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**Technical Panel**
**of the**
**Nebraska Information Technology Commission**
Wednesday, December 11, 2002 - 9:00 a.m.
Varner Hall - Board Room
38th and Holdrege, Lincoln, Nebraska

**AGENDA**

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1. Roll Call and Meeting Notice

2. Public Comment

3. Approval of Minutes* - November 8, 2002

4. Telehealth Network Plan - Roger Hahn and Roger Keetle

5. Video-over-IP at ESUs - Wayne Fisher

6. Standards and Guidelines

   - Recommendation to the NITC*

| Groupware Architecture | Use of Computer-based Fax Services by State Government Agencies |
|---|---|

7. Network Work Groups - Discussion of Interrelationship and Coordination of Groups

   - Network Architecture Work Group - Charter
   - Network Policy Work Group - Draft Charter
   - Collaborative Aggregation Partnership (CAP)
   - Statewide Synchronous Video Network Work Group

8. Regular Informational Items and Work Group Updates (as needed)

   - Wireless Project
   - Network Architecture Work Group / NETCOM
   - Security Architecture Work Group
   - Accessibility Architecture Work Group
   - NIS

9. Election - Technical Panel Chair for 2003

10. Other Business

11. Next Meeting Date

    Wednesday, January 8, 2003

12. Adjourn

* Denotes Action Items

NITC and Technical Panel Websites: http://www.nitc.state.ne.us/

Meeting notice posted to the NITC Website: 8 NOV 2002
Meeting notice posted to the Nebraska Public Meeting Calendar: 8 NOV 2002
Agenda posted to the NITC Website: 6 DEC 2002

Friday, November 8, 2002, 8:00 a.m.
University of Nebraska-Lincoln, Nebraska Union-City Campus, Georgian Room
Lincoln, Nebraska
**PROSPOSED MINUTES**

**MEMBERS PRESENT:**

**Walter Weir**, University of Nebraska
**Steve Henderson**, IMServices, State of Nebraska (alternate for Brenda Decker)
**Christy Horn**, University of Nebraska, Compliance Officer
**Steve Schafer**, Chief Information Officer, State of Nebraska
**Kirk Langer**, Lincoln Public Schools, K-12 Representative
**Mike Beach**, Nebraska Educational Telecommunications Commission

**ROLL CALL AND MEETING NOTICE:**

The Chair, Walter Weir, called the meeting to order at 8:05 a.m.  The meeting notice posted to the NITC Website and Nebraska Public Meeting Calendar on October 10, 2002 and the agenda was posted to the NITC Website on October 31, 2002.  Mr. Weir announced that the Voluntary Review-Last Mile Wireless Effort will be moved to later in the agenda.

**PUBLIC COMMENT**

Gene Hand, Public Service Commission, commented that the hearing for the Nebraska USF hearing went well.  The NITC Telehealth Subcommittee did a good job demonstrating the hospital's needs.  Grants were encouraged for one-time T1 costs.

**APPROVAL OF MINUTES - OCTOBER 9, 2002**

Corrections to the minutes included:

- Mr. Weir's name was misspelled.
- Under Security Architecture Work Group, change the word "extrusion" to "intrusion".
- Under NIS, change wording "is running readiness assessments" to "is conducting a readiness assessment".

**Mr. Schafer moved to approve the minutes with corrections.  Mr. Henderson seconded the motion. Roll call vote: Henderson-Yes, Horn-Yes, Langer-Yes, Schafer-Yes, and Weir-Yes.  The motion was carried by unanimous vote.**

Mr. Beach arrived at 8:10 a.m.

**PROJECT REVIEWS  FY2003-05 BIENNIAL BUDGET REQUESTS**
- Summary Sheets with Scores and Comments
- Full text of the requests (for your information)

Panel members provided comments on some of the requests. There were some questions regarding operational costs versus new funding.

**Mr. Beach moved to approve the technical reviews, and provide agencies the opportunity to respond to reviewer comments.  Mr. Henderson seconded the motion. Roll call vote: Weir-Yes, Schafer-Yes, Langer-Yes, Horn-Yes, Henderson-Yes, and Beach-Yes.  The motion was carried by unanimous vote.**

For the next budget request cycle, the panel requested that staff consider developing a checklist for

Technical Panel reviews; include an accessibility portion in the project proposal; and provide a time when agencies can present proposal and be available for questions.

## STANDARDS AND GUIDELINES

*RECOMMENDATION TO THE NITC*

| Groupware Architecture | *Secure E-mail for State Government Agencies* |
|---|---|
| Security Architecture | *Disaster Recovery Planning Procedures* |

**Ms. Horn moved to recommend adoption of these guidelines by the NITC.  Mr. Schafer seconded the motion. Roll call vote: Henderson-Yes, Horn-Yes, Langer-Yes, Schafer-Yes, Weir-Yes, and Beach-Yes.  The motion was carried by unanimous vote.**

*SET FOR PUBLIC COMMENT*

*Groupware Architecture - Use of Computer-based Fax Services by State Government Agencies*
**Ms. Horn moved that the guideline be set for the 30-day comment period.  Mr. Beach seconded the motion. Roll call vote: Langer-Yes, Horn-Yes, Henderson-Yes, Beach-Yes, Weir-Yes, and Schafer-Yes.  The motion was carried by unanimous vote.**

## WORK GROUP CHARTERS

*Statewide Synchronous Video Network Work Group - Draft Work Group Charter.*  The following changes were agreed to by the members:

- Sponsor should be Mike Beach.
- Membership – change wording from "shall include" to "may include" and add NET and Department of Education.

**Mr. Schafer moved to approve the Statewide Synchronous Video Network Work Group charter as changed.  Ms. Horn seconded the motion. Roll call vote: Henderson-Yes, Beach-Yes, Horn-Yes, Langer-Yes, Schafer-Yes, and Weir-Yes.  The motion was carried by unanimous vote.**

*Network Architecture Work Group-Current Charter* – Tabled until the next meeting.

## VOLUNTARY REVIEW
Last Mile Wireless Effort - Wayne State College

Dennis Linster, Wayne State College was present to entertain questions from the members. The project would utilize local resources for funding and implementation. The goal is to have it in place by March or June at the latest. A key issue is security.

Questions were raised regarding the following: current ISP providers; software licenses; what applications will be run on the system; and the project's collaboration and coordination with county government. The panel recommended the development of a white paper so that other communities could benefit from their efforts. Mr. Linster requested the support of the Technical Panel for the project.

