The Program Contractor provided technical, logistical and educational program consultation to the Southern Consortium for Children, Tri-County Mental Health and Counseling Services, Inc. and child psychiatrist Edward Lynam, M.D., to establish a telepsychiatry program to link four centralized clinical service facilities to psychiatric clinical nurse specialists in the field. Award: \$177,579.00.

United States Department of Agriculture: Principal Investigator, 1996-1999

United States Department of Agriculture, Office of Rural Development Project: Distance Learning and Telemedicine Grant to develop a two-way interactive video training network for Southeastern Ohio. Developed and implemented the Southeastern Ohio Health Education Network utilizing two-way video technology to allow medical professionals in Southeastern Ohio to share information and obtain continuing education required by their unique specialty areas. The system provided connectivity to five (5) rural county library sites in Southeastern Ohio, the first libraries in the state to take advantage of this advanced telecommunications technology. Curriculum was coordinated through the Ohio University College of Osteopathic Medicine and the Appalachian Health Education Consortium (AHEC). Award: \$345,837.00.

Grants & Research Activity, (continued)

Governor's Office of Appalachia: Principal Investigator, 1997-1998

State of Ohio Department of Development, Appalachian Regional Commission Project: Rural Physicians Telecommunications Training Network to develop Internet services and training for rural physicians in Southeastern Ohio. Directed the activities of a multi-departmental team to establish a community-based network called MAGICnet (Medical And Government Internet Coalition Network) that provided local governments and healthcare professionals in rural underserved areas of Southeastern Ohio access to online information databases and the ability to develop World Wide Web (WWW) home pages, bulletin boards and communication via electronic mail. Award: \$77,167.00.

Governor's Office of Appalachia: Co-Principal Investigator, 1997-1998

A joint study for the State of Ohio Department of Development, Appalachian Regional Commission with the Ohio State University to provide needs assessment for telehealth in Perry and Lawrence counties. Co-Principal Investigator duties included designing tutorial programs to promote awareness of the potentials of telemedicine and developing an assessment instrument to evaluate area residents and health care professional's opinions on the use of telemedicine. Also conducted in-depth interviews and facilitated numerous focus groups. Co-authored the final research report. Award: \$34,669.00.

Brentwood Foundation: Technical Consultant, 1996-1997

Designed and implemented a telehealth training center for teaching clinical faculty preceptors in Northeastern Ohio sponsored by the Brentwood Foundation. The training center included both computer based and digitally compressed video teleconferencing training facilities for faculty development, residency and internship training, and instructional development for six Centers for Osteopathic Research & Education (CORE) training hospitals in the Northeastern CORE region. Award: \$130,690.00.

Program Affiliations & Subcontracts

Sponsor: Ohio Department of Mental Health (ODMH)
Sponsor: Tri-County Mental Health (Athens & Belpre)(TCMH)
Sponsor: Tri-County Mental Health Belpre (TCMH)
Sponsor: Stark County Community Mental Health Board (SCCMHB)
Sponsor: University Medical Associates (UMA)
Total 2003 to 2007: \$220,040



Presentations

Ohio Association for Healthcare Quality, Presentation topic: Health Information Technology: The Good, the Bad & the Ugly. **Presenter: April 2007**

Ohio Hospital Association, Small and Rural Hospital Committee, Presentation topic: RHIOs and the ARIC EDI Project. **Presenter: April 2007**

Internet2 Design Meeting, Presentation topic: National Health Information Network. **Presenter: June 2006**

Health Information Community of Ohio, Ohio Health Information Technology Invitation Only Meeting, Health Information Community of Ohio Panel Session. **Panelist: February 2006**

Organization for Health Improvement in Appalachia for Business Executives and Legislative Leaders, Executive Briefing. **Presenter: September 2005**

Health Resources and Services Administration, Office of Rural Health Policy All-Programs Meeting. Presentation topic: Best Practices for Health Information Technology (HIT) Integration and Quality. **Presenter: August 2005**

Association of Telecom Professionals, Presentation topic: Voice over IP: Another Instrument in the Medical Bag. **Presenter: August 2005**

Presentations, (continued)

Ohio Rural Health Coalition, Statewide Rural Health Conference, Presentation topic: Partnerships by Necessity: RHIO for Rural. **Presenter: June 2005**

IAIMS Consortium, IAIMS Consortium 2005 Annual Meeting, Presentation topic: How to write an IAIMS grant and get funded. **Co-presenter: April 2005**

