

Southern Ohio Health Care Network
October 2009 Quarterly Report for 3rd Quarter of 2009

I. Project Contact & Coordination Information

A. The Southern Ohio Health Care Network (SOHCN) is incorporated as a 501(c)(3). In May 2009, the SOHCN amended its Articles of Incorporation and changed the composition of its Board of Directors as appropriate. The following is a list of current SOHCN board members:

<u>Name</u>	<u>Position</u>	<u>Affiliation</u>
Marcus Bost	President	CIO, Adena Health System
Kristine Barr	Vice President	CIO/VP of Comm., O'Bleness Health System
Morgan Saunders	Vice President	CIO, Holzer Consolidated Health Systems
Mark Shuter	Member	CEO, Adena Health System
Keith Coleman	Member	CFO, Adena Health System
Elisabeth Williams	Member	CSO, Adena Health System

B. Contact information for responsible administrative officials:

Marcus Bost
President, Southern Ohio Health Care Network, Inc.
CIO, Adena Health System
272 Hospital Road
Chillicothe, OH 45601
Phone: 740-779-7390
FAX: 740-779-7498
mbost@adena.org

Tom Reid
President, Reid Consulting Group LLC
4 Elizabeth Avenue
Athens, OH 45701
Phone: 740-590-0076
FAX: 614-448-1718
Tom@ReidConsultingGroup.com

C. The Southern Ohio Health Care Network Inc. Board of Directors is **legally** responsible for the conduct of activities supported by the FCC Rural Health Care Pilot Program (RHCPP) award. As the pilot project's fiduciary agent, Adena Health System is **financially** responsible for the conduct of activities supported by the FCC RHCPP award.

D. The staff of Reid Consulting Group (RCG) has contacted and/or visited all eligible health care providers (HCPs) in the thirteen (13) Phase I counties to explain the SOHCN project and collect FCC-required letters of agency (LOA) from each.

The SOHCN has been expanded to include a total of 34 counties. Phase II of the network build will be the 21 remaining counties not included in Phase I. RCG has commenced preliminary Phase II field work, beginning to contact and visit the eligible health care facilities to explain the project and collect LOAs.

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As stated in our original application, Phase II implementation will necessitate additional rounds of funding for the RHCPP because of the significantly expanded geographic scope of the Southern Ohio Health Care Network.

Coordination with Region:

In April 2008, the Southern Ohio Health Care Network (SOHCN) agreed to merge with Holzer Consolidated Health Systems (HCHS), the other Rural Health Care Pilot Project receiving funding in southeastern Ohio. In August 2008, HCHS and Adena Health System jointly petitioned USAC and the FCC to approve their merger request.

In the final quarter of 2008, the SOHCN board reviewed and offered comments/suggestions on the draft RFP prepared by Reid Consulting Group.

On December 5, 2008, FCC Wireline Competition Bureau Chief Dana R. Shaffer adopted an order accepting the merger request of the HCHS and SOHCN projects. As requested, the order names SOHCN as the successor to the HCHS Pilot Program project.

During the first quarter of 2009, USAC and RCG worked together to review the SOHCN's 465 Package. This often required RCG to act as the liaison between USAC and various SOHCN members to answer USAC's eligibility questions.

Upon successful completion of the 465 review process, the SOHCN's Form 465, 465-Attachment and RFP were posted publicly on March 31, 2009. A mandatory pre-bid web conference was held for all parties interested in responding to the SOHCN RFP on April 10, 2009. The original deadline for RFP responses was May 8, 2009, but upon the request of multiple carriers, that deadline was extended to May 26, 2009.

A scoring retreat was held on May 28, 2009, at the Adena Regional Medical Center. The five-member scoring team discussed and scored the six responses according to the rubric detailed in the RFP. The scoring team included: (1) Adena Manager of Technical Operations Roganne West, (2) Holzer CIO and SOHCN Board VP Morgan Saunders, (3) O'Bleness CIO and SOHCN Board VP Kristine Barr, (4) OARnet Technology Infrastructure Division's Director of Partner Relations Dennis Walsh, and (5) Ohio University Voice & Data Operations Manager Rick Manderick.

The scoring team selected Horizon Telcom to build and operate the SOHCN Phase 1 fiber-optic backbone. Horizon and the SOHCN are currently in contract negotiations to solidify the Master Services Agreement before proceeding with the 466 package. During this negotiation, Horizon and RCG engineers have started site surveys of HCPs that will serve as Points of Presence (POPs) for the SOHCN in anticipation of the build.

RCG uses its newly redesigned SOHCN website, www.sohcn.org, and a SOHCN listserv to periodically update HCPs, carriers, vendors and other stakeholders on the project's progress. On June 10, 2009, the SOHCN widely distributed a press release announcing the Phase I contract award to Horizon.

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Coordination with Government:

RCG is in regular contact with USDA Rural Development (both state and federal offices), Governor Strickland's Office of Appalachia, and our region's three ARC local development districts: Ohio Mid-Eastern Governments Association, Buckeye Hills – Hocking Valley Regional Development District, and Ohio Valley Regional Development District. All of the above agencies are kept informed of SOHCN's progress.

SOHCN is also in regular contact with the staffs of Rep. Zack Space (OH-18), Rep. Charlie Wilson (OH-6), and Senator Sherrod Brown. All three are adamant that SOHCN's expansion of broadband penetration must benefit not just the health care industry but entire communities throughout our region.