**Mr. Schafer moved that the Technical Panel endorse the project and request a follow-up report in 6 months. Mr. Beach seconded the motion. Roll call vote: Langer-Yes, Horn-Yes, Henderson-Yes, Beach-Yes, Weir-Yes, and Schafer-Yes.  The motion was carried by unanimous vote.**

## REGULAR INFORMATIONAL ITEMS AND WORK GROUP UPDATES (AS NEEDED)

*Wireless Project*. No report.

*Network Architecture Work Group/NETCOM*. No report.

*Security Architecture Work Group, Steve Schafer*.  The RFP process is in place and underway for the Security Assessment project.  Mr. Weir would like to explore the possibility of collaboration between the state and the University of Nebraska.

*Accessibility Architecture Work Group, Christy Horn*.  Ms. Horn raised a concern regarding accessibility compliance of the NIS system.  Mr. Schafer stated that accessibility clause and requirements were part of the RFP and that the project is working on this issue.

*NIS, Steve Schafer*.  The go-live date for Financials has been postponed until the first part of February.  Mr. Weir raised concerns about the NIS project implementation.  Mr. Schafer will organize a meeting with the University of Nebraska, NIS, IBM, and JD Edwards.

**OTHER BUSINESS**

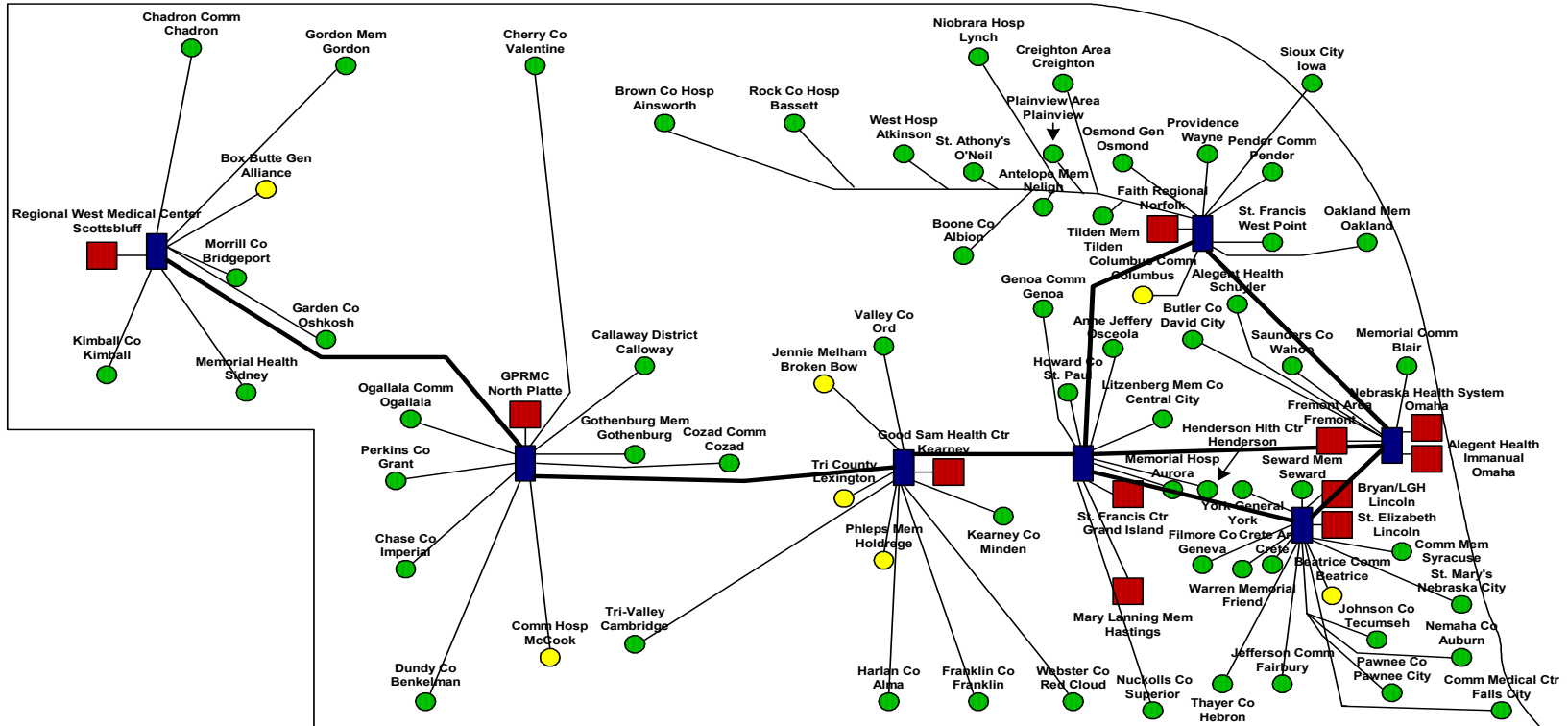There was no other business.

**ADJOURNMENT AND NEXT MEETING DATE**

It was decided not to have the regularly scheduled meeting on Wednesday, November 13, 2002 since the NITC is meeting that afternoon.  The next meeting of the Technical Panel will be held on Wednesday, December 11, 2002, 9:00 a.m.

With no further business, Mr. Weir adjourned the meeting at 11:13 a.m.

Meeting minutes were taken by Lori Lopez Urdiales and reviewed by Rick Becker of the Office of the CIO/NITC.

