Technical Panel
of the
Nebraska Information Technology Commission
Wednesday, November 12, 2003 - 9:00 a.m.
Varner Hall - Board Room
38th and Holdrege, Lincoln, Nebraska

AGENDA

Meeting Documents:
Click the links in the agenda
or click here for all documents (880 KB)

1. Roll Call and Meeting Notice

2. Public Comment

3. Approval of Minutes* - October 8, 2003

4. Maintenance Management System - Department of Roads

5. Open Door Information Exchange (ODIE) System - Alan Wibbels

6. Technical Architecture

   - Recommendation to the NITC*

Network Architecture	IP Communication Protocol Standard for Synchronous Distance Learning and Videoconferencing	(See Comment 2, Contracting Guidelines...)
	Contracting Guidelines for Upgrade of Distance Learning Services	Comment 1 Comment 2
Groupware Architecture	Blocking Unsolicited Bulk E-Mail / "SPAM"	
	Blocking E-Mail with Attachments	

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

   - Accessibility Architecture Work Group
   - CAP
   - Security Architecture Work Group
   - Statewide Synchronous Video Network Work Group
   - NIS

8. Other Business

9. Next Meeting Date

   Wednesday, December 10, 2003

10. Adjourn

* Denotes Action Item

NITC and Technical Panel Websites: http://www.nitc.state.ne.us/
Meeting notice posted to the NITC Website: 10 OCT 2003
Meeting notice posted to the Nebraska Public Meeting Calendar: 10 OCT 2003
Agenda posted to the NITC Website: 6 NOV 2003

TECHNICAL PANEL

Nebraska Information Technology Commission
Wednesday, October 8, 2003, 10:00 a.m.
Varner Hall, 3835 Holdrege Street, Lincoln, Nebraska
PROPOSED MINUTES

MEMBERS PRESENT:

Bob Huber, (Alt. for Mike Beach, Nebraska Educational Telecommunications)
Brenda Decker, Dept. of Administrative Services, State of Nebraska
(Steve Henderson present for the first part of the meeting)
Christy Horn, University of Nebraska, Compliance Officer
Steve Schafer, Chief Information Officer, State of Nebraska
Rick Golden, University of Nebraska (alt. for Walter Weir, University of Nebraska)

MEMBERS ABSENT: Kirk Langer, Lincoln Public Schools, K-12 Representative

CALL TO ORDER, ROLL CALL, AND MEETING NOTICE

In the absence of the Chair, Steve Schafer, called the meeting to order at 10:03 a.m. There were four members present at the time of roll call. A quorum existed to conduct official business. The meeting notice was posted to the NITC and the Nebraska Public Meeting calendar websites on September 19, 2003. The agenda was posted to the NITC Website on October 3, 2003.

PUBLIC COMMENT

There was no public comment.

APPROVAL OF SEPTEMBER MINUTES

Mr. Huber moved to approve the September 17, 2003 minutes. Mr. Golden seconded the motion. All were in favor. The motion was carried by voice vote.

VOTER REGISTRATION PROJECT – SECRETARY OF STATE'S OFFICE
Marie Gregoire, Applications Lead, Gregoire Consulting
Josh Daws, Chief Technology Officer, Secretary of State

Ms. Decker arrived at 10:08 a.m.

The Secretary of State has started a voter registration project to meet the requirements of HAVA (Help America Vote Act). The primary goal is to have a single, statewide, centralized voter registration system. Currently, each of Nebraska's 93 counties have their own system. (Click on link above for the detailed presentation.)

Ms. Horn arrived at 10:48 a.m.

UPDATE: COMMUNITY TECHNOLOGY FUND PROJECTS
Anne Byers, Community Information Technology Manager

Since September 1998, 40 projects have been awarded a total of $834,700 from the Nebraska Information Technology Commission's Community Technology Fund. The projects funded demonstrate how information technology is being used to improve efficiency and enhance economic development. For 2002, 11 projects were awarded. Eight projects have been completed. Of the remaining three projects, two related to telehealth and have been extended. The other extended program is the Mini-grants program. Six of the eight selected communities have completed their technology plans. Crawford, Nebraska received a $150,000 federal grant to further their I.T. efforts. Ms. Byers entertained questions.

TECHNICAL ARCHITECTURE – SET FOR PUBLIC COMMENT

IP Communication Protocol Standard for Synchronous Distance Learning and Videoconferencing

Ms. Decker moved to approve the IP Communication Protocol Standard for Synchronous Distance Learning and Videoconferencing for the 30-day comment period. Ms. Horn seconded the motion. Roll call vote: Huber-Yes, Decker-Yes, Horn-Yes, Schafer-Yes, and Golden-Yes. The motion was carried by unanimous vote.

Contracting Guidelines for Upgrade for Distance Learning Services

Mr. Horn moved to approve the draft Contracting Guidelines for Upgrade for Distance Learning Services for the 30-day comment period. Mr. Huber seconded the motion. Roll call vote: Golden-Yes, Schafer-Yes, Horn-Yes, Decker-Yes, and Huber-Yes. The motion was carried by unanimous vote.

TECHNICAL ARCHITECTURE – RECOMMENDATION TO THE NITC

Members discussed revisions to the documents. Given the changes, it was suggested that these documents be posted for comment as revised.

Mr. Golden moved to adopt the Groupware Architecture-Blocking Unsolicited Bulk E-mail/SPAM and Groupware Architecture-Blocking E-mail with Attachments, as revised, for the 30-day comment period. Mr. Huber seconded the motion. Roll call vote: Horn-Yes, Schafer-Yes, and Golden-Yes, Huber-Yes, and Decker-Yes. The motion was carried by unanimous vote.

REGULAR INFORMATIONAL ITEMS AND WORK GROUP UPDATES

Accessibility Architecture Work Group, Christy Horn. Training will begin on November 1st. The first round of training will be conducted as workshops and state agencies will be invited. Part of the training will involve agencies assessing their websites.

CAP, Brenda Decker. The project is progressing.

Security Architecture Work Group, Steve Schafer. State agencies have received their results from the security assessment to address vulnerability issues. Mr. Schafer will be contacting Omni Tech regarding a follow-up vulnerability study. The work group is addressing business continuity planning.

Statewide Synchronous Video Network Work Group. No report.

NIS. No report.

OTHER BUSINESS

No other business.

ADJOURNMENT AND NEXT MEETING DATE

The next meeting of the NITC Technical Panel will be held on Wednesday, November 12th, 9:00 a.m. at the University of Nebraska-Varner Hall in Lincoln, Nebraska.

With no further business, Mr. Schafer adjourned the meeting at 11:30 a.m.

NDOR
Nebraska
Department of Roads

EMMS Project Planning
&
Overview

NDOR
Nebraska
Department of Roads

What is EMMS?