SOHCN has partnered with Congressman Space to advance a set of proposals known as Connecting Appalachia, which will improve health care in our region and deploy broadband infrastructure for economic development and education purposes.

In February 2009, RCG and SOHCN Board President Marcus Bost travelled to Washington, D.C. for a series of meetings to discuss SOHCN's objectives and progress. We met with representatives from HRSA's Office of Rural Health Policy, FCC's Wireline Competition Bureau, USDA's Rural Development Broadband Division, Congressman Space and Congressman Wilson's offices.

The SOHCN submitted its BTOP/BIP (ARRA broadband programs) proposal for the Connecting Appalachia project on August 20, 2009, which was the final BTOP/BIP deadline for Round One funding applications. NTIA expects to begin making awards for this initial round of funding in mid-December 2009.

Coordination with Technology Community:

SOHCN's Ohio Academic Resources Network (OARnet, formerly known as OSCnet) liaison is Dennis Walsh, director of partner relations for OARnet's Technology Infrastructure division. As stated above, Walsh was an invaluable member of the scoring team that selected the winning bid for SOHCN Phase 1.

More recently, OARnet Executive Director Pankaj Shah has joined SOHCN's Connecting Appalachia management team. SOHCN's partnership with OARnet is invaluable, as OARnet can provide our network with backhaul to Tier 1 NSPs, in-state bandwidth and high-caliber engineering talent as we continue to grow.

Additionally, RCG President Tom Reid participates in a weekly conference call with Internet2 staff, partners and stakeholders. SOHCN understands the importance of staying connected and coordinated with nationwide data networks.

II: List of Health Care Facilities Included in the Network

Please see the attached Excel spreadsheet for a list of participating sites, addresses and all requested information on each.

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III. Network Narrative

SOHCN has retained Reid Consulting Group to administer the network design and build. Reid Consulting Group specializes in data network planning, construction and maintenance, President Tom Reid has contracted with a network engineer, and they prepared the RFP and facilitated the carrier selection process.

RCG drafted the following network design narrative which details changes that have been made to SOHCN's original RHCPP proposal over the course of the currently ongoing Master Services Agreement (MSA) negotiation with Horizon Telcom. We will update this narrative upon the completion of contract negotiations.

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Network Narrative

a. Description of the Backbone



The FCC-funded Southern Ohio Health Care Network (SOHCN) will:

- + Deliver metropolitan-class fiber-based broadband in rural towns and villages, using a dense wave division multiplexing (DWDM) foundation, offering point-to-point (Layer 2) connections ranging in speed from 1 Gbps to 10 Gbps.
- + Add a diverse routing core to the DWDM fabric to provide any-to-any (Layer 3) connections ranging in speed from 1.5 Mbps to 1 Gbps.
- + Provide high capacity backhaul to Tier 1 Network Service Providers via redundant 10 Gbps DWDM wavelength services provided by the Ohio Academic Resources Network (OARnet).
- + Peer with OARnet's Layer 3 network to provide high performance in-state access for urban health care providers, universities and government.

SOHCN
Fiber-Optic
Backbone

b. How Health Care Providers Will Connect

Physical Considerations

SOHCN will deploy a total of 3 interconnected fiber rings, each benefiting from 100% route diversity (minimum geo-path separation of 100 feet). These rings will provide the foundation for last-mile options in both the fiber-optic and wireless implementations. The POPs, most to be hosted in computer rooms of regional medical centers, will be served by diverse entry to the facility (minimum separation of twenty feet at building entrance).

The 24-strand fiber cables for the trunk routes will allow expansion capacity and provide splice junctions to shorten the distance of last-mile fiber runs to smaller facilities and network-to-network interconnection links. A large majority of the fiber runs for SOHCN will be aerial, attached to existing power poles. Current state-of-the-art cable construction and suspension practices make aerial fiber as reliable as buried cable, while dramatically speeding installation and simplifying right-of-way processes.

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III. Network Narrative (continued)

Southern Ohio Health Care Network Phase I – Lambda & Regional Ethernet Network

1029	1014	1034	1009	1006			1143	1144	1142	1020	1104
1098	1129		1028	1007	1010		1107	1110	1111	1112	1113
1099 Washington C.H.		1049 Circleville	1001 Chillicothe		1012 1011		1114	1115	1116	1117	1118
		1013	Nellston	1008	1031						
1032	1079				1019 1030		1119	1120	1121	1128	1138
1073	1096				1003 1136		1139	1140	1141	1123	1124
1005 Greenfield			OARnet								1125
			Horizon		Athens	1108					
1076	1077	1131			1066		OARnet				
1074	1072	1033	1097		McArthur					1021	1038
					1106						
1075	1071	1070	1078							1086	1109
1069 Hillsboro						1137	1105		Pomeroy		
							1022			1122	1134
1095	1068	1045	1016	1067	1083						
				Pike Community							
1103	1015	1035	1135								
1065 Seaman			1004				1081				
	West Union		Waverly				1002				
1024	1102	1040	1127								
			Portsmouth	1101			Jackson	1054		Gallipolis	1050
1017	1023	1027	1039	OARnet	1052	1132	1056	1036	1051	1055	1057
1041	1042	1043	1044		1126	1037	1058	1080	1082	1130	
1046	1047	1048	1100		1053	1018		1087	1088	1089	1090
			Ironton					1091	1092	1093	1094
1025	1026	1059	1060								
1061	1062	1063	1064								
1084	1085	1133									