Ohio Department of Insurance, The Ohio Medical Malpractice Commission Testimony. **Co-presenter: February 2005**

IAIMS Consortium, IAIMS Consortium 2004 Annual Meeting, Presentation topic: IAIMS Reloaded: Planning, Implementing, and Beyond. **Co-presenter: April 2004**

Ohio Department of Mental Health, Telemedicine Reimbursement Guidelines Testimony. **Co-presenter (SCC): March 2003**

Ohio Academy of Family Physicians, Ohio Family Medicine Symposium on Research and Education. **Co-presenter: March 2003**

Ohio House Subcommittee on Healthcare, Representative Gregory Jolivet, Moderator, Legislative Testimony. **Witness: 2002**

Ohio Valley Regional Development Commission, "MAGICnet, a Model for Change". **Poster Presentation: March 1999**

Ohio Hospital Insurance Association, Presentation topic: Emerging Areas of Liability Exposure: Issues in Telemedicine. **Presenter: May 1996**

American Osteopathic Association, Presentation topic: Distance Learning in Medical Education. **Presenter: September 1996**

Ohio Hospital Association, Presentation topic: Emerging Technologies in Medicine. **Presenter: November 1996**



American Association of Colleges of Osteopathic Medicine (AACOM) Information Technology Subcommittee
American Medical Informatics Association (AMIA)
Healthcare Information and Management Systems Society (HIMSS)
National Rural Health Association (NRHA)

University Appointments

Ohio University, College of Osteopathic Medicine: **Executive Committee member**, 2001-present

Centers for Osteopathic Research & Education: **Executive Committee member**, 2001-present

Ohio University, College of Osteopathic Medicine: **Deans and Senior Officers Committee member**, 2001-present

Ohio University, College of Osteopathic Medicine: **Accreditation Standard 3 Facilities, Equipment and Resources Committee Chair**, 2006-2007

Ohio University, IT Leadership Council: **Council member**, 2005 - 2006

Ohio University, Security Task Force: **Security Task Force member**, 2002-2006

Ohio University, Technology Fee Advisory Committee: **Committee Chair**, 2005

Ohio University, Information Resource Council: **College Representative**, 1996-2003

Ohio University, Associate Provost Y2K Task Force: **College Representative and Technical Consultant**, 1999-2000

Ohio University, Provost Strategic Task Force on Information Technology: **Administrative and Academic Committee member**, 1998-1999

University Appointments, (continued)

Ohio University, Administrative Senate: **District Representative (three-year term)**, 1993-1996

Awards & Recognition

Ohio Valley Regional Development Commission, **Special Recognition Award**, 1999

Ohio University College of Osteopathic Medicine, **Standard of Excellence Award**, 1996

United States Department of Defense, **Certificate of Appreciation**, 1996

Ohio University, **Administrative Senate Meritorious Service Award**, 1994-1996



Kristine Marie Barr

699 State Route 7, Coolville, Ohio 45723, (740) 667-6021

- Education **Ohio University**, Athens, Ohio. September, 1989 - June, 1993
Bachelor of Business Administration
◆ Major: Management Information Systems
- Alexander High School**, Albany, Ohio. September, 1985 - May, 1989
College Preparatory courses
◆ Valedictorian of graduating class of 122.
- Experience **O'Bleness Health System**, Athens, Ohio. March, 2000 – present
Vice President Communication Services
Responsibilities include ensuring information and voice technology investments are aligned with organization's business objectives. Oversee desktop and server architecture and support, network implementation, systems integration, management of IT and telecommunications staff; operational decisions regarding hardware and software purchases, implementation, and usage.
- Ohio University**, Athens, Ohio. January, 1999 – March, 2000
Computer Support Specialist, College of Business
Responsibilities included diagnosing and repairing computer hardware and software problems, installation of new hardware and software, assist with network server administration and management of computer labs, provide training for faculty and staff, assist with web page design.
- Ohio University**, Athens, Ohio. March, 1998 – January, 1999
Clerical Coordinator, Dept. of Environmental Health & Safety
Responsibilities included specialized clerical support, accounting, development and maintenance of database, preparation of statistical reports, and directing work of students. Assist in network administration, Web page development, and software troubleshooting.
- County of Athens**, Athens, Ohio. January, 1995 – March, 1998
Court Reporter/Legal Secretary
Responsibilities included computerized production of court documents, being liaison to public, personal secretary to judge, and recording of all court hearings.
- Tri-County Mental Health and Counseling Services, Inc.**, Athens, Ohio
Contract Transcriptionist July, 1994 – January, 1999
Responsibilities include transcription and production of psychiatric consultation notes, utilizing personal equipment.
- Honors Elks National Scholarship, 4-year award, 1989-1993.
Ohio Academic Scholarship, 4-year award, 1989-1993.

