# Application to the Federal Communications Commission under the Rural Healthcare Pilot Program WC Docket No. 02-60

# GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE

**Submitted by:**

**Minnesota Telehealth Network, Lead Applicant**
**Medi-sota Network, Co-Applicant**
**North Region Health Alliance, Co-Applicant**
**SISU Medical Systems, Co-Applicant**
**Minnesota Association of Community Mental Health Programs, New Connections, Co-Applicant**

**May 2007**

# GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE
# MAY 2007

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| **Co-Applicant:** | **SISU Medical Systems**<br>5 West 1st Street<br>Suite 200<br>Duluth, MN 55802<br>Contact: Dan Svendsen, Executive Director<br>(218) 529-7900 |
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| With support from: | Minnesota Department of Health, Office of Rural Health & Primary Care<br>Minnesota Office of Enterprise Technology<br>University of Minnesota<br>Minnesota State Colleges and Universities/The Learning Network<br>Minnesota Department of Human Services<br>Minnesota Hospital Association<br>Avera Telehealth Network<br>Great Plains Telehealth Resource Center<br>Community Health Information Collaborative<br>Internet2 |

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# MAY 2007

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## FCC Rural Healthcare Pilot Program
Application Checklist

| ***FCC Application Outline<br>FCC Order 06-144, Page 6*** | ***Greater Minnesota Telehealth Broadband Initiative<br>Application*** |
|---|---|
| 1. Identify the organization that will be legally and financially responsible for the conduct of activities supported by the fund | **Minnesota Telehealth Network**<br>415 North Jefferson<br>Wadena, MN 56482<br>Contact: Maureen Ideker, Director of Patient Services<br>Phone: 218-631-3510<br>Email: maureen.ideker@tricountyhospital.org |
| 2. Identify the goals and objectives of the proposed network | The immediate goal of the Initiative is to strengthen and expand existing rural telehealthcare networks and allow them to interconnect with other health care provider networks. See Section I for detailed goals and objectives. |
| 3. Estimate of total costs for Year 1. | Total estimated cost: $3,612,526<br>FCC Request (85%) $3,070,647<br>Applicant Match (15%) $541,879 |
| 4. Describe how for-profit network participants will pay their fair share of the network costs | Project members are either nonprofit or government entities. Though no for-profit usage is envisioned, any for-profit entities that may use project services will pay their full costs. |
| 5. Identify the source of financial support and anticipated revenues that will pay for costs not covered by the fund | All project co-applicants have budgeted matching share and other operating costs from ongoing operations. See each participant request in Section III for details. |
| 6. List the health care facilities that will be included in the network | See each co-applicant request in Section III for details. |
| 7. Provide the address, zip code, Rural Urban Commuting Area (RUCA) code and phone number for each health care facility participating in the network | See each co-applicant request in Section III for details. |
| 8. Indicate previous experience in developing and managing telemedicine programs. | The lead applicant has been providing telehealth services to rural patients since 1994, and other project partners have varying information technology, telecommunications and telehealth experience. |
| 9. Provide a project management plan outlining the project's leadership and management structure, as well as its work plan, schedule, and budget. | Leadership and management: The Greater Minnesota Telehealth Initiative is a five network "network of networks" that will be led and managed by the lead applicant and guided by a Steering Committee comprising representatives from each co-applicant organization, along with representation from telecommunications networking and applications, data security and privacy, data collection and analysis, telehealth policy and financial analysis experts and partners. The steering committee will be responsible for coordination, development and implementation of the project.<br><br>Workplan and schedule: The workplan and schedule addresses |

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| | development of service level agreements, initial infrastructure implementation, management and support services, standards adoption and development of operational procedures, centralized directories, event management and scheduling, 24x7 help desk, bridging services, and other state-level shared functions.<br><br>Budget: The budget includes one time and recurring costs for each member network and for inter-network infrastructure and operational costs.<br><br>For details, see Section IV, beginning on Page 43. |

# GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE
# MAY 2007

## I. PROPOSAL

### A. Proposed Project: Greater Minnesota Broadband Initiative

**B. Summary.** The lead and co-applicants of the Greater Minnesota Telehealth Broadband Initiative ("Initiative") are jointly requesting approval of funding from the Federal Communications Commission to build upon a established vision of a strong integrated rural telehealth care delivery system supported by a telecommunications infrastructure that will ultimately allow any patient in any community in Minnesota and bordering states to connect to any provider in Minnesota and beyond.

**The Greater Minnesota Telehealth Broadband Initiative will:**

1. Build broadband bridges and gateways between current organizational and regional telecommunications and telehealth networks to establish statewide a virtual network dedicated to delivering telehealth applications to all rural areas of the state with connections to neighboring states.
2. Focus resources on linking health care providers, patients and programs to create sustainable telehealth practices in multiple health disciplines and settings, including rural and urban hospitals, clinics, mental health centers, community clinics, public health, long term care, prisons, tribal health, and home care.
3. Leverage and build upon existing linkages between health care industry and public health, emergency preparedness, social services, education, and government.
4. Evaluate performance, issues, and lessons learned**,** including security, emergency response enhancement, and exchange of electronic health information as a result of the infrastructure enhancements.

**C. Lead Applicant/Co-application.** A lead applicant, **Minnesota Telehealth Network**, has been identified for this application and the application is submitted equally by each Initiative member including: **Medi-sota Network, North Region Health Alliance, SISU Medical Systems, and Minnesota Association of Community Mental Health Programs: New Connections.** These established health care provider/telehealth networks will each be legally and financially responsible for the activities conducted within their network under this funding. The Initiative members determined that accountability must lie with existing business telehealth networks that have already-established relationships, defined organizational structures, and legal and financial accountability to their network members – those providers whom this program was intended to benefit**.** A **Memorandum of Agreement** signed by each Initiative member is attached and incorporated herein (See Memoranda of Agreement, Page 56).

**D. Greater Minnesota Telehealth Broadband Initiative Project Request.** The request herein contains two levels of telecommunications infrastructure support, as follows:

1. **SECTION III** (pp.14-42) of this application contains each co-applicant's identified network connection and enhancements requests and addresses individually their network's:

a. Name of organization(s) with legal and financial responsibility to the activities supported by the fund
b. Anticipated source(s) of funds or revenues for costs not covered by the fund
c. Description of for-profit participation and cost-sharing of network costs
d. Health care facilities included in the network (including address, zip code, Rural Urban Commuting Code (RUCA) and phone number)
e. Previous experience in developing and managing telemedicine programs
f. A workplan outlining the network leadership and management structure, and anticipated schedule of work
g. Estimated costs of telecommunications network additions and enhancements.

2. **SECTION IV** (pp. 43-52) and **SECTION V** (p. 53) of this application requests assistance under this pilot with statewide and regional interconnection and coordination and provides details on:
    a. A plan for interconnecting the networks to each other
    b. A plan for connection to Internet2/Lamdrail
    c. An estimate of shared costs to be allocated among network participants
    d. Plans for management of shared network and Internet2 connection
    e. Plans for continued coordination of statewide and regional telehealth activities

3. **SECTION VI** (pp. 54-55) of this application contains a request to amend the reimbursement under the FCC rural health care pilot program and suggestions for improvement of traditional USAC subsidy.

**E. Goals of Greater Minnesota Telehealth Broadband Initiative.** The immediate goal of the Initiative is to strengthen and expand existing rural telehealthcare networks and allow them to interconnect with other health care provider networks. This will be accomplished by integrating established telecommunications networks serving multiple telehealth network providers in Minnesota and bordering states into a seamless broadband enabled telehealth delivery services infrastructure dedicated to providing access to health care across rural Minnesota and beyond.

The long term vision of the Initiative is to strengthen the foundation for a statewide, coordinated telehealth system encompassing the broad spectrum of telehealth service delivery, including but not limited to rural and urban hospitals, physician clinics, community clinics, community mental health centers, local and county public health and social service agencies, home health care agencies, long term care facilities, correctional facilities, tribal health facilities, K-12 and higher education, and patients' homes.

The Greater Minnesota Telehealth Broadband Initiative infrastructure will integrate established telecommunication networks serving various healthcare systems into a seamless broadband enabled telehealth and telemedicine delivery service infrastructure dedicated to improving access to health care across rural Minnesota and beyond. It will promote technical standards and operational best practices to reduce costs, boost performance, and improve user-friendliness of telehealth application.

1. **Year 1 Objectives for FCC Rural Health Care Pilot.** While the co-applicants represent or reach approximately 200+ health care providers in Minnesota, North Dakota, and South Dakota, it is important to note that they are not representative of all ongoing or potential telehealth network activities (some to be described below). Significant discussion among co-applicants on a realistic approach for this pilot resulted in an agreement that building upon and leveraging a foundation of existing, already-established healthcare provider network relationships and telecommunications network infrastructure in Phase I would result in the best long term results for Minnesota and the region. Limiting the scope for the initial phase to those willing and able to participate at this time will allow for relationships to build, obstacles to be identified, lessons to be learned, and incremental changes to be implemented, setting the stage for future sustainable growth and coordination. Year 1 objectives are to:
    a. **Grow and strengthen existing telehealth networks.** Add new telehealth network sites and add telecommunications capacity to existing sites and network s to support expanded delivery of telehealth services and exchange of electronic health records (Section III).
    b. **Interconnect existing telehealthcare networks** (network of networks) to allow rural health care providers and patients to connect with health care providers in other existing networks and/or with urban providers and major medical centers (Section IV).
    c. **Establish network connections to Internet 2 or LamdaRail** to allow Greater Minnesota and bordering state health care providers to connect to academic, public, and non-profit health care institutions with advanced medical expertise and information (Section IV).
    d. **Ensure that telecommunications network infrastructure supports use and exchange of electronic health records (EHRs)** and patient health information exchange.
    e. **Evaluate performance, issues, and lessons learned,** including security, emergency response enhancement, and exchange of electronic health records as a result of the infrastructure enhancements.
    f. **Continue to coordinate, build and support telehealth in Minnesota and bordering states** (Section IV)**.**
        i. Build relationships among participating Initiative networks
        ii. Create new relationships and connections with additional networks, providers, and supporting sectors such as social services, public health, emergency preparedness and corrections to further leverage current resources and expand services
        iii. Establish a statewide public or non-profit coordinating entity for telehealth
        iv. Promote technical standards and operational best practices to reduce costs, boos performance, and improve user-friendliness of telehealth application.
        v. Identify gaps in telehealth services in rural communities and help to establish telehealth network services and relationships
        vi. Build a comprehensive statewide system of telehealth for Minnesota and its bordering states

2. **Year 2 Objectives for FCC Rural Health Care Pilot.** Following funding and implementation of Phase I of the Greater Minnesota Telehealth Broadband

Initiative, it is the commitment of the applicant(s) to build upon the established health care provider and telecommunications network relationships and infrastructure to:

a. Establish health care provider and telecommunications connections with additional existing telehealth networks (including those described below)
b. Add additional eligible telehealth providers and services where none now exist through continued education and outreach.
c. Continue to coordinate, build and support telehealth in Minnesota and its bordering states, including:
    i. Build relationships among participating Initiative networks
    ii. Develop partnerships with other existing telehealth networks in Minnesota and bordering states
    iii. Identify gaps in telehealth services in rural communities and help to establish telehealth network services and relationships
d. Establish connections with other regional telehealth networks beyond Minnesota and its bordering states.

**F. Beyond the FCC Rural Health Care Pilot**. The Initiative and its partners in state government and higher education are committed to moving forward with the goal of building upon an established vision of a strong integrated rural telehealth care delivery system supported by a telecommunications infrastructure that will ultimately allow any patient in any community in Minnesota and bordering states to connect to any provider in Minnesota and beyond, support health care education, and support expansion of electronic health records exchange. The shared objectives identified by the Initiative and its statewide partners for Year 1 and Year 2 under the FCC Rural Healthcare Pilot Program are long term and will continue apart from approval or funding under this pilot program (Section IV).

## II. TELEHEALTH IN MINNESOTA: AT A CROSSROADS

### A. Rural telehealth services in Minnesota.

Minnesota is not new to telehealth. It has been developing in a variety of settings, organizations and services. Rural Minnesota communities have a history of developing innovative strategies – telehealth being only one – to assure patient access to high quality care. Current community and regional successes have benefited from the creativity and initiative of a few individuals determined to respond to needs for health care services that might not otherwise be available. Those individuals gathered support, networked, found resources, and kept their focus on finding ways to connect their patients to the services they needed.

Minnesota and its bordering states are in the process of addressing many of these issues. This pilot project is a step in an ongoing process.

**B. Rural health system in Minnesota.** Minnesota's rural health and primary care delivery system is supported by a network of for-profit, non-profit, and publicly-owned health care facilities and organizations, including but not limited to:

1. 79 Critical Access Hospitals (Medicare designation targeting America's small rural hospitals)(Appendix A).
2. Metropolitan and regional hospitals in the metropolitan areas of Minneapolis-St. Paul, Duluth, Rochester, St. Cloud, Mankato, Willmar, Fargo, ND-Moorhead, MN, and Sioux Falls, SD
3. 77 Rural Health Clinics (RHCs)
4. 16 Federally Qualified Health Centers (FQHCs)
5. 78 community mental health centers
6. 300+ nursing homes
7. 200+ home health care agencies
8. 20+ state-operated behavioral health hospitals and facilities

**C. Drivers of past and current telehealth services** development in Minnesota include:

1. **Geography.** Minnesota is the home of "10,000 lakes" and a major Minneapolis-St. Paul metropolitan area. It is also the beginning of the northern Great Plains and shares this geography with North Dakota, South Dakota, and other states in the Upper Midwest. In addition, large areas of northeastern Minnesota are covered with dense forests. Rural communities in these areas often many miles from each other, and sometimes hundreds of miles away from the larger cities. Transportation to specialty medical services available in the Twin Cities and other larger cities, such as Duluth, St. Cloud, Willmar, and Rochester, Minnesota, and neighboring Fargo, North Dakota, and Sioux Falls, South Dakota, can be a serious challenge for patients and their families.


2. **Demographics.** Minnesota's population, along with its Plains neighbors is, on average, aging. The western part of the state, from the Canadian border on the north to the border with Iowa on the south, is especially feeling the effects as young people migrate to the larger urban areas. The challenges for the rural health care system are reflected in demographic data. According to2000 Census data Minnesota had a population of 4,919,479 (MN State Demographic Center, October 2002). Of those, 1,456,119 were classified as living in non-metropolitan areas. While the overall population is expected to grow in the next ten years, 81 percent of that growth will occur in metropolitan areas. (Ibid) Forty-one percent of the state's population over the age of 65 lives in rural areas. All counties in which more than one-fifth of the population was 65 years or older were in rural Minnesota. Minnesota's median age is expected to rise from 35 to 40 in 2030. Twenty-four entire counties and portions of 27 other counties are considered to be medically underserved (MN Department of Health, Office of Rural Health and Primary Care, April 2003.)
3. **Health care workforce shortages.** As the average population ages and their health care needs increase, the health care workforce that must serve that same elderly population is also aging. The Upper Midwest states are not alone in experiencing shortages of health care workers. But add distance challenges and demographic shifts to current and projected workforce shortages – including primary care and specialty physicians, pharmacists, dentists, registered nurses, mental health workers, and ambulance personnel – and the challenge to rural communities in maintaining access to health services is very apparent (MN Department of Health, Office of Rural Health and Primary Care, 2007.) Telehealth services are a critically important solution for addressing the health care needs of our rural communities
4. **Telecommunications landscape.** Most of Minnesota's telehealth networks have migrated to converged Internet Protocol (IP) networks. Converged IP networks integrate data, voice and video applications across a single network architecture. Converged IP networks bring economies of scale to network procurement, operations and support. This in turn enables high-speed, high

capacity broadband connections across great distances to support the real-time or asynchronous exchange of complex data – audio, video, documents and images across a private and secure IP infrastructure.

Today, the set and features of available communication types *between* healthcare entities on *different* IP network architectures is greatly reduced. This especially is true for real-time interactive media such as H.323 videoconferencing. Differing IP dialing plans, quality of service protocols, network security standards and operational support systems make inter-network connections difficult to plan, execute and support. All too often, videoconference connections between provider networks, often arranged on a case-by-case basis, are lower performing, less secure and more expensive than connections within a provider network.

These operational limitations and technical barriers effectively limit telehealth applications between healthcare entities that are served by different network architectures. Limits caused by disconnected networks effectively reduce the sustainability of some telehealth applications and reduces access to some health services, especially in rural areas of Minnesota.

**D. Current telehealth activities.** Below is a list of telehealth networks and services in Minnesota and along its borders. Some of those listed are co-applicants in this pilot; others, while not co-applicants at this time, have participated in efforts to coordinate and promote telehealth in Minnesota. While this list is not exhaustive of services provided, it is intended to create a picture a growing telehealth services delivery system. As noted below, there are already overlapping relationships among several the initiatives mentioned.

1. **Minnesota Telehealth Network (Lead applicant)***. A telehealth provider network begun in 1994 as Fairview-University of Minnesota Telemedicine Network, including the University of Minnesota, 17 active sites, with plans for expanding to include North Region Health Alliance sites (below) and SISU sites (below) (See Section III).
2. **North Region Health Alliance (Co-applicant)*.** Consortium of 20 rural hospitals, 1 mental health center, and 1 regional medical center serving northwestern Minnesota and northeastern North Dakota. All facilities belong to the Minnesota Telehealth Network and some are members of SISU network (Section III).
3. **SISU Medical Systems (Co-applicant)*.** A non-profit consortium of fourteen medical centers in Northern Minnesota working together to share information technology resources and telehealth applications (See Section III.).
4. **Medi-sota, Inc. (Co-applicant)*** A health care consortium of 30 rural health care providers in primarily western Minnesota and 1 hospital in eastern South Dakota for sharing staff education, telehealth, and health provider recruitment utilizing videoconferencing and telehealth applications (See Section III).
   ***Overlapping health care provider network relationships among these co-applicants.*
5. **New Connections for Community Mental Health (Co-applicant)*.** A project of the Minnesota Association of Community Mental Health Programs, to provide tele-mental health services to patients served by its 80+ community mental health centers and satellite clinics (See Section III).

6. **MN Dept of Human Services/State Operated Services and Office of Telecommunity Development.** A network of 21 state-operated facilities connecting patients to mental health and related services using telemedicine.
7. **Wilderness Health Care Coalition.** Comprising ten rural northeastern Minnesota hospitals to assure each hospital the after-hours pharmacy coverage they required to meet accreditation requirements and to provide better care for their patients. A Duluth hospital staff pharmacist provides services to each hospital as needed on a 24/7 basis by supervising pharmacy technicians or nurses at the remote site, using video cameras in each location to allow the pharmacist to verify medication orders and dosages, bedside barcode scanning devices, and remote dispensing equipment.
8. **Avera Telehealth Network.** Currently serves 80 telehealth sites, with 55 in South Dakota, 1 in North Dakota, 14 in southwestern Minnesota, and 10 in northeastern Iowa. Part of the 220-facility Avera Health System in eastern South Dakota and surrounding states.
9. **Mayo Health System.** A network of clinics and hospitals headquartered in Rochester Minnesota and dedicated to serving the healthcare needs of people in more than 60 communities in Northern Iowa, Southern Minnesota and Western Wisconsin.
10. **South Central Community Based Initiative** – Collaborative of 14 hospitals, county social services, mental health facilities, courts and law enforcement in 10 counties providing community-based telemental health services.
11. **Minneapolis Veterans Administration Medical Center**. As part of its services in Region 11, provides home telehealth, teledermatology, telemental health, telerehabilitation, and telesurgery consultation to serve veterans in the region.
12. **Collaborative (CHIC).** Headquartered in Duluth, MN, is a nonprofit corporation focused health information exchange across care settings and sharing costs and best practices among its hospital, clinic, public health, tribal health, long term care and academic members.
13. **MN-PHIN.** Formed in 2006, the Minnesota Public Health Information Network (MN-PHIN) is a local-state initiative to collect, manage, and exchange public health data.
14. **Home telehealth** – Provided throughout Minnesota and provided by hospitals, clinics, nursing homes, home care agencies, public health and social services.

**E. Telehealth Resources: the Great Plains Telehealth Resource & Assistance Center (TRAC).** A partnership of Avera Telehealth; North Dakota State University Telepharmacy Network, Fargo, ND; Evangelical Lutheran Good Samaritan Society, Sioux Falls, SD; St. Elizabeth Health System, Lincoln, NE; and the University of Minnesota. Created in 2006 and funded through the Health Resources and Services Administration Office of Advancement for Telehealth, Great Plains TRAC assists rural health care providers, facilities, and organizations in the upper Midwest states utilize telehealth technology to address the health care needs within their communities**.**

Through collaboration with several other active telehealth programs within this region, the Great Plains TRAC serves are a primary resource for telehealth program development and service implementation information to foster development of telehealth applications, projects, and programs to address health disparities and improve health of rural populations.

The Great Plains TRAC will increase telehealth utilization among rural health care providers in areas affected by this project by breaking down geographic and experiential barriers (See Appendix B).

**F. Telehealth and HIT coordination and planning activities.**

Efforts to coordinate and strengthen telehealth service delivery in Minnesota and its neighbors began well before the creation of the FCC Rural Health Care Pilot Program. The timing of the Pilot, in fact, created the opportunity to move forward on a creating a coordinated telehealth system in Minnesota as identified during work done in the fall of 2006. Examples of these activities include:

1. **Telehealth coordination discussions, December 5, 2005**. A small group of individuals representing the Minnesota Department of Health Office of Rural Health and Primary Care, Minnesota Department of Human Services Office of Telecommunity Development, Minnesota Association of Community Mental Health Programs, Blue Cross-Blue Shield, the University of Minnesota Institute for Health Informatics and the Fairview-University of Minnesota Telemedicine Network (now known as the Minnesota Telehealth Network) met to begin discussions on how to identify the ongoing telehealth activities in Minnesota and the organizations delivering telehealth services. A list of existing services and providers were identified and an agreement made to meet again with a larger group of providers and interested parties to begin telehealth coordination discussions.

2. **The Minnesota Rural Health Conference: Focus on Technology, July 2006.** in Duluth, MN, included a telehealth provider and policy panel on telehealth issues and coordination, reimbursements, telehealth network successes and history, telemental health services, home telehealth, and telepharmacy.

3. **Minnesota Telehealth Forum, September 6, 2006**. The Minnesota Department Health and the University of Minnesota Center for Health Informatics co-sponsored the first Minnesota Telehealth Forum to begin to organize an effort toward a coordinated and supported telehealth system in Minnesota. The Forum participants, comprising 30 participants from various telehealth organizations, developed a set of preliminary shared recommendations, including:
    a. establishing a statewide public-Non-profit coordinating entity for telehealth
    b. developing an open interoperable telehealth network system accessible to providers and consumers statewide
    c. developing a cross-state regional approach to telehealth that recognizes health care delivery patterns
    d. identifying and addressing regulatory/policy barriers (See Appendix C)

4. **Minnesota e-Health Advisory Committee Telehealth Workgroup Recommendations, Fall 2006.** Immediately following the Minnesota Telehealth Forum, work began on integrating the recommendations developed into ongoing work by the Minnesota e-Health Advisory Committee to provide the Governor with recommendations on the development of electronic health

records exchange in Minnesota. The workgroup developed a recommendation to ensure that e-Health system development is integrated with and support telehealth services with the goal of ensuring that all Minnesotans will have access to reliable, secure, and robust telehealth services that are fully integrated with e-Health systems by 2012 (See Appendix D).

**G. Minnesota Telehealth Inventory**. In December 2006, the Minnesota Department of Health contracted with the University of Minnesota Insitute for Health Informatics to administer a survey to health care provider facilities in Minnesota (hospitals, clinics, mental health clinics, home care agencies, nursing homes) to identify existing telehealth services in Minnesota, create searchable online directory of providers and services, and develop a better understanding of specific issues and barriers to further expansion (began January 1, 2007, expected completion June 30, 2007).

**H. Summary.** Health care providers in Minnesota and its bordering states have been active in providing telehealth and related services for more than a decade. With the current federal and state emphasis on electronic health records expansion and other information technologies supporting telehealth, Minnesota is poised to engage its separate but growing telehealth initiatives into a coordinated telehealth system.

## III. TELEHEALTH NETWORK PROGRAM DESCRIPTIONS AND COST ESTIMATES FOR EXPANDED OR ENHANCED TELECOMMUNICATIONS NETWORK SERVICES

**A. Minnesota Telehealth Network**
**B. North Region Health Alliance**
**C. SISU Medical Systems**
**D. Medi-sota, Inc.**
**E. Minnesota Association of Community Mental Health Programs/New Connections for Telehealthcare**

Section III describes each co-applicant network's program descriptions, organizational structure, management and governance, previous experience in developing and managing telehealth and related programs, workplans and network sustainability under the FCC pilot.

Each network's section ends with an estimate of network costs for new services or added/enhanced capacity. The requests are based upon agreed-upon functional and technical network requirements for all networked sites in support of the Greater Minnesota Telehealth Network. The requests for FCC subsidy for new network sites and enhanced capacity in existing sites provide foundation for the development and future expansion of the Greater Minnesota Telehealth Broadband Initiative network infrastructure described in further detail in Section IV.

A. **MINNESOTA TELEHEALTH NETWORK (Lead Applicant)**

415 North Jefferson
Wadena, MN 56482
Contact: Maureen Ideker, Director of Patient Services
Phone: 218-631-3510

The Minnesota Telehealth Network with headquarters based in Wadena, MN at Tri-County Hospital (TCH) will serve the **Lead Applicant** role for the Initiative. See the signed Memoranda of Agreement from the Co-Applicants (p. 56).

1. **History of Minnesota Telehealth Network.** In 1994, TCH and the University of Minnesota participated in a federal grant to explore the implementation of medical specialty services provided at a long distance using new and emerging telecommunications technology, and formed the Fairview-University of Minnesota Telemedicine Network. The original program linked Wadena to the University of Minnesota Physicians (UMP) specialists.