- Legend**
- ROADM / WXC / Xponder Site
 - ROADM / Xponder Site
 - Xponder Site
 - Class 2 Site
 - Class 3 Site
 - Class 4 Site



Southern Ohio Health Care Network

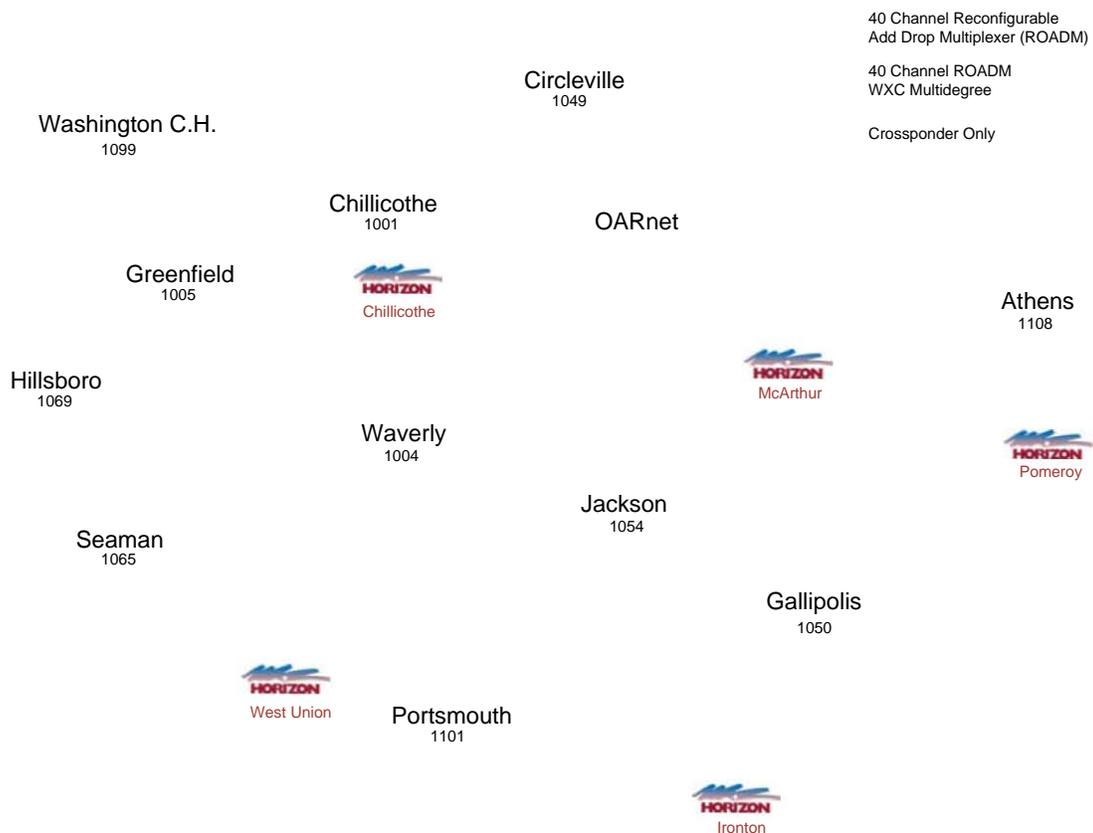
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III. Network Narrative (continued)

Layer 2 Design

SOHCN will use Cisco equipment to light the fiber rings with fully redundant 40-channel DWDM-15454 components. Reconfigurable optical add/drop multiplexing (ROADM) hardware in each POP will provide a flexible optical fabric across all of the rings. Cisco's Crossponder technology will extend the Ethernet core over the DWDM network to every POP. The Crossponders integrate a 20-port Gigabit switch with dual DWDM uplinks, which we will connect to separate lambdas to increase capacity and improve reliability. The network will deliver point-to-point (Layer 2) fiber-optic connections ranging in speed from 1 Gbps to 10 Gbps (and will support future 40 Gbps links).

Southern Ohio Health Care Network Phase I



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III. Network Narrative (continued)