Lawrence Lee Gabel

Business Address: The Ohio State University
Family Medicine Academic Foundation
456 West 10th Avenue, Suite 1110
Columbus, Ohio 43210

Business Phone: 614-293-8007

EDUCATIONAL BACKGROUND

Eastern Illinois University (Charleston, Illinois) - BS, May 1966; Major: Physics; Minor: Mathematics

Eastern Illinois University - Graduate Study in Physics, Summer 1968

Oregon State University (Corvallis, Oregon) - MS, August 1970; Major: Earth Science; Minor: Science Education

The Ohio State University (Columbus, Ohio) - PhD, August 1976; Major: Science Education; Minors: Physics and Educational Foundations

APPOINTMENTS AT THE OHIO STATE UNIVERSITY

Professor with tenure, Department of Family Medicine, College of Medicine and Public Health

Professor, School of Public Health, College of Medicine and Public Health

Professor, School of Allied Medical Professions, College of Medicine and Public Health

Graduate Faculty, Graduate School

Center Scholar, Center for Health Outcomes, Policy, and Evaluation Studies (HOPES)

APPOINTMENTS AT OTHER UNIVERSITIES

Professor, Department of Primary Care Medicine, Lake Erie College of Osteopathic Medicine, Erie, PA

PROFESSIONAL EXPERIENCE

September 2000 to present - Director, Primary Care Research Institute, College of Medicine and Public Health, The Ohio State University.

May 1999 to present - Vice Chair for Academic Affairs, Department of Family Medicine, College of Medicine and Public Health, The Ohio State University

July 1997 to May 1999 - Director, Family Medicine Academic Foundation, Department of Family Medicine, College of Medicine and Public Health, The Ohio State University.

July 1995 to June 1997 - Director, Academic Development, Research, and Grant Support, Department of Family Medicine, College of Medicine, The Ohio State University.

September 1987 to June 1995 - Executive Director, East Central Regional AIDS Education and Training Center, The Ohio State University.

July 1982 to September 1991 - Director, Graduate Education and Research Section, Department of Family Medicine, College of Medicine, The Ohio State University.

March 1985 to present - Principal, ACT For Success, Westerville, Ohio.

September 1979 to June 1982 - Coordinator, Graduate Education and Research Section, Department of Family Medicine, College of Medicine, The Ohio State University.

October 1976 to August 1979 - Research Associate II, Division of Research and Evaluation in Medical Education, College of Medicine, The Ohio State University.

September 1973 to September 1976 - Graduate Teaching/Research Associate, Faculty of Science and Mathematics Education, College of Education, The Ohio State University.

September 1970 to June 1973 - Teacher of physics, chemistry, and geology, Tigard High School, Tigard, Oregon.

September 1966 to May 1969 - Teacher of physics, physical science, and mathematics, Tri-City High School, Buffalo, Illinois.

PROFESSIONAL HONORS

- 1962 Received an Illinois State Teacher Scholarship.
- 1968 Received a National Science Foundation summer fellowship.
- 1969 Received a National Science Foundation academic year fellowship.
- 1971 Received the National Innovative Secondary Physics Teacher Award from the American Association of Physics Teachers.
- 1972 Designated Professional Educator of the Year in the Tigard School District, Tigard, Oregon.
- 1972 One of six finalists for Oregon Teacher of the Year.
- 1973 Received a three-year assistantship in the Faculty of Science and Mathematics Education at The Ohio State University.
- 1973 Named as an Outstanding Secondary Educator of America.
- 1974 Received the Science Teaching Achievement Award from the National Science Teachers Association.
- 1976 Nominated and accepted into Phi Kappa Phi, an honorary educational society.
- 1977 Finalist in the Graduate Student Awards for Research and Creative Achievement Program at The Ohio State University.
- 1990 Presented the Excellence in Research Education Award by the South Central Regional Research Consortium.
- 1994 Named Honorary Member of Philippine Society of Teachers of Family Medicine.
- 2004 Unsung Hero Award, Ohio State University Department of Family Medicine

