DRAFT
Nebraska Information Technology Commission
Nebraska Network Workgroup
Charter
(Date of Last Revision: December 26, 2001)

A. Purpose

To evaluate the feasibility of the development of a digital network and related support functions to serve education, communities, and state government that could be accomplished through a statewide consortium.

B. Sponsor
Lt. Governor Dave Heineman, NITC Chair

The sponsor has the authority to oversee, monitor and guide the efforts of the workgroup on behalf of the Commission.

C. Chair
Steve Schafer, Chief Information Officer

The chair will organize and conduct meetings of the workgroup. The chair will be responsible for managing the objectives and achieving the schedule and deliverables set forth in this charter. The chair will represent the workgroup at presentations to the NITC, the NITC Councils, and any other organizations.

D. Goals and Principles
The activities of this workgroup will promote the following NITC goals:
1. Support the development of a unified statewide telecommunications infrastructure that is scalable, reliable and efficient;
2. Coordinate the state's investment in telecommunications infrastructure so as to:
    *   Develop new ways to aggregate demand, reduce costs, and create support networks;
    *   Encourage collaboration within and among communities of interest;
3. Determine a broad strategy and objectives for developing and sustaining information technology development in Nebraska, including long-range funding strategies, so as to:
    *   Encourage long-term infrastructure innovation and improvement;
    *   Support the rapid deployment of appropriate technology;

The following principles shall guide the efforts of the workgroup:
1. The recommendations of the workgroup shall support efforts to aggregate state spending on telecommunications by agencies and educational institutions, including NETCOM;
2. Existing and proposed networks shall be consistent with any technical standards and guidelines adopted by the NITC, including video standards and migration plan;
3. The recommendations of the workgroup shall conform to the State's statutory policy of acquiring telecommunications services from the private sector;
4. The proposed network should involve a critical mass of state and local public sector demand for advanced telecommunications services that will encourage deployment of such services to private sector households and business firms within the state;
5. The proposed network should promote a minimum level of access to telecommunications services for state and local public sector users at a reasonable price, regardless of geographic location within the state.

E. Objectives
The objectives of the workgroup include the following:
1. Report on the strengths and deficiencies of existing telecommunications networks serving state and local public sector entities;
2. Examine the strengths, weaknesses, opportunities, and risks pertaining to the concept of a statewide digital network;
3. Basic requirements and critical success factors for a statewide digital network;
4. Address security issues related to a statewide digital network;
5. Evaluate different models for implementing a statewide consortium, including participation, governance, and operational authority;
6. Solicit suggestions and comments from affected entities;
7. Report findings and recommendations, including relationship to NETCOM and incremental options for consideration by the NITC;
8. Prepare a business case and estimate of fiscal impact for all recommendations and options;
9. Report on different funding models and strategies and the corresponding levels of service;
10. If needed to attain the goals listed above in an efficient manner, develop a set of statutory changes for consideration by the NITC for recommendation to the Governor and Legislature.

F. Membership of the Workgroup [See Appendix 1 for Membership Directory]
The Workgroup membership shall be composed of the following positions and affiliations:

Education: Two members each from K-12 and Higher Education, as determined by the NITC Education Council;
Communities: One member each from telehealth, public libraries, and local government, as determined by the NITC Community Council;
State Government: The Chief Information Officer;
Technical Panel: One member each from Nebraska Educational Telecommunications, University of Nebraska Computing Services Network, DAS Division of Communications, and DAS Information Management Services, as determined by the NITC Technical Panel.

G. Operational Support
The Office of the CIO shall provide staff support for the workgroup and may acquire additional support as necessary to expedite this project. Members of the workgroup will be eligible for travel reimbursement pursuant to state statute.

H.   Relationship to NETCOM

NETCOM is an acronym representing the **NE**braska **TeleCOM**munications Contract, an RFP for a Service Contract Award (SCA) # SCA-0207. The RFP was issued by the State of Nebraska, Department of Administrative Services on August 27, 2001, for the purpose of selecting a qualified entity to assume the position of a "prime contractor" for implementation of a statewide telecommunications network. On October 19, 2001, the State rejected all proposals and is now reassessing its options for achieving the goals of NETCOM.

The prime contractor concept is defined as the State contracting to lease transport services under a competitive procurement from a single statewide prime telecommunications service provider. This service provider would offer these transport telecommunications services to all levels of state and local government, including K-12, post-secondary and higher education. Service Level Agreements (SLA) and performance parameters such as Quality of Service (QoS), circuit availability, and lead times for service implementation, among others, would be defined. The prime contractor would be expected to provide end-to-end services through subcontracting or joint ventures with the incumbent local exchange carriers (ILEC), competitive local exchange carriers (CLEC), Interexchange carriers (IXC), and any other telecommunications service providers as allowed by law.

For all practical purposes, NETCOM can best be described as delivering layer 1, Physical, and layer 2, Data Link, on the OSI 7-layer model. [See Appendix 2]
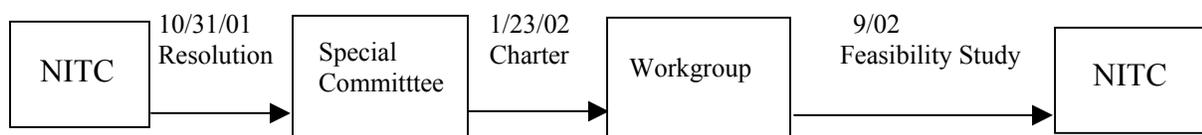
The Nebraska Network, if developed, would be presumed to deliver all or a portion of layers 3-6, according to the OSI 7-layer model. The Network, if developed, could best be described as the delivery and management of an array of digital services (data, video, or voice) provided to the various members.