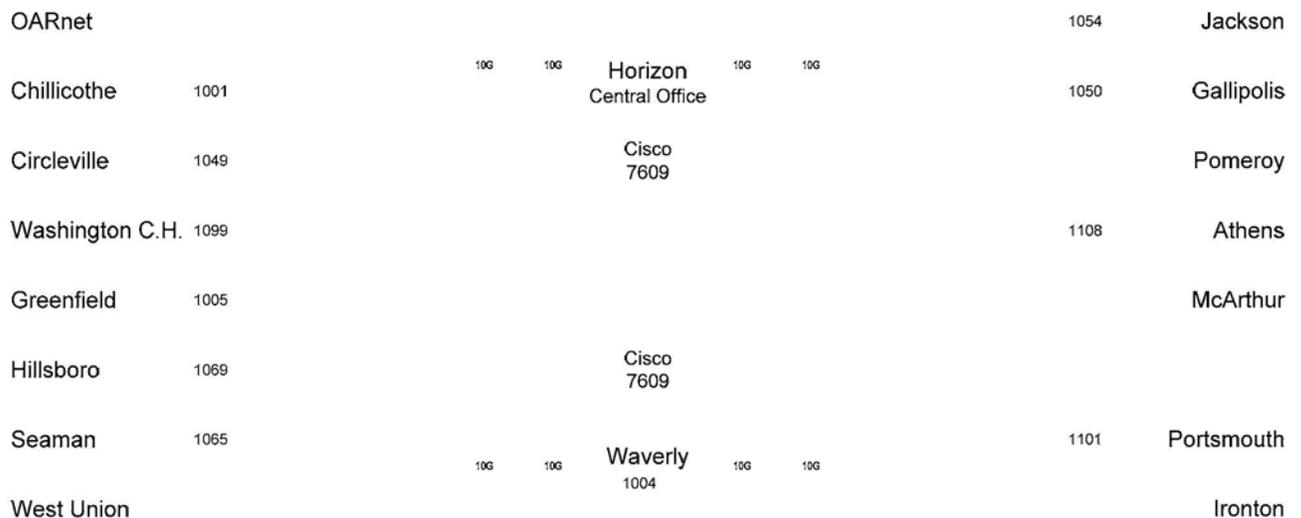
Layer 3 Design

To provide any-to-any (Layer 3) services, we will deploy geographically dispersed and redundant Cisco 7609-S routers to provide any-to-any (Layer 3) fiber-optic connections ranging in speed from 1.5 Mbps to 1 Gbps. As traffic increases, additional router cores will be added to support the growth, maintaining both low latency and high packet delivery rates. Rates for service will anticipate the need for future growth in capacity and lifecycle replacement requirements.

Crossponder Flexibility

The innovative crossponder technology features dual lambda interconnection, providing 0% oversubscription in our load profiles. Interconnected to the routers and the DWDM fabric, the crossponders can provide 1 Gbps Layer 2 or Layer 3 services.

Southern Ohio Health Care Network
 Regional Ethernet Service



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III. Network Narrative (continued)

c. Connection to a National Backbone

The SOHCN will connect to the Ohio Academic Resources Network (OARnet) in at least two locations, Chillicothe and Athens, at speeds of up to 2.5 Gbps. OARnet will provide high-speed in-state connectivity to urban health centers and universities. OARnet is also Ohio's regional connector for Internet2. The membership of the SOHCN, though, has not yet committed to joining Internet2 due to the associated ongoing costs. Deliberations continue among the members regarding the cost-benefit analysis of Internet2 membership. As Internet2 continues to demonstrate its value and barriers to inter-state medical cooperation decrease, we believe the membership will opt to join Internet2.

d. Number of Miles of Fiber to be Constructed

The SOHCN will purchase Indefeasible Rights to Use (IRU) on both newly installed fiber and existing fiber. The fiber assets will include backbone and last mile connections. We are currently working with Horizon to create the completed list of fiber assets that will provide a detailed inventory.

e. Network Management and Maintenance

Under a Master Services Agreement with the SOHCN, Horizon will manage the entire network. The SOHCN will have read-only access into the management tools to verify compliance with all performance requirements as defined in the Horizon RFP response.

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IV. List of Connected Health Care Providers

SOHCN does not yet have any health care providers that are connected to the network and operational.

V. Non-Recurring and Recurring Costs

Under the MSA currently being negotiated by SOHCN and Horizon Telecom, FCC RHCPP funding and the required 15% match will not be used for any recurring costs. SOHCN member facilities will be responsible for paying all recurring costs of their connectivity to the network, but these monthly service rates will be greatly reduced from standard commercial rates because of the capital buydown made possible by the SOHCN paying for its fiber infrastructure upfront. The vast majority of the RHCPP award and match will be used to purchase Indefeasible Rights to Use (IRU) both newly installed fiber and existing fiber. The fiber assets will include the SOHCN backbone and all last mile connections to eligible HCPs.

No actual RHCPP eligible costs have been incurred this fiscal quarter or yet this funding year. Here are the **budgeted, non-recurring** costs we will be using RHCPP funds and match to cover, broken down by each of the seven expense categories listed in paragraph 5 of Appendix D of the *2007 RHC Pilot Program Selection Order*:

- a. Network Design: \$0
- b. Network Equipment, including engineering and installation: \$0
- c. Infrastructure Deployment/Outside Plant
 - i. Engineering: \$0
 - ii. Construction: \$18.4 Million to purchase fiber IRUs with 20-year term plus 10-year renewal option for \$1.
- d. Internet1, NLR, or Public Internet Connection: \$0
- e. Leased Facilities or Tariffed Services: \$0
- f. Network Management, Maintenance, and Operation Costs (not captured elsewhere): \$0
- g. Other Non-Recurring and Recurring Costs: \$0

VI. Apportioned Costs & Funding Sources to Pay Them

SOHCN will not be able to initiate the process of apportioning costs until the Master Services Agreement with Horizon has been finalized. However, here are preliminary responses broken down by required response sections (a) – (d):

- a. Explain how costs are identified, allocated among, and apportioned to both eligible and ineligible network participants.**

As explained in Section V above, RHCPP funds and match will be used to purchase all SOHCN fiber infrastructure. The fiber IRU documentation will list each fiber link described by: address of both endpoints, distance of fiber run, type of fiber,

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year installed (if fiber already exists), strand count included in IRU, dollar value for the fiber run.