   The Fairview-University of Minnesota Telemedicine Network began with a single, point to point T1 connection between TCH and UMP. As expansion was considered, the stakeholders soon realized sustainability would be greatly improved by using a more affordable model, in this case, ISDN. Due to the inherent instability that resulted with ISDN and its usage based cost structure, the network transitioned to its current gold standard model described as a statewide IP converged services network that offers quality of service prioritization. In 2006, the Network was re-named the Minnesota Telehealth Network and Tri-County Hospital took on the management and headquarters operations (see #3 below).

2. **Minnesota Telehealth Network lead organization: Tri-County Hospital, Wadena, MN.** TCH has been providing medical specialist outreach via telemedicine since 1994. This 25-bed hospital with Joint Commission on Accreditation of Healthcare Organizations standing has one of the largest most active telemedicine programs in Minnesota. TCH is a leader in the State and region in teaching others about telemedicine. In September 2006, TCH was the lead applicant for a Office for the Advancement of Telehealth (OAT) grant awarded in and held lead roles in past OAT grants with the University of Minnesota.

   The constant pioneering effort of problem solving, testing and discovering the best ways to use the network and equipment for patient care has resulted in TCH being a leader and teacher to others across the state. TCH has trained over 15 additional rural sites and numerous specialists, mostly in central and northeastern Minnesota. Due to the involvement at the federal level, TCH helped shape the future deployment and reimbursement of telemedicine services. In addition, key relationships have developed with other networks and stakeholders throughout Minnesota, North and South Dakota (Appendix E).

3. **Minnesota Telehealth Network/ Office of Advancement for Telehealth**. In September 2006, the Office for the Advancement of Telehealth (OAT) awarded TCH a grant that transferred the original Fairview-University of Minnesota Telemedicine Network active sites to the Minnesota Telehealth Network and management of the Network to TCH. This three-year project brings four experienced Minnesota and North Dakota health provider networks (North Region Health Alliance (Section III.B), SISU (Section III.C), University of Minnesota and TCH) together, adding 22 additional sites over the next three years, and resulting in growth in the Minnesota Telehealth Network to 38 Minnesota and 8 North Dakota counties. (See table below, Appendix F and Appendix G).

# MINNESOTA TELEHEALTH NETWORK

| MN TELEHEALTH SITES | SISU MEDICAL SYSTEMS SITES | NORTH REGION HEALTH ALLIANCE SITES |
|---|---|---|
| *Aitkin, MN, Riverwood Health Care Center | • Cloquet, MN, Cloquet Community Memorial Hospital | • Ada, MN, Bridges Medical Center |
| *****Bigfork, MN, Bigfork Valley Hospital | • Deer River, MN, Deer River HealthCare Center | • Bagley, MN, Clearwater Health Services |
| Cass, Lake, MN, Indian Health Services | • Detroit Lakes, MN, St. Marys Regional Health Center | • Baudette, MN, Lakewood Health Center |
| *****Cook, MN, Cook Hospital | • Ely, MN, Ely-Bloomenson Community Hospital | • Cavalier, ND, Pembina County Memorial Hospital |
| ± Crookston, MN, RiverView HealthCare Association | • Grand Marais, MN, Cook County North Shore Hospital & Care Center | • Cooperstown, ND, Cooperstown Medical Center |
| *Crosby, MN, Cuyana Regional Medical Center | • Hastings, MN, Regina Medical Center | • Crookston, MN, Northwestern Mental Health Center |
| Grand Rapids, MN, Itasca Superior Clinic | • Hutchinson, MN, Hutchinson Area Health Care | • Crookston, Roseau, Thief River, MN, Altru Health System Clinics |
| Hibbing, MN, Fairview Range Regional Health Svcs | • Mora, MN, Kanabec Hospital | • Devils Lake, ND Mercy Hospital |
| International Falls, MN, Falls Memorial Hospital | | Fosston, MN, First Care Medical Services |
| Littlefork, MN, Littlefork Medical Center | | • Grafton, ND, Unity Medical Center |
| Longville, MN, Longville Lakes Clinic | | • Hallock, MN, Kittson Memorial Healthcare Center |
| *Moose Lake, MN, Mercy Hospital & Health Care Center | | • Hillsboro, ND, Hillsboro Medical Center |
| Onamia, MN, Mille Lacs Health System | | • Langdon, ND, Cavalier County Memorial Hospital |
| Onamia, MN, Ne Ia Shing Clinic – Mille Lacs Band of Ojibwe | | • Mayville, ND, Union Hospital |
| Red Wing, MN, Fairview Red Wing Health Services | | • McVille, ND, Nelson County Health System |
| Wadena, MN, Tri-County Hospital | | • Northwood, ND, Northwood Deaconess Health |
| Wheaton, MN, Wheaton Community Hospital | | Park River, ND, First Care Health Center |
| | | • Roseau, MN, Roseau Area Hospital & Homes |
| | | • Thief River Falls, MN, Northwest Medical Center |
| | | • Warren, MN, North Valley Health Center |

• Future telemedicine sites  * Also SISU sites  ± Also NRHA sites

4. **Telehealth services.** The overall purpose of the Minnesota Telehealth Network is to address the restricted access to medical specialty and healthcare professionals in rural areas. Over 865 visits are provided annually by the Minnesota Telehealth Network in the areas of orthopedic surgery, dermatology, cardiology, pulmonology, wound care, gastroenterology, clinical psychology, adult and child psychiatry, fetal and maternal health, neurology, asthma/allergy and chronic pain management. Teleradiology, telepharmacy, wound care nursing and telehomecare visits are in addition to these. Of these visits, 99 percent of physician and facility submitted claims are paid.

   The expanded Minnesota Telehealth Network will provide telehealth consultations from medical specialists and health professionals. Additional purposes will include:
   a. Providing educational programs and activities for both medical and rural health professionals
   b. Consultations with long-term care
   c. Administration of the telehealth network
   d. Telehealth network technical education and trouble-shooting
   e. Alliance meetings and e-health record system user meetings through SISU
   f. General videoconferencing applications.
   g. State-level activities will also be conducted, especially related to technology in healthcare and progressing to a statewide telehealth network in Minnesota.

5. **Future Network Activities.** The future of healthcare is rapidly changing and moving forward to expand telehealth activities, along with a need for data exchange between facilities. Special areas of need for the MN Telehealth Network include geriatric care, chronic disease management, mental health and rehab services. As part of the 22 rural facilities' commitment to participate in the network, each new telemedicine site will be required to reach out to at least 2 other health care entities within 2 years, i.e. public health, tribal health and long term care. This project will require expanded capacity and connectivity. These costs, along with associated expenses, are described in the MN Telehealth Netwrok cost estimate in the table below.

6. **Additional Tri-County Hospital telehealth collaborations.**
   a. TCH is also a participating organization in the Medi-sota, Inc. (See Section III.D) consortium consisting of 31 rural hospitals located in central and southwestern Minnesota and one Avera Health Systems site facility across the border in eastern South Dakota. The affiliation with Medi-sota provides additional opportunities for growth since most of the Medi-sota sites are not offering telemedicine outreach for specialty services, although some are conducting teleradiology, home monitoring and some telepsychiatry services.
   b. Tri-County Hospital's expertise has reached state and national levels in telehealth planning through involvement in over 10 years with the four OAT grants. TCH held lead roles in three Office for the Advancement of Telehealth (OAT) grants with the University of Minnesota (1994, 1997, 2003) and is now the lead agency in the 2006 OAT three year project. Two Rural Utilities Services Distance Learning and Telemedicine grants were also received in 2001 and 2006.
   c. TCH was awarded a 2007 Minnesota Department of Health e-Health Initiative grant to implement an electronic health record among the 5 clinics. Specialty broadband community e-health initiatives in the three county service area of Todd, Wadena and Otter Tail Counties include medication reconciliation, e-provider

communication/scheduling, PACS, implementing the electronic medical record, and information exchange.

d. A commitment to training others has been shown in the numbers of sites taught as well as frequent presentations at rural health and technology conferences. TCH has served as a resource expert and educator for telemedicine and is committed to passing on lessons learned to assure interoperability through gold standard equipment choices.

7. **Estimated costs and matching funds.** Those Minnesota Telehealth Network sites participating in the Greater Minnesota Telehealth Broadband Initiative would be responsible for their portion of costs associated with the project. Matching funds would come from additional revenue gained through enhanced telehealth services.

8. **Management of activities under FCC Pilot.** Tri-County Hospital has served as the fiscal agent of the OAT grant and is an experienced grant administrator. Responsible parties within TCH are Director of Patient Services Maureen Ideker, RN, BSN, MBA as principal investigator and Chief Financial Officer Joel Beiswenger, CPA. They both have extensive experience in coordinating the activities of several state and federal grant projects. Acceptance of this pilot project will help to establish operational protocols and communication standards that will assure successful implementation of telehealth services using the proven Tri-County Hospital model.

## 9. Minnesota Telehealth Network - FCC Pilot Request for Expanded/Enhanced Services

| Facility | City | ST | Type | Owner - ship | Zip Code | RU CA Code | Current Telehealth | Projected Need(s) | New (N) or Enhanced (E) | Current Conn. | Equip. Need | Line Needs | Equip. Cost | Monthly cost x12 | Total Year 1 Costs | 15% Match | FCC 85% 1-yr Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bigfork Valley Hospital** | Bigfork | MN | Hospital | Public | 56628 | 10.6 | Radiology, Dermatology | Psych | N | T1 | New routers / interface cards for redundancy | See SISU | $0 | $0 | $0 | $0 | $0 |
| Cook Hospital** | Cook | MN | Hospital | Public | 55723 | 6 | Dermatology Endocrinology Psych | Wound care | E | T1 | New routers / interface cards for redundancy | See SISU | $0 | $0 | $0 | $0 | $0 |
| Cuyuna Regional Medical Center** | Crosby | MN | Hospital | Public | 56441 | 7.4 | Radiology Previous Dermatology | Endocrinology | E | 5MB / T1 | New routers / interface cards for redundancy | See SISU | $0 | $0 | $0 | $0 | $0 |
| Fairview Range Regional Health Svcs | Hibbing | MN | Hospital | Non-Profit | 55746 | 4 | Gastroenterology Endocrinology | Psych | E | T1 (X2) | New routers / interface cards for redundancy | min T1 x 2 | $5,000 | $26,400 | $31,400 | $4,710 | $26,690 |
| Falls Memorial Hospital | International Falls | MN | Hospital | Public | 56649 | 7 | Pending | Mental Health Speech Pathology | N | T1 | New router | T1 x 2 | $5,000 | $36,000 | $41,000 | $6,150 | $34,850 |
| Indian Health Services | Cass Lake | MN | Hospital | Federal | 56633 | 10 | Dermatology | Mental Health | E | T1 | New router | T1 X1 | $5,000 | $12,000 | $17,000 | $2,550 | $14,450 |

| Facility | City | ST | Type | Owner - ship | Zip Code | RU CA Code | Current Telehealth | Projected Need(s) | New (N) or Enhanced (E) | Current Conn. | Equip. Need | Line Needs | Equip. Cost | Monthly cost x12 | Total Year 1 Costs | 15% Match | FCC 85% 1-yr Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Littlefork Medical Center | Little Fork | MN | Clinic w/MD | Non-Profit | 56653 | 8 | Psych Endocrine Dermatology | Psych,wound | E | T1 | New router | T1 X1 | $5,000 | $12,000 | $17,000 | $2,550 | $14,450 |
| Longville Lakes Clinic | Longville | MN | Clinic | | 56655 | 10 | Dermatology | Endocrinology | E | T1 | New router | T1 X1 | $5,000 | $14,400 | $19,400 | $2,910 | $16,490 |
| Mercy Hospital & Health Care Ctr** | Moose Lake | MN | Hospital | Non-Profit | 55767 | 10.5 | Pending | Derm, Psych | E | 5MB / T1 | New router | See SISU | $0 | $0 | $0 | $0 | $0 |
| Mille Lacs Health System | Onamia | MN | Hospital | Non-Profit | 56359 | 10 | Dermatology | ?? | E | T1 | New router | T1 X1 | $5,000 | $12,000 | $17,000 | $2,550 | $14,450 |
| Ne Ia Shing Clinic | Onamia | MN | Indian Clinic | Federal | 56359 | 10 | Dermatology | Pain Management | N | Other | New router | T1 X1 | $5,000 | $12,000 | $17,000 | $2,550 | $14,450 |
| Prairie St. Johns | Fargo | ND | Clinic/ Mental Health | Private | N/F | | Mental Health/Psych Provider | NA | E | T1 | New router | T1 X3 | $5,000 | $36,000 | $41,000 | $6,150 | $34,850 |
| Riverwood Health Care Center** | Aitkin | MN | Hospital | Public | 56431 | 10 | Dermatology | | E | 5MB / T1 | New Router | See SISU | $0 | $0 | $0 | $0 | $0 |
| Tri-County Hospital (MTN administrator) | Wadena | MN | Hospital | Non-Profit | 56482 | 7 | Dermatology Psychiatry Orthopedics Neurology | Pulmo Cardiac | E | T1 | New Router | T1 X3 | $5,000 | $30,000 | $35,000 | $5,250 | $29,750 |
| Wheaton Community Hospital | Wheaton | MN | Hospital | Public | 56296 | 10 | Radiology Pending oncology cardiology | Derm. Cardiac Psych Oncolog. | New | T1 | New router | T1 X1 | $5,000 | $12,000 | $17,000 | $2,550 | $14,450 |
| University of Minnesota Duluth Medical School | Duluth | MN | Clinic-Mental Health | Non-Profit | 55801 | 2 | Mental Health/Psych Provider | None | E | Other | New router | T1 X3 | $5,000 | $36,000 | $41,000 | $6,150 | $34,850 |

| Facility | City | ST | Type | Owner - ship | Zip Code | RU CA Code | Current Telehealth | Projected Need(s) | New (N) or Enhanced (E) | Current Conn. | Equip. Need | Line Needs | Equip. Cost | Monthly cost x12 | Total Year 1 Costs | 15% Match | FCC 85% 1-yr Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| University of Minnesota Physicians | St. Paul | MN | | | 55101 | 1 | Speciality Care/Consult | | E | | New router | T1 X3 | $5,000 | $36,000 | $41,000 | $6,150 | $34,850 |
| First Care Medical Services* | Fosston | MN | CAH/ Clinic/ LTC | Non-Profit | 56542 | 10 | Radiology Urology Pending gastro provider | Derm psychncology | N | T1 | New Router | T1 X1 | $5,000 | $14,400 | $19,400 | $2,910 | $16,490 |
| First Care Medical Services* | Park River | ND | CAH/ Clinic/ LTC | Non-Profit | 58270 | 10.6 | Pending Gastro, Radiology | Gastroenterology | N | Asy nc. DSL | New Router | T1 X1 | $5,000 | $16,800 | $21,800 | $3,270 | $18,530 |
| Riverview HealthCare Assoc.**,* | Crookston | MN | CAH/ Clinic/ LTC | Non-Profit | 56716 | 7 | Telemedicine, Radiology | Dermatology & Psych | E | T1 | New Router | See SISU | $0 | $0 | $0 | $0 | $0 |
| Kanabec Hospital** | Mora | MN | Hospital | Public | 55051 | 8.3 | Pending | Dermatology & Psych | N | T1 | New router | See SISU | $0 | $0 | $0 | $0 | $0 |
| | | | | | | | | | | | | | **$70,000** | **$306,000** | **$376,000** | **$56,400** | **$319,600** |

*Member of North Region Health Alliance.

**Concurrent member of SISU Network. Identified each individual hospital is driving the decision and using the SISU WAN to interface with hospitals outside of the SISU WAN when necessary. Examples include various applications: radiology, dermatology, consultation, 24/7 pharmacy verification and review, centralized database for electronic health records and hospital software modules, training and learning opportunities for staff.

**B. NORTH REGION HEALTH ALLIANCE (Co-Applicant)**

109 South Minnesota
Warren, MN 56762
Jon Linnell, Director
Phone: 218-281-9352

9. **Program Description.** North Region Health Alliance (NRHA) is a 21 hospital consortium formed under the Rural Healthcare Cooperative in 1995. North Region Health Alliance consists of every hospital in Northwestern Minnesota and Northeastern North Dakota covering approximately 20,000 square miles (see map below). NRHA hospitals and clinics are all not-for-profit facilities.

**NRHA Coverage Area**

North Dakota Minnesota

10. **Connection to Minnesota Telehealth Network and SISU Medical Systems**. North Region Health Alliance along with SISU, a consortium of hospitals in the Duluth, Minnesota area, and Tri County Hospital of Wadena, obtained a2006 Office for the Advancement of Telehealth grant to pursue telemedicine capabilities for NRHA's rural facilities over a 3 year project (see Minnesota Telehealth Network). This relationship builds upon already-established health care provider relationships.

11. **History of activities.** The consortium was organized and developed to consolidate resources to collectively negotiate contracts, purchasing agreements and services to provide quality healthcare to the rural communities served along with coordinated efforts with regional tertiary facilities and to sustain rural healthcare access to the communities it serves.

    NRHA has coordinated projects among its members for Provider Contracting, Compliance and HIPPA Hotline, HIPPA Collaboration, Community Needs Assessment, Workforce Issues Forums, Joint Purchasing Network and Contracting, Health Care Access Program, Regional Department Meetings, Medical Records Hotline, Collaborative Grants, Mobile Imaging Contracting.

12. **Connectivity with Minnesota and North Dakota providers**. North Region Health Alliance has created connectivity via video conferencing within the Minnesota hospitals and is presently researching connectivity with our North Dakota membership.

    Connectivity is vital in almost every area of present and future technological programs and projects. Each facility is aware of the importance to quality health care and promotes and supports efforts financially to make these programs happen. Presently NRHA's connectivity is limited within its membership and each facility bears their portion of costs. Grants and subsidies offset the overall costs of the projects and provide the ability to make rural healthcare accessible. Long distances between facilities and difficulty traveling in winter months combined with increasing average age of NRHA patients demand innovative solutions, robust telecommunications connections, and innovative health care providers.

    It is of the utmost priority to NRHA facilities to have connectivity throughout the state of Minnesota and with our neighboring states to assure regionalization of healthcare access and information transportation associated with the regional care

13. **Current activities.** North Region Health Alliance is presently pursuing a data center to provide efficiencies and economies of scale to provide our membership the ability to upgrade and provide the capabilities for an "Electronic Medical Record" with in their billing and clinical software.

14. **Areas for expansion of telehealth.** NRHA members are interested in expanding services in the following areas:
    a. Telepharmacy
    b. Telemental health
    c. Radiological PACS system
    d. Teleradiology
    e. Distance learning for healthcare professionals
    f. Peer review
    g. Home telehealth

15. **Request for expanded services under FCC Rural Healthcare Pilot Program.** This request focuses on strengthening connections to both Minnesota and North Dakota NRHA sites to allow the rural health care provider facilities to connect with each other, with larger health care facilities in the region, and to have access to health care services beyond Minnesota and North Dakota. See below.

## North Region Health Alliance - FCC Pilot Request for Expanded/Enhanced Services

| Facility | Address | Type | Ownership | RUCA Code | Telehealthcare Application Need(s) | Current Line | Equip Needs | Proj Line Needs | Projected Equip. Cost | Monthly Line Costs X12 | Total Year 1 Costs | 15% Match | FCC 1-yr 85% Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| North Region Health Alliance | 115 S Main St, Ste 4 Warren, MN 56762 (218) 745-3242 | Data Center | NFP | 10.4 | Central line support for member telehealth applications | None | Router(s) | T-1 x3 | $15,000 | $48,600 | $63,600 | $9,540 | $54,060 |
| Riverview HealthCare Assn* | 323 S Minnesota St Crookston MN 56716 | CAH Clinic LTC | NFP | 7 | Dermatology & Psych | T1 | See SISU | See SISU | $0 | $0 | $0 | $0 | $0 |
| Kittson Memorial HealthCare Center | 1010 South Birch Hallock MN 56728 | CAH Clinic LTC | NFP | 10 | Dermatology & Psych, ENT, Radiology | T1 | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Bridges Medical Services | 201 9th St W Ada MN 56510 | CAH Clinic LTC | NFP | 10.4 | Dermatology & Psych, ENT, Radiology | T1 | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Clearwater Health Services | 203 4th St NW Bagley MN 56621 | CAH | County | 10.5 | Education | T1 - county | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| North Valley Health Center | 109 S Minnesota Warren MN 56762 | CAH Clinic | NFP | 10.4 | Dermatology, Psych, ENT, Radiology | T1 | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Lakewood Health Center | 600 Main Ave S Baudette MN 56623 | CAH Clinic LTC | NFP | 10 | Unknown | | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Roseau Area Hospital & Homes | 715 Delmore Dr Roseau MN 56751 | CAH | NFP | 7 | Access to Specialists | 2 T1's (Onvoy) | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Northwest Medical Center | 120 LaBree Ave S Thief River Falls MN 56701 | CAH LTC | NFP | 7 | Unknown | T1 | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| First Care Medical Center** | 900 Hilligoss Blvd. SE Fosston MN 56542 | CAH LTC Clinic | NFP | 10 | Unknown | T1 | See MTN | See MTN | $0 | $0 | $0 | $0 | $0 |
| Northwestern Mental Health Center*** | 603 Bruce St Crookston MN 56716 | Mental Health | NFP | 7 | | | See MACMHP | See MACMHP | $0 | $0 | $0 | $0 | $0 |
| Altru Health System | 1000 South Columbia Rd Grand Forks ND 58201 | Reg Hosp Clinic | NFP | 1 | | None | 3 new routers | New T-1 x3 | $15,000 | $48,600 | $63,600 | $9,540 | $54,060 |

| Facility | Address | Type | Ownership | RUCA Code | Telehealthcare Application Need(s) | Current Line | Equip Needs | Proj Line Needs | Projected Equip. Cost | Monthly Line Costs X12 | Total Year 1 Costs | 15% Match | FCC 1-yr 85% Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Union Hospital | 42 6th Street SE Mayville ND 58257 | Hosp | NFP | 4 | Unknown | BTWAN | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Hillsboro Medical Center | 12 3rd St SE Hillsboro ND 58045 | CAH LTC | NFP | 10 | | BTWAN | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Cavalier County Memorial Hospital | 909 2nd St Langdon ND 58249 | CAH Clinic | NFP | 1 | Unknown | BTWAN | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Mercy Hospital | 1031 7th St NE Devils Lake ND 58301 | CAH | NFP | 7 | | | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Cooperstown Medical Center | 1200 Roberts Ave. NE Cooperstown ND 58425 | CAH | NFP | 10.3 | Mental Health, Radiology | Cable 768 (upgradeable), BTWAN | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Unity Medical Center | 164 W 13th St Grafton ND 58237 | CAH Clinic | NFP | 7 | Unknown | BTWAN | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| First Care Health Care | 115 Vivian St Park River ND 58720 | CAH Clinic LTC | NFP | 10.6 | Unknown | BTWAN | See MTN | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Northwood Deaconess Health | 4 N Park St Northwood ND 58267 | CAH Clinic LTC | NFP | 10.4 | Unknown | BTWAN | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Nelson County Health System | 42 6th St SE McVille ND 58254 | CAH | NFP | 10 | Pharmacy | DSL (We have a T1 also) | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| Pembina County Memorial | 301 Mountain St E Cavalier ND 58220 | CAH LTC Clinic | NFP | 10 | Unknown | BTWAN | Router | Add T-1 for redundancy | $5,000 | $16,200 | $21,200 | $3,180 | $18,020 |
| **TOTALS** | | | | | | | | | **$100,000** | **$324,000** | **$424,000** | **$63,600** | **$360,400** |

*Member of SISU

**Member of Minnesota Telehealth Network. Costs shown on MTN request.

*** Member of MACMHP - See Separate section

## C. SISU MEDICAL SYSTEMS (Co-Applicant)

5 West 1st Street
Suite 200
Duluth, MN 55802
CEO: Dan Svendsen
CIO: Mark Schmidt
218-529-7900

1. **Program Description.** SISU Medical Systems, a consortium of medical centers sharing information technology resources since 1982 is a non-profit located in Duluth, MN. SISU's long track record for providing quality information technology and staffing based on cost is a testament to their success. It is through sharing of costs that the very best in information technology is provided to SISU member medical facilities - technology that these same facilities alone might not otherwise be able to cost justify. SISU provides a state of the art data-center, highly regarded technical staff, a SISU support center and application software, support and expertise.

2. **Membership.** Fifteen of 16 SISU member facilities are located in rural areas of Minnesota and are made up of public and non-profit healthcare organizations. Our member organizations could not afford these products and services independently but successfully navigate the swiftly changing and costly HIT environment as SISU coalition members. SISU is a successful case study of the FCC's Rural Health Care fund that utilizes Universal Service Funds (USAC). Through those funds and a collaborative sharing of resources; an efficient and sustainable health information system supporting our member hospital's needs is economically feasible.

3. **Mission.** SISU provides the medical community access to cost effective information technology so that it may provide the best in patient care and employee satisfaction. SISU provides strong service and training to support the technology needs of its member organizations. It facilitates the sharing of information, meets multi-facility needs with limited resources, makes available congregate data, and encourages members to share their expertise.