# *Nebraska Hospital Network*



Chadron Comm
Chadron

Gordon Mem
Gordon

Cherry Co
Valentine

Niobrara Hosp
Lynch

Creighton Area
Creighton

Sioux City
Iowa

Box Butte Gen
Alliance

West Hosp
Atkinson

Plainview Area
Plainview

Osmond Gen
Osmond

Providence
Wayne

Pender Comm
Pender

Brown Co Hosp
Ainsworth

Rock Co Hosp
Bassett

St. Athony's
O'Neil

Antelope Mem
Neligh

Faith Regional
Norfolk

St. Francis
West Point

Oakland Mem
Oakland

Regional West Medical Center
Scottsbluff

Morrill Co
Bridgeport

Boone Co
Albion

Tilden Mem
Tilden

Columbus Comm
Columbus

Alegent Health
Schuyler

Garden Co
Oshkosh

Genoa Comm
Genoa

Butler Co
David City

Saunders Co
Wahoo

Memorial Comm
Blair

Kimball Co
Kimball

Memorial Health
Sidney

Valley Co
Ord

Anne Jeffery
Osceola

Howard Co
St. Paul

Litzenberg Mem Co
Central City

Nebraska Health System
Omaha

Callaway District
Calloway

Jennie Melham
Broken Bow

GPRMC
North Platte

Fremont Area
Fremont

Alegent Health
Immanual
Omaha

Ogallala Comm
Ogallala

Gothenburg Mem
Gothenburg

Cozad Comm
Cozad

Good Sam Health Ctr
Kearney

Henderson Hlth Ctr
Henderson

Seward Mem
Seward

Perkins Co
Grant

Tri County
Lexington

Memorial Hosp
Aurora

Bryan/LGH
Lincoln

Chase Co
Imperial

Phleps Mem
Holdrege

Kearney Co
Minden

St. Francis Ctr
Grand Island

York General
York

St. Elizabeth
Lincoln

Comm Mem
Syracuse

Filmore Co
Geneva

Crete Area
Crete

Comm Hosp
McCook

Tri-Valley
Cambridge

Beatrice Comm
Beatrice

Johnson Co
Tecumseh

St. Mary's
Nebraska City

Dundy Co
Benkelman

Warren Memorial
Friend

Nemaha Co
Auburn

Mary Lanning Mem
Hastings

Harlan Co
Alma

Franklin Co
Franklin

Webster Co
Red Cloud

Nuckolls Co
Superior

Jefferson Comm
Fairbury

Pawnee Co
Pawnee City

Comm Medical Ctr
Falls City

Thayer Co
Hebron

**2002 Rev 6**
**10/23/02**

■ **Regional Hub Hospitals**

● **Critical Access Hospitals**

○ **Rural Hospitals**

In the Matter of the Nebraska Public  )
Service Commission, on its own motion    )        Application No. NUSF-26
seeking to establish a long-term universal    )
service funding mechanism                )

### Comments of the Nebraska Telehealth Development Group

On behalf of the 85 members of the Nebraska Hospital Association and the 30,000 people we employ, the Nebraska Hospital Association and the Nebraska Telehealth Development Group (Telehealth representatives) appreciate the opportunity to submit comments in this matter in response to the August 27, 2002 Order of the Nebraska Public Service Commission ("Commission"). Specifically, the Commission seeks further comments on providing support for the provisioning of telehealth services for rural health care providers.

In its investigation to determine whether support should be provided to telehealth services for rural health care providers, the Commission found that rural health care providers must first avail themselves of federal support. The Commission found it appropriate to adopt the recommendation of Mr. Jeff Pursley, Director of the Nebraska Universal Service Fund, and hold a separate hearing of the issue of affordable access for rural health care providers. The Telehealth representatives will provide additional testimony on the issue of affordable access for rural health care providers at a hearing which is scheduled for November 6, 2002 at 1:30 a.m. in the Commission Hearing Room.

### Overview of Proposed Telecommunication Plan for Telehealth Services

In response to the Commission's request, Telehealth representatives present further information in the form of a plan for development of telecommunication services to support telehealth services as follows:

- **Thoughtful planning requires a vision or objective.**

The Telehealth Subcommittee of the Nebraska Information Technology Commission has proposed a vision for telehealth services as follows:

"All Nebraskans and their communities will have affordable access to an integrated telecommunication system that meets their needs, and makes available the resources to enhance their lives and work."

For purposes of these comments, the term "telehealth" means the use of electronic information and telecommunication technologies to support long distance clinical health care, patient and professional health-related education and health care administration. The following is an overview of a proposal for telecommunications for rural health care providers for the next five years. Whether the Nebraska Universal Service Fund (NUSF) should support any part of this plan is a separate question.

With or without NUSF support, the following advance telecommunication systems as described in the Telecommunications Act of 1996 (Advance Telecommunication Systems) should be implemented:

< Rural hospitals designated as Critical Access Hospitals should be connected by advance telecommunication systems to support telehealth services between regional hub hospitals as defined and outlined in this plan. This will support rural community access to affordable, high quality health care services; support

telecommunication infrastructure; and support the economies of rural communities.

< Rural hospitals that are not designated as Critical Access Hospitals, should be connected by advance telecommunication systems to regional hub hospitals.

< Regional hub hospitals should be connected by advanced telecommunication systems to each other, including Omaha's teaching and research hospitals.

< Public health agencies should be connected by advance telecommunication systems to all hospitals and the state laboratory for bio-terrorism and disaster purposes.

< All regional hospital groups and public health agencies should be connected by advance telecommunication systems to regional K-12 educational consortiums and non-profit and government-owned nursing facilities.

The Telehealth representatives would offer the following plan or methodology for support of a telecommunication infrastructure from the Nebraska Universal Service Fund to support telehealth services for discussion and the Commission's consideration:

• **Federal Universal Fund support should be the basis for Nebraska Universal Service Fund support for monthly line charges.**

Since federal support is a prerequisite for rural health care providers under the Commission's order, the NUSF should utilize the federal system for support of the payment of line charges and provide additional assistance for line charges. Telehealth representatives are advised by federal officials that under terms of the applicable federal order, the state may offer state universal fund support as further assistance and not reduce or jeopardize federal USF support for line charges. Currently, the only known grant fund that assists in payment of monthly

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line charges for telehealth services is a competitive grant from the Office of Technology Assessment. Funding of line charges through this competitive grant will soon terminate for one Nebraska hospital telehealth program. The Telehealth representatives have not been able to locate assured grant funding or other reliable sources for assistance for the payment of line charges. Without assistance for the payment of line charges, existing hospital telehealth programs will likely be terminated. Payments for telehealth services are improving, but currently the revenue produced by telehealth services are insufficient for telehealth services to be self sustaining.

Research shows that the single biggest limitation on the use, expansion and long-term sustainability of telehealth systems is ongoing line charges and issues of connectivity. The Nebraska Center for Rural Health Research conducted an extensive study titled "Assessment of Potential Uses and Needs for Telehealth Services in Rural Nebraska" completed in 2001. Surveys were returned from 339 respondents, including physicians that might refer patients (122); physicians that accept referrals (152); hospital administrators in small rural hospitals (49); and hospital administrators in large hospitals likely to be consulting sites (15). The most significant obstacle reported was the presence of high line charges.

Roger Hahn, Nebraska Information Network (NIN), has prepared the cost estimates used throughout these comments. The NIN estimates are attached as appendix "A". Limited telecommunication systems options exist in rural Nebraska outside of dedicated T1 lines which cost about $1,520 per month on the average for transport cost only. The Federal Universal Service Fund allows two formulas for claiming support, and hospitals may choose the method that results in the highest subsidy and lowest rates. Using the best federal option, generally the maximum allowable subsidies from the Federal Universal Service Fund in most parts of the state,

will reduce the costs to $1,117 per month for transport and switching for each rural hospital. A $1,117 per month rate for line charges remains a significant barrier to telehealth services in rural hospitals. The low volumes generated by a new service in a low population area does not compare with the volumes that can support rates for T1 connections for telehealth services in an urban area. The urban rate under the federal USF is the rate for an urban hospital. Rural hospitals do not have the service base or resources that urban hospitals have to obtain and use high speed lines. In Nebraska, the average urban hospital in Omaha and Lincoln is over 300 beds. Critical Access Hospitals average only 15 patients at any given time. The urban rate is not just, reasonable or affordable for rural hospitals. The Commission should recognize the flaws in the federal USF assistance program.

Telehealth representatives offer a simple methodology for the Commission's consideration. The Commission should support Nebraska's rural hospitals' development of telehealth services by reducing the cost of monthly line charges to $200 per month for transport and $200 per month for switching after applying federal USF support. A $200 per month cost for transport after Federal Universal Service Fund support is just, reasonable and affordable for rural hospitals. NUSF support for $377 of transport costs on average will attract an additional average of $943 per month for transport from the federal USF. The $200 charge per month for switching is just, reasonable and affordable for access to a statewide telecommunications network by rural hospitals. Rural hospitals are not seeking free services, only affordable monthly line charges.

- **Support for telecommunication services to Critical Access Hospitals should be a priority.**

Critical Access Hospitals (CAHs) are a defined class of small rural hospitals. Federal and state-specific criteria mandate that CAHs must make available 24-hour emergency services; have

no more than 15 acute care patients at any one time; be at least 20 miles from the nearest hospital; be in a county that is at least partially designated as a Health Professional Shortage Area or a Medically Under-Served Area; and may provide care for an average of up to 96 hours. The hospital must also be located in a county where the percentage of families with incomes of less than 100% of the federal poverty level is higher than the state average and the percentage of the population aged 65 or older exceeds the state's average. CAHs are a critical point of access to health care services for the elderly and the poor.

Critical Access Hospitals are required to have a formal network agreement with another larger hospital to enhance the continuity of health care delivery for all levels of care. This network agreement formalizes the rules for transfer and referral of patients on a non-exclusive basis between the respective facilities; the manner and methods involved in the transportation of patients or other referral centers under emergency and non-emergency situations; and an understanding between the parties regarding quality assurance and credentialing of health care professionals. A key requirement is to identify the communication systems that will be used between the facilities. These CAH networks are the logical base for the establishment of telehealth networks for clinical care, health education and administrative support. CAH networks are a perfect opportunity to link networks of hospitals, physicians, and other health care providers through a communications network. The locations of Nebraska Critical Access Hospital Networks are shown in appendix "A".

The Federal Universal Service Fund makes support available for any rural hospital, regardless of financial need. The Commission, in its order, has made need and affordability issues for consideration.

- Critical Access Hospitals and Rural Hospitals need universal service fund

support.

Rural facilities in the United States have been struggling since the late 1970s when Medicare reimbursement was changed from a cost based system. (Medicare comprises in excess of 50% of the revenue and patients for rural hospitals). The change to a fixed payment system for Medicare inpatients in 1983 was originally projected to close over 2,000 hospitals (mostly rural). Nebraska rural hospitals have been struggling with survival during this same period of time. The number of Nebraska hospitals has decreased from 100 in 1980 to 89 in 2002. These closings have primarily occurred in rural Nebraska as facilities were unable to survive the loss in reimbursement.

Information on the financial performance of rural facilities in Nebraska has been summarized through 2001 by an organization contracted by the Nebraska Hospital Association. The largest groups of facilities are those classified as Critical Access Hospitals. During the period from 1997 to 2001, these facilities have shown a median value for total profit margin decrease from 3.1% to 2.5%, with a low in 1999 of a negative 0.6%. This negative trend is much more pronounced in those hospitals that are in rural areas but are not Critical Access.

Another indicator of long-term strength is a ratio called the Replacement Viability Ratio. This ratio, which is a measure of current funds available to meet potential replacement needs, looks at the hospital's present long term investments in relation to the price level adjusted accumulated depreciation on the hospital's facilities and equipment. Higher values for this ratio indicate a facility is better positioned to meet its long term needs. During the last five years, this value has decreased (worsened) for Critical Access Hospitals by 25% from 10.8 to 8.1, a level that is approximately 80% of their urban counterparts. Rural hospitals need NUSF assistance to make access to advance telecommunication systems affordable. The Telehealth representatives will

provide additional testimony on the issue of affordable access for rural health care providers at the public hearing on November 6, 2002, and will expand on the need for NUSF support for telecommunication services to rural hospitals.

It can be assumed that not all Critical Access Hospitals would make the commitment necessary to support telehealth services unless monthly line charges are substantially reduced.

< In order to qualify, Critical Access Hospitals would make a substantial commitment of capital equipment, facility space, programing and maintenance.

In exchange for a reduction in the monthly line charges, Critical Access Hospitals may be required to use their own resources or seek grants to purchase the internal equipment needed for telehealth services such as a digitizer for radiology or Polycom for video. Currently, a radiology digitizer and associated dicom bridges cost approximately $80,000.

The cost of video equipment has dropped, but is still in the range of $20,000 for Polycom, monitor, camera, document camera, and equipment cart. Starting a new telehealth service in rural Nebraska takes time, work, education and investment. Capitalizing on the potential benefits of telehealth in rural areas requires patching together a range of federal, state and local resources to cover infrastructure development and ongoing transmission, training and technical support expenses.

• **Support for telecommunication services to CAHs will maintain and develop telecommunications infrastructure and rural communities in Nebraska.**

Small or rural hospitals are often the hub of the local health care delivery system and the major employer in their community. Having a strong health care system is fundamental to building successful communities. Rural hospitals are important to creating, retaining, expanding and attracting business and industry. They provide a broad range of career choices, enhancing income

levels and workforce diversity. The dollars from the operation of a rural hospital circulate many times through the community, provide employment opportunities for agricultural families, and support local physicians' offices and pharmacies. Hospital employees, physicians, and related businesses support the telecommunications infrastructure in the rural community. Economic studies conducted by the Nebraska Center for Rural Health Research demonstrate the economic impact rural hospitals have on their communities. For example, the economic study of the 20 bed hospital in Perkins County estimates the hospital recreates 66 other jobs in the county, produces $1.52 million of income in the county, and created $4.09 million of economic output in other sectors of the economy (see appendix "B"). Critical Access Hospitals, in every public service district in Nebraska, will produce a similar economic impact.

On the other hand because they are small, rural hospitals have difficulty absorbing the impact of changes in payment and coverage policies, managed care, and government regulations. They are more severely affected by shifts in local demographics, health status, practice patterns and the loss of health professionals. Because there often are few or no reasonable alternatives to care, small or rural hospitals are the source of essential health care services and lifelines for community wellness. The Federal Critical Access Hospital Program has somewhat stabilized the financial condition of rural hospitals. CAHs must continue to provide current health care services while experiencing an increasing shortage of health care workers of all types, at the same time new federal regulations are requiring additional costs.

One very relevant new and costly regulation is the Health Insurance Portability and Accountability Act (HIPAA). The new privacy regulations of this federal law require communications of private health care information to be secure and confidential. Transmission over an open-switched telecommunication system is prohibited unless the private health care

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information can be encrypted and privacy insured. Encryption technology for video telehealth services is not commercially available. The lack of encryption technology means separate secure telecommunications lines are necessary.

- **Critical Access Hospitals must address new technology, increase quality of care, and seek new services and revenues.**

Telehealth offers the opportunity to remove the barrier of distance to benefit both providers and users of health care services. Enabling patients to stay closer to home and decreasing travel time increases patient satisfaction. Telehealth increases the diagnostic resource available to rural communities and allows for better triage, stabilization, and follow-up care. Additional testimony will be presented to show that telehealth services are needed to meet the needs for mental health services across Nebraska, particularly for children. On October 16, 2002, Governor Johanns stressed the need for additional mental health programs for children as he released an Early Childhood Mental Health Report. Telehealth allows health care providers to prove their skills and knowledge by providing access to continuing medical education and by increasing their interactions with specialists. Thus, telehealth services can reduce professional isolation of rural providers. Telehealth services can improve the access to care and the quality of local health care, and can improve the health status of rural populations. (See appendix "C" for selected comments from rural hospital representatives.)

- **Rural hospitals that are not designated as Critical Access Hospitals should be connected to regional hub hospitals.**

The third priority should be to connect all rural hospitals to regional hub hospitals. By designing a telecommunication system to include all rural hospitals, the cost of duplicate T1 lines for tele-radiology services can be eliminated. The Federal Universal Service Fund is available to

support separate point-to-point systems with sufficient bandwidth to provide quality high speed services for tele-radiology services for rural hospitals. Radiologists are found in only 15 of Nebraska's 93 counties. The images must be sent to where the radiologists are located. The radiologist's hospital location will likely be different than that of the regional hub hospital for critical access purposes. A more efficient and cost effective telecommunication system is established if the remaining seven Non-Critical Access Hospitals have access to affordable advance telecommunication systems.

As the expert witness for the Nebraska Hospital Association will testify, the seven rural hospitals that are not Critical Access Hospitals, are experiencing adverse financial difficulties because of inadequate payments for services provided to Medicare patients. Several of these rural communities have remodeled or expanded their facilities to meet their community's needs only to find that inadequate federal payments threaten the very existence of their facility. The rural Non-Critical Access Hospitals have an average bed size of 47. It will be very difficult to downsize this group of rural hospitals to CAH status because of bed size and limited length of stay requirements. The urban rate after the Federal Universal Service Fund support is unaffordable for rural hospitals not licensed as Critical Access Hospitals. A 47-bed rural hospital does not have the volume or resources to match an average 300-bed urban hospital. The urban rate is not just, reasonable and affordable for all rural hospitals.

The Nebraska Information Network has priced this aspect of the plan, and reports that if all rural hospitals of this class requested NUSF support to the $200 per month rate, the state USF support would be only $6,839. Considering the ability to have a state-wide network for all rural hospitals, this cost is very reasonable. Appendix "A" provides a breakout of the monthly federal USF support provided by Nebraska Universal Service Fund incentives.

- **Regional hub hospitals should be connected to each other, including Omaha's teaching and research hospitals.**

Rural Nebraska has a critical need to address workforce shortage issues. In October, 2001, the Nebraska Hospital Association circulated a staffing shortage survey to its membership. While not every member responded to the survey, results show that Nebraska is currently facing a shortage of health care workers, and is projected to do so over the next five years. The survey shows that in 46 hospitals (excluding Lincoln and Omaha hospitals), 1,264 vacant health care positions existed. Additionally, over the next five years, 1,038 individuals will be needed to fill vacancies in the Critical Access and rural hospitals. In addition, the need to continue to upgrade the skills of the existing workforce to adopt new technologies, treatment methods, and best clinical practices will continue to grow. The first step to address workforce shortages is to connect the Critical Access Hospitals to their respective regional hub hospitals. The second step is to connect the Critical Access and regional hub hospitals to the urban teaching and research hospitals.

Although a mixture of health care providers is needed to provide quality care, the physician is the cornerstone of the rural health care systems. Generally, rural practice is more demanding than its urban counterpart because the rural physician sees about 20% more patients, spends longer hours in practice, and is scheduled for more on-call time. Professional and personal interactions are limited with peers, and access to continuing medical education is limited. Rural Nebraska has a severe shortage of specialists. Psychiatrists practice in only 12 of 93 counties; Oncologists practice in only 10 counties; and Obstetricians practice in 13 counties. Telehealth neutralizes distance and can bring the specialist to the patient in an instant.

Nebraska must address connectivity issues for telehealth education. In order to provide

distance education to address health workforce shortages, hospitals need critical mass to support

quality health education. This means rural hospitals need to connect to each other, to regional

referral centers, and to urban teaching hospitals. Providing workforce education does not generate

income to the facilities to support monthly line charges. The Commission must recognize the vital

need to support rural hospitals to continue to be viable employers in rural communities. In

addition, the Commission must address another flaw in the Federal Universal Service Program. It

only supports line charges to the closest urban area with a population of 50,000, not to an urban

center for health education. The current federal USF will support connections to Lincoln for

substantial portions of the state, but Omaha is the primary source of health workforce training in

Nebraska at the University of Nebraska Medial Center. This flaw must be corrected to address

health workforce education in Nebraska. As the research suggests, educational programs are the

first step to building physician acceptance of telehealth services for video consultation for clinical

uses. Educational uses will lead and build revenue producing activities. Revenue producing

activities must be "grown". Once revenues are produced, the need for NUSF support can be

reduced or terminated.

- **Public health agencies should be connected by advance telecommunication systems to all hospitals and the state laboratory for bio-terrorism and disaster purposes**.

Under Federal Universal Service regulations, public health agencies are eligible for

support for the payment of monthly line charges for advance telecommunications services. In a

public health emergency, such as an incident of bio-terrorism, local hospitals will have a critical

need to communicate between the local and regional public health departments and also between

the state laboratory at the University of Nebraska Medical Center in Omaha with high quality

video images. The tragedy of 911, as well as other recent acts of terrorism, proves that terrorism can occur anywhere. Communication must be everywhere, in rural and urban areas, to address the threat to the vital food chain. If federal funds are not available, the Commission should make support available to the 21 public health agencies across Nebraska to protect the public.

- **All regional hospital groups and public health agencies should be connected by advance telecommunication systems to regional K-12 educational consortiums, and non-profit and government-owned nursing facilities.**

Unfortunately Federal Universal Service Funds are not available to connect rural hospitals to regional K-12 educational consortiums. Programs to interest youth in medical careers must start early in the education process. A program on health careers is needed just like programs to stimulate youth to pursue any vocational objective. Telehealth connections between rural health providers and K-12 education are needed to solve the shortage of health care workers in rural Nebraska. Other priorities should be addressed first, but the need exists to implement the vision for telecommunication services for health care providers and consumers.

- **The Commission has the authority under Nebraska law to support telecommunication services for all rural health care providers using Nebraska Universal Service Funds.**

In *Neb. Rev. Stat.* Section 86-1404, the Legislature declared that it is the policy of the state to preserve and advance universal services based upon the following applicable principles:

> (1) Quality telecommunications and information services should be available at just, reasonable and affordable rates. . . .
>
> (5) . . . . Funds for the support of low income customers, schools, libraries and

providers of health care to rural areas will be available to any entity

providing telecommunication services, maintenance, and upgrading of

facilities. The distribution of Universal Service Funds should encourage the

continued development and maintenance of telecommunications

infrastructure.

(6)     Elementary and secondary schools, libraries, and providers of health care to

rural areas should have access to advance telecommunication services as

described in the Telecommunications Act of 1996. . . .

If advance telecommunication services are not affordable, they are not accessible. Federal

Universal Service Fund support is inadequate to make advance telecommunication services

available in Nebraska. The federal support for schools is significantly higher than the federal

support provided for telecommunication systems to support telehealth services. Other sources of

funding do not exist to support telehealth services under Nebraska law. The Commission is urged

to take action under the authority of Nebraska law that gives exclusive power to the Commission

over the Universal Service for advance telecommunication systems for providers of health care to

rural areas.

The Legislature has adopted the principle that "the distribution of Universal Service

Funds should encourage the continued development and maintenance of telecommunications

infrastructure." Providing state USF support for telecommunication/telehealth services to rural

hospitals is consistent with this legislative principle. Rural telecommunications providers will gain

for transport on average per hospital $943 per month of Federal Universal Service Fund support

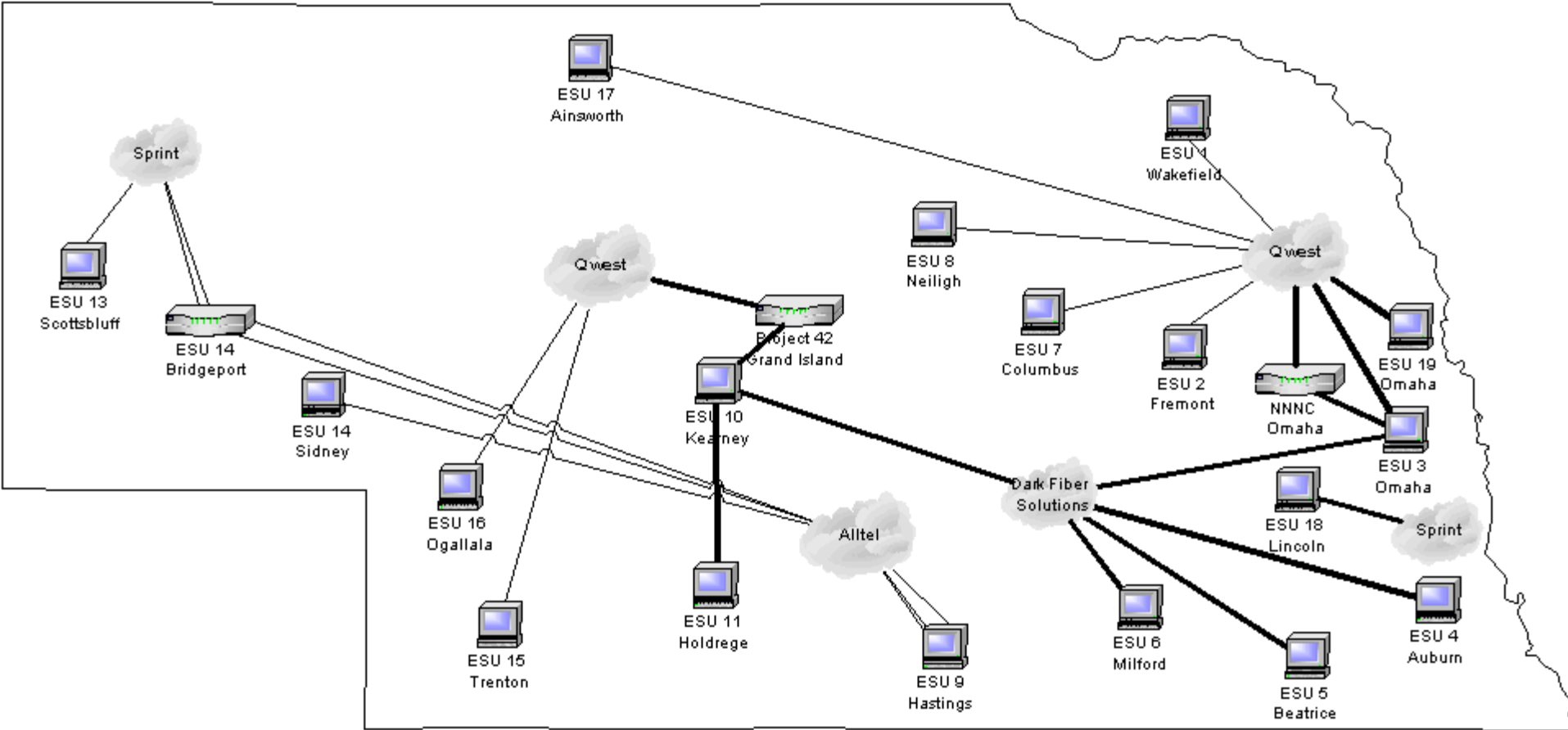for Nebraska's telecommunications infrastructure through on average per hospital $377 per

month of state USF support. Rural communities gain support for their telecommunications infrastructure and gain improved access to quality health care services.

Telehealth providers have been introduced to the telecommunication term "ubiquitous" which means existing in all places at the same time. All Nebraskans in urban and rural areas benefit from ubiquitous telecommunication services. After deregulation, the Universal Service Fund is the means to provide assistance to high cost rural areas to provide ubiquitous communications services because everyone benefits. Health care services also need to exist everywhere. Nebraskans travel across urban and rural areas, and emergency health care services are needed everywhere. Rural hospitals must provide emergency services and be linked to regional hub hospitals for support of all services. In addition, due to the unfortunate events of 9/11, telecommunications must be present everywhere to address bio-terrorism and disaster preparedness. The entire state will benefit from the rapid response of rural and urban hospitals in the event of bio-terrorism disaster.

The Commission has been delegated by the Nebraska Legislature, *Neb. Rev. Stat.* Section 86-1404 et seq. the authority and the means to provide advance telecommunication systems and telehealth services through the use of the Nebraska Universal Service Fund. Under Nebraska law the universal service fund is **the** clear source of support for telecommunication services needed by rural health care providers. Providing NSUF assistance will be an incentive to attract federal universal service funds that are currently out of reach to support telecommunications infrastructure in Nebraska. Telehealth representatives urge the Commission to take action to support the provisioning of telehealth services for rural health providers. Nebraska Universal Service Support will provide rural Nebraska with high quality and accessible health care services; support telecommunications infrastructure; and support the economies of rural communities. Such

action is in the public interest.

# Proposed NDE / ESU Video Conferencing Network

ESU 17
Ainsworth

Sprint

ESU 1
Wakefield

Qwest

ESU 8
Neiligh

Qwest

ESU 13
Scottsbluff

ESU 14
Bridgeport

Project 42
Grand Island

ESU 7
Columbus

ESU 19
Omaha

ESU 14
Sidney

ESU 10
Kearney

ESU 2
Fremont

NNNC
Omaha

ESU 3
Omaha

ESU 16
Ogallala

Alltel

Dark Fiber
Solutions

ESU 18
Lincoln

Sprint

ESU 15
Trenton

ESU 11
Holdrege

ESU 9
Hastings

ESU 6
Milford

ESU 5
Beatrice

ESU 4
Auburn

| Title | **Use of Computer-based Fax Services by State Government Agencies** |
|---|---|
| **Category** | **Groupware Architecture** |
| **Applicability** | **State Government Agencies** (See the "Applicability" section below.) |
| **Status** | ☐ **Standard** - A degree or level of requirement that all jurisdictions should use, which would be enforceable by duly authorized entities. With any standard, there may be circumstances that merit exceptions.<br>☑ **Guideline -** A statement of general policy or procedure by which to determine a course of action. Adherence is voluntary. |
| **Date Adopted** | **DRAFT (November 5, 2002)** |
| **Date of Last Revision** | |
| **Date of Next Review** | |

## A. *Authority*

Section 86-516 (6).  "[The Nebraska Information Technology Commission shall] adopt minimum technical standards, guidelines, and architectures upon recommendation by the technical panel."

## B. *Purpose and Objectives*

The purpose of this guideline is to provide state government agencies a suggested technical solution for sending and receiving electronic faxes directly from personal computers.

### *Background*

*Sending Faxes* - The traditional method for sending faxes is to scan printed copy into a facsimile machine and manually entering a phone number to transmit a copy to an external fax machine. This method consumes staff time when copies must be sent to multiple destinations. Sequential transmissions to a large number of recipients can take too much time in an emergency situation.

Some agencies have contracted for mass distribution services from external companies. These services can be costly and require advance arrangements for entering recipient fax connection information.

An alternative method for faxing documents is the use of a high-capacity, state-run fax server activated directly from personal computers. The sender never leaves the workstation and can fax announcements directly from existing agency e-mail systems. The body of the e-mail can include a wide array of attachment formats.

Destination fax numbers can be stored in email address books. Group lists can be used for mass distribution. Multiple destination fax machines can be contacted at the same to reduce the total time to deliver information in an emergency situation.

For agencies with non-standard e-mail, it is possible to utilize a web site to send faxes.

*Receiving Faxes* - The traditional method for receiving faxes is to have incoming faxes printed at a local facsimile machine. An attendant watches for incoming faxes and manually routes the document to the intended user. Photocopies must be produced manually when the information needs to be routed to several people.

An eFax Server routes incoming faxes to an e-mail inbox where the information can be reviewed for distribution. This electronic image can be forwarded to multiple e-mail addresses without need from printing or photocopy services.

An added benefit of receiving electronic fax images is that the image can be copied into a document management system for processing without the need for scanning the printed faxes.

*eFax* - Three agencies, Information Management Services ("IMServices"), Health and Human Services ("HHS") and Workers' Compensation Court, identified a need for the use of a fax server. In a collaborative effort, these agencies are sharing the use of a fax server maintained and hosted by IMServices. A fax server is a computer connected to a network that uses a pooled collection of phone lines for users to send and receive faxes.

The state run electronic fax server system, called "eFax", is available for use by other agencies within state government.

## C. *Guideline*

State agencies needing fax services based on electronic mail systems should consider utilizing the "eFax" system maintained and hosted by IMServices. Agencies are encouraged to contact IMServices for more information and a cost-benefit analysis.

## D. *Key Definitions*

<u>Fax server</u>. A computer in a network that uses a pooled collection of phone lines for users to send and receive faxes.
<u>eFax</u>. A fax server maintained and hosted by IMServices for use by state government agencies that uses electronic mail for sending and receiving faxes.

## E. *Applicability*

<u>State Government Agencies</u> - Adherence to this guideline is voluntary.

## F. *Responsibility*

## G. *Related Policies, Standards and Guidelines*

(http://www.nitc.state.ne.us/standards/)
Secure E-mail for State Government Agencies

**Nebraska Information Technology Commission**
**Technical Panel**

# Network Architecture Work Group
# Charter

| | |
|---|---|
| **Purpose** | Make recommendations to the Technical Panel on all matters relating to the state's network architecture. |
| **Sponsor** | Brenda Decker, DAS - Division of Communications |
| **Scope / Boundaries** | Section 3 of the Statewide Technology Plan establishes a state enterprise architecture framework to provide guidance on various aspects of the state's technical environment. The network architecture -- one element of this framework -- defines and provides guidance for the communications infrastructure and issues relating to interconnectivity of systems. This includes physical and logical network topologies as well as the software protocols that enable all the devices to interoperate with one another. The work group should follow the outline of the network architecture contained in the Statewide Technology Plan. |
| **Desired Goals and Outcomes** | • Review and revise the "scope" of the network architecture.<br>• Review and revise the "principles" for the network architecture.<br>• Identify "best practices" for the network architecture.<br>• Recommend "standards and guidelines" for the network architecture. |
| **Authority** | This work group will:<br>• Make recommendations to the Technical Panel regarding the network architecture, including: scope; principles; best practices; and standards and guidelines.<br>• Identify problems and issues related to the technical environment.<br><br>Decisions on proposed recommendations will be determined by a vote of the members. |
| **Membership** | Any member of one of the NITC Councils or Technical Panel may participate on the work group, with permission of the sponsor. Membership shall include representatives from the following entities: State agencies (HHS, Roads, Labor, NET, NDE, IMServices, IDSD); Education (University of Nebraska, State Colleges, Community Colleges, ESUs); and Others (NOL). The sponsor of the work group may solicit membership from other entities to provide additional perspectives and information. |
| **Reporting** | The sponsor of the work group will report to the Technical Panel as needed. |
| **Timeframe** | This work group will continue in existence until this charter is repealed. |

Adopted by the Technical Panel on April 11, 2000

**Nebraska Information Technology Commission**
**Joint Council Committee**

# Network Policy Work Group
# Draft Charter

| | |
|---|---|
| **Purpose** | Provide policy input to the Collaborative Aggregation Partnership (DOC, NET, UN). |
| **Sponsor** | |
| **Scope/ Boundaries** | This work group would act as a policy input group and communication link between the users of the network and the operational entities who lease and purchase services for the network. The NPWG would be able to discuss and make recommendations on such issues as long-term management of the network, funding strategies, network services and pricing, resolution of technical problems, quality assurance, and security needs. |
| **Desired Goals and Outcomes** | a. Conduct informative and working sessions to determine the needs, issues, and constraints regarding the growth and management of a statewide network; <br> b. Conduct an annual meeting of all network participants to discuss network performance, growth projections, emerging technologies, vendor service, and pricing; <br> c. Explore alternative funding strategies to enhance the network's ability to deliver services; <br> d. Research the advantages and disadvantages of different long-term management models and make a detailed recommendation to the NITC. |
| **Authority** | This work group will act in accordance with the recommendations adopted by the NITC on September 16, 2002 in the Nebraska Network Study. Representatives serve on behalf of their network constituents and provide policy input to the Collaborative Aggregation Partnership in order to serve the telecommunications needs of Nebraska network participants. |
| **Membership** | **Annual Meeting Membership** may include major network stakeholders from any of the following subsectors: <br> • (State Government) Major state agencies <br> • (Education) Community colleges, state colleges, public universities, independent colleges/universities, K-12 districts, ESUs, distance learning consortia, Department of Education <br> • (Community) Telehealth, public libraries, informal education entities <br> • NITC Council representatives and other members as determined by the sponsor <br> **Regular Meeting (monthly or quarterly) Membership** should include **one** representative from each of the following subsectors: <br> • (State Government) Major state agencies <br> • (Education) Community colleges, state colleges, public universities, independent colleges/universities, K-12 districts, ESUs, distance learning consortia, Department of Education <br> • (Community) Telehealth, public libraries, informal education entities <br> • NITC Council representatives and other members as determined by the sponsor |
| **Reporting** | The sponsor of the work group will report to the NITC Councils as needed. |
| **Timeframe** | This work group will function until this charter is repealed. |

**Background**  The following excerpt is Recommendation #9 and #10 of the Final Report and Recommendations of the Nebraska Network Work Group, adopted by the NITC on Monday, September 16, 2002.

9.  Under the auspices of the NITC, an interim work group composed of stakeholders should coordinate implementation of a shared Nebraska statewide IP-centric network (Recommendation 6).  The work group should include stakeholders, with some representation of the Community Council, Education Council, and State Government Council.  The work group should address technical requirements, network management, quality assurance and security needs.
10. Long-term  functions of the network and a mechanism for constituent input could be delivered in a variety of ways. Issues to be decided include funding strategies, pricing and services to be offered, resolving technical problems, and establishing service levels.  Funding options should encourage collaborative mechanisms for multiple independent entities to use existing resources as well as other available sources. The interim work group would research the advantages and disadvantages of different models and make a detailed recommendation to the NITC.
    a.  Distributed  Model
        Stakeholders would divide up the tasks of running the network and applications and share responsibilities using existing staff and resources. The group would meet as needed to resolve differences and reach consensus on future service changes. Each participant in the network would deal with the purchasing entity individually.
    b.  Centralized  Model
        Stakeholders would designate a central entity to support the network and applications. The central entity would make decisions on behalf of the stakeholders and solicit input when needed. The central entity would be an existing state agency or educational institution and would be responsible for interacting with the purchasing entity.
    c.  Cooperative  Model
        Stakeholders would form a group under 501(c)3 and/or the Interlocal Cooperation Agreement Act that would be the oversight group for the management of the network and implementation of multi-jurisdictional applications. The resulting collaborative would receive oversight by a stakeholder board and have the ability to enter into purchasing agreements with application providers, purchase telecommunications services from the purchasing entity and other providers, and hire staff.