SOHCN members' recurring, monthly service charges for connectivity are identified in the rate tables found in Horizon Telecom's RFP response. There are different rate table for eligible and ineligible entities. Ineligible sites must pay 100% of their last-mile fiber connectivity costs.

Each SOHCN member will decide which speed/level of service to subscribe to based on the facility's needs and budget. The HCP will then pay the monthly charge indicated on its respective Horizon rate table. In addition, each SOHCN member will be charged a 7% monthly membership surcharge as detailed below in (b).

b. Describe the source of funds from:

- i. Eligible Pilot Program network participants:** Each participant's monthly connectivity cost will be identified and apportioned as described above. It will be paid directly to Horizon, and will presumably come from the health care facility's operating budget. In addition, the participant will pay a 7% SOHCN Membership Monthly Surcharge; this fee will be put toward paying off Adena's \$2.78M loan to the SOHCN for the RHCPP's required 15% match. For example, if an eligible participant decides it needs a 100 Mbps connection, the Horizon rate table lists the monthly cost as \$666.67, which means the facility's SOHCN membership monthly surcharge will be \$46.67.
- ii. Ineligible Pilot Program network participants:** Ineligible participants will identify their monthly cost as outlined above using Horizon's rate table for ineligible sites. These monthly rates are higher than those for eligible sites, and ineligible sites must also pay last-mile fiber installation costs. Ineligible sites must also pay the 7% SOHCN Membership Monthly Surcharge detailed above. Again, presumably, these funds will come from the HCP's operating budget.

- c. Show contributions from all other sources:** The SOHCN fiduciary agent, Adena Health System, has contributed approximately \$222,810 to date for project costs not covered by the RHCPP fund and match. These costs include project management, RFP creation and the ensuing bidding process, as well as member outreach and supplying public information.

Adena has also agreed to loan the SOHCN the \$2.78M match required by the RHCPP because financial hardship in our economically distressed region of Appalachia precluded individual members from being able to contribute their share of the 15% match.

- i. Identify source of financial support and anticipated revenues that is paying for costs not covered by the fund and by Pilot Program participants:** Adena is the largest regional health system in SOHCN Phase I. Despite severe economic instability nationwide, Adena has been able to maintain its financial stability and posted a net revenue of \$293 million last year. Adena supports the SOHCN because it believes

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increased collaboration and economic development in our region will help Adena grow and remain financially healthy.

The 7% SOHCN Membership Monthly Surcharge will eventually enable Adena to recoup its \$2.78 million loan to the SOHCN to pay the RHCPP-required 15% match.

- ii. **Identify the respective amounts and remaining time for such assistance:** SOHCN's current financial projections estimate that the SOHCN will be self-sustaining by 2011. Until then, Adena has budgeted \$168,700 to cover the remaining SOHCN implementation tasks through Dec. 2010.

- d. **Explain how the selected participant's minimum 15% contribution is helping to achieve both the selected participant's identified goals and objectives and the overarching goals of the Pilot Program:** The SOHCN's 15% match contribution is just as important to the success of the project as its \$15.76 million RHCPP award. Both are necessary to procure the 20-year fiber IRUs that constitute the Southern Ohio Health Care Network backbone and last-mile connections. This critical infrastructure will allow us to achieve the goals we share with the Pilot Program: a robust regional broadband health care network that supports electronic health records, telemedicine, continuing medical education via distance learning, and ties into the National Health Information Network being developed by HHS.

VII. Requirements & Procedures Necessary for Ineligible Entities' Network Participation

All ineligible sites listed in Section II are owned by or in some way affiliated with SOHCN's eligible agencies. Ineligible sites have only been included in the SOHCN because they are integral to the operation of regional health care agencies made up mostly of RHCPP-eligible facilities. These ineligible locations understand their responsibility for paying 100% of their last-mile fiber connectivity to the SOHCN and that their monthly recurring rates will be higher than eligible sites.

VIII. Updates to Project Management Plan

A. As stated above, during the second quarter of 2008, the Southern Ohio Health Care Network was incorporated as a 501(c)(3). SOHCN formed a Board of Directors and elected officers.

In the fourth quarter of 2008, the FCC approved the merger request of the Southern Ohio Health Care Network and Holzer Consolidated Health Systems. The resulting joint project will fulfill the objectives stated in **both** original funding proposals.

At the SOHCN Board's meeting of October 2008, members unanimously agreed to create a co-vice presidency and appointed HCHS Telecommunications Manager Morgan Saunders vice president in order to more accurately reflect SOHCN project leadership post-merger.

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There were no changes to the project's management structure made in the first quarter of 2009. In the second quarter of 2009, the SOHCN bylaws were amended and the Board of Directors composition was altered accordingly (See Section I. A. of this report.). No additional changes were made in the recently completed third quarter of 2009.

B. Project Plan/Schedule

In previous quarterly reports we have included the schedule for SOHCN Phase 2 development. However, when SOHCN completed the bid process for Phase 1 during the second quarter of 2009, we learned definitively that Phase 2 will require a second round of RHCPP funding. Since that time, we have reconfigured our project work plan and schedule to only include the remaining benchmarks for Phase 1 completion.