4. **Focus on rural, collaboration, and shared costs.** SISU is owned by its members, each of which is located in a rural part of Minnesota. It is through sharing of costs that SISU has been able to provide the very best in information technology to the member medical facilities; HIT that these same facilities alone might not otherwise be able to cost justify. SISU staff eliminates the burden for each facility to maintain technology equipment and perform software updates and data backups. The collaboration in the maintenance of the SISU data center and network eliminates the need for each site to invest in elaborate infrastructure. It is through the collaborative success of SISU that our rural members experience increased reliability of their HIT thus increasing patient safety and care. A number of SISU member hospitals have received Critical Access Hospital designation and fall in federally designated health workforce shortage (Health Professional Shortage Area/HPSA; Medically Underserved Area/MUA) or poverty areas. See table below.

| Facility/community | CAH | HPSA | MUA | Low Income |
|---|---|---|---|---|
| Bigfork Valley Hospital | X | X | X | |
| Cloquet Community Mem. Hospital | X | X | X | |
| Cook | X | X | X | |
| Cook County North Shore-Grand Marais | X | X | X | |

| Facility/community | CAH | HPSA | MUA | Low Income |
|---|---|---|---|---|
| Deer River HealthCare Center | X | X | X | |
| Ely-Bloomensen Community Hospital | X | X | X | X |
| Hutchinson Area Health Care | | | | |
| Kanabec Hospital-Mora | X | | | |
| Mercy Hospital- Moose Lake | X | X | X | |
| Pine Medical Center-Pine City | X | X | X | X |
| Riverwood Healthcare Center-Aitkin | X | | X | |
| St. Mary's Regional Health Care Center | | X | X | X |
| Swift County Benson Hospital | X | | X | |

16. **SISU Success Story: Cook Hospital.** SISU can show the positive impact on rural health care through a case study of one of its member hospitals: Cook Hospital, located in Cook, MN, in central northern Minnesota, on the edge of the Boundary Waters Canoe Area, population 85. Cook Hospital is designated as a Critical Access Hospital, Health Professional Shortage Area hospital and a Medically Underserved Area hospital. It is a 16-bed primary care hospital with 3 doctors and nursing staff. It provides 24/7 emergency room care and 24/7 pharmacy, a surgery unit, and a 47 bed nursing home. It has been a SISU member since 1997.

    Cook Hospital effectively utilizes USAC funding for connection through a broadband network to SISU's data center and support desk. It has successfully incorporated HIT into its standard operations of patient care through electronic health records, a remote after-hours pharmacy program, tele-radiology, and distance learning classes for hospital nursing staff and other professionals. Additionally Cook Hospital increases administrative effectiveness through ITV meetings saving both valuable time and money. Through SISU, Cook Hospital's HIT data is backed-up daily and through careful network design Cook hospital's information technology connections to SISU are generally reliable.

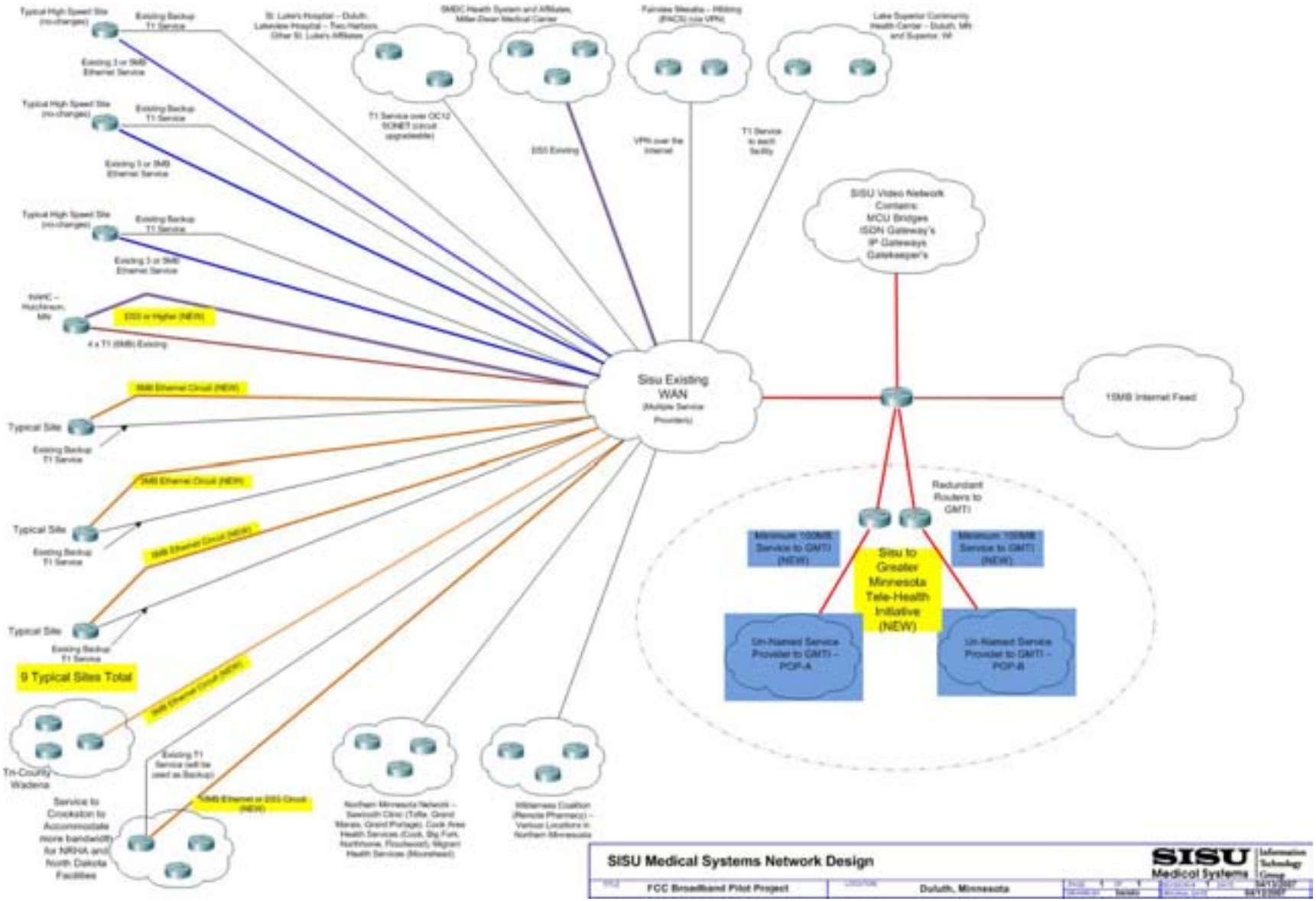
    Cook Hospital is a story that repeats itself throughout the SISU membership. Additionally, in the very strong and sustainable combination of USAC funding and SISU's wide area network, there is great potential to continue these actions of quality health care in rural Minnesota, such as, greater implementation of electronic health records, increased use of specialist providers for patients within their own medical systems, and distance learning for a small pool of health care staff and professionals.

17. **Rural Health Award.** SISU Medical System's success in support of rural health care is exemplified in its receiving the Outstanding Rural Health Team Award at the 2005 Minnesota Rural Health Conference by Commissioner Diane Mandernach, MN Dept. of Health Office of Rural Health Primary Care. The award recognizes teams of people who have made significant contributions toward improving the health care of rural Minnesota.

18. **Telehealth and SISU**. SISU currently has many and varied telehealth services available through its network that bring medical expertise and the advantages of modern health care technology to rural areas in an economically feasible manner. With increased reliability and capacity of SISU's wide area network and connections to a larger Minnesota framework, with Minnesota Telehealth Network (Section A above), North Region Health Alliance (Section B above), and the University of Minnesota Duluth, more opportunities for telehealth will be possible.

19. **Rural-focused broadband network.** SISU has identified three keys to success of a rural-focused broadband network. All three of these keys are built into the health information network model that SISU has designed and implemented since 1982:
    a. Coalition of healthcare organizations addresses a reality of the high cost of HIT in rural areas through shared costs and resources.
    b. A focus on patient safety and quality of service, in rural America, is a cornerstone of keeping healthcare facilities a vital part of communities.
    c. A reliable and resilient network is necessary in order for a broadband network to be successful for healthcare professionals and patients.
    d. SISU plans to build on its successes to design and implement additional infrastructure that will support its current work and move rural Minnesota forward toward more reliable and robust connectivity to support opportunities of telehealth and telemedicine. See current and proposed SISU wide area network below.

20. **Current and proposed SISU Medical Systems Wide Area Network**



## 13. SISU Medical Systems - FCC Pilot Request for Expanded/Enhanced Services

| Facility | City | Type | Ownership | RUCA Code | Current Line | Proj. Equip*./Install. | Proposed NEW or REDUNDANT Lines | Projected Equip./Intall Cost | Monthly line costs x 12 | Total | 15% Match | FCC 1-yr 85%Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bigfork Valley Hospital | 258 Pine Tree Dr., Bigfork, MN 56628 (218) 743-3177 | Critical Access Hospital (CAH) | Public | 10.6 | T1 | New routers/interface cards | Add redundant 5MB Ethernet | $6,000 | $42,000 | $48,000 | $7,200 | $40,800 |
| Cloquet Community Memorial Hospital | 512 Skyline Blvd, Cloquet, MN 55720 (218) 879-4641 | CAH | Public | 4.2 | T1 | New routers/interface cards | Add redundant 5MB Ethernet | $6,000 | $42,000 | $48,000 | $7,200 | $40,800 |
| Cook Hospital | 10 SE 5th St. Cook, MN 55723 (218)666-5945 | CAH | Public | 6 | T1 | New routers/interface cards | Add redundant 5MB Ethernet | $6,000 | $42,000 | $48,000 | $7,200 | $40,800 |
| Cook County North Shore Hospital & Care Center | PO Box 10 Grand Marais, MN 55604 (218) 387-3040 | CAH | Public | 10 | T1 | New routers/interface cards | Add redundant 5MB Ethernet | $6,000 | $42,000 | $48,000 | $7,200 | $40,800 |
| Cuyuna Regional Medical Center | 320 East Main Street Crosby, MN 56441 (218) 546-7000 | CAH | Public | 7.4 | 5MB + T1 backup | N/A | No change | $0 | $0 | $0 | $0 | $0 |
| Deer River HealthCare Center | 1002 Comstock Dr. Deer River, MN 56636 (218)246-2900 | CAH | Public | 8 | T1 | New routers/interface cards | Add redundant 5MB Ethernet | $6,000 | $42,000 | $48,000 | $7,200 | $40,800 |
| Ely-Bloomenson Community Hospital | l328 West Conan Ely, Minnesota 55731 (218)365-3271 | CAH | Public | 7 | T1 | New routers/interface cards | Add redundant 5MB Ethernet | $6,000 | $42,000 | $48,000 | $7,200 | $40,800 |
| Hutchinson Area Health Care | 1095 Highway 15 S. Hutchinson, MN 55350 (320) 234-5000 | Hosp. | Public | 4 | 6 MB | New routers/interface cards | Add redundant 45 MB DS3 | $20,000 | $72,000 | $92,000 | $13,800 | $78,200 |

| Facility | City | Type | Ownership | RUCA Code | Current Line | Proj. Equip*./Install. | Proposed NEW or REDUNDANT Lines | Projected Equip./Intall Cost | Monthly line costs x 12 | Total | 15% Match | FCC 1-yr 85%Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kanabec Hospital | 301 South Highway 65 Mora, MN (320) 679-1212 | CAH | Public | 8.3 | T1 | New routers/interface cards | Add redundant 5 MB Ethernet | $6,000 | $42,000 | $48,000 | $7,200 | $40,800 |
| Mercy Hospital & Healthcare Center | 710 South Kenwood Ave. Moose Lake, MN 55767 (218) 485 5858 | CAH | Public | 10.5 | 5MB+T1 backup | N/A | No change | $0 | $0 | $0 | $0 | $0 |
| Miller-Dwan Medical Center | 502 East Second St Duluth, MN 55805 (218) 727-8762 | Reg. Hosp. | Private NonProfit | 2 | DS3 (T3) | N/A | No change | $0 | $0 | $0 | $0 | $0 |
| Pine Medical Center | 109 Court Ave. S., Sandstone, MN 55072 | CAH | Public | 2 | T1 | New routers/interface cards | No change | $0 | $0 | $0 | $0 | $0 |
| Regina Medical Center | 1175 Nininger Rd. Hastings, MN 55033 (651) 480-4100 | Hosp. | | 4.1 | T1 | New routers/interface cards | Add redundant 5MB Ethernet | $6,000 | $42,000 | $48,000 | $7,200 | $40,800 |
| Riverwood Healthcare Center | 200 Bunker Hill Drive Aitkin, MN 56431 (218) 927-2121 | CAH | Public | 10 | 5MB+T1 backup | N/A | No change | $0 | $0 | $0 | $0 | $0 |
| St. Mary's Regional Health Center | 1027 Washington Ave Detroit Lakes, MN 56501 (218) 847-5611 | Reg. Hosp. | Private NonProfit | 7 | T1 | New routers/interface cards | Add redundant 5MB Ethernet | $6,000 | $42,000 | $48,000 | $7,200 | $40,800 |
| Swift County Benson Hospital | 1815 Wisconsin Avenue, Benson, MN 56215 (320) 843-4232 | CAH | | | None | New routers/interface cards | No change | $0 | $0 | $0 | $0 | $0 |
| NON-SISU SITES TO STRENGTHEN NETWORK INTERCONNECTIONS AND SERVICES | | | | | | | | | | | | |

| Facility | City | Type | Ownership | RUCA Code | Current Line | Proj. Equip*./Install. | Proposed NEW or REDUNDANT Lines | Projected Equip./Intall Cost | Monthly line costs x 12 | Total | 15% Match | FCC 1-yr 85%Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Riverview Healthcare Assn. - see MN Telehealth Network | 323 S. Minnesota St. Crookston, MN 56716 | Reg. Hosp. | Private NonProfit | 7 | T1 | New routers/interface cards | Add redundant 6 MB-10MB Ethernet | $20,000 | $48,000 | $68,000 | $10,200 | $57,800 |
| Tri-County Hospital - see MN Telehealth Network | 415 North Jefferson Wadena, MN 56482 | CAH | | 7 | T | | Add New to SISU 6-10 MB Ethernet | $20,000 | $48,000 | $68,000 | $10,200 | $57,800 |
| | | | | | | | | **$114,000** | **$546,000** | **$660,000** | **$99,000** | **$561,000** |

*Equipment includes 1) routers appropriate to the size of the proposed connections, such as, Cisco 2811, Cisco 3845, and Cisco 7204 and 2) DS3 and/or OC3 interface cards.
** MN Framework may include the MN Learning Net.

**D. MEDI-SOTA, INC. (Co-Applicant)**

669 6th Street, Suite 3
P.O. Box 389
Dawson, MN 56232
Debra Ranallo, Director
Phone: 320-769-2269

**1. Program Description.** Medi-sota, Inc. is a non-profit healthcare consortium consisting of 31 rural hospitals located in Minnesota and South Dakota. The majority of the healthcare providers belonging to Medi-sota are located in central and southwestern Minnesota, with the exception of one healthcare provider located in eastern South Dakota. Some members also have attached nursing homes, clinics and home health agencies. This alliance of rural healthcare organizations provides services such as physician and staff recruitment assistance, as well as provide networking and education opportunities. Through collaboration on numerous projects, these healthcare providers work towards strengthening the delivery of healthcare in Greater Minnesota to provide our rural community members with the best possible patient care available. A telehealth network would improve the delivery of healthcare in the Medi-sota service area by improving access to cost-effective continuing education and enhance our ability to collaborate with partner organizations and share healthcare information.

Please note that Tri-County Hospital in Wadena, a member of Medi-sota and the Minnesota Telehealth Network, is the lead applicant for this pilot program application. Tri-County Hospital has been a leader in telehealth initiatives in Minnesota and will be a great resource for other Medi-sota members if approved.

**2. Governance.** Medi-sota is a 501(c) 3 non profit organization governed by a Board of Directors, which is made up of the CEO from each of the 31 healthcare organizations in its membership. Board members meet once a month to collaborate on various healthcare initiatives, and provide direction to the Executive Director on various matters. These board members also meet with the staff annually to prepare a Strategic Plan to identify goals and objectives for the year, with time lines to guide staff as needed. Each member pays dues to the organization to cover administrative and overhead costs, while other services are offered for a fee; therefore, self-sustaining by those utilizing the services.

**3. Organizational History.** Medi-sota dates back to 1976 when 5 small hospitals came together in a joint effort to attract physicians to each community, rather than competing against one another. This collaboration led to new outreach services being implemented at the participating hospitals and later to two successful recruitment programs. Early collaboration also resulted in coordination of education for professional hospital staff, and later led to a successful partnership with the Minnesota West Community & Technical College for a highly successful education program. Through the years, Medi-sota successfully obtained and coordinated many state and federal grants, as well as foundation grants, for additional resources to enhance our recruitment and education programs. These programs have been instrumental in the membership growing from a small group of 5 members to 31 healthcare providers today.

**4. Telehealth and Distance Education**. An increased emphasis is being placed on making education and networking opportunities more accessible to members by making additional events available via video conferencing. Healthcare providers belonging to the Medi-sota consortium utilize various telehealth networks, but Onvoy was chosen the preferred network provider for the network's activities. A recent USDA Distance Learning and Telemedicine grant of $102,100 was

approved to cover some of the costs to install video conferencing equipment at 14 member sites to enhance the Medi-Sota Education Program. Grant activities have not yet been completed, but at least 7 of those facilities have purchased and installed equipment thus far. Medi-sota offered four workshops at remote video conferencing sites thus far in this education year, with 119 staff members attending at those sites. In addition, we offered education at a minimum of 9 ancillary networking meetings in 2006, with most available by video conferencing beginning in October 2006. This was up from only 1 workshop offered via video conferencing in 2005. Members and staff have worked successfully with Onvoy representatives, a preferred network provider for that telemedicine project, to meet our objectives in this area. With the latest equipment additions, Medi-sota now has a minimum of 18 sites that have the ability to use video conferencing. Other telehealth activities performed at some of the member sites include teleradiology, homehealth monitoring, and some telepsychiatry services.

**5. FCC Pilot Request for Expanded Services**. Medi-sota healthcare providers have made progress in expanding telehealth activities throughout our region, but there are connections and enhancements that are still needed. While some of the smaller rural hospitals are still struggling with the support and sustainability required for telehealth projects, at least 10 members indicated a strong interest in participating in the Greater Minnesota Telehealth Broadband Initiative, and would be responsible for their portion of costs associated with the project. Matching funds would come from additional revenue gained through enhanced telehealth services. See FCC Pilot Program request below.

## 7. Medi-sota - FCC Pilot Request for Expanded/Enhanced Services

| Facility | Address | Type | Ownership | RUCA Code | Telehealthcare Application Need(s) | New (N) or enhanced (E) | Current Connect | Proj. Line Needs | Projected Equip. Cost | One-time Network Costs | Monthly line costs x12 | Total Year 1 Costs | 15% Match | FCC 85% 1-yr Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Johnson Memorial Health Services | 1282 Walnut Street Dawson MN 56232 | Hospital, LTC, Clinic | District/Non-Profit | 10.6 | Teleradiology | N | DSL | T-1 | $10,000 | $800 | $18,600 | $29,400 | $4,410 | $24,990 |
| Glacial Ridge Health System | 10 4th Ave SE Glenwood MN 56334 | Hospital, Clinic | Non-Profit | 10.0 | Specialty Consults and all images sent to radiologists. | E | T1 | T-1 | $0 | $0 | $11,400 | $11,400 | $1,710 | $9,690 |
| Graceville Health Center | 115 W. 2nd St Graceville MN 56420 | Hospital, LTC, Clinic | Non-Profit | 10.0 | Complete telradiology & teleconferencing. | N | DSL | T-1 | $10,000 | $800 | $15,000 | $25,800 | $3,870 | $21,930 |
| Granite Falls Municipal Hospital & Manor | 345 10th Avenue Granite Falls MN 56421 | Hospital, LTC | City/Non-Profit | 7.0 | ACMC clinic prefers to refer to Willmar | E | 2 -T1's | T-1 | $0 | $0 | $15,600 | $15,600 | $2,340 | $13,260 |
| Madelia Community Hospital | 121 Drew Avenue SE Madelia MN 56062 | Hospital | Non-Profit | 10.5 | Just beginning. | E | DSL | T-1 | $0 | $0 | $16,800 | $16,800 | $2,520 | $14,280 |
| Chippewa Co. Montevideo Hosp. | 824 N 11th Street Montevideo MN 56265 | Hospital, Clinic | Non-Profit / City | 7.0 | Specialist Consultations | E | 4-T1's | T-1 | $0 | $0 | $13,200 | $13,200 | $1,980 | $11,220 |
| Ortonville Area Health Services | 750 Eastvold Avenue Ortonville MN 56278 | Hospital, LTC | Non-Profit / City | 10.6 | Psychology, Dermatology, telepharmacy (Graceville-Ortonville). | N | Cable internet | T-1 | $10,000 | $800 | $18,000 | $28,800 | $4,320 | $24,480 |
| Redwood Area Hospital | 100 Fallwood Road Redwood Falls MN 56283 | Hospital | Non-Profit / City | 7.0 | Telestroke services | E | T1 - hoping to expand | T-1 | $0 | $0 | $14,400 | $14,400 | $2,160 | $12,240 |

| Facility | Address | Type | Ownership | RUCA Code | Telehealthcare Application Need(s) | New (N) or enhanced (E) | Current Connect | Proj. Line Needs | Projected Equip. Cost | One-time Network Costs | Monthly line costs x12 | Total Year 1 Costs | 15% Match | FCC 85% 1-yr Request |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Tri-County Hospital | 415 N. Jefferson Wadena MN 56482 | Hospital, LTC, Clinic | Non-Profit | 7.0 | | | See MTN | | | | $0 | $0 | $0 | $0 |
| Rice Memorial Hospital | 301 Becker Avenue SW Willmar MN 56201 | Hospital | Non-Profit / City | 4.0 | unknown | E | 384 K T1 | T-1 | $0 | $0 | $6,600 | $6,600 | $330 | $5,610 |
| **TOTALS** | | | | | | | | | **$30,000** | **$2,400** | **$129,600** | **$162,000** | **$24,300** | **$137,700** |

## E. MINNESOTA ASSOCIATION OF COMMUNITY MENTAL HEALTH PROGRAMS/ NEW CONNECTIONS FOR TELEHEALTHCARE (Co-Applicant)

1821 University Ave W, Suite 350-S
St. Paul, MN 55104
Ron Brand, Executive Director
Phone 651-642-1903

**1. Program Description.** New Connections telehealthcare, a project of the Minnesota Association of Community Mental Health Programs, Inc. is a statewide program in Minnesota to solve chronic problems faced by rural Minnesotans to obtain access to appropriate mental health care. The New Connections program is designed to be the first phase of a major reform effort to bring innovation in communication and information management to healthcare provider organizations throughout Minnesota, but first and foremost in rural Minnesota.

Minnesota Association of Community Mental Health Programs, Inc. (MACMHP) represents the mental health centers participating in this program and is the sponsoring organization for New Connections. These not-for-profit centers are located in all regions of the state and providing mental health care to both rural and urban populations in over 120 locations.

New Connections is supported by the following:

**VISION:** Minnesota statewide community-based mental health services, Coordinated and teleconnected with people, providers, and partners of Associations programs.

**MISSION:** Provide Minnesotans with high quality, efficient and effective mental Health services, on demand, in their own communities near their natural supports of family and friends.

**GOALS:**

1. Connect persons to service.
2. Connect all MN Association of Community Mental Health Program clinics statewide.
3. Overcome disparities in access for persons served based on community of residency.
4. Connect mental health and healthcare communities via virtual presence communication technologies.
5. Enhance quality of services and efficiency of resource utilization.
6. Foster Non-profit/public cooperation statewide through telemental health and eHealth innovations.

There are 50 telehealthcare sites currently installed and operational. The 50 installed sites represent a majority of the rural areas of this state. They also represent some of the poorest and least populated counties in Minnesota with major distances to travel for services and other necessities.

Currently there are 31 mental health centers that are members of the Association. The MACMHP office and 13 centers have participated in the initial installation of telehealthcare equipment. There are 11 centers on hold and 7 centers that have chosen not to install telehealthcare equipment. The 13 beginning centers that did not implement all their identified satellite locations will be activating these sites during the next two years as will the 13 centers on hold. The 7 centers not participating will also be worked with to gain their participation.

2. **Telehealth applications.** Clinical applications such as consultation, individual therapy, group therapy, and medication management are the major drivers for use of telehealthcare. Learning and educational applications and administrative/programmatic applications are the other critical drivers for the use of telehealthcare. The intent is to have the technology bring services to the client and eliminate issues of lack of qualified providers, costly trips for specialized services, waiting lists, and appointment delays.

| **Clinical** | **Educational** | **Administrative** |
|---|---|---|
| Consultation | Seminars | Management |
| Diagnostic Assessment | In-Service Training | Supervision |
| Therapy: Individual, Group, Family | Coaching: Individual, Group | Meetings: Board, Committee, Task Force |
| Medication Management | State Conference | Individual Discussion |
| Case Management | | Group Discussion |
| Discharge Planning | | Business Development |
| Court Hearings, Exams, Pre-Petition Screenings | | Regulatory Discussions |

MACMHP/New Connections sees the importance of developing community health partners and bringing telehealth care to the physician's office. Connecting telehealth technology to the nursing homes, group homes and the offices of professionals is key to increasing healthcare access in rural Minnesota. Also key is the linking of multiple specialty groups in the metropolitan area of Minnesota to rural areas of critical need.

3. **Application requirements to support clinical applications.** MACHMP members have identified the following requirements to support high quality, sustainable telehealth service delivery:
   - User requirements
   - Availability of solution
   - Fit of solution to need
   - Accessibility/ usability
   - Connectivity
   - Quality of performance
   - Reliability
   - Adaptability/flexibility
   - Affordability
   - Life cycle feasibility
   - Cost effectiveness
   - Quality of service
   - 24/7 operation
   - Far end camera control

4. **Organizational and financial accountability**. All New Connections participants are responsible for the monthly operating costs of the network connections. These costs are a major barrier for some centers moving forward with telehealthcare equipment. The FCC Pilot program would enable all centers to implement plans for telehealthcare. The centers would individually be responsible for their 15% share of the costs.