GRANTS/CONTRACTS RELATED TO TELEMEDICINE AND CME

Nutritional Care Independent Study Packages for Family Practice Residents. Department of Health, Education, and Welfare, eighteen-month contract - \$89,208; October 1978, Co-Author and Project Director

Area Health Education Centers Program (AHEC), Department of Health and Human Services, Contract was awarded initially October, 1980 and funded continuously through September, 1984 - \$775,845, Author and Departmental Program Director

Development and Implementation of a Computerized Information Management System, Department of Health and Human Services, three-year grant - \$244,944; July 1986, Evaluation Coordinator

HIV/AIDS Telemedicine and the U.S. Correctional System, Department of Health and Human Services, three-month grant - \$26,999; March 1995, Author and Principal Investigator

Family Medicine Emphasis (FAME): Expansion to Rural and Other Underserved Populations, Department of Health and Human Services, three-year grant - \$486,000; July 1995, Program Coordinator

Ohio State: A Statewide Classroom to Train Tomorrow's Physicians Today, Department of Health and Human Services, three-year grant - \$603,603; July 1999, Author and Co-Principal Investigator

A Four-Track University-Anchored Community-Oriented Residency, Department of Health and Human Services, three-year grant - \$538,822; July 2001, Author and Co-Principal Investigator

The Ohio TeleHealth, Education, and Linkage Program (Ohio TeleHELP), Ohio State University Multidisciplinary Research Centers, two-year grant - \$1,843,420; March 2001, Author and Principal Investigator (Approved for Funding)

Telehealth: A Unique Solution for Health Needs of the Columbus Empowerment Zone, Columbus Compact Corporation, three-year grant - \$108,000, March 2002, Author and Principal Investigator

Building Research Capacity: Enhancing Research Productivity, Department of Health and Human Services, three-year grant - \$1,060,560; September 2003, Author and Co-Principal Investigator

The Ohio Center of Excellence in Education for Bioterrorism Preparedness and Response, two-year grant - \$863,993; October 2003, Co-Author and Curriculum Design Facilitator

Ohio Telemedicine, Education, and Linkage Program (Ohio TeleHELP): A Proof-of-Concept Study, Ohio Board of Regents, six-month grant -\$150,000; March 2005, Author and Principal Investigator

Telemedicine by a Stroke Neurologist is Superior to Bedside Emergency Room Physicians in Assessment of NIHSS, Genentech, six-month grant - \$10,000; July 2004, Co-Author and Co-Principal Investigator

Video-Teleconference Equipment for OSU-East Family Medicine, Board of Regents Equipment Fund, 2005-06 Awards - \$9,314; January 2006, Author

Teaching to the CORE: Using Core Competencies Without Losing Core Values, Department of Health and Human Services, three-year grant - \$642,190; July 2005, Project Director

The Personal Medical Home: Implications for Patient Care, Education, and Research. Department of Health and Human Services, three-year grant - \$589,888; September 2007, Author and Co-Principal Investigator (Status Pending)

PUBLICATIONS RELATED TO TELEMEDICINE AND CME

Lipsky JA, Gabel LL, Curry JJ, Nishikawara MT, Pieper HP, Hall JA. PHYSEU: a computerized instructional and self-evaluation program for learning medical physiology. *Physiologist* 1979; 22:31-5.

Farmer SA, Gabel LL. Using technology for AIDS education. *J Med Educ Tech* 1992; 2:9-11.

Pearsol J, Gabel LL. The ECAETC evaluation study. *Eval Prog Plan* 1992; 15:75-80.

Gabel LL, Farmer SA, Pearsol JA. Interactive video teleconferencing: a tool for distance continuing professional education. *J Med Educ Tech* 1992; 3:13-9.

Gabel LL, Comer RC, Pearsol JA. From national priorities to practical products: a development model applied to AIDS-related computer-assisted instruction for health care providers. *J Med Educ Tech* 1993; 4:15-22.

Kreger C, Knutson D, Fish C, Cain T, Gabel LL: An interactive multimedia web-based program to enhance the learning of physical examination skills by medical students.

J Gen Int Med 2001; 16(Supplement 1), 81-2.

Ferretti SM, Kruger WA, Gabel LL, Curry JJ: A problem-based pre-clinical learning pathway (pbl): the LECOM experience. *JAOA* (In Press)