<u>Year:</u>	<u>Quarter:</u>	<u>Objectives</u>
2009	4 th	Complete Contract Negotiations w/Horizon
2010	1 st	Complete & Post 466 Package
2010	2 nd	Implement Phase 1 network build
2010	3 rd	Chillicothe Rings Operational and Fully Redundant Adena Facilities Operational Adena Data Replication Link Available Chillicothe OARnet POP Interconnected OARnet Peering Arrangements Established South Ring Operational Jackson Ring Operational O'Bleness Memorial Hospital Operational via Temporary Ring Existing O'Bleness HS Network Interconnected Existing Holzer HS Network Interconnected Existing Holzer Clinic Network Interconnected Existing SOMC Network Interconnected All Peering Arrangements Established Participating Ross County Class 3 Facilities Connected
2010	4 th	South Ring Fully Redundant Jackson Ring Fully Redundant Holzer Medical Center – Gallipolis Operational Holzer Data Replication Link Available Berger Hospital Operational Fayette Memorial Hospital Operational Existing Berger HS Network Interconnected All Other OARnet POPs Interconnected (As Desired)
2011	1 st	East Ring Operational and Fully Redundant Athens Local Ring Operational and Fully Redundant Nelsonville Doctor's Hospital Operational

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2011	1 st	Highland District Hospital Operational Adams County Regional Medical Center Operational Ironton Fiber Route Completed 25% of Class 3 and 4 Facilities Connected
2011	2 nd	West Ring Operational and Fully Redundant 50% of Class 3 and 4 Facilities Connected
2011	3 rd	All Participating Class 3 and 4 Facilities Operational

Explanation of Missed Milestones: In our previous quarterly report, we stated a goal of having contract negotiations completed with Horizon Telcom and posting the 466 Package. This was an overly ambitious work schedule that two particular factors inhibited us from meeting. First, both SOHCN and Horizon submitted BTOP & BIP applications for broadband stimulus funding. The application process was arduous and on an extremely condensed timeline. Both organizations had to devote huge amounts of time, personnel and other resources to completing their respective applications. Unfortunately, this resulted in contract negotiation efforts being placed on the back burner. Second, while we have been pursuing many avenues to attain the required 15% match since the FCC notified SOHCN of its RHCPP award, we did not know how desperate the economic situation would become as a result of the global financial crisis that began in 2008. The complexities of obtaining a feasible source for the \$2.78 million match presented a serious obstacle to our project's progress. However, Adena's Finance Committee recently approved lending the SOHCN the required match funds, so we should be able to progress on this front without further delay.

IX. Network's Self-Sustainability

At USAC's request, Reid Consulting Group prepared and submitted the following SOHCN Sustainability Plan prior to posting our 465 package and network build RFP on March 31, 2009. This sustainability plan was accepted and approved by our USAC coach and Daniel Johnson. We will work with USAC to update this plan as needed as we move toward posting our 466 package and receiving a Funding Commitment Letter.



Southern Ohio Health Care Network (SOHCN)



WC Docket No. 02-60

Sustainability Plan

15 January 2009

On behalf of RHCPP Recipients

Adena Health System – Chillicothe, Ohio
Holzer Health Systems – Gallipolis, Ohio
O’Bleness Health System – Athens, Ohio
and
All SOHCN Members

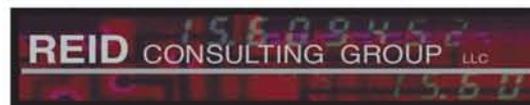
Contacts:

Marcus Bost
Board President, SOHCN
CIO, Adena Health System Inc.
740-779-7390
Mbst@Adena.org

Tom Reid
President
Reid Consulting Group LLC
740-590-0076
Tom@ReidConsultingGroup.com



SOHCN Sustainability Plan



Southern Ohio Health Care Network Fiber-Optic Backbone



The Challenges

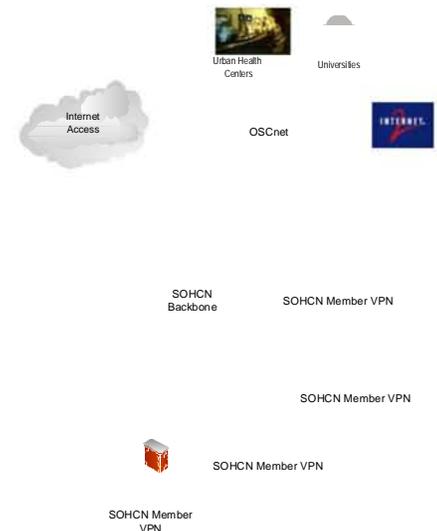
The Southern Ohio Health Care Network (SOHCN) is a consortium of health care providers serving a population of 1.7 million across thirty-two rural counties spanning over 16,000 square miles of Southeast Ohio. The SOHCN service area includes the ten poorest and all six ARC-distressed counties in Ohio. Federal health-care designations blanketing the SOHCN region include Health Professional Shortage Areas (HPSA), one-dozen Critical Access Hospitals (CAH) and 40+ Federally Qualified Health Centers (FQHC).

Given these circumstances, health care professionals in Southeast Ohio are all too familiar with the challenges of practicing medicine in an impoverished, geographically isolated region. Broadband medical tools will provide the critical leverage needed to increase efficiency, improve outcomes and lower costs, but the required high-quality network connections remain unavailable.