## 5. FCC Pilot Request for Expanded Services – Minnesota Association of Community Mental Health Programs

| Facility Name | Provider Address | RUCA | Type of Facility | Ownership | Current Line | Needed Line | Connection Fee Estimate | Monthly Costs and Fees x 12 | Total Year 1 Costs Estimate | 15% Match Estimate | FCC Request 85% Estimate |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Amherst H. Wilder | 919 Lafond Ave St. Paul, MN 55104 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $12,024 | $12,274 | $1,841 | $10,433 |
| Central MN MH Center | 308 12th Ave S, Buffalo, MN 55313 | 2 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $17,100 | $17,350 | $2,603 | $14,748 |
| Central MN MH Center | 730 Dodge Ave, Ste 101 Elk River, MN 55330 | 2 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $18,288 | $18,538 | $2,781 | $15,757 |
| Central MN MH Center | 407 Washington St, Monticello, MN 55362 | 2 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $19,896 | $20,146 | $3,022 | $17,124 |
| Central MN MH Center | 1321 - 13th St N. St. Cloud, MN 55303 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $10,116 | $10,366 | $1,555 | $8,811 |
| Crisis Connection | PO Box 19550 Minneapolis, MN 55419 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $11,940 | $12,190 | $1,829 | $10,362 |
| Family Networks, Inc. | (fna Crystal) 7600 Boone Ave N #2 Brooklyn Park, MN 55428 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $12,900 | $13,150 | $1,973 | $11,178 |
| Family Networks, Inc. | 4530 W 77th St, Ste 200 Edina, MN 55435 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $11,388 | $11,638 | $1,746 | $9,892 |
| Family Networks, Inc. | Minneapolis, MN | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $12,900 | $13,150 | $1,973 | $11,178 |
| Family Networks, Inc | 5530 Zealand Ave N. New Hope, MN 55428 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $11,388 | $11,638 | $1,746 | $9,892 |
| First Street Center | 600 E 4th St, Chaska, MN 55318 | 1 | Mental Hlth Clinic | Public | T1 | | | $16,200 | $16,200 | $2,430 | $13,770 |
| First Street Center | New Prague, MN | 2 | Mental Hlth Clinic | Public | None | T1 | $250 | $22,608 | $22,858 | $3,429 | $19,429 |
| First Street Center | 540 E 1st St, Waconia, MN 55387 | 2 | Mental Hlth Clinic | Public | T1 | | | $16,032 | $16,032 | $2,405 | $13,627 |
| Five County MH CTR | 521 Broadway Ave N, Braham, MN 55006 | 2 | Mental Hlth Clinic | Non-profit | T1 | | | $19,092 | $19,092 | $2,864 | $16,228 |
| Five County MH CTR | 115 S Adams Cambridge, MN 55008 | 7.3 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $11,388 | $11,638 | $1,746 | $9,892 |
| Five County MH CTR | 110 2nd St NW Milaca, MN 56353 | 10.4 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $18,444 | $18,694 | $2,804 | $15,890 |
| Five County MH CTR | 106 Main St Sandstone, MN 55072 | 10.4 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $23,028 | $23,278 | $3,492 | $19,786 |
| Fraser Child & Family | 3333 University Ave SE, Minneapolis, MN 55414 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $12,048 | $12,048 | $1,807 | $10,241 |
| Hiawatha Valley MHC | 121 S Marshall Caledonia, MN 55921 | 7.3 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $26,340 | $26,590 | $3,989 | $22,602 |

| Facility Name | Provider Address | RUCA | Type of Facility | Ownership | Current Line | Needed Line | Connection Fee Estimate | Monthly Costs and Fees x 12 | Total Year 1 Costs Estimate | 15% Match Estimate | FCC Request 85% Estimate |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Hiawatha Valley MHC | 306 Main St<br>LaCrescent, MN 55947 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $24,864 | $25,114 | $3,767 | $21,347 |
| Hiawatha Valley MHC | 611 Broadway Ave, Ste 100<br>Wabasha, MN 55981 | 10 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $20,676 | $20,926 | $3,139 | $17,787 |
| Hiawatha Valley MHC | 166 Main St.<br>Winona, MN 55987 | 4 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $17,220 | $17,470 | $2,621 | $14,850 |
| Human Dev. CTR | 40 Eleventh St.<br>Cloquet, MN 55720 | 4.2 | Mental Hlth Clinic | Non-profit | T1 | | | $18,516 | $18,516 | $2,777 | $15,739 |
| Human Dev. CTR | 1401 E 1st St.<br>Duluth, MN 55805 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $10,704 | $10,704 | $1,606 | $9,098 |
| Human Dev. CTR | 1807 W Hwy 61, PO 847,<br>Grand Marais, MN 55604 | 10 | Mental Hlth Clinic | Non-profit | T1 | | | $26,364 | $26,364 | $3,955 | $22,409 |
| Human Dev. CTR | Mercy Hospital, 710 S Kenwood Av.<br>Moose Lake, MN 55767 | 10.5 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $16,836 | $17,086 | $2,563 | $14,523 |
| Human Dev. CTR | 99 Edison Blvd.<br>Silver Bay, MN 55614 | 10.6 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $11,388 | $11,638 | $1,746 | $9,892 |
| Human Dev. CTR | 39 N 25th St E.<br>Superior, WI 54880 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $16,200 | $16,450 | $2,468 | $13,983 |
| Human Dev. CTR | 629 First Ave.<br>Two Harbors, MN 55616 | 7.3 | Mental Hlth Clinic | Non-profit | T1 | | | $17,460 | $17,460 | $2,619 | $14,841 |
| Human Serv. Inc. | 8451 E Point Douglas Rd,<br>Cottage Grove, MN 55016 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $12,672 | $12,672 | $1,901 | $10,771 |
| Human Serv. Inc. | 121 11th Ave SE<br>Forest Lake, MN 55025 | 2 | Mental Hlth Clinic | Non-profit | T1 | | | $11,064 | $11,064 | $1,660 | $9,404 |
| Human Serv. Inc. | 5650 Memorial Ave .<br>Oak Park Heights, MN | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $13,728 | $13,728 | $2,059 | $11,669 |
| Human Serv. Inc. | 7066 Stillwater Blvd N,<br>Oakdale, MN 55128 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $12,612 | $12,612 | $1,892 | $10,720 |
| Human Serv. Inc. | 375 E Orleans S.<br>Stillwater, MN 55082 | 2 | Mental Hlth Clinic | Non-profit | T1 | | | $13,728 | $13,728 | $2,059 | $11,669 |
| Lakeland MHC | 714 Washington Ave,<br>Detroit Lakes, MN 56501 | 7 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $15,312 | $15,562 | $2,334 | $13,228 |
| Lakeland MHC | 28 Central Ave S.<br>Elbow Lake, MN 56531 | 10.5 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $18,624 | $18,874 | $2,831 | $16,043 |
| Lakeland MHC | 126 E Alcott Av.<br>Fergus Falls, MN 56537 | 4 | Mental Hlth Clinic | Non-profit | T1 | | | $17,856 | $17,856 | $2,678 | $15,178 |
| Lakeland MHC | 105 2nd Ave N.<br>Glenwood, MN 56334 | 10.5 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $14,244 | $14,494 | $2,174 | $12,320 |
| Lakeland MHC | 1010 32nd Ave S,<br>Moorhead, MN 56560 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $10,116 | $10,116 | $1,517 | $8,599 |

| Facility Name | Provider Address | RUCA | Type of Facility | Ownership | Current Line | Needed Line | Connection Fee Estimate | Monthly Costs and Fees x 12 | Total Year 1 Costs Estimate | 15% Match Estimate | FCC Request 85% Estimate |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lakeland MHC | 155 5th St NE Perham, MN 56573 | 10 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $14,592 | $14,842 | $2,226 | $12,616 |
| MACMHP | 1821 University Ave W, Ste 307-S, St. Paul, MN 55104 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $12,252 | $12,252 | $1,838 | $10,414 |
| Mental Health Resourc | 3928 Sibley Memorial Hwy, Eagan, MN 55122 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $12,612 | $12,862 | $1,929 | $10,933 |
| Mental Health Resourc | 1821 University Ave W, Ste 464-N, St. Paul, MN 55104 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $12,612 | $12,862 | $1,929 | $10,933 |
| Northern Pines MHC | 520 5th St NW Brainerd, MN 56401 | 4 | Mental Hlth Clinic | Non-profit | T1 | | | $17,736 | $17,736 | $2,660 | $15,076 |
| Northern Pines MHC | 1906 5th Ave SE, PO 367 Little Falls, MN 56345 | 7.3 | Mental Hlth Clinic | Non-profit | T1 | | | $15,696 | $15,696 | $2,354 | $13,342 |
| Northern Pines MHC | 15 9th St SE Long Prairie, MN 56347 | 7 | Mental Hlth Clinic | Non-profit | T1 | | | $16,800 | $16,800 | $2,520 | $14,280 |
| Northern Pines MHC | 616 4th St NE, Ste 3 Staples, MN 56479 | 7 | Mental Hlth Clinic | Non-profit | T1 | | | $19,032 | $19,032 | $2,855 | $16,177 |
| Northland Coun. Ctr. | 215 SE 2nd Ave. Grand Rapids, MN 55744 | 7 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $10,836 | $11,086 | $1,663 | $9,423 |
| Northland Coun. Ctr. | 1404 Highway 71 International Falls, MN | 7 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $35,928 | $36,178 | $5,427 | $30,751 |
| Northwestern MHC | 603 Brucet Crookston, MN 56716 | 8 | Mental Hlth Clinic | Non-profit | T1 | | | $10,944 | $10,944 | $1,642 | $9,302 |
| People Inc. | 2665 Fourth Ave N, Ste 108 Anoka, MN 55303 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $14,904 | $14,904 | $2,236 | $12,668 |
| People Inc. | 7373 W 147th St, Ste 197 Apple Valley, MN 55124 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $16,260 | $16,260 | $2,439 | $13,821 |
| People Inc. | 726 Second St NE Minneapolis, MN 55413 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $11,940 | $11,940 | $1,791 | $10,149 |
| People Inc. | 317 York Ave. St. Paul, MN 55130 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $11,964 | $11,964 | $1,795 | $10,169 |
| Range MHC | 3403 3rd Ave W. Hibbing, MN 55746 | 4 | Mental Hlth Clinic | Non-profit | T1 | | | $20,208 | $20,208 | $3,031 | $17,177 |
| Range MHC | 624 S 13th St. Virginia, MN 55792 | 4 | Mental Hlth Clinic | Non-profit | T1 | | | $19,512 | $19,512 | $2,927 | $16,585 |
| Southwestern MHC | PO Box 269, 401 W St, Ste 0115, Jackson, MN 56143 | 7 | Mental Hlth Clinic | Non-profit | T1 | | | $13,956 | $13,956 | $2,093 | $11,863 |
| Southwestern MHC | PO Box 686, 216 E Luverne Luverne, MN 56156 | 7 | Mental Hlth Clinic | Non-profit | T1 | | | $19,788 | $19,788 | $2,968 | $16,820 |
| Southwestern MHC | PO Box 85, 1016 8th Ave SW, Pipestone, MN 56164 | 7 | Mental Hlth Clinic | Non-profit | T1 | | | $20,340 | $20,340 | $3,051 | $17,289 |

| Facility Name | Provider Address | RUCA | Type of Facility | Ownership | Current Line | Needed Line | Connection Fee Estimate | Monthly Costs and Fees x 12 | Total Year 1 Costs Estimate | 15% Match Estimate | FCC Request 85% Estimate |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Southwestern MHC | 9 4th St.<br>Windom, MN 56101 | 7 | Mental Hlth Clinic | Non-profit | T1 | | | $10,836 | $10,836 | $1,625 | $9,211 |
| Southwestern MHC | PO Box 175, 1024 7th Ave.<br>Worthington, MN 56187 | 4 | Mental Hlth Clinic | Non-profit | T1 | | | $18,432 | $18,432 | $2,765 | $15,667 |
| Upper Miss. MHC | 722 15th St NW, PO 640<br>Bemidji, MN 56619 | 4 | Mental Hlth Clinic | Non-profit | T1 | | | $11,064 | $11,064 | $1,660 | $9,404 |
| Upper Miss. MHC | 120 N Main Ave.<br>Park Rapids, MN 56470 | 8 | Mental Hlth Clinic | Non-profit | T1 | | | $16,080 | $16,080 | $2,412 | $13,668 |
| Woodland Centers | 206 S 3rd St.<br>Atwater, MN 56209 | 5 | Mental Hlth Clinic | Non-profit | T1 | | | $16,428 | $16,428 | $2,464 | $13,964 |
| Woodland Centers | 1209 Pacific Ave.<br>Benson, MN 56215 | 7 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $17,628 | $17,878 | $2,682 | $15,196 |
| Woodland Centers | 1296 Chestnut St.<br>Dawson, MN 56232 | 10.6 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $21,924 | $22,174 | $3,326 | $18,848 |
| Woodland Centers | 114 N Holcombe Ave, # 230<br>Litchfield, MN 55355 | 7 | Mental Hlth Clinic | Non-profit | T1 | | | $11,064 | $11,064 | $1,660 | $9,404 |
| Woodland Centers | 517 N 17th St.<br>Montevideo, MN 56265 | 7 | Mental Hlth Clinic | Non-profit | T1 | | | $16,464 | $16,464 | $2,470 | $13,994 |
| Woodland Centers | 1635 W Lincoln Ave.<br>Olivia, MN 56277 | 10 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $14,424 | $14,674 | $2,201 | $12,473 |
| Woodland Centers | 1125 SE 6th St.<br>Willmar, MN 56201 | 4 | Mental Hlth Clinic | Non-profit | T1 | | | $10,116 | $10,116 | $1,517 | $8,599 |
| Zumbro Valley MHC | Box 214, 301 St. Paul St.<br>Preston, MN 55965 | 10.4 | Mental Hlth Clinic | Non-profit | T1 | | | $12,996 | $12,996 | $1,949 | $11,047 |
| Zumbro Valley MHC | 1931 Viking Dr NW<br>Rochester, MN 55901 | 1 | Mental Hlth Clinic | Non-profit | T1 | | | $10,116 | $10,116 | $1,517 | $8,599 |
| People Incorporated | 1315 Girard Ave N,<br>Minneapolis, MN 55411 | 1 | Mental Hlth Clinic | | None | | | $0 | $0 | $0 | $0 |
| Hamm Clinic | 408 St. Peter St.,# 429<br>St. Paul, MN 55102 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $10,116 | $10,366 | $1,555 | $8,811 |
| Hennepin County MHC | 1801 Nicollet Ave.<br>MCS626,Mpls,MN 55403 | 1 | Mental Hlth Clinic | County | None | T1 | $250 | $10,116 | $10,366 | $1,555 | $8,811 |
| South Central HRC | 610 Florence Ave.<br>Owatonna, MN 55060 | 4 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $12,024 | $12,274 | $1,841 | $10,433 |
| Touchstone MH | 2829 University Ave SE St 200, Mpls, MN 55414 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $10,116 | $10,366 | $1,555 | $8,811 |
| Washburn Child G. Ctr | 2430 Nicollet Ave S,<br>Mpls,MN 55404-3449 | 1 | Mental Hlth Clinic | Non-profit | None | T1 | $250 | $10,116 | $10,366 | $1,555 | $8,811 |
| **TOTALS** | | | | | | | **$9,250** | **$1,191,276** | **$1,200,526** | **$180,079** | **$1,020,447** |

## IV. MINNESOTA TELEHEALTHCARE BROADBAND INITIATIVE: Establishing A Collaborative Telehealth Infrastructure to Interconnect Existing Networks and Provide Access to Internet2 and National LambdaRail.

**A. Project concept and rationale.** As demonstrated in previous sections, Minnesota has a number of well established telecommunication networks serving various healthcare provider entities. These entities participate in distinct network architectures either as individual institutions, as regional collaboratives or as organizational systems. Consequently, there are a number of excellent but fragmented telehealth efforts and overlapping telehealth networks. As of yet, no coordination or broadly organized support for telehealth development currently exists. This section on the Greater Minnesota Telehealth Broadband Initiative addresses this issue.

The Greater Minnesota Telehealth Broadband Initiative infrastructure will integrate established telecommunication networks serving various healthcare systems into a seamless broadband enabled telehealth and telemedicine delivery service infrastructure dedicated to improving access to health care across rural Minnesota and beyond. It will promote technical standards and operational best practices to reduce costs, boost performance, and improve user-friendliness of telehealth application.

The long range vision is for a shared service infrastructure to link the various segments of the health care industry including public, non-profit and for-profit entities with higher education facilities; federal, tribal, state and local government's healthcare policy administration and health care program agencies to enable sustainable healthcare program delivery and administration throughout the state and beyond.

**B. Internet2 and LamdaRail.** The Northern Lights GigaPoP, a network operated by the University of Minnesota, provides access to Internet2 and National LambdaRail for the University of Minnesota. Through cooperative initiatives with the Minnesota State Colleges and Universities (MNSCU), State of Minnesota MNET, regional network coordinators, and local Internet Service Providers, Northern Lights connects public and private higher education K-12 schools to advanced networks.

Minnesota Telehealth Broadband Initiative infrastructure will ensure Internet2 and National LambdaRail access to all participating healthcare entities served by participating networks connected to the Infrastructure. Healthcare providers will be able to participate in nationwide and worldwide broadband connections, thereby expanding the number of telehealth applications and telehealth opportunities including nationwide emergency planning and response. All this adds to the cost effectiveness and general sustainability of Minnesota's telehealth care delivery systems.

**C. Network of networks.** The Greater Minnesota Telehealth Broadband infrastructure will establish a broadband network connection from each participating IP network to a collaborative IP network infrastructure shared among participating networks.

The Greater Minnesota Telehealth Broadband Initiative infrastructure will consist of the following:

1. IP network interconnection among participants and shared high capacity access to Internet2 and the National LambdaRail networks. This network interconnection better ensures that communications between networks follow the shortest and most secure route.
2. Application Gateways within each service provider network to enable direct IP-to-IP interconnect between multiple service provider networks for session-based services (i.e., H.323 videoconferencing). These application gateway servers provide protocol inter-working, security, and admission control and management for real-time sessions.
3. Broadband network connection(s) from the service provider network to the Minnesota Telehealth Infrastructure. These connections will be sized to enable complex IP communications among Minnesota Telehealth participants, without transversal across the Internet. An agreed-to set of standardized QoS protocols will be deployed by each service provider from their application gateways to the Minnesota Telehealth Infrastructure.
4. Minnesota Telehealth Directory Gatekeepers will manage video calling between networks, and to Internet2 locations using the Global Dialing Scheme. H.323 and network test systems will enable service providers to quickly isolate and identify network or application issues between service provider networks.

**D. Existing network architectures participating in the Greater Minnesota Telehealth Broadband Initiative infrastructure.** Three existing telecom architectures (distinct IP networks) have agreed to collaborate in the initial deployment of the Minnesota Telehealth Infrastructure. These are:

1. **State of Minnesota.** The network known as Minnesota's Network for Enterprise Telecommunications or MNET, a public private partnership using leased-line network facilities, is an integrated statewide network for education, local governments and state agencies. The University of Minnesota, Minnesota State Colleges and Universities and the Minnesota Office of Enterprise Technology are partners in supporting this shared services infrastructure for Minnesota's public sector entities (Appendix H).
2. **Onvoy**. Since 1988 Onvoy has been a Minnesota-focused communications and IT provider with thriving wholesale and retail operations. Onvoy provides a full suite of carrier, IP network services, local and long distance telecommunications, OCN data circuits, SS7 and Operator Services. Today Onvoy is leading Minnesota service providers in the deployment and support of fully managed IP network services such as Voice over IP, Video over IP and Private Data Networking. With more than 100,000 customers on its legacy voice network and with nearly 20 years of experience providing advanced voice services to rural Minnesota communities, Onvoy is an experienced network service provider.

   Onvoy's customer base includes several key government agencies, several of the state's K-12 schools and higher education institutions, healthcare organizations, financial institutions, the majority of independent telephone companies throughout Minnesota and large enterprise corporate clients. In addition, Onvoy provides network access services to a number of the nation's largest carriers. Onvoy delivers leading-edge, high-capacity transport facilities to Interexchange Carriers (IXCs), Internet Service Providers (ISPs), Competitive Local Exchange Carriers (CLEC) and Wireless Providers.

Onvoy has provided special focus on the Minnesota healthcare market for more than a decade. Onvoy now delivers these services to hundreds of healthcare providers, many in rural Minnesota. These healthcare providers span the gamut from long term care and mental health clinics, to community clinics and physician offices, to critical access hospitals and some of the largest health systems in the state. Some sites also represent tertiary health care functions like public health or radiology/imaging. All these sites gain access to the Onvoy Converged IP services network, a 3500-mile fiber optic network that traverses the state. This network supports our video conferencing services for telemedicine, whether that involves a no-charge point-to-point connection between two on-network sites, a bridged connection to an off-network or ISDN site, or an operator-assisted multi-site conference. These capabilities securely and reliably support the dispersion of sophisticated health care services to citizens across the state and beyond (Appendix I).

3. **SISU Medical Systems**. A consortium of medical centers sharing information technology resources organized as a 501e non-profit corporation. SISU operates a leased –line converged IP network in support of its member healthcare entities. See previous Section III.C.

4. **University of Minnesota.** The Northern Lights GigaPoP is a network initiative operated by the University of Minnesota. As a regional hub for advanced research and education networks, Northern Lights provides access to Internet2 and National Lambda Rail for the University of Minnesota campuses. Through cooperative agreements with the State of Minnesota Office of Enterprise Technology and local Internet Service Providers, Northern Lights connects 53 community, state university, and technical college campuses; approximately 60% of K-12 public school districts; and 16 private colleges throughout Minnesota. Mayo Clinic is also a connection participant. Northern Lights has connection and network peering and agreements with research and education entities in Iowa, Wisconsin, North Dakota and South Dakota.

**E. Network connectivity requirements and characteristics for video network interconnections**. Participants in the collaborative Greater Minnesota Telehealth Broadband Initiative infrastructure have agreed to the following set of parameters for the videoconferencing and other healthcare applications which would flow across and among the network architectures.

1. Seamless, “any to any” 10-digit dialing between IP H.323 video endpoints with PSTN-registered E.164 numbers.
2. Maintain end-to-end QoS including parameters:
    a. Average roundtrip delay of < 50 milliseconds
    b. < 0.1% packet loss
    c. < 20 millisecond jitter (delay variance)
    d. 99.99% network availability
3. Sufficient bandwidth to support high-quality full motion video:
    a. minimum national standard: 384 kbps
    b. minimum width overhead: 450 kbps
    c. ability to request: 768-1,000 kbps (i.e. live cardiac telehealth)

4. Administrative network security policy and operational requirements meet confidentiality demands of HIPAA regulations.
5. Support for standard-based encryption between H.323 endpoints
6. Support for H.239 control standards
7. Adherence to common technical standards and operational procedures to maintain system reliability

**F. Network connectivity requirements and characteristics for IP to ISDN connectivity**

1. Seamless, "any to any" 10-digit dialing between IP H.323 video endpoints with PSTN-registered E.164 numbers and ISDN video endpoints on the PSTN.
    a. Centralized access to IP-ISDN gateway services that are available for automated/user-initiated video calling as well as operator assisted calls.
    b. Standard operating procedures for utilization of IP-ISDN gateway services and centralized billing of access and toll charges.

**G. Estimated cost and allocation to networked facilities.** For the initial pilot deployment of the Minnesota Telehealth Infrastructure (MTHI), there will be a combination of one-time and recurring costs for provisioning and support of the MTHI. These costs will be apportioned among the participating entities. The objective of cost allocations should be to equalize the cost among participating healthcare entities in a manner which reasonably shares the cost on a per entity basis, rather than on a per network basis. In addition, cost disparities for rural versus urban high-capacity leased line connections should be minimized by pooling total transport costs and averaging expense per entity served.

1. **Initial infrastructure costs.** It is estimated that the approximate one-time cost for application gateway infrastructure for each network architecture to be $100,000 per network, and the cost for common network and management infrastructure at the interconnection point to be $150,000.
2. **MCU bridging and PSTN ISND connectivity.** Infrastructure expansion for increased capacity is estimated at $100,000.
3. **Ongoing line and operational costs.** Broadband high-capacity network connections and Internet2/LamdaRail access would have an estimated recurring cost of $20,000 per month or $240,000 per year.

| **Greater Minnesota Telehealth Network Infrastructure** | | | | | |
|---|---|---|---|---|---|
| | **Equipment/ infrastructure/ 1-time costs** | **Monthly Network Costs x12** | **Total Year 1 Costs** | **15% Match** | **85% Total** |
| Application gateway infrastructure per network | | | | | |
| - State of MN | $100,000 | $0 | $100,000 | $15,000 | $85,000 |
| - Onvoy | $100,000 | $0 | $100,000 | $15,000 | $85,000 |
| - SISU | $100,000 | $0 | $100,000 | $15,000 | $85,000 |
| - At central interconnection point | $150,000 | $0 | $150,000 | $22,500 | $127,500 |
| Infrastructure expansion for increased capacity in MCU bridging and PSTN ISDN connectivity | $100,000 | $0 | $100,000 | $15,000 | $85,000 |
| Ongoing line and operational costs for broadband high-capacity network and Internet 2/ LamdaRail access ($20K per month estimated) | | $240,000 | $240,000 | $36,000 | $204,000 |
| **TOTAL** | **$550,000** | **$240,000** | **$790,000** | **$118,500** | **$671,500** |

**H. Management and leadership.** Participating network managers in the initial pilot deployment of the MTHI have agreed in principle to develop a management process, agreements and healthcare entity oversight which would enable the participating healthcare entities to experience a robust service and support infrastructure that is in alignment with the right-now, mission-critical nature of telehealth communications. The goal is to enable participating healthcare entities to enjoy the same end-to-end support across multiple networks as they experience today within a single network.

1. **Service level agreements.** This vision will be realized through well defined service level agreements among networks, documented support processes, clear escalation procedures, transparent reporting on incidents among network managers and end-users along with a plan for a closed loop corrective process which looks at altering processes, procedures or designs to eliminate future incidents of the same nature.
2. **Initial implementation of the interconnection infrastructure**. Implementation and ongoing management and maintenance of the shared infrastructure (represented in this application as the Minnesota Telehealth Infrastructure) will be performed in a centralized fashion, with costs allocated across the participating healthcare providers. Many of these shared costs may also be subsidized or reimbursed by the pilot program.
3. **Management and Support Services**. To achieve the desired ubiquitous telehealth capabilities within Minnesota within the context of multiple network architectures, these functions require central administration. Some of the costs for these functions can be clearly allocated on a usage-basis, while others are more common, and thus require the allocation described above. The following support and administrative functions will be considered as part of this centralized management system and will be an expectation of the services provider(s). These include the following:
    a. Develop and adhere to common set of telehealth applications and event support standards and operational procedures
    b. Centralized and shared directory of telehealth capable facilities and sites listing the telehealth applications supported at each.
    c. Centralized directory of available practitioners and specialists prepared to support telehealth applications
    d. Centralized telehealth event management and scheduling – online/automated/assisted
    e. Centralized network-wide online calendar of events including videoconference facilities
    f. Event planning assistance, consultation and support
    g. 24 x 7 help desk with telehealth-knowledgeable staff
    h. Robust videoconferencing bridging services – fully user-controlled/automated options and operator-assisted options with technical support for transcoding, speed matching, cascading, etc.
    i. Common technology standards and operational procedures and policies (including privacy) for visits and consultations.

    Many of these costs can be charged on a usage basis, and need not be managed as centralized, common costs which are allocated to the health care providers.

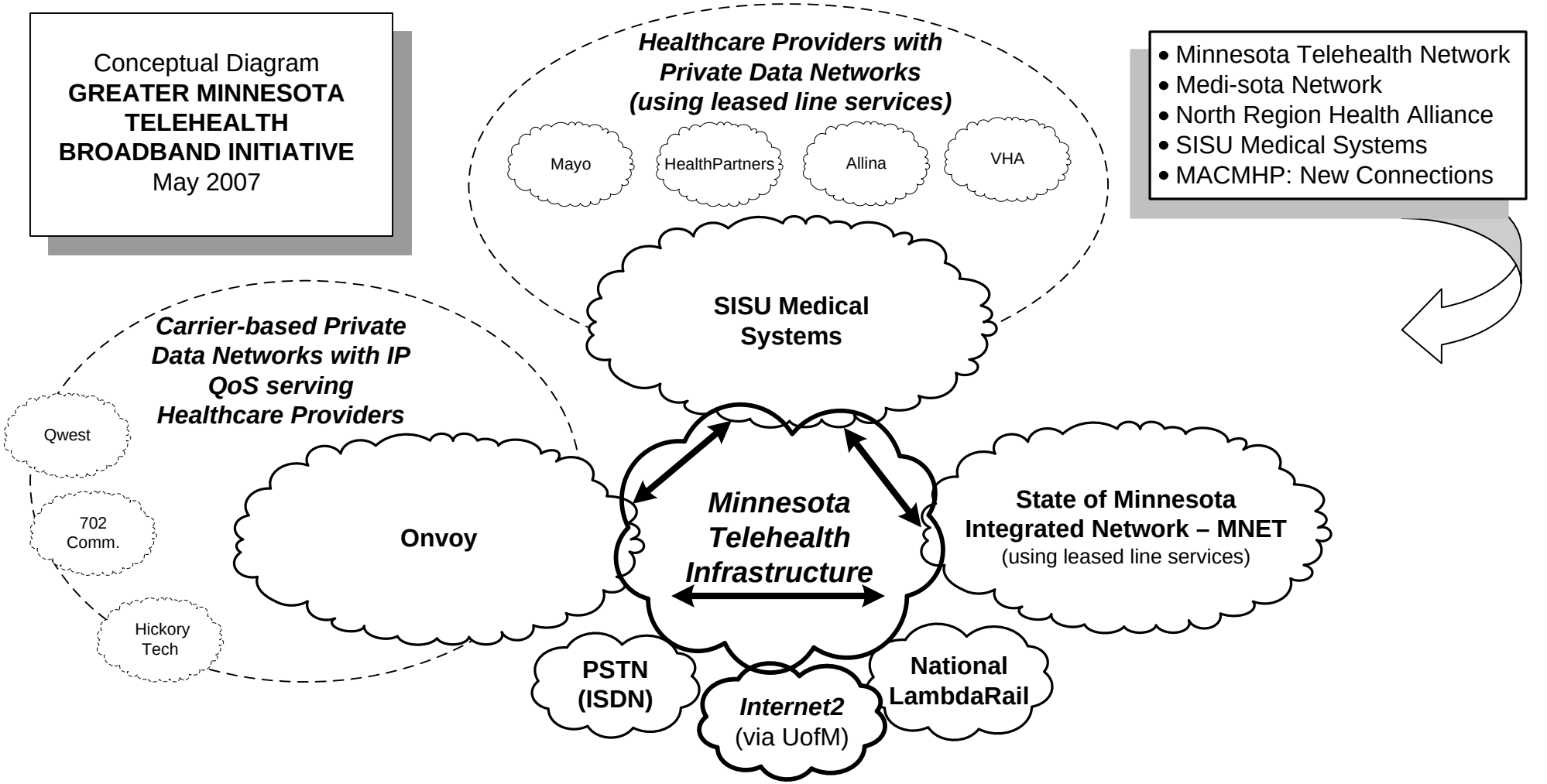
I. **Proposed Coordination and Ongoing Sustainability.** In addition to providing a robust network architecture for telehealth applications, the parties to this project are in agreement that to achieve true success for rural healthcare delivery using advance broadband telecommunications, all participating healthcare entities and network service providers need to focus on ongoing support for the core telehealth applications. It is agreed that the effort is not focused on the network infrastructure as an end in itself, rather the network is only a means to achieve seamless support for telehealth applications.

1. **Greater Minnesota Telehealth Initiative Steering Committee**. This steering committee will be responsible for further coordination, development and implementation of the Greater Minnesota Telehealthcare Network.
    a. Membership will comprise representatives from each co-applicant organization, along with representation from telecommunications networking and applications, data security and privacy, data collection and analysis, telehealth policy, financial analysis.
    b. It will also form the core group for exploration of a formalized telehealth network coordinating entity in Minnesota and border states.
    c. The Committee will meet at regular intervals during the pilot to review reports and presentations by sites or disciplines and recommend adjustments to the pilot process, as appropriate.
    d. The Committee will work collaboratively to develop, document and publish shared information and processes, and to ensure that the necessary support functions are in place to deliver high quality and reliable telehealth capabilities.
    e. To achieve sustainability, the Committee will meet at regular intervals to share information, review reports and presentations by sites or disciplines and recommend adjustments to the pilot process, as appropriate.
2. **Continued coordination and support by major statewide partners:** University of Minnesota, Minnesota State Colleges and Universities (MNSCU), Minnesota Department of Health, Minnesota Department of Human Services, Minnesota Office of Enterprise Technology. These organizations will be represented on the steering committee and provide staff support and planning services as appropriate.
3. **Great Plains Telehealth Resource & Assistance Center (TRAC).** The Great Plains TRAC will provide support to the Greater Minnesota Telehealth Broadband Initiative health care provider participants through its telehealth support, training and development services. It will also assist with regional coordination (See Section II.F.)**.**
4. **Broad range of health care applications.** To achieve ongoing sustainability after the pilot, it is well understood that the healthcare entities need to embrace the broadest possible range of telehealth applications. These applications need to become the everyday and preferred way to meet the broad range of needs of healthcare entities.

J. **Beyond the Pilot.** Project participants desire to move telehealth from its current "pilot project" status within many healthcare entities. These "pilots" rely on subsidies to be cost-effective, and often never achieve broad adoption for healthcare delivery due to a lack of ongoing funding by healthcare entity administration. Collectively, the partners in

the Greater Minnesota Telehealthcare Broadband Initiative believe the timing is right to move telehealth into the mainstream of healthcare delivery and support.

Conceptual Diagram
**GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE**
May 2007



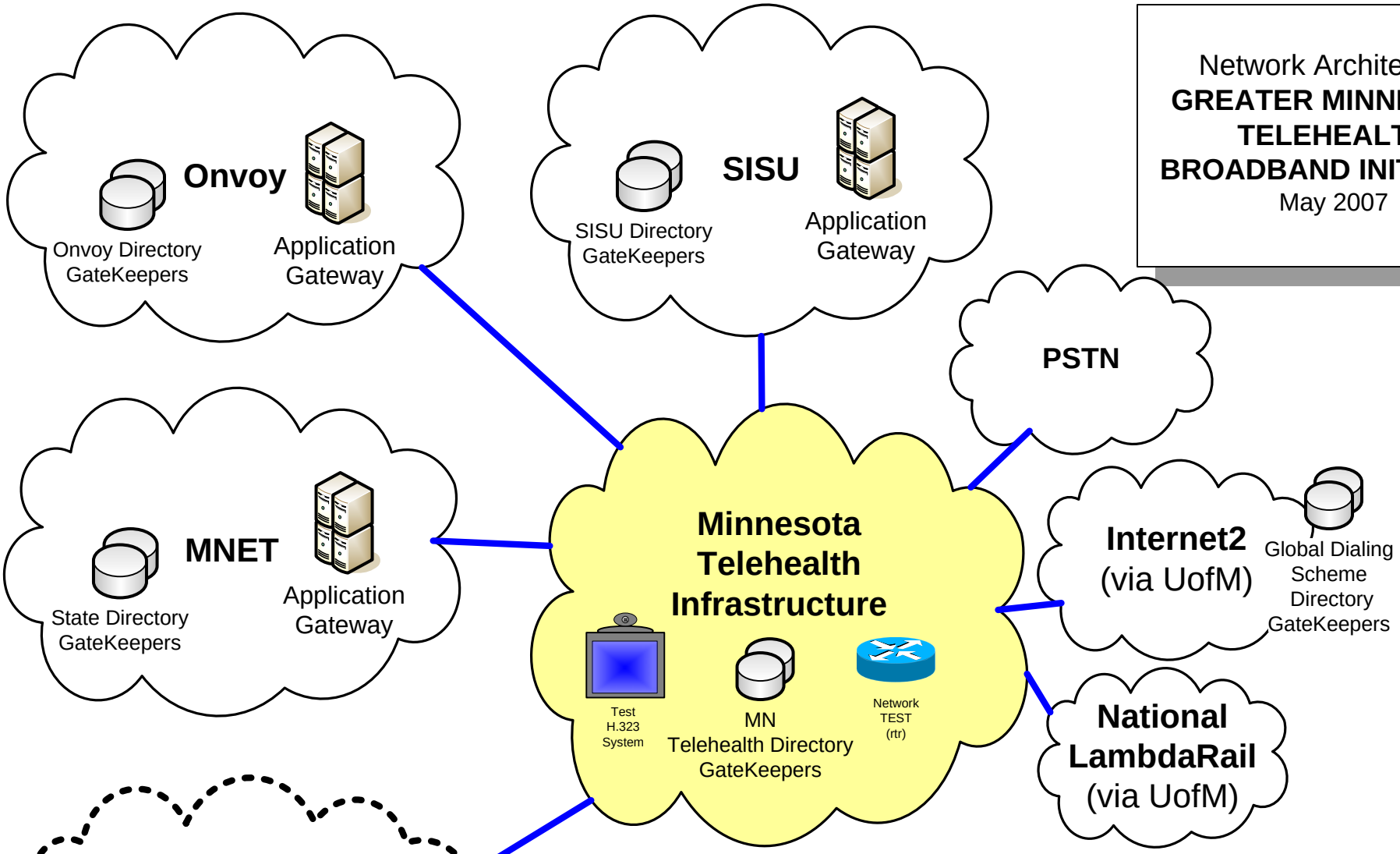

Critical Access Hospitals | Homeland Security | Center for Disease Control | Local Public Health Agencies | Homecare Agencies | Medical Schools | Public Higher Education | Emergency Responders

Physician Clinics | Long-term Care Facilities | Mental Health Centers | Federal Facilities | Research Universities | Community Clinics | Correctional Facilities | Public Health Admin. | Social Service Heathcare

Healthcare Entities

*This conceptual diagram represents how interconnection of current IP networks serving Minnesota health related entities can expand and enhance telehealthcare applications in rural Minnesota. Some of these provider or telecom networks (represented as directly connecting to the Mn Telehealth Infrastructure) are participating in this pilot program grant application. Others have some current Minnesota telehealth activity, but are not currently participating in this pilot program. The health care providers and related entities represented at the bottom can connect to the MN Telehealth Infrastructure in a variety of ways, through any of the entities connected to the core MN Telehealth Infrastructure.*

Network Architecture
**GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE**
May 2007



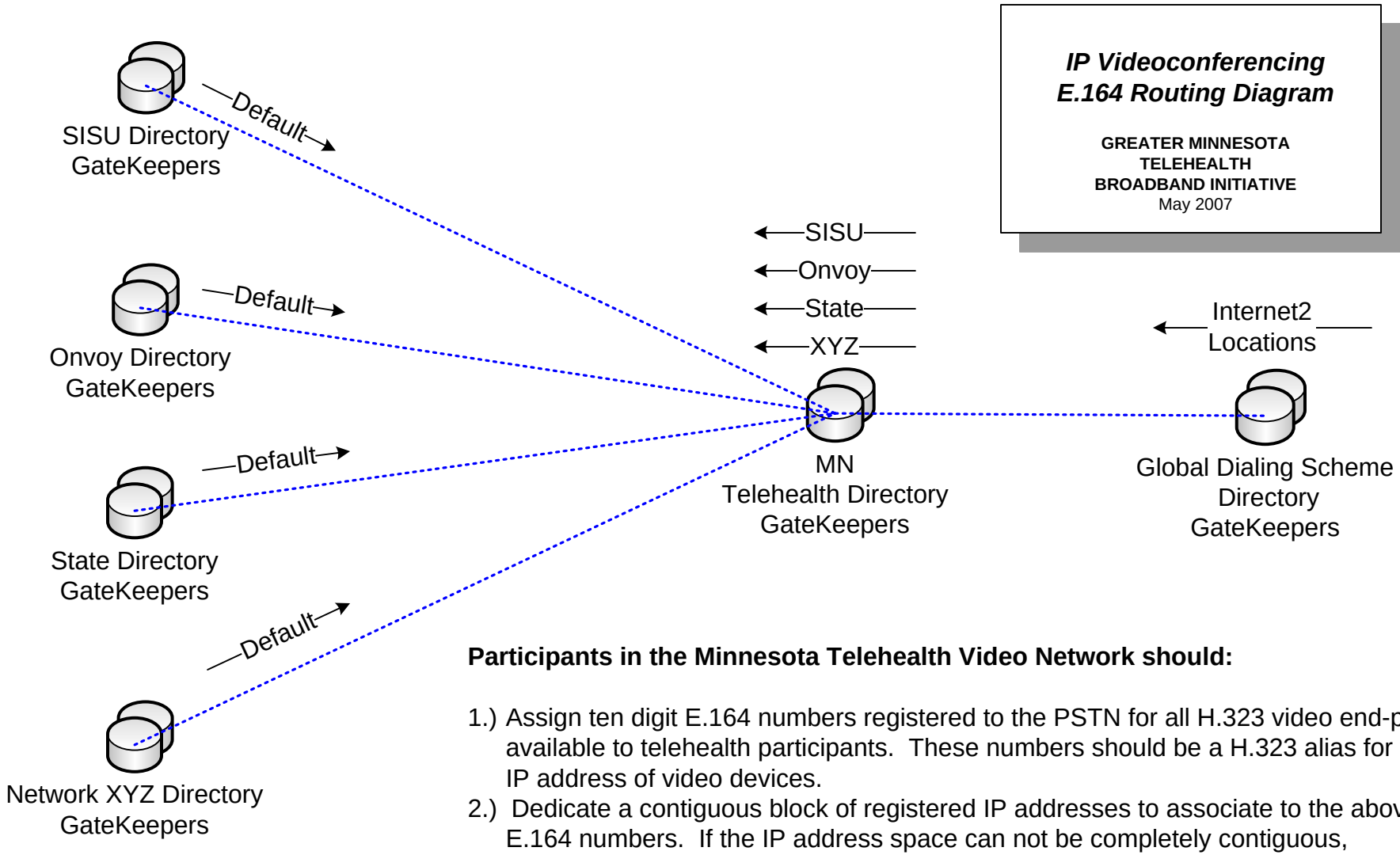

**Minnesota Telehealth Infrastructure consists of the following:**

1.) IP network interconnection among participants and shared access to the Public Switched Telephone Network (PSTN), Internet2 and the National LambdaRail networks.

2.) An Application Gateway within each service provider network to enable direct IP-to-IP interconnect between multiple service provider networks for session-based services (i.e., H.323 videoconferencing). These servers provide protocol inter-working, security, and admission control and management for videoconference sessions.

3.) Broadband network connection(s) from the service provider network to the Minnesota Telehealth Infrastructure. These connections should be sized to enable complex IP communications among Minnesota Telehealth participants, without transversal across the Internet. An agreed-to set of standardized QoS protocols are deployed by each service provider from their application gateways to the Minnesota Telehealth Infrastructure.

4.) Minnesota Telehealth Directory Gatekeepers manage video calling between networks, and to Internet2 locations. H.323 and network test systems enable service providers to quickly isolate and identify network or application issues between service provider networks.




**Participants in the Minnesota Telehealth Video Network should:**

1.) Assign ten digit E.164 numbers registered to the PSTN for all H.323 video end-points available to telehealth participants. These numbers should be a H.323 alias for the IP address of video devices.
2.) Dedicate a contiguous block of registered IP addresses to associate to the above E.164 numbers. If the IP address space can not be completely contiguous, providers should keep the number of blocks assigned to a minimum.
3.) Maintain a fully redundant set of H.323 video directory gatekeepers to manage video call control and directory look-up functions on their network.
4.) Each provider's directory gatekeeper should maintain a connection to the MN Telehealth Directory Gatekeepers to enable inter-provider video call control and directory look-up for inter-network calls.
5.) Each provider should establish a Internet2, ViDeNet Organizational Prefix to register their network within the Global Dialing Scheme. Providers may use the MN Telehealth Directory Gatekeeper to forward requests to the GDS gatekeeper or may establish that connection on their own.

## IV. SUMMARY COST ESTIMATE and REQUEST UNDER THE FCC RURAL HEALTH CARE PILOT PROGRAM

| **A. Network Infrastructure Requests** | | | | | |
|---|---|---|---|---|---|
| **Network** | **Equipment/ infrastructure/ 1-time costs** | **Monthly Network Costs x12** | **Total Year 1 Costs** | **15% Match** | **85% Total** |
| Minnesota Telehealth Network | $70,000 | $306,000 | $376,000 | $56,400 | $319,600 |
| North Region Health Alliance | $100,000 | $324,000 | $424,000 | $63,600 | $360,400 |
| SISU Medical Systems | $114,000 | $546,000 | $660,000 | $99,000 | $561,000 |
| Medi-Sota, Inc. | $32,400 | $129,600 | $162,000 | $24,300 | $137,700 |
| MACMHP/ New Connections | $9,250 | $1,191,276 | $1,200,526 | $180,079 | $1,020,447 |
| **A. SUBTOTAL** | **$325,650** | **$2,496,876** | **$2,822,526** | **$423,379** | **$2,399,147** |
| **B. Greater Minnesota Telehealth Network Infrastructure** | | | | | |
| Application gateway infrastructure per network | | | | | |
| - State of MN | $100,000 | $0 | $100,000 | $15,000 | $85,000 |
| - Onvoy | $100,000 | $0 | $100,000 | $15,000 | $85,000 |
| - SISU | $100,000 | $0 | $100,000 | $15,000 | $85,000 |
| - At central interconnection point | $150,000 | $0 | $150,000 | $22,500 | $127,500 |
| Infrastructure expansion for increased capacity in MCU bridging and PSTN ISDN connectivity | $100,000 | $0 | $100,000 | $15,000 | $85,000 |
| Ongoing line and operational costs for broadband high-capacity network and Internet 2/ LamdaRail access ($20K per month estimated) | | $240,000 | $240,000 | $36,000 | $204,000 |
| **B. SUBTOTAL** | **$550,000** | **$240,000** | **$790,000** | **$118,500** | **$671,500** |
| **TOTALS** | **$875,650** | **$2,736,876** | **$3,612,526** | **$541,879** | **$3,070,647** |

## V. REQUEST TO AMEND THE REIMBURSEMENT UNDER THE FCC RURAL HEALTH CARE PILOT PROGRAM AND SUGGESTIONS FOR IMPROVEMENT OF ONGOING USAC SUBSIDY

**A. Current USAC reimbursement places undo burden on small rural health care provider.** As currently administered, a rural health care provider is put at significant disadvantage by the method of reimbursement and by the time taken to receive reimbursement.

1. A small health care provider, such as a Critical Access Hospital or community mental health provider, must often wait sixteen months to two years to receive reimbursement from USAC. Meanwhile, they are being billed by the telecommunciations providers for the full costs of delivering services, even though they've been approved for subsidy under the program.
2. Example: Littlefork Medical Center (LMC), is a small rural clinic in the Minnesota Telehealth Network with one physician and one nurse practitioner providing telehealth services. LMC was approved for USAC subsidy in 2004 and began T1 service in March 2005. LMC pays $1,638/month for its telecommunications; USAC reimbursement of $1,293 brings the net cost to $346/ month. LMC paid approximately $19,000 for the full cost of their T-1 lines before they received any subsidy from USAC. This amount of advance cost for this small hospital/clinic is extremely burdensome.

**B. Request for alternative reimbursements under FCC Rural Healthcare Pilot Program.** The Initiative co-applicants hereby request the following amendments to the reimbursement process under the Rural Healthcare Pilot.

1. **Limit telecommunications provider billing to qualified health care provider participants to the health care provider's FCC-approved portion of the costs only.** Under this program, the billing to the health care provider would be limited to 15% (or the directed amount under the program). Upon receipt of USAC funding, the remaining reimbursement would go directly to the telecommunications provider. This change places the burden of carrying the unreimbursed costs on the telecommunications provider, while providing a significant incentive for development of new lines and services.
2. **Reimburse approved telecommunications providers directly for the difference between the actual cost and the health care providers approved reimbursement.**

**C. Further suggestions for rural health care-friendly changes to the Universal Service Administrative Company (USAC) program.**

1. **Examine requirement to annually complete forms.** Efforts should be directed to eliminate, simplify, and not impose undue burden on all eligible rural health care providers.
    a. **Critical Access Hospital ongoing eligibility.** In particular, Critical Access Hospitals (CAHs) are the smallest, most rural hospitals and receive special designation from the Centers for Medicare and Medicaid Services (CMS) which assures them cost-based reimbursement under Medicare. Upon designation, each hospital

receives special licensure. We recommend that this special licensure allow the CAH to file for USAC eligibility once and that this approval carries forward as long as CAH designation is in force.

b. **Examine ongoing eligibility for other eligible rural providers.** While CAHs receive special licensure as a rural provider, consider expanding ongoing eligibility, based upon RUCA code, to other rural providers. The same administrative burden applies to all small providers.

2. **Expand list of eligible health care providers.** The eligibility list for "health care providers" is too restrictive. The providers listed below are all integral to a rural health care system in need of affordable communications capabilities. With a disproportionately growing number of aging rural patients, health care providers should include:
    a. long term care facilities and nursing homes
    b. home health care providers
    c. hospice facilities
    d. pharmacies dentists
    e. EMS providers. In addition to their role as health care providers, Emergency Medical Services (EMS) agencies are key to the formation of "alert networks" when dealing with bioterrorism events or other emergencies.
3. **Eliminate competitive bidding for rural providers.** Competitive bidding only burdens the process and timeframe in rural areas that are usually served by only one telecommunications carrier.

**SUBMITTED BY:**

**MINNESOTA TELEHEALTH NETWORK, Lead Applicant**

Date: May 3, 2007

By: Maureen Ideker, R.N.

**ON BEHALF OF GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE CO-APPLICANTS:**

**MEDI-SOTA NETWORK, CO-APPLICANT**
**NORTH REGION HEALTH ALLIANCE, CO-APPLICANT**
**SISU MEDICAL SYSTEMS, CO-APPLICANT**
**MINNESOTA ASSOCIATION OF COMMUNITY MENTAL HEALTH PROGRAMS, NEW CONNECTIONS, CO-APPLICANT**

# MEMORANDA OF AGREEMENT

# GREATER MINNESOTA
# TELEHEALTH BROADBAND INITIATIVE

1. **Minnesota Telehealth Network, Lead Applicant**

2. **Medi-sota Network, Co-Applicant**

3. **North Region Health Alliance, Co-Applicant**

4. **SISU Medical Systems, Co-Applicant**

5. **Minnesota Association of Community Mental Health Programs, New Connections, Co-Applicant**

# GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE

## Memorandum of Agreement

THIS AGREEMENT, and amendments and supplements thereto, is between Minnesota Telehealth Network, Medi-sota, Inc., Minnesota Association of Community Mental Health Programs, North Region Health Alliance, and SISU Medical Systems, (hereinafter the PARTNERS); witnesseth that:

WHEREAS, the PARTNERS have voluntarily joined together to improve telehealth services, increase access and improve health quality for rural Minnesota residents; and

WHEREAS, the PARTNERS desire to develop and advance the capacity of Minnesota's telehealth infrastructure; and

WHEREAS the PARTNERS have collaborated on an application to the Federal Communications Commission under the Rural Healthcare Pilot Program;

NOW THEREFORE, it is agreed:

I. ESTABLISHMENT.

The PARTNERS hereby establish the Greater Minnesota Telehealth Broadband Initiative (hereinafter the INITIATIVE) to strengthen and expand existing rural telehealthcare networks and allow them to interconnect with other health care provider networks.

II. PARTNER ACTIVITIES. Each PARTNER agrees to the following

1. Conduct the broadband infrastructure investment activities identified for the PARTNER in the application to the Federal Communications Commission.

2. Authorize the Minnesota Telehealth Network to serve as lead applicant and authorize the lead applicant to submit the application and serve as the organization legally and financially responsible for the conduct of the activities supported by the FCC Rural Health Care Pilot Program.

3. Upon approval of the FCC application and according to the process therein and the process described in the FCC Rural Health Care Pilot Program orders, provide from its member or other resources the required fifteen per cent share of FCC - Pilot Project eligible costs for its network infrastructure activities described in the FCC application.

4. Appoint one representative to the INITIATIVE 's Steering Committee

5. Collaborate with the INITIATIVE and all PARTNERS to achieve the INITIATIVE's long term vision to strengthen the foundation for a statewide, coordinated telehealth system encompassing the broad spectrum of telehealth service delivery.

III. DURATION, TERMINATION AND MODIFICATION

This agreement shall be effective on the date of final signature by the official representatives of the parties and for an initial period of two years, which may be extended by mutual agreement in writing. This

Memorandum of Agreement may be terminated at any time, with or without cause, upon ninety (90) days written notice to the other party.

IN WITNESS WHEREOF, the parties have caused this agreement to be duly executed intending to be bound thereby.

APPROVED:

1. PARTNER
The PARTNER certifies that the appropriate persons(s) have executed the agreement on behalf of the PARTNER.

By: Dominic C. Miley

Title: Administrator

Date: 4/24/07

2. LEAD APPLICANT
The LEAD APPLICANT certifies that the appropriate persons(s) have executed the agreement on behalf of the LEAD APPLICANT.

By: Maureen Ideker R.N.

Title: Tri-County Hospital, Inc.
Director of Patient Care Services

Date: 4/24/07

# GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE

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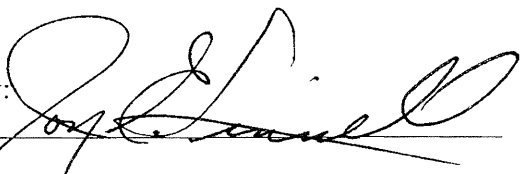
By: 

Title: Executive Director

Date: 4-16-2007

2. LEAD APPLICANT
The LEAD APPLICANT certifies that the appropriate persons(s) have executed the agreement on behalf of the LEAD APPLICANT.

By: Maureen Ideker R.N.

Title: Tri-County Hospital, Inc.
Director of Patient Care Services

Date: 4/24/07

# GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE

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APPROVED:

1. PARTNER
The PARTNER certifies that the appropriate persons(s) have executed the agreement on behalf of the PARTNER.

By: Daniel J. Jacobs

Title: CEO

Date: 4/24/07

2. LEAD APPLICANT
The LEAD APPLICANT certifies that the appropriate persons(s) have executed the agreement on behalf of the LEAD APPLICANT.

By: Maureen Ideker RN

Title: Tri-County Hospital, Inc.
Director of Patient Care Services

Date: 4/25/07

# GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE

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APPROVED:

1. PARTNER
The PARTNER certifies that the appropriate persons(s) have executed the agreement on behalf of the PARTNER.

By: [signature]

Title: Executive Director

Date: 4-17-07

2. LEAD APPLICANT
The LEAD APPLICANT certifies that the appropriate persons(s) have executed the agreement on behalf of the LEAD APPLICANT.

By: Maureen Ideker R.N.

Title: Tri-County Hospital Inc. Director of Patient Care Services

Date: 4/24/07

# GREATER MINNESOTA TELEHEALTH BROADBAND INITIATIVE

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APPROVED:

1. PARTNER
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By: Ron Brand

Title: Executive Director

Date: April 24/2007

2. LEAD APPLICANT
The LEAD APPLICANT certifies that the appropriate persons(s) have executed the agreement on behalf of the LEAD APPLICANT.

By: Maureen Ideker R.N.

Title: Tri-County Hospital, Inc. Director of Patient Care Services

Date: 4/25/07

# LETTERS OF SUPPORT

# GREATER MINNESOTA
# TELEHEALTH BROADBAND INITIATIVE

1. **Internet 2/ Office of the President & CEO**
2. **Minnesota Department of Health/ Office of Rural Health and Primary Care**
3. **State of Minnesota Office of Enterprise Technology/ Network Services Division**
4. **University of Minnesota/ Division of Health Informatics**
5. **University of Minnesota/ Office of Information Technology**
6. **Minnesota Department of Human Services**
7. **Minnesota Hospital Association**
8. **Great Plains Telehealth Resource Center**
9. **Avera Health**
10. **Minnesota State Colleges and Universities/ The Learning Network**
11. **Minnesota Office of Higher Education**
12. **Community Health Information Collaborative**

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

Greater Minnesota Telehealth Broadband
Initiative Committee
c/o Minnesota Telehealth Network
415 North Jefferson
Wadena, MN 56482

To Whom It May Concern:

On behalf of Internet2, I am pleased to write in strong support of the proposal for the Greater Minnesota Telehealth Broadband Initiative that is being submitted 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 the Minnesota Telehealth Network, Medi-sota Network, North Regional Health Alliance, SISU Medical Systems, and the Minnesota Association of Community Mental Health Programs/New Connections for Telehealthcare, along with other partners spanning academic medical centers, public health offices, and telehealth services;
- Provision of connected and managed telehealth services typically associated with major urban health care centers to over 200 health care providers statewide;
- Use of Internet2's high bandwidth network to provide access to unmatched content and support; and
- Likelihood of enhancing telehealth in Minnesota and bordering states, improving access to specialty medical care and research collaborations, addressing barriers (including geographic, demographic, and workforce shortage-related) to remote and rural healthcare, enhancing the timely and accurate delivery of health care records, and cost-effectively improving statewide health care.

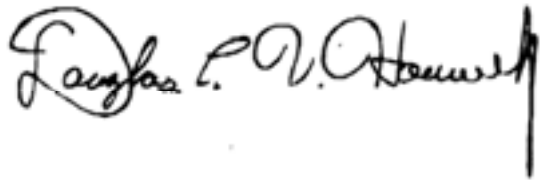
The proposal will utilize the new Internet2 Network and the regional networks to expand the telehealth infrastructure and provide high speed connections to all participants. By incorporating Internet2's middleware, security, and performance measurement tools, it also will provide secure exchange of medical 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,



Douglas E. Van Houweling
President and CEO, Internet2

*Protecting, maintaining and improving the health of all Minnesotans*

April 25, 2007

Maureen Ideker
Greater Minnesota Telehealth Broadband Initiative
Minnesota Telehealth Network
415 N. Jefferson St.
Wadena, MN 56482

Dear Ms. Ideker:

Please accept our enthusiastic support for the Greater Minnesota Telehealth Broadband Initiative's application to the FCC Rural Healthcare Pilot Program.

Your application represents a new and significant level of telehealth integration and expansion in Minnesota. Each of your members has a record of providing excellent telehealth services in Minnesota, and your combined efforts as a multi-partner initiative have the potential to take our state's telehealth system to a whole new level. With eighty percent of Minnesota's geography being rural, distances to health facilities, providers and services are genuine challenges for many in our population. The Initiative's proposed investments in new broadband capacity will connect the majority of Minnesota's rural health providers to telehealth services of the highest quality and reliability.

The members of the Initiative participated in Minnesota's 2006 Telehealth Forum, and I know you all share the vision developed at the forum to use telehealth to help assure patient safety, quality and access for rural and underserved populations. In fact, your hard work since then on this project has led to accomplishing a key recommendation from the forum, to establish a statewide entity to coordinate, develop and support telehealth in Minnesota.

The Greater Minnesota Telehealth Broadband Initiative has brought together top telecommunications and health leaders from government, universities and the public and nonprofit health sectors. We have been pleased to be partner and contributor to this effort, and will provide staff support to the Initiative and related telelhealth development. From our close vantage point it's clear you have assembled all the components, met all the requirements and hit all the objectives the FCC is hoping for. Minnesota and the country will gain greatly from the results you are poised to deliver.

I strongly urge the FCC to support your project. I know it will be a great success!

Sincerely,

Mark Schoenbaum, Director
Office of Rural Health and Primary Care

Office of Enterprise Technology
State of Minnesota
*Innovation. Change. Transformation.*

April 24, 2007

Maureen Ideker
Greater Minnesota Telehealth Broadband Initiative
Minnesota Telehealth Network
415 North. Jefferson Street
Wadena, MN 56482

Dear Ms. Ideker:

On behalf of the State of Minnesota's Office of Enterprise Technology, I am pleased to endorse the **Greater Minnesota Telehealth Broadband Initiative**, Minnesota's application to the FCC Rural Healthcare Pilot Program.

The Office of Enterprise Technology, working in partnership with our public and private sector partners, will bring the resources of the State's shared and utility information technology services to this pilot program. Minnesota's Network for Enterprise Telecommunications, MNET, is an existing public-private partnership delivering an integrated statewide network shared service for education, local government and state agencies.

MNET is a essentially a network of networks, supporting the higher education Learning Network of Minnesota, enterprise networks for the Minnesota Department of Health and Department of Human Services, as well as the State/County Collaboration Program network which connects all 87 Minnesota counties on a secure, shared IP network. Today all public higher education campuses, all state agencies, all Minnesota counties, many cities and many local school districts use MNET to connect to each other and share high-capacity connections to the Internet and Internet2. MNET connects over 1,000 locations in 300 Minnesota cities.

The **Greater Minnesota Telehealth Broadband Initiative** seeks to improve connectivity between the State network architecture and private healthcare oriented telecommunication networks. Working collaboratively and leveraging existing networks and relationships, we are confident that rural healthcare providers, consumers and administrators will see the benefits of high-capacity, high-performing, secure and reliable connections for healthcare delivery.

We endorse the **Greater Minnesota Telehealth Broadband Initiative.** We support the Minnesota Telehealth Network as the lead applicant and will work to bring success and sustainability to this effort.

Sincerely,

Jim Johnson
Director, Network Services Division

# UNIVERSITY OF MINNESOTA

***Twin Cities Campus***

*FUMTN Telemedicine Project*
***Division of Health Informatics***
*Medical School*

*Box 511 Mayo*
*420 Delaware St. SE.*
*Minneapolis, Minnesota 55455*

*Phone: (612) 625-8440*
*Fax: (612) 626-7155*


April 18, 2007

Greater Minnesota Telehealth Broadband Initiative
c/o Maureen Ideker
Tri-County Hospital
415 North Jefferson
Wadena, MN 56482

Dear Maureen:

It is with a great deal of pleasure that I write this letter in support of the Greater Minnesota Telehealth Broadband Initiative. The University of Minnesota and the Academic Health Center have a long history of support of telehealth activities and as you are well aware was the home of the rural telemedicine network until recently. We were proud to "pass the torch" to Tri-County Hospital and are happy to see that you are now assuming the role of lead organization for the FCC Pilot Program application.

We are strongly supportive of this the network of networks proposed for this application and have every intention of participating through the provision of telehealth services by University of Minnesota physicians. We believe that the implementation of the Initiative will make high quality medical care significantly more available to both rural and underserved populations in the state. The support that would be provided by a successful application to the FCC is critical to this effort since it provides the means to leverage and enhance our existing resources in order to bring new services and sites on line.

We look forward to working with the Initiative and pledge our cooperation and support for its work.

Sincerely,

Stuart M. Speedie, Ph.D.
Professor of Health Informatics
Director, Fairview-University of Minnesota Telemedicine Network

UNIVERSITY OF MINNESOTA

*Twin Cities Campus*

***Office of Information Technology***
*Office of the Senior Vice President for System Administration*

*203 Johnston Hall*
*101 Pleasant Street S.E.*
*Minneapolis, MN 55455*
*612-626-8735*
*Fax: 612-626-0076*
*http://www.umn.edu/oit*

April 27, 2007

To Members of the Committee for the Greater Minnesota Telehealth Broadband Initiative:

As the Vice President and Chief Information Officer for the University of Minnesota, I am writing on behalf of the Office of Information Technology in support of the Greater Minnesota Telehealth Broadband Initiative.

Northern Lights GigaPoP is a network initiative operated by the University of Minnesota. As a regional hub for advanced research and education networks, Northern Lights provides access to Internet2 and National Lambda Rail for the University of Minnesota. Through cooperative initiatives with the Minnesota State Colleges and Universities (MnSCU), State of Minnesota Office of Enterprise Technology, regional network coordinators, and local Internet Service Providers, Northern Lights connects university, community and technical colleges; K-12 public school districts; and private colleges throughout Minnesota to advanced networks. Northern Lights also has network peering and connection agreements with research and education entities in Iowa, Wisconsin, North Dakota and South Dakota.

I applaud this effort to secure funding for a comprehensive broadband network that will serve the healthcare community and expand collaboration with the statewide education network.

Sincerely,

Steve Cawley
Vice President & CIO
Office of Information Technology

Minnesota Department of **Human Services**

April 23, 2007

Maureen Ideker
Greater Minnesota Telehealth Broadband Initiative
Minnesota Telehealth Network
415 N. Jefferson Street
Wadena, MN 6482

Dear Ms. Ideker:

I am writing to express my support, on behalf of the Minnesota Department of Human Services, for the Minnesota Application to the FCC Rural Healthcare Pilot Program.

Your leadership and commitment to improving access to healthcare through telehealth services is of great importance to Minnesotans and our neighboring states. The collaborative approach you have taken with other healthcare providers and public and private stakeholders requires shared vision, determination, trust, patience and hard work. The Department of Human Services operates community hospitals, uses telehealth and related video-based communication and shares the Minnesota Telehealth Network vision.

I sincerely hope the pioneering work you and your partners have been doing is rewarded by the FCC.

Sincerely,

Cal R. Ludeman

Cal R. Ludeman
Commissioner

Minnesota Hospital Association

2550 University Ave. W., Suite 350-S
St. Paul, MN 55114-1900
phone (651) 641-1121 fax (651) 659-1477
toll free (800) 462-5393 www.mnhospitals.org

April 25, 2007

Maureen Ideker
Greater Minnesota Telehealth Broadband Initiative
Minnesota Telehealth Network
415 N. Jefferson St.
Wadena, MN 56482

Dear Ms. Ideker:

The Minnesota Hospital Association (MHA) is pleased to offer its support for your application to the Federal Communications Commission (FCC), Rural Healthcare Pilot Program for the Greater Minnesota Telehealth Broadband Initiative.

Telehealth services provide important access to care for rural health care beneficiaries that face significant distance and travel challenges. The Greater Minnesota Telehealth Broadband Initiative will continue to improve and expand these services and can also be an important component of addressing workforce shortages.

The members of this initiative undoubtedly have the expertise and the capacity to make the project a success.

Sincerely,

Bruce J. Rueben
President


April 21, 2007

Maureen Ideker
Greater Minnesota Telehealth Broadband Initiative
Minnesota Telehealth Network
415 N. Jefferson St
Wadena, MN 56482

RE: Federal Communications Commission, Rural Health Care Pilot Program,
W.C. Docket No. 02-60

Dear Ms. Ideker:

The Great Plains Telehealth Resource and Assistance Center (TRAC) is happy to extend our support to Minnesota's application to the Federal Communications Commission's Rural Health Care Pilot Program (W.C. Docket No. 02-60) and their development of the Greater Minnesota Telehealth Broadband Initiative.

The charge of Great Plains TRAC is to assist health care facilities and providers in their implementation and expansion of telehealth services within the region of Minnesota, South Dakota, North Dakota, Iowa and Nebraska. We understand the importance and value of establishing a more robust connection to the various telehealth networks across the region. Because patients regularly cross state borders to access their specialty care services, improving the overall access to quality health care services for the patients within our multi-state region is critical.

The creation of these broadband networks will allow for increased utilization of telehealth, teleradiology, electronic patient records and other advanced information systems across the extended region.

The Great Plains TRAC is looking forward to providing whatever assistance we can to the rural facilities in their efforts to strengthen the availability of telehealth services to our region's citizens.

Sincerely,

Mary DeVany
Program Director
Great Plains TRAC

Avera Health

*We're Caring for Life*

3900 West Avera Drive
Sioux Falls, SD 57108-5721
(605) 322-4700
Fax: (605) 322-4799

www.avera.org

April 21, 2007

Maureen Ideker
Greater Minnesota Telehealth Broadband Initiative
Minnesota Telehealth Network
415 N. Jefferson St
Wadena, MN 56482

RE: Federal Communications Commission, Rural Health Care Pilot Program, W.C. Docket No. 02-60

Dear Ms. Ideker:

Avera Health, and the partners participating in our own FCC pilot program HUBNet (Heartland Unified Broadband Network), extend our support to Minnesota's application to the Federal Communications Commission's Rural Health Care Pilot Program (W.C. Docket No. 02-60) and their development of the Greater Minnesota Telehealth Broadband Initiative.

Avera Health realizes the importance of establishing a more robust connection to the various telehealth networks within the state of MN. Because patients regularly cross state borders to access their specialty care services, improving the overall access to quality health care services for the patients within our multi-state region is critical. As a result of on-going conversations during our projects' development, specific components have been identified to be incorporated into the individual projects to assure interconnectedness once funded. Collaboration during the development phase has eliminated the chance for duplication of budgetary items.

The creation of these secure, robust broadband networks, HUBNet and the Greater Minnesota Telehealth Broadband Initiative will allow for increased utilization of telehealth and other advanced information systems across the extended region. Additionally, our on-going conversations have established a foundation for continued discussion around improved regional interconnectivity as well as improved regional coordination that could impact our overall disaster preparedness and crisis response.

We look forward to working with the Minnesota program as we both strive to improve the health care services to our citizens.

Sincerely,

Jim Veline
Sr. Vice President/CIO

Minnesota
STATE COLLEGES
& UNIVERSITIES

VICE CHANCELLOR FOR IT & CIO
500 WELLS FARGO PLACE
30 EAST SEVENTH STREET
ST. PAUL, MN 55101-4946

ph 651.296.8970
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May 3, 2007

To Members of the Committee for the Greater Minnesota Telehealth Broadband Initiative:

As the Vice-Chancellor and Chief Information Officer for the Minnesota State Colleges and Universities (MnSCU) System of Minnesota, and also as Chairperson of the Board of Directors for the Learning Network of Minnesota, I am writing on behalf of my post-secondary constituents in support of the Telehealth Broadband Initiative. Minnesota has a long history of a collaborative approach among education and government entities in the statewide development of a comprehensive voice/video/data interactive communications infrastructure. The MnSCU system alone consists of 53 connected university and community and technical college campuses. The Learning Network of Minnesota links all four primary University of Minnesota campuses, approximately 60% of Minnesota's K12 public school districts, several private educational entities, and government agencies across the state. A digital satellite broadcast/production entity provides additional communications capability for our systems.

Based on the extensive use of the existing communications infrastructure among the government and educational entities in this state, we applaud the development of a Telehealth Broadband network that will serve the voice/video/data communications needs of the healthcare system in this state and beyond. In addition, we look forward to linking the existing communications infrastructure among our institutions with the Telehealth Network so we can collaborate on educational and information exchanges between our institutions and the healthcare community. All of our campuses provide some level of healthcare instruction. There is significant potential and strong need for working with the healthcare industry by linking campuses and healthcare facilities, and by working with our on-line educational programs.

In view of our extensive and experienced history providing education and information via our voice/video/data networks, in view of our broad educational offerings in the healthcare area, and in view of the significant potential we have for working with the Minnesota healthcare industry, my constituents and I applaud this effort to secure funding for a comprehensive broadband network that will serve the healthcare community as well as connect with the educational community and the general citizenry across the state of Minnesota and beyond.

Sincerely,

Ken Niemi
Vice Chancellor/CIO, Minnesota State Colleges & Universities
Chair, Learning Network of Minnesota Board of Directors

1450 Energy Park Drive, Suite 350
St. Paul, MN 55108-5227

Tel: 651-642-0567
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MINNESOTA OFFICE OF HIGHER EDUCATION
reach higher

May 2, 2007

Ms. Maureen Ideker
Greater Minnesota Telehealth Broadband Initiative
Minnesota Telehealth Network
415 North Jefferson Street
Wadena, Minnesota 56482

RE: Federal Communications Commission, Rural Health Care Pilot Program,
W.C. Docket No. 02-60

Dear Ms. Ideker:

This letter is in strong support of the Minnesota Telehealth Network's application for funding under the Rural Healthcare pilot program. As fiscal agent for the Learning Network of Minnesota, the Office of Higher Education helps to facilitate development of the state's education technology infrastructure. That infrastructure has evolved into a dynamic partnership of educational and governmental entities. The Greater Minnesota Telehealth Broadband Initiative leverages the existing networks and partnerships to improve access to healthcare information and education throughout the state.

Funding from the Rural Healthcare pilot program would extend the reach of health education programs beyond individual campuses. The Telehealth Network would give practitioners access to educational opportunities regardless of their location. Likewise, the network would enable providers and patients in Greater Minnesota to communicate easily with medical centers and educational institutions in the metro area. Connecting to Internet2 and the National LambdaRail links providers to the latest medical research nationally and internationally.

Greater Minnesota Telehealth Broadband Initiative is an opportunity to build upon Minnesota's tradition as a pioneer in the healthcare field. Such an effort improves the quality of life for Minnesotans while enabling the state's heathcare professionals to share their expertise with the rest of the world.

Sincerely,

Susan Heegaard

Susan Heegaard
Director

SH:EK


May 2, 2007

Maureen Ideker
Greater Minnesota Telehealth Broadband Initiative
Minnesota Telehealth Network
415 N. Jefferson St.
Wadena, MN 56482

Dear Ms. Ideker:

The Community Health Information Collaborative (CHIC) is pleased to offer our support for your application to the FCC Rural Healthcare Pilot Program. CHIC's focus is to initiate projects that promote health information exchange across care settings and to share costs and best practices across the membership. Our membership, which is predominantly from the rural areas of northeastern Minnesota, includes hospital, clinic, public health, tribal health, long term care and academic organizations.
A number of our members are participants in this project, and we believe it will meet urgent needs for telehealth expansion in Minnesota.

One of our important support services is to assist our members with the administrative services they require to participate in the Universal Services Administration Fund (USAC). Through this and other CHIC services, we know the importance of ensuring that health care providers in rural areas obtain the benefits of current telecommunications technology. The Greater Minnesota Telehealth Broadband Initiative holds great potential to improve and expand the telehealth infrastructure serving rural Minnesota.

The FCC would do well to invest in the Greater Minnesota Telehealth Broadband Initiative. It is poised to be a model of innovation and coordination among all sectors of the state's health system to improve health care access and quality for our rural citizens. Please let us know how we can assist the project as it moves ahead.

Sincerely,

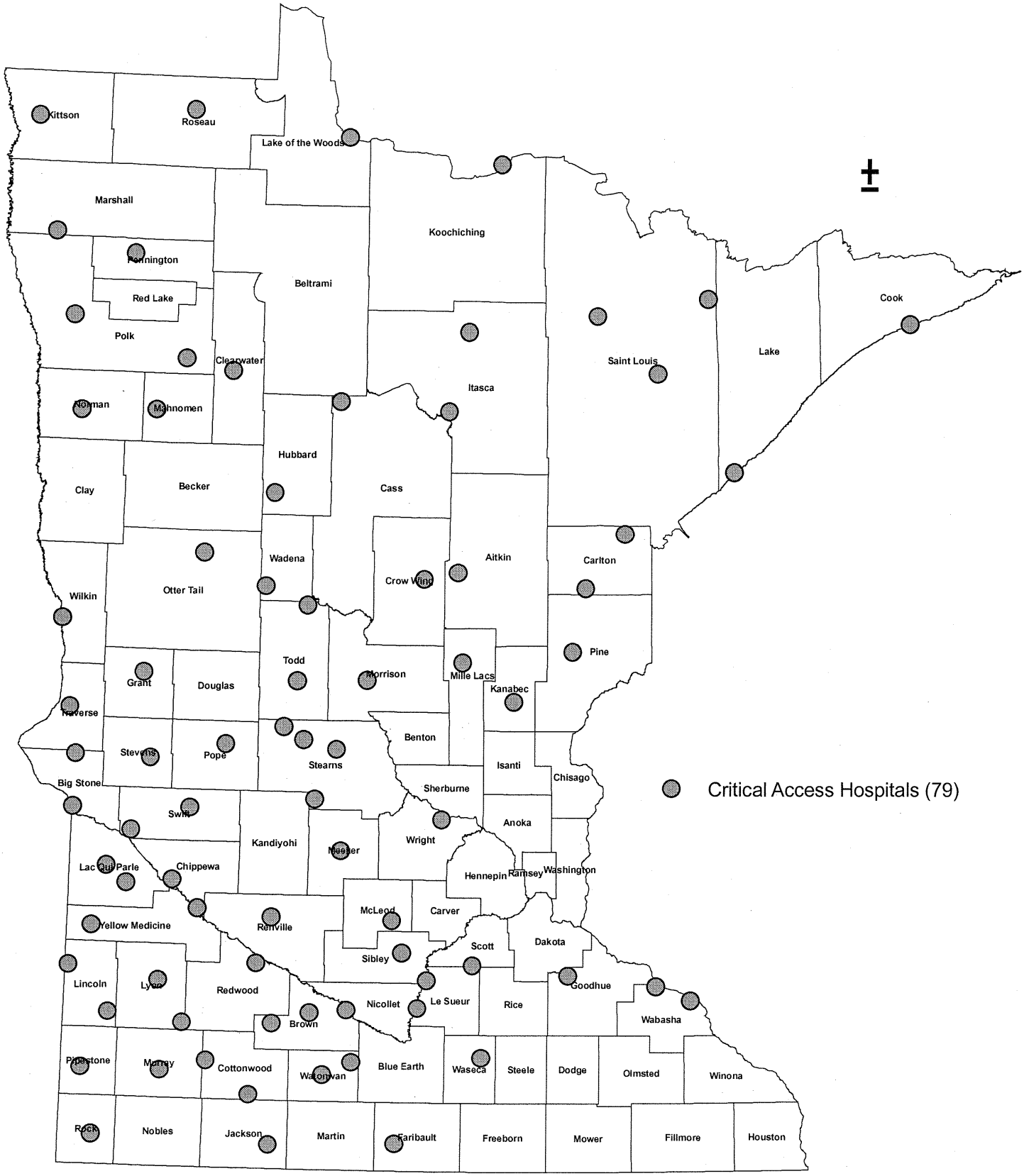
Cheryl M. Stephens
Executive Director

# APPENDICES

# GREATER MINNESOTA
# TELEHEALTH BROADBAND INITIATIVE

Appendix A

# Critical Access Hospitals
# Minnesota 2007




Source: MN Office of Rural Health & Primary Care 2007

**Appendix B**

## Executive Summary – Program Description

The **Great Plains Telehealth Resource and Assistance Center** (**TRAC**) assists rural health care providers, facilities, and organizations utilize telehealth technology to address the health care needs within their communities. The Resource Center encourages improved health care access and quality of service by fostering improved telehealth service functionality and availability. Services include an on-line information library, the development of educational materials for providers, an annual regional telehealth conference, and customized "coaching" services specific to the needs of individual facilities.

Through collaboration with several other active telehealth programs within this region, the Great Plains TRAC serves as a primary resource for telehealth program development and service implementation information, thus impacting the overall program goal of fostering the development of telehealth applications, projects, and programs to address health disparities and positively impact the health of rural populations.

The Great Plains TRAC is a partnership of Avera TeleHealth; North Dakota State University, Telepharmacy Network in Fargo, ND; The Evangelical Lutheran Good Samaritan Society in Sioux Falls, SD; St. Elizabeth Health System in Lincoln, NE; and the Fairview Hospital-University of Minnesota Telemedicine Network program in Minneapolis, MN.

**PROGRAM GOAL:** *The Great Plains TRAC will increase telehealth utilization among rural and frontier health care providers by breaking down both geographic and experiential barriers.*

**Objective 1:** Increase the knowledge of applications, practices and research findings relating to telehealth technology among rural and frontier health care providers in the region from baseline toward a level meeting the needs of their communities.

**Key Activities:**

1) Develop and present an Annual Great Plains TRAC Conference;
2) Identify and catalog a comprehensive library of resources relating to telehealth; and
3) Disseminate information, resources and tools relating to telehealth applications, practices and research findings.

**Objective 2:** Increase the quality and quantity of standards-based information regarding the best utilization of telehealth technologies from baseline toward a level that meets the health care needs in the region.

The Great Plains TRAC was created in 2006 and is partially funded through the Office for the Advancement of Telehealth, a division of the Health Resources and Services Administration, grant number G22TH07768.

**Key Activities:**

1) Implement specific regional collaborative efforts to identify and address key telehealth issues, including healthcare provider shortages, reimbursement issues, and policy considerations;
2) Conduct evaluation and special projects to determine the best utilization of telehealth technologies to meet the health care needs in the region; and
3) Participate in evaluation activities sponsored by OAT and the National TRC.

**Objective 3:** Continuously increase the number of contacts (via website, e-mail, phone, fax, mail or other communication) initiated by rural and frontier health care providers in the region to the Great Plains TRAC during each project year to minimum a of 500 in Year 1; 750 in Year 2; and 1,000 in Year 3.

**Key Activities:**

1) Promote Great Plains TRAC through a variety of marketing and development activities involving a spectrum of media, including the Great Plains TRAC website, user groups, and electronic newsletter as well as presentations, news releases, advertisements, collateral marketing materials and published articles directed to local, regional and national audiences in the health care arena;
2) Continuously update on-line Telehealth Tool Box including downloadable tools as well as cataloged informational and training resources (www.gptrac.org);
3) Provide accurate and timely responses to client inquiries and requests for information, resources, training, customized coaching and other specialized services (user groups, document review, etc.) to ensure a positive client / experience.

**Objective 4:** Continuously improve the skill level of key staff members of rural and frontier health care facilities to conceptualize, plan, implement and evaluate telehealth programs from baseline toward a level of competency.

**Key Activity:**

1) Help rural health care facilities acquire the skills and expertise necessary to implement telehealth programs.

**Objective 5:** Increase by a minimum of 30 in year one, 50 in year two, and 75 in year three of the project, the number of rural and frontier health care providers that utilize telehealth technology to exchange information and provide standards-based education and quality health care services more effectively and efficiently. (Accomplished through the achievement of the previous 4 Objectives.)

---

For further information, contact Mary DeVany at 605-322-6038, mary.devany@mckennan.org, or Amanda Witt at 605-322-6264, amanda.witt@avera.org.

The Great Plains TRAC was created in 2006 and is partially funded through the Office for the Advancement of Telehealth, a division of the Health Resources and Services Administration, grant number G22TH07768.

# Appendix C

## Minnesota Telehealth Forum
**September 6, 2006**
**SUMMARY**

**Purpose:** Begin to organize an effort toward a coordinated and supported telehealth system in MN.

**Attendees:** See Appendix A.

**Presentation:** ***Telehealth in Minnesota: At a Crossroads***
http://www.health.state.mn.us/divs/chs/hottopic/MNtelehealth9606.ppt

**Presentation Part I: What's Going on in Minnesota**
*Participant reactions to presentation/ common themes:*

Coordination and leadership
- Impressed with what is going on
- Lack of coordinated resources – different/overlapping systems
- Splintered efforts. Providers should be talking more broadly, providing services to each other
- State-level strategies and leadership is critical
- Why is it a problem if things aren't coordinated? What does coordination mean? Danger that it can become an end in itself, not patient service
- Coordination is clearly important
- Telecom representation and participation critical
- Infrastructure issues need coordination at state level to stretch scarce resources
- Medical, dental, mental health operating in different systems in the same community
- Interstate licensure issues can be problem when delivering care across state lines
- Do our current telehealth systems interact?
- If lots of networks, what is needed to connect them? (both technically and financially)
- No central clearinghouse for telehealth exists…what would that look like?
- How do we coordinate all of this? (burning question)
- Need understanding of current telehealth resources in MN communities, and what needs are there

Reimbursements
- Reimbursements issues remain – may need legislative change
- Reimbursements for home health, store and forward, allied health need to be better
- How do we move from pilot projects to sustainability
- Start-up funding – can't all be funded with grants
- Payers need to be at table, involved in discussion

Business case
- "Mission-focused" groups started telehealth activities in MN; business opportunities turned into initiatives
- Business case important for physician understanding
- Cost is still an issue – equipment and line charges
- Telehealth can give business efficiencies – business model savings come from where?
- Store and forward technology makes time barrier disappear
- Take advantage of what we already have in place, leverage what we already have
- How do you demonstrate cost neutrality?
- Savings across various systems of care are huge – keeping people at home, healthier, doing prevention

Provider and public awareness and understanding
- Lack an understanding of community needs and services
- Provider acceptance critical - education and outreach needed - there are some misperceptions about economic and time benefits
- Not enough information for providers – ie, how do you get started?
- Need public awareness of what is possible through telehealth

Other
- Need to focus on patient-provider relationship and how that is affected and developed via telehealth
- Level of patient care is higher using home telehealth– reduces isolation and need for 1:1 visits
- Active consumer will be at the center of health care
- Telehealth can be beneficial for both rural and urban
- Does telehealth discourage providers to locate in rural areas over the long term?

**Presentation Part II: Telehealth in Other States**
*Participant reactions to presentation/ common themes:*

- Find out about other states' "lessons learned"
- Presence of sustainable funding critical
- Presence of a coordinating organization with key players
- Program-focused list of activities from California
- Legislative mandates to deliver telemedicine, with funding
- Everyone has "skin in the game" – money, efforts – not merely recipients
- Relatively open networks
- Lots of access points
- Network needs major funder(s) – state, federal, private
- Training and technical support provided to network members
- Government-owned or private networks? Likely private with state funding, but need more info.
- Telehealth incorporated into medical education in states with strong networks, mainly used to supervise residents, much slower to incorporate into curriculum
- Leveraging grant funding to obtain additional funding
- Online scheduling tool for network

## Preliminary Shared Directions or Goals for Telehealth in Minnesota

### Vision: *Use telehealth to help assure patient safety, quality and access for rural and underserved populations.*

1. Establish a statewide public-private organization to coordinate, develop and support telehealth in Minnesota.
   - Further research on how organizations are structured in other states, sample documentation
   - Identify lead entity to coordinate and spearhead telehealth initiatives
   - Define role for state government in leadership and funding of telehealth
   - Define telehealth in Minnesota
   - Bring key players to table to develop a lead organization and maximize current resources, and define benefit/roles
   - Leverage common resources (funding, technical, other), including non-health systems, such as education, corrections
   - Develop/create a telehealth resource center for teaching and technical assistance
   - Connect to disparity efforts

2. Develop an open interoperable telehealth network system that is accessible to providers and consumers statewide.
   - Create technical standards for state telehealth systems to support cost-effective network integration and assure quality patient care
   - Develop comprehensive clinical directory to connect people and providers to services
   - Inventory stakeholders, resources, funding, needs

3. Use cross-state regional approach to telehealth that recognizes regional delivery of health care.
   - Deal with border issues re: licensing, credentialing, regulatory, legislative
   - Develop a way to allocate scare medical and health care professional resources across region.
   - Develop a way to allocate scare medical professional resources across the state/region

4. Address regulatory and policy barriers to delivery of telehealth services.
   - Address insurance/payer policies and issues such as preferred provider restrictions, pre-authorization, reimbursement, coordination
   - Identify and establish policies friendly to telehealth via legislation, administrative changes

5. Identify existing services, capabilities and needs.
   - Understand who has telecommunications capacity
   - Assure quality/access from patient and community perspective
   - Assure that patient and consumer needs are met via telehealth services

6. Provide comprehensive education to providers and consumers about telehealth.

- Adopt working definition of telehealth in Minnesota.
- Address misperceptions about uses and costs/benefits of telehealth.

7. Identify funding sources and business model for implementation and sustainability.
   - Develop a broad funding bases that provides affordable access to telehealth services, consider additional fees
   - Get appropriate reimbursements for all telehealth services (parity with onsite services)
   - Plan for future health care needs and technology changes

## Next Steps and Priorities

*The group voted on their top action priorities from the above list, and then worked in groups to identify some initial strategies for action, who would be responsible, and an estimated time frame.*

| WHAT | WHO | OTHERS | WHEN |
|---|---|---|---|
| 1. Establish a statewide public-private coordinating entity for telehealth.<br>a. Clarify distinction between this effort and e-Health Initiative<br>b. Research other states with statewide coordinating groups and obtain samples/models of organizational members and governance.<br>c. Identify potential organizational members and invite to organizational meeting.<br>d. Hold initial organizing meeting. Provide samples and options for organizational models. Get commitment from members, establish common purpose and vision (eg. share information, establish network, establish standards, create center, etc.).<br>e. Develop framework for charter and governance, communications. | MDH/ORHPC<br><br>Telehealth forum attendees | Existing networks<br>MN Hosp Assn<br>Off Enterprise Tech<br>Dept of Education<br>Dept of Corrections<br>Public Utilities Comm<br>MACSSA (county social services)<br>MN Council Hlth Plans<br>Consumer(s) | Nov 2006<br><br><br><br><br><br><br><br>Jan 2007<br><br><br><br><br><br>Apr 2007 |
| 2. Develop an open interoperable telehealth network system accessible to providers and consumers statewide..<br>a. Clarify distinction between this effort and e-Health Initiative<br>b. Define and establish telehealth technology and operational performance minimum standards for telehealth industry.<br>c. Define vision of open network providing telehealth video dial tone in MN and bordering regions, including all health care services.<br>d. Perform a technical assessment of the vision. | DHS-Root<br>Onvoy-Ebert<br>UofM-Speedie<br>MACMHP-Caldwell<br>BCBS-Scanlan<br><br><br>DHS-Root<br>Onvoy-Ebert | e-Health Adv Comm<br>OET<br>Tri-County Hosp<br>Good Samaritan<br>Med device mftrs (Continua)<br>Avera Health<br><br><br>Other technical advisors | <br><br><br><br><br>Jan 2007<br><br><br>Jan 2007 |
| 3. Develop cross-state regional approach to telehealth that recognizes the regional delivery of health care.<br>a. Define our region and the main healthcare providers within the service areas they cover.<br>b. Identify existing telehealth services, capabilities and needs of patients/communities.<br>c. Identify/list what care delivery barriers exist to providing billable services across state borders (licensure, credentialing, regulatory, legislative) | MDH/ORPHC or designee<br>DHS<br>Telehealth forum participants | | <br>Jan 2007<br><br>Mar 2007 |
| 4. Identify and address regulatory/policy barriers; create telehealth-friendly policies.<br>a. Survey current users to collect data/information on telehealth barriers (see above #3).<br>b. Establish work group to identify/recommend policy or regulatory changes. | MDH/ORHPC<br>DHS-Kolb<br>MMA-Schierman | | Jan 2007<br><br>Mar 2007 |

## Appendix A

## Minnesota Telehealth Forum
## September 6, 2006

## Attended/Invited

Attended:
Bill Brand, MN Dept of Health, Center for Health Informatics
Sally Buck, Rural Health Resource Center, Duluth
Andy Burmeister, Senator Norm Coleman
Harvey Caldwell, MACMHP, New Connections
Mary Devany, Avera McKennan, Sioux Falls, SD
Barb Durbahn, Blue Earth MH Unit, Blue Earth County
Karl Evert, Onvoy Communications
Pamela Hayes, MDH Office of Rural Health/Primary Care
Zoi Hills, Fairview-Univ Telemedicine Network
Maureen Ideker, Tri-County Hospital, Wadena
Sharon Josephson, Congressman Colin Peterson
Denise Kolb, MN Dept of Human Services
Marty LaVenture, MDH, Center for Health Informatics
Jon Linell, North Region Health Alliance
Linda Norlander, MDH, Office of Rural Health/Primary Care
Mary Pohl, DHS
Roger Root, DHS, Office of Telecommunity Development
John Scanlan, Blue Cross Blue Shield
Becky Schierman, MN Medical Association
Mark Schoenbaum, MDH, Office of Rural Health/ Primary Care
Bill Slininger, USDA Rural Development
Stuart Speedie, University of Minnesota Medical School
Joel Stokka, Tribal Health, Cass Lake
Nancy Stratman, Rural Health Advisory Committee, Rice Memorial Care Center, Willmar
Dan Svendsen, SISU Medical Systems, Duluth
Tom Syverson, Good Samaritan Society, Sioux Falls, SD
Janelle Taylor, MN House of Rep Research
Karen Welle, MDH, Office of Rural Health/Primary Care
Barb Wills, MDH, Center for Health Informatics

Invited:
Adam Suomala, MN Health & Housing Alliance
Ann Gibson, MN Hospital Assn.
David Giehl , MN Senate Research
Colleen Mecoch/ Jaideep Strivisava, Office of Enterprise Technology
Jane Leonard, MN Rural Partners
Bernadine Joselyn, Blandin Foundation

# Minnesota e-Health Advisory Committee
## *Recommendations Workgroup on Telehealth*

**Draft v.12-1**

**Recommendation:** Ensure that e-Health system development is integrated with and supports statewide telehealth services.

**Goal:** All Minnesotans will have access to reliable, secure, and robust telehealth services that are fully integrated with e-Health systems.

**Targets**:

1. By June 2008, stakeholders will begin implementation of an open, interoperable statewide telehealth network that is accessible to all consumers and providers statewide and integrates with e-Health systems.

2. By 2012, the telecommunication infrastructure in Minnesota will allow any patient to connect to any telehealth provider.

3. By 2012, 80% of healthcare providers using EHRs will provide and incorporate telehealth services.

**Actions:**

**Action 1:** By September 2007, establish a statewide public-private initiative that coordinates, develops, and supports telehealth as an integral component of e-Health policies and activities in Minnesota.

**Action 2:** By September 2007, develop and publish a dynamic directory of all existing telehealth services and functional capabilities in Minnesota in order to raise awareness of telehealth and to connect people and providers to services.

**Action 3:** By January 2008, identify telecommunications and health care regulatory and policy barriers to achieving the telehealth goal and propose possible solutions.

**Action 4:** By June 2008, develop a plan and initiate implementation of an open, interoperable telehealth network that is accessible to all consumers and providers statewide and integrates with e-Health systems.

**Background/Context:** Telehealth is integral to Minnesota e-Health because it gives patients the ability to receive the high quality healthcare they need without the barriers of time and distance that may exist between them and caregivers—a critical issue for all Minnesotans, but especially those in rural areas where access to medical care is more difficult. To achieve the goals of personalizing care and empowering consumers, we must improve the availability of reasonably priced, secure telehealth services throughout the entire state.

Widespread adoption of telehealth requires:

- standards;
- models of financial sustainability;
- a favorable regulatory and legal environment; and
- statewide availability of interoperable, high bandwidth networks for securely conducting telehealth communications and transmitting patient images and other data.

"Many telehealth applications are required to cross institutional and public/private boundaries in an administrative, fiscal and technical sense. This involves not only the technical issues of establishing communication links, but also obtaining support agreements, negotiating financial agreements, and accrediting the providers of care at multiple sites."[1]

Policy issues include:

- achieving equitable and affordable statewide broadband access;
- standards (technical, infrastructure, interoperability, and quality) that support both e-Health and telehealth services;
- training and accreditation of providers of telehealth services and telehealth network administrators; and
- investment/startup funding and financial sustainability.

**Key organizations and roles:**

- **Proposed public-private Minnesota telehealth initiative:** Establish business model (including mission, principles, governance); broker inter-organizational agreements; identify and address issues with telehealth accreditation and provider credentials; coordinate with state agencies, health care entities, telecommunications companies, standing committees (Rural Health Advisory Committee, e-Health Advisory Committee, etc.) and related activities; coordinate telemedicine and telemental health network development; forge consensus on standards adoption.

- **Private sector telecommunications organizations:** Provide infrastructure for statewide interoperable network capabilities, engineering requirements for change, costs of infrastructural investments, requirements for private sector investments; consensus on standards adoption.

- **MDH:** Co-sponsor meetings to facilitate creation of proposed Minnesota telehealth initiative; administer grants; provide policy support; maintain directory of telehealth services.

- **Existing telemedicine networks** (Such as the Department of Human Services, University of Minnesota, Fairview, Tri-County Hospital, Avera Health, New Connections for Telehealth, Sisu, etc.): Collaborate on establishing a non-proprietary telehealth network.

- **Department of Human Services:**
  - Medical Assistance Payer of reimbursement for telehealth services;
  - Telehealth service provider in government hospitals for mentally ill;
  - Program developer and grant funder for programs and services that include telehomecare; home telehealthcare);
  - Office of Tele-Community Development: Operates DHS 90-site network for telehealth and telehuman service communications. Provides development planning support statewide for all DHS programs identified above and for DHS-business partners.

- **Office of Enterprise Technology:**
  - Provide support and coordination of statewide public and private sector telecommunications infrastructure.

[1] Speedie SM, Davis D. Telehealth and the national health information technology strategic framework. J Telemedicine and Telecare, 12, suppl. 2,2006, p59-64.

- Advise public and private sector telehealth providers and stakeholders in establishing telehealth and security standards to ensure sustainable, interoperable, reliable communications between locations on current and planned networks.
- Provide enterprise network architecture for an interoperable network among public sector entities with high-capacity shared, secure gateway connections from public sector entities to commercial telecommunications companies and private health care system networks. Lead public sector procurement activities
- Leverage existing statewide information infrastructure using private sector leased line facilities to interconnect public and private sector locations requiring telehealth connections.

.

- **Payers:** Evaluate the appropriateness of paying for specific telehealth services, work with telehealth providers to control the costs of care through telehealth services, encourage the appropriate use of telehealth in the plans and networks.

- **Health Professions Organizations:** Review, evaluate and modify as appropriate professional practice codes to incorporate telehealth, work with their respective state regulatory agencies to ensure that telehealth services are incorporated as necessary into the regulations promulgated by those boards.

**Public Funding:**
This recommendation has considerable reliance on public funding. However, there is a distinction between investment/startup funding and ongoing maintenance funding. It may be that the investment-startup has "considerable reliance" on public funding for the purposes of getting the ball rolling. But experience of other states in developing business models may suggest that on-going maintenance and "sustainability" funding may be found with current health plan and system operating budgets or redirection of public program dollars from predictable cost savings identified in the business plan.

State appropriations should be targeted to the following:
- A multi-year grant to a newly created telehealth initiative to provide for staffing, research, communications and other responsibilities necessary to achieve its charter.
- A grant program to offset telehealth equipment costs for providers in rural and medically underserved communities.

Telehealth programs in a number of other states have made telemedicine a line item in the state budget by successfully arguing its public benefit. "A number of telehealth programs provide services to penal facilities on a sustainable basis due to the cost savings in avoiding transport of prisoners to health care facilities. Other business models have been built on providing off-hours support for emergency rooms or providing scarce psychiatric services where there is sufficient additional business to justify the infrastructure costs."[2]

Substantial private sector investment in telecommunication infrastructure and services may also be required. There is some possibility that the existing infrastructure may supply a considerable portion of the needs. It is also possible that planned investments for other purposes could be leveraged to achieve this end (e.g. expanding broadband access into rural Minnesota to promote economic development).

**Action Step Details:**

**Action 1:** By September 2007, establish a statewide public-private initiative that coordinates, develops, and supports telehealth as an integral component of e-Health policies and activities in Minnesota.

[2] Ibid.

This should be undertaken as a collaborative among private and public sector stakeholder organizations. Stakeholders should include existing networks as well as representatives from associations (such as the Minnesota Hospital Association, Minnesota Association of County Social Services Administrators, Minnesota Council of Health Plans,) governmental entities (such as the Minnesota Department of Health, Department of Human Services, Office of Enterprise Technology, Department of Education, Department of Corrections, Public Utilities Commission, local public health departments), the University of Minnesota, MNSCU, and organizations and consumers with potential interest in telehealth services such as:

- Trade associations like the Minnesota Association for Rural Telecommunications (MART) http://www.MNart.org
- Wide area networks like Aurora http://www.aurorafonet.com
- Telecomm companies operating in rural MN: Onvoy, Qwest, 702 Communications http://www.702com.com, etc.

These stakeholders should:

1.1 Research what has been done in other states that have statewide coordinating groups and obtain samples/models of organizational members and governance. [See Virginia, for example: http://www.vdh.state.va.us/primcare/center/vtn/info.asp] (NOTE this web address is not working)

1.2 Develop a draft charter framework for governance and communications.

1.3 Co-sponsor an organizational meeting for potential stakeholders at which the proposed organization is presented for review and discussion.

1.4 Launch a Minnesota telehealth initiative.

It is recommended that state agencies should request a legislative appropriation of $690,000 to cover the first two years of operational funds for the development of the Minnesota telehealth initiative. Stakeholders will pay dues to financially support the organization thereafter. Substantial private sector investment in telecommunication infrastructure and services will also be required.

**Action 2:** By September 2007, develop and publish a dynamic directory of all existing telehealth services and functional capabilities in Minnesota in order to connect people and providers to services.

This task should be coordinated through government and nonprofit entities with expertise in telehealth, such as MDH, DHS, Rural Health Resource Center, and the University of Minnesota's Institute for Interprofessional Health Informatics.

Existing base funding and in-kind contributions from government and non-profit entities should support this action.

**Action 3:** By January 2008, identify telecommunications and health care regulatory and policy barriers to achieving the telehealth goal and propose possible solutions.

A statewide public/private group such as the proposed Minnesota telehealth initiative should involve licensing boards to establish working groups of stakeholders to identify and resolve legal, licensing, reimbursement, and cross-state implementation issues. This group should:

2.1 Identify and address barriers to providing interoperable telehealth services.

2.2 Identify and address barriers to interoperable telecommunications networks.

2.3 Produce a report for the 2008 legislative session.

The statewide group should be able to support this action through using existing operational financial resources, such as the start-up funding for the Minnesota telehealth initiative described in Action 1 above, as well as ongoing organizational membership fees.

**Action 4:** By June 2008, develop a plan and initiate implementation of an open, interoperable telehealth network that is accessible to all consumers and providers statewide and integrates with e-Health systems.

An organization such as the proposed Minnesota telehealth initiative should do this in coordination with Minnesota Department of Health, Minnesota Department of Human Services, Onvoy, MACMHP, BCBS, the Minnesota e-Health Advisory Committee, Office of Enterprise Technology, Tri-County Hospital, Good Samaritan, medical device manufacturers (such as Continua), Avera Health, and other technical advisors from key stakeholders.

This group should:

4.1 Develop a comprehensive business plan that will:

a. Identify existing services, capabilities and needs;
b. Take into account who has telecommunications capacity;
c. Assure quality/access from patient and community perspective;
d. Assure that patient and consumer needs are met via telehealth services;
e. Define revenue streams, cost savings and sustainability; and
f. Assure that training and technical assistance are available to users of the network.

4.2 Explore a bulk-purchasing cooperative to lower equipment costs for all involved.

4.3 Develop a specific strategy to provide universal ("first mile") access for consumers and providers to telehealth services.

4.4 Develop a model of needs and solutions that demonstrates feasibility.

4.5 Identify effective business financing models for implementing and sustaining telehealth network infrastructure and services that address barriers identified in Action 2.

4.6 Define and establish statewide telehealth technology and operational performance minimum standards.

The statewide group should be able to support this action through using existing operational financial resources, such as the start-up funding for the Minnesota telehealth initiative described in Action 1 above, as well as organizational membership fees. Eventually, this initiative should be commercially viable. Continuing funding may include a combination of federal and state grants and Universal Service Funds (in high cost, low density areas), a possible state annual appropriation support for telehealth network operations

(such as training and technical assistance to providers), possible state-supported universal service discounts, and telehealth network member user fees.

**Status:** In Minnesota, there are a number of excellent but fragmented telehealth efforts and overlapping telehealth networks. No coordination or broadly organized support for telehealth development currently exists.

"Over the last ten years, telehealth has seen a convergence of technologies driven by a number of market forces in the videoconferencing world. The standards situation has evolved to the point that the ANSI H.32x set of standards facilitates wide-scale videoconferencing interoperability that is leading to a continued growth in the market for videoconferencing, a steep decline in the cost of equipment and the ability to conduct such interactions between parties independent of the particular hardware they happen to use."[3]

**Related MN e-Health Goals:**

- Inform Practice
- Interconnect Care Providers
- Personalize Care (specifically, "Promote use of telehealth systems")

**Resources:**

Speedie SM, Davis D., Telehealth and the National Health Information Technology Strategic Framework. J Telemedicine and Telecare, 12, suppl. 2, 2006, pp 59-64.

The American Telemedicine Association, Telemedicine, Telehealth, and Health Information Technology,: http://www.americantelemed.org/news/policy_issues/HIT_Paper.pdf

Committee on The Future of Rural Health Care, Institute of Medicine, Quality Through Collaboration: The Future of Rural Health,: http://www.iom.edu/?id=29734

MedQIC Resource Package - Home Telehealth Reference 2005, (For home health agencies that are implementing telehealth)
http://www.medqic.org/dcs/ContentServer?cid=1122297924530&pagename=Medqic/MQTools/ToolTemplate&c=MQTools

**Workgroup Membership:**

Roger Root, Minnesota Department of Human Services/Office of Telecommunity Development
Mark Schoenbaum, Minnesota Department of Health/Office of Rural Health and Primary Care
Stuart Speedie, University of Minnesota
Karen Welle, Minnesota Department of Health/Office of Rural Health and Primary Care
Attendees of the Minnesota Telehealth Forum, September 6, 2006, St. Paul, Minnesota. See http://www.health.state.mn.us/divs/chs/hottopic/summary.pdf

**Definitions:**

- **Telehealth:** Telehealth is a form of e-Health that uses telecommunications and information technologies to provide health care services over distance and/or time, to include diagnosis, treatment, public health, consumer health information, and health professions education. This may be done through real-time or asynchronous exchange of complex data (video, images, audio, etc.).

[3] Ibid.

- **Home Telehealth**: Home telehealth is a service that uses information and telecommunications technologies to give the clinician the ability to monitor and measure health data and obtain information from patients located at home for diagnostics, monitoring, and clinical care.

- **Tele-homecare**: Tele-homecare is the non-clinical service and support given to a patient by family members, friends, and others.

- **Telemedicine:** Telemedicine is that aspect of telehealth that encompasses all those interactions between a health care provider or their surrogate and a patient where there is a geographic and/or temporal separation.

  Types of telemedicine:

  1) Teleconsultation is real time treatment analogous to an office visit;

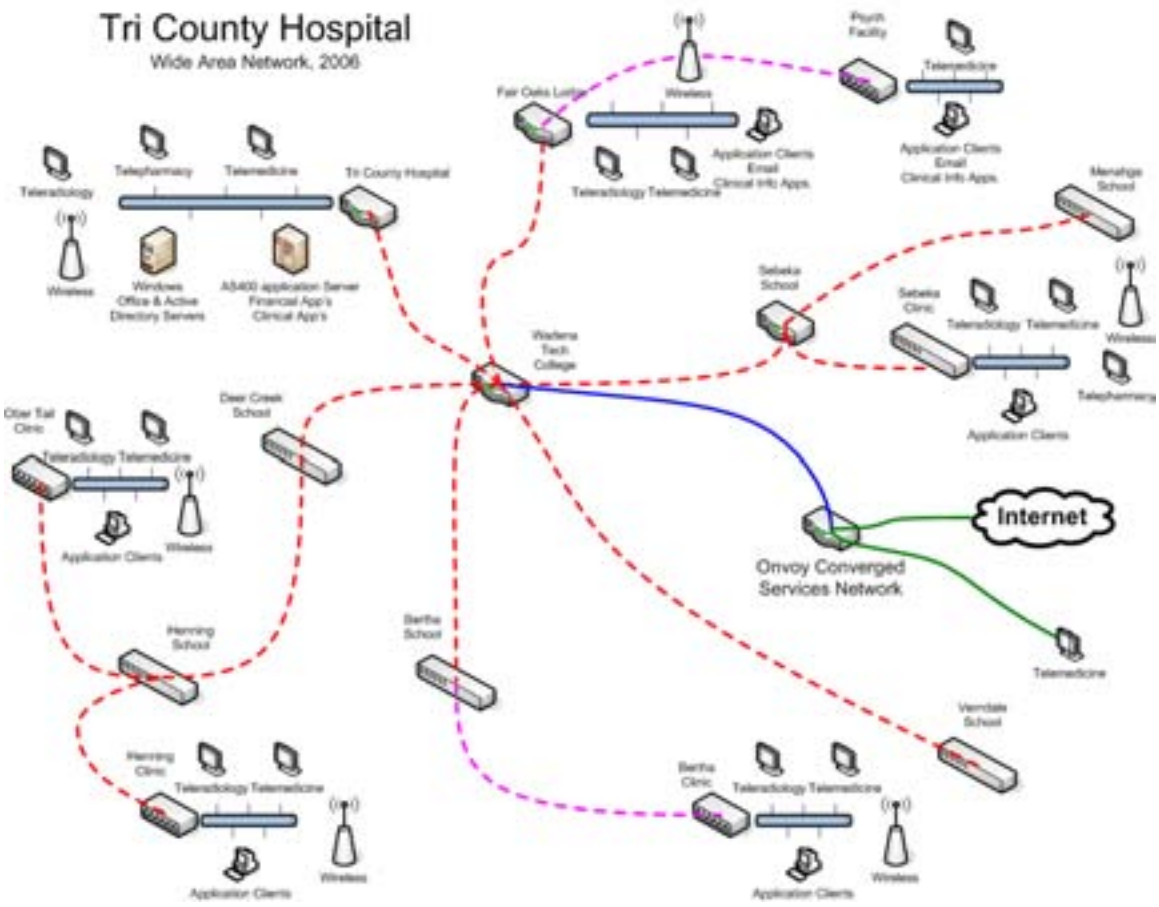
  2) Store and Forward (example: teleradiology. Radiology images are acquired at many different sites of care, stored in an information system, read and interpreted at other, sometimes remote sites by radiologists who then record their findings in the same system for others to view and use.). Used mostly in radiology, pathology and increasingly dermatology;

  3) Direct Asynchronous Communication. Communication between the provider and patient (example: email or secure messaging systems) where there is an exchange of text messages.

- **Underserved Community:** An "Underserved Community" is a geographic location that for reasons of socio-economic status, availability of adequate health insurance coverage, transportation, lack of accessible clinic facilities and services, health professionals and services, health status or indicators, age or other demographic factors, cultural and/or language barriers, or other factor(s), experiences barriers to accessing health care services for preventive and acute care needs

**Appendix E**

# Tri-County Hospital Wide Area Network 2006



**MINNESOTA TELEHEALTH NETWORK**
**2006 Office of Advancement for Telehealth Grant 3-Year Project Summary**

***Network Partners:***

**University of Minnesota, Mpls., previous Fairview University of MN Telemedicine Network consisting of 17 active sites; North Region Health Alliance representing a consortium of 22 rural hospitals across northwest MN and northeast ND; and SISU Medical Systems, Duluth, a consortium of 14 medical centers in northern MN.**

***Project Purpose:***

Implement a Minnesota Telehealth Network across northern MN and eastern ND. Address the restricted access to medical specialty and healthcare professionals in rural areas. Special needs include geriatric care, chronic disease management, mental health and rehab services for underserved populations; and health professional education.

***Outcomes Expected/Project Accomplishments:***

Increase access to medical specialists and health professionals by increasing the number of network members who provide telehealth services, 7 new rural sites each year. Quantify patient usage of telehealth services using data collection of OAT GPRA performance measures. Provide medical and health professional education.

***Service Area:***

MN: Wadena, Todd, Otter Tail, Polk, Kittson, Pennington, Clearwater, Roseau, Lake of the Woods, Norman, Marshall, Carlton, St. Louis, Crow Wing, Itasca, Aitkin, Cook, Kanabec, Becker, McLeod, Dakota, Cass, Pine, Goodhue, Koochiching, Mille Lacs, Traverse. ND: Grand Forks, Traill, Cavalier, Walsh, Pembina, Ramsey, Griggs, Nelson.

***Services Provided:***

Dermatology, orthopedics, neurology, gastroenterology, asthma/allergy, behavioral health, cardiology, child/adult psychiatry, endocrinology, gerontology, home care/hospice, pharmacy, pulmonology, wound care, rehab services, NICU visits, oncology, dietitian, and chronic disease management such as diabetes/CHF/pain.

***Equipment:***

Rural sites: Document Video Visualizer, Digital Camera, Polycom Videoconferencing System. Providers: Polycom Videoconferencing System, Stethoscope.

***Transmission:***

Interoperable transmission standards will be used made up of IP videoconference capable connections, ie: point to point enabled layer 3, quality of service managed connections.

***Management:***

Tri-County Hospital
415 North Jefferson Street
Wadena, MN, 56482
http://www.tricountyhospital.org

Maureen Ideker, RN/Cindy Uselman, RN
Cindy Uselman
Ph: 218-631-7509
Fax: 218-631-7503

# Minnesota Telehealth Network
# FACT SHEET

**Goal:** Provide medical specialty consultation services to rural Minnesotans via telemedicine.

**Lead Organization:** Tri-County Hospital, Wadena Minnesota

**Collaborating Organizations:** North Region Health Alliance (NRHA)
SISU Medical Systems, Duluth, MN
University of MN, Minneapolis, MN

**Funding Agency:** Office for the Advancement of Telehealth, Health Resources and Services Administration, Department of Health and Human Services, since September 1995.

**Participating Organizations:**
Aitkin, MN, Riverwood Health Care Center
Bigfork, MN, Bigfork Valley Hospital
Cass Lake, MN, Indian Health Services
Cook, MN, Cook Hospital
Crookston, MN, RiverView HealthCare Association
Crosby, MN, Cuyuna Regional Medical Center
Fosston, MN, First Care Medical Services
Grand Rapids, MN, Itasca Surgical Clinic
Hibbing, MN, Fairview Range Regional Health Services
International Falls, MN, Falls Memorial Hospital
Littlefork, MN, Littlefork Medical Center
Longville, MN, Longville Lakes Clinic
Moose Lake, MN, Mercy Hospital and Health Care Center
Mora, MN, Kanabec Hospital
Onamia, MN, Mille Lacs Health System
Onamia, MN, Ne Ia Shing Clinic - Mille Lacs Band of Ojibwe
Park River, ND, First Care Health Center
Red Wing, MN, Fairview Red Wing Health Services
Wadena, MN, Tri-County Hospital
Wheaton, MN, Wheaton Community Hospital and Medical Center

**Specialty Providers:**
Crookston, MN, Riverview HealthCare Association
Duluth, MN, Miller-Dwan Medical Center
Duluth, MN, St. Lukes Hospital
Duluth, MN, University of MN Duluth Medical School
Edina, MN, Sports & Orthopedic Specialists
Fargo, ND, Prairie at St. Johns
Grand Forks, ND, Altru Health System
Grand Forks, ND, Schultz Clinic
Minneapolis, MN, University of MN Medical Center, Fairview Health Services
St. Paul, MN, Regions Hospital
St. Paul, MN, U of MN Physicians
Woodbury, MN, Health Partners

**Services:**

| | | |
|---|---|---|
| Orthopedic Surgery | Wound Care | Fetal and Maternal Health |
| Dermatology | Gastroenterology | Neurology |
| Cardiology | Clinical Psychology | Asthma/Allergy |
| Pulmonology | Psychiatry, Adult & Child | Chronic Pain Management |
| Home Telehealth | Long Term Care Support | |

**Number of Patient Encounters in the Last 12 Months**: 866
**Provider Reimbursement Rate:** 99% of submitted claims
**Technologies Used:** Digital videoconferencing over secure internet connections.

**Contacts:**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Technical, Training Site Liaison
Telemedicine Manager
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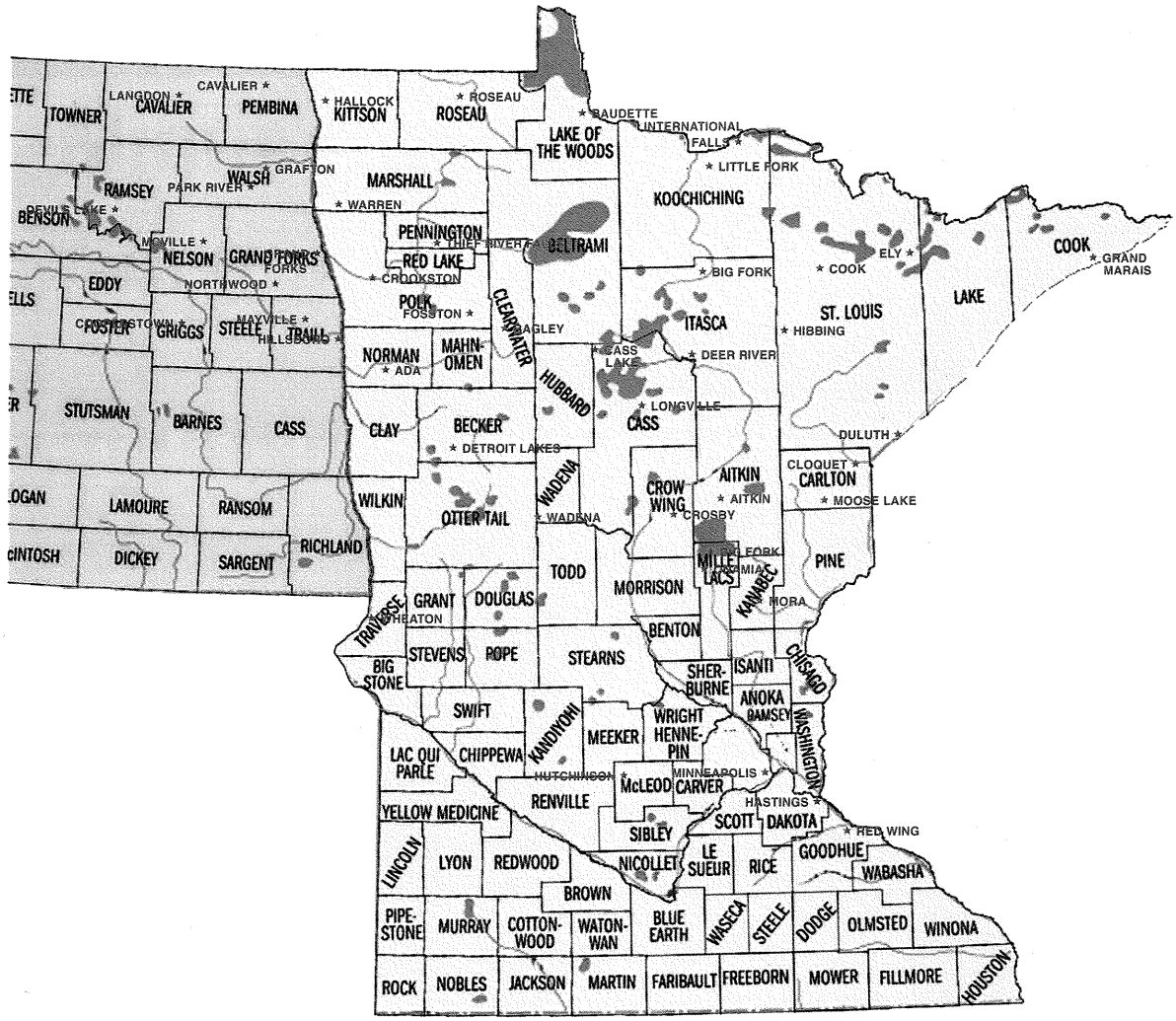
Zoi Hills, Telemedicine Coordinator, U of MN Medical School, 612-625-9938, hills069@umn.edu

Appendix G

# Minnesota Telehealth Network, Projected

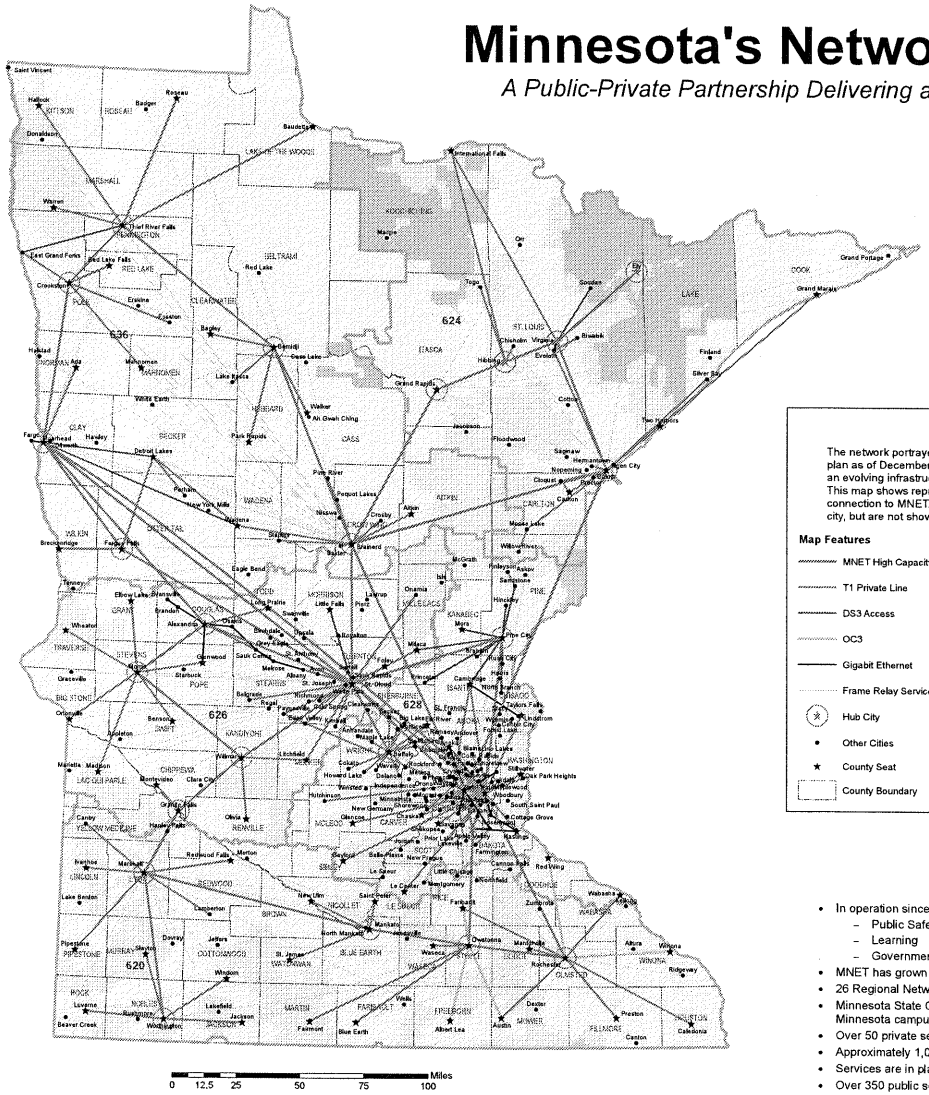


# Appendix H

# MNET

## Minnesota's Network for Enterprise Telecommunications

*A Public-Private Partnership Delivering an Integrated Statewide Network for Education, Local Governments and State Agencies*




### Map Key

The network portrayed on this map is the current and proposed plan as of December, 2004. However, the statewide network is an evolving infrastructure and this map may not be all-inclusive. This map shows representation of each city that has a connection to MNET. Multiple connections may occur within a city, but are not shown here.

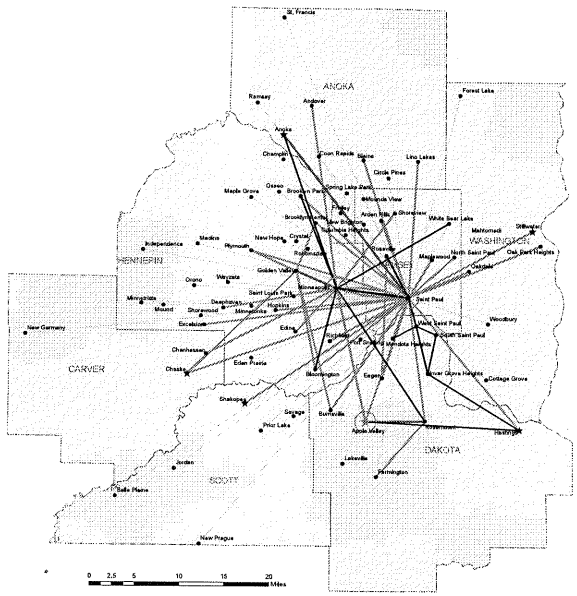
**Map Features**

- MNET High Capacity Backbone
- T1 Private Line
- DS3 Access
- OC3
- Gigabit Ethernet
- Frame Relay Service
- Hub City
- Other Cities
- County Seat
- County Boundary

**Telephone Exchange**

- Qwest
- Frontier
- Sprint
- Coops/Muncipals/Independents
- Exchange Outside MN
- Unassigned
- LATA Boundary

Twin Cities Metropolitan Area




Greater M

- In operation since 1993, MNET supports Minnesota's
  - Public Safety
  - Learning
  - Governmental Operations
- MNET has grown to about 900 locations today
- 26 Regional Network Hubs aggregate capacity
- Minnesota State Colleges and Universities and University of Minnesota campuses host most regional network hubs
- Over 50 private sector providers furnish services
- Approximately 1,000 leased line circuits are purchased
- Services are in place in nearly 300 cities across Minnesota
- Over 350 public sector entities are MNET partners
- MNET partners include:
  - Many cities and governmental units
  - Many schools, libraries and private colleges
  - All Minnesota counties
  - All state government
  - All public higher education

MNET has three main purposes:

1. Procurement, aggregation and integration of private sector telecommunications services for use by government and education
2. Support for secure, reliable and seamless intra-and inter-organizational networking of data, video and voice services among Minnesota's branches and levels of government
3. Provision of high-speed, reliable and secure access to the worldwide Internet, national networks, and private provider networks, to enable public access to e-learning and e-government services

The purpose of this map is to illustrate the current statewide telecommunications network connecting Minnesota's branches and levels of government and the extent to which private sector telecommunications service providers are involved in providing the core infrastructure. This integrated statewide network enables converged data, video and voice communication services to be delivered to Minnesota's public sector in an effective, timely and cost-effective manner. This integrated statewide network is comprised of network hardware and management systems that have been purchased through competitive bidding and with leased network facilities competitively bid and purchased from telecommunication service providers working throughout Minnesota. The statewide network is managed by the Office of Enterprise Technology, State of Minnesota. For more information see: www.intertech.state.mn.us/telecommunications

*For a copy of this map send an email to oetshrsvc.consulting.services@state.mn.us*
*Download a copy in PDF format at: www.intertech.state.mn.us/networkmap*

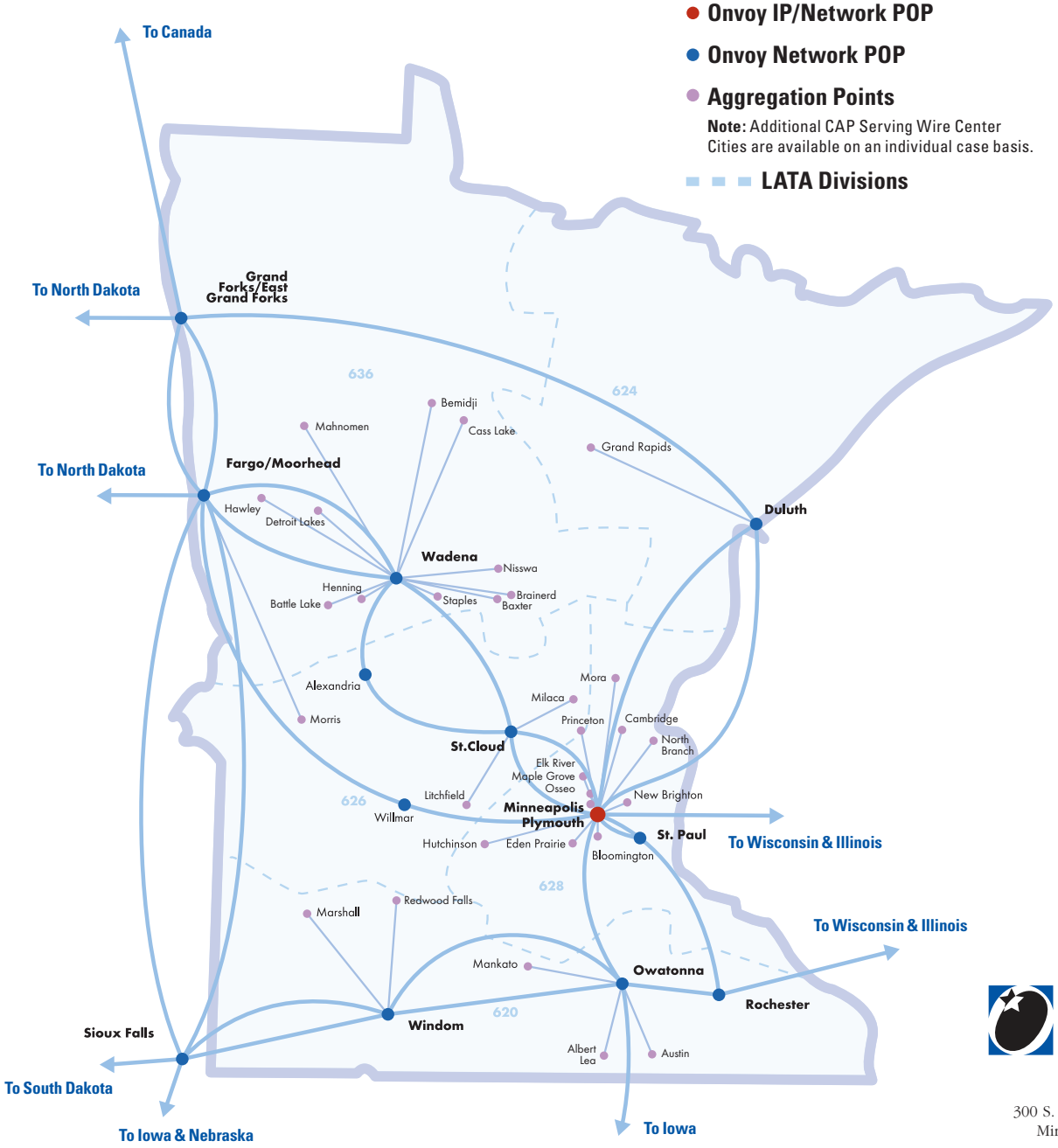


This map was prepared for the Office of Enterprise Technology, State of Minnesota by the Land Management Information Center, Minnesota Department of Administration, Project Code: ITGFIB7B

Prepared: December, 2004, Revised: December, 2005.

Appendix I

# Onvoy Network
## MINNESOTA

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