I.   Definitions
For purposes of this charter, the Open System Interconnections (OSI) 7-layer model shall be used. See Appendix 2 for elaboration and definitions of the seven layers.

J. Proposed Schedule and Deliverables

Due Date	Deliverables
Due Date	**Deliverables**
January 23, 2002	Present workgroup charter to the NITC
February 2002	Phase 1
	Organize membership
	• Review existing networks
	• Identify strengths and weaknesses of existing systems
	• Review networks from other states
	• Identify statutory authority and constraints
	• Prepare summary report
March 2002	Phase 2
	• Identify goals and objectives
	• Determine primary functions to be served
	• Establish high-level requirements
	• Identify stakeholders and potential participants
	• Identify critical success factors
	• Prepare summary report
April 2002	Phase 3
	• Review models from other states
	• Review operational models
	• Review governance models
	• Prepare summary report
May 2002	Phase 4
	• Review models from other states
	• Review funding options
	• Develop business case
	• Prepare summary report
June 2002	Phase 5A
	• Prepare findings and conclusions
June 2002	Phase 5B
	• Conduct risk assessment
	• Evaluate business case
	• Develop draft recommendations
	• Prepare draft final report
June 2002	Public review process (15 day comment period)
July 2002	Phase 6
	• Review, revise and adopt final report
August 2002	Present draft final report to affected NITC Councils and Technical Panel
Sept 2002	Present Final Report to NITC

NITC → 10/31/01 Resolution → Special Committtee → 1/23/02 Charter → Workgroup → 9/02 Feasibility Study → NITC

Appendix 1: Membership Directory

Education	K-12	Alan Wibbels, ESU 10, awibbels@esu10.org, 308-237-5927
	K-12	Ed Rastovsky, Wahoo P.S., erastovski@aol.com, 402-443-3051
	Higher Ed	Kent Hendrickson, UNL, khendrickson1@unl.edu, 402-472-2311
	Higher Ed	Dennis Linster, Wayne St., DeLinst1@wsc.edu, 402-375-7286
Community	Telehealth	*Ted Schultz, NAHHS, tschultz@nahhsnet.org, 402-458-4907
	Public Libraries	
	Local Government	
Government	DAS-CIO	Steve Schafer, CIO, slschafe@notes.state.ne.us, 402-471-4385
	Pub. Serv. Comm.	
Technical Panel	NET	
	UNCSN	*Rick Golden, UN, rgolden@uneb.edu, 402-472-7626
	DAS-DOC	
	DAS-IMS	
Alternates	K-12 alternate	Shirley Schall, SWDLC, sschall@esu15.org, 308-334-5160
	K-12 alternate	Wayne Fisher, NDE, wfisher@nde.state.ne.us, 402-471-2085
	Higher Ed alternate	Con Dietz, Creighton U., cpdietz@creighton.edu, 402-280-2202
	Higher Ed alternate	Jack Huck, Southeast CC, jhuck@scc.cc.ne.us, 402-471-8519
	Telehealth alternate	*Jolene Davidson, Madonna, jlavigne@madonna.org, 402-489-7102
	Library alternate	
	Local Gov alternate	
	CIO alternate	
	Pub. Serv. Comm alternate	
	NET alternate	
	UNCSN alternate	*Walter Weir, UN, wweir@uneb.edu, 402-472-2111
	DOC alternate	
	IMS alternate	

* Pending approval by their respective Councils

Appendix 2: OSI 7-layer model

The ISO (International Standards Organization) has created a layered model, called the OSI (Open Systems Interconnect) model, to describe defined layers in a network operating system. The purpose of the layers was to provide clearly defined functions describing how applications running on network-aware devices may communicate with each other. Each layer has a standard defined input and a standard defined output. Understanding the function of each layer is instrumental in understanding data communication within local, metropolitan or wide area networks.

7) Application Layer
The *Application layer* represents the level at which applications access network services. This layer represents the end-user services that directly support applications such as software for file transfers, database access, and electronic mail.

6) Presentation Layer
The *Presentation layer* translates data from the Application layer into an intermediary format, ready for use by the running application. This layer also manages security issues by providing services such as data encryption, protocol conversions, and compresses data so that fewer bits need to be transferred on the network.

5) Session Layer
The *Session layer* provides for two communicating presentation entities to exchange data with each other. It allows two applications on different computers to establish, use, and end a session. This layer establishes dialog control between the two computers in a session, regulating which side transmits, plus when and how long it transmits.

4) Transport Layer
The *Transport layer* handles error recognition and recovery and relieves the session layer of the burden of ensuring data reliability and integrity. It also repackages long messages when necessary into small packets for transmission and, at the receiving end, rebuilds packets into the original message. The receiving Transport layer also sends receipt acknowledgments.

3) Network Layer
The *Network layer* provides a means for communicating open systems to establish, maintain and terminate network connections. It addresses messages and translates logical addresses and names into physical addresses. It also determines the route from the source to the destination computer and manages traffic problems, such as switching, routing, and controlling the congestion of data packets.

2) Data Link Layer
The *Data Link layer* packages raw bits from the Physical layer into frames (logical, structured packets for data) and defines the access strategy for sharing the physical medium. This layer is responsible for transferring frames from one computer to another, without errors. After sending a frame, it waits for an acknowledgment from the receiving computer.

1) Physical Layer
The *Physical layer* defines the physical and electrical characteristics of the network. It transmits bits from one computer to another and regulates the transmission of a stream of bits over a physical medium. This layer defines how the cable is attached to the network adapter and what transmission technique is used to send data over the cable.