The Solution

SOHCN objectives include:

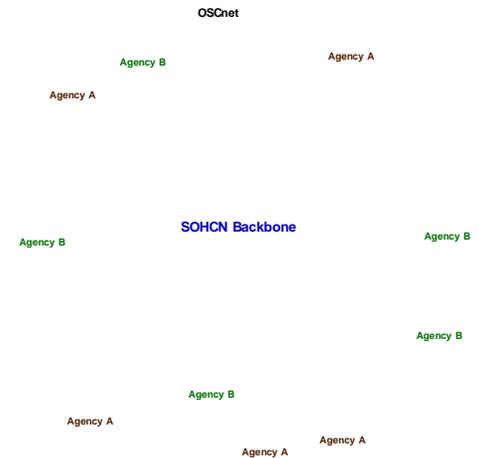
- Create an inclusive and sustainable broadband health care network open to all providers in the service area.
- Enhance sustainability of rural medical practices.
- Develop deeper, mutually beneficial collaboration among health care providers.
- Expand telemedicine capacity through immersive telepresence based on high-definition video, high-fidelity audio and the latest diagnostic equipment.
- Deliver high-impact continuing education programs for physicians and allied health professionals.
- Support a progressive community health record project and efforts to create a regional health information organization (RHIO).
- Participate in statewide efforts to build a unified health care information infrastructure and cooperative clinical services.



The SOHCN has already been awarded \$16.1 million under the FCC Rural Health Care Pilot program (RHCPP). The SOHCN originated with a partnership between the Adena Health System and O'Bleness Health System, resulting in an application for \$14.3 million in funding from the RHCPP. In addition, Holzer Consolidated Health System also received an award for \$1.8 million. Holzer agreed to join the SOHCN, pooling the collective resources to magnify the impact further. A formal merger request was approved by the FCC in late 2008.

With the FCC funding we are partnering with carriers to build the SOHCN Fiber-Optic Backbone that will deliver:

1. Connection of rural health care providers, large and small, to the robust network, subsidized by as much as 85%
2. Fiber-optic rings to provide the reliability necessary to support real-time health care innovations
3. Metropolitan-class broadband services in Appalachia available to businesses in the SOHCN communities at urban-market rates
4. Expanded residential broadband services



Key Sustainability Factors

Our keys to network sustainability include the following:

- Support from three of the largest non-profit health care systems in the region (Adena Health System, O'Bleness Health System & Holzer Consolidated Health Systems)
- Partnering with telecommunication carriers to build and operate the fiber optic network
- Buy down of capital costs with the FCC funds to keep recurring costs within the budget range of our participating rural providers
- Expenses for existing T-1s and other communications facilities will remain committed to the SOHCN project
- Increased reimbursement for telemedicine services in the future
- Efficiencies gained through use of broadband health care tools
- More effective sharing of medical expertise and information within the region

Broadband health care tools will allow the SOHCN to improve the quality and reduce the cost of health care services:

- Critical and intensive care consultations from urban medical centers to rural hospitals using HDTV quality picture and sound
- At-home telemedicine for chronic conditions, improving health and reducing hospitalizations
- Communities of interest sharing best practices, responding to public health emergencies and delivering continuing medical education



The SOHCN Inc. is a 501(c)(3) operated by an independent board under the fiduciary oversight of the Adena Health System Inc., 272 Hospital Road, Chillicothe, Ohio 45601

Project Partners

The SOHCN has secured the support and involvement of numerous partners. These partnerships will propel the SOHCN beyond mere sustainability into full realization of our broad agenda.



- Buckeye Hills – Hocking Valley Regional Development District (BH-HVRDD)
- Ohio Valley Regional Development Commission (OVRDC)
- Ohio Mid-Eastern Governments Association (OMEGA)



Sustainability Details in the SOHCN RFP

We have included sustainability provisions in the SOHCN RFP. The following excerpts highlight the key provisions impacting sustainability. Of course, the overall design and procurement process is also key, but we refer readers of this sustainability plan to the full RFP for additional details.

1.3. Foundation of Approach

The SOHCN seeks to fulfill its mission based on three guiding principals:

1. Provide pervasive access to broadband services for the health care entities and the community at large
2. Achieve this ambitious mission by building on and creating partnerships with Carriers
3. Deploy open architecture solutions to provide full interoperability across the SOHCN, the State of Ohio and the nation

1.4. Partnerships with Carrier(s)

Through this RFP, we intend to form partnerships with one or more Carriers to create and operate the SOHCN. This model features the health care providers as the “anchor tenants” to justify the investment by Carriers in our underserved region. The FCC funding provides the basis for the SOHCN Members to afford high-speed connectivity. From Carriers, we seek commitments to serve the health care facilities and to expand broadband in communities across the service region. Community broadband commitments could include:

- New types of broadband services
- Extended range of existing broadband services

1.6. Importance of Community Broadband

The reasons for the SOHCN focus on improving community broadband are simple:

- a. Physician homes have emerged as a critical target for broadband deployment, providing essential after-hours coverage for rural facilities.
- b. The quality and efficiency of in-home patient care can be significantly improved by using technologies that rely on residential broadband connectivity.
- c. The financial strength of the rural health care providers depends on the overall economic well being of the region. Broadband for small businesses and residential customers provides an essential ingredient for economic growth.

Widespread broadband adoption across the region will improve the long-term sustainability of health care broadband through the economies of scale.

3.1. Master Services Agreement with the SOHCN Inc.

The SOHCN Inc. will execute a master services agreement (MSA) with the Carrier(s) selected to implement the SOHCN. The SOHCN Members will decide which connection options to exercise. The SOHCN MSA will in no way obligate the Southern Ohio Health Care Network to purchase any guaranteed set of products or services.

3.2. Connections to SOHCN Member Facilities

Installation of connections under the SOHCN MSA will be as a result of contracts between individual SOHCN Members and the Carrier(s) under the terms and conditions of the SOHCN MSA(s). Beyond the capital buy down for eligible facilities, the SOHCN members are responsible for paying all costs related to the services for which they contract under the SOHCN MSA(s). In no way does the SOHCN Inc. bear responsibility for such costs, collections and/or bad debt.

3.3. Connections to Community Entities in Service Area

The SOHCN intends to benefit the general community as well as the SOHCN Members. Explain your company’s willingness to extend the terms, conditions and pricing in the SOHCN MSA to Community Entities.

3.4. Duration of Agreement and Contracts

1. The MSA between the SOHCN Inc. and the Carrier(s) shall become effective immediately upon signing by selected Respondent(s) and the SOHCN Inc.
2. The term of this MSA will be for a period of eleven (11) years, during which time SOHCN Members may purchase connections, equipment, supplies and services as specified in the bidder's response.

The contracts for service with SOHCN Members for connections to their facilities will be for a period of up to ten (10) years depending on when, during the term of the MSA, the SOHCN Member elects to install the connection(s) for their respective facilities.

3.5. Capital Buy Down Formula and the Standard Rate Formula

In the pricing sections for connections we seek the results of two rate formulas:

- *Standard Rate Formula* = Respondent's standard approach for pricing connections.
- *Capital Buy Down Formula* = Respondent front-loads the cost of the connection by offering a one-time price that includes related capital expenses so that a lower monthly recurring price can be offered.

3.6. Long-Term Sustainability

The FCC requires that the networks built with RHCPP funds offer long-term sustainability. After the eleven (11) year term of the MSA, will you commit to hold the rates for existing connections as a "not to exceed" cost for the connections on an on-going basis? For how many years will you commit to this "not to exceed" pricing? What other offers regarding sustainability does your company offer to the SOHCN?

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X. Network's Role in Advancing Telemedicine

Given that our network has yet to be built, we have not had a measurable impact on telemedicine in our part of the state. However, in late September 2008, we were notified that our proposal to the USDA Rural Development's Distance Learning & Telemedicine program was successful. The \$277,695 grant award (with an additional 15% match from applicant Adena) will provide four SOHCN health care facilities in our poorest, most rural areas with telemedicine equipment and training. We submitted a 2009 USDA DLT proposal this March and were just informed in early October that it too will receive funding. The 2009 award provides an additional \$226,467 in USDA Rural Development funds to bring telemedicine equipment to eight more SOHCN sites. When our RHCPP project is completed, these 12 HCPs will have the fiber bandwidth they need to participate in cutting-edge telemedicine with HD videoconferencing.

XI. Compliance with HHS Health IT Initiatives

We have not completed the network build yet. However, all network architecture plans made to date comply with all HHS initiatives and interoperability standards in order to support the creation of the Nationwide Health Information Network. The SOHCN is designed as a standards-based network with open architecture that allows peering to multiple Tier 1 service providers.

When the SOHCN is fully operational, it will be a tremendous support for our fledgling RHIO, the Appalachian Health Information Exchange (AHIE). AHIE has been floundering without broadband connectivity in Southern Ohio. The SOHCN will provide for sharing of electronic health records and public health information regionally, and it will peer with OARnet's Layer 3 network to provide high-performance in-state access to urban health care providers, universities and government.

XII. Coordination with HHS in Public Health Emergencies

When the SOHCN is fully operational, it will provide – for the first time in Appalachian Ohio – a high-capacity, fully redundant fiber-optic infrastructure allowing our region's health care providers to take part in a nationally orchestrated response to health emergencies. The SOHCN's physical fiber route diversity and disaster recovery data replication links make the network a reliable and dependable source of connectivity even in times of crisis and natural disasters

The SOHCN will provide broadband connectivity to all health departments in our service area, which is critical as health departments provide the first line of defense in times of public health emergency. In addition, the uniform telemedicine equipment packages, videoconferencing, and web-based synchronous and asynchronous (featuring persistent virtual rooms) communication capabilities being funded by USDA Distance Learning & Telemedicine projects will run on SOHCN connectivity and further equip medical personnel to coordinate emergency responses.

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At the heart of the SOHCN, Adena's PACCAR Medical Education Center (www.adenapaccar.com) continues to perform groundbreaking health care quality research that, when disseminated to SOHCN members via the network's broadband connectivity, will improve our region's ability to effectively respond to public health emergencies.

While we hope to never encounter public health emergencies in our region, we are confident that the connectivity an operational SOHCN will provide our participating health care facilities will enable them to fully cooperate with HHS and its Centers for Disease Control and Prevention in any crisis.

This report was prepared and submitted by Reid Consulting Group LLC, 4 Elizabeth Drive, Athens, OH 45701. Questions? Call (740) 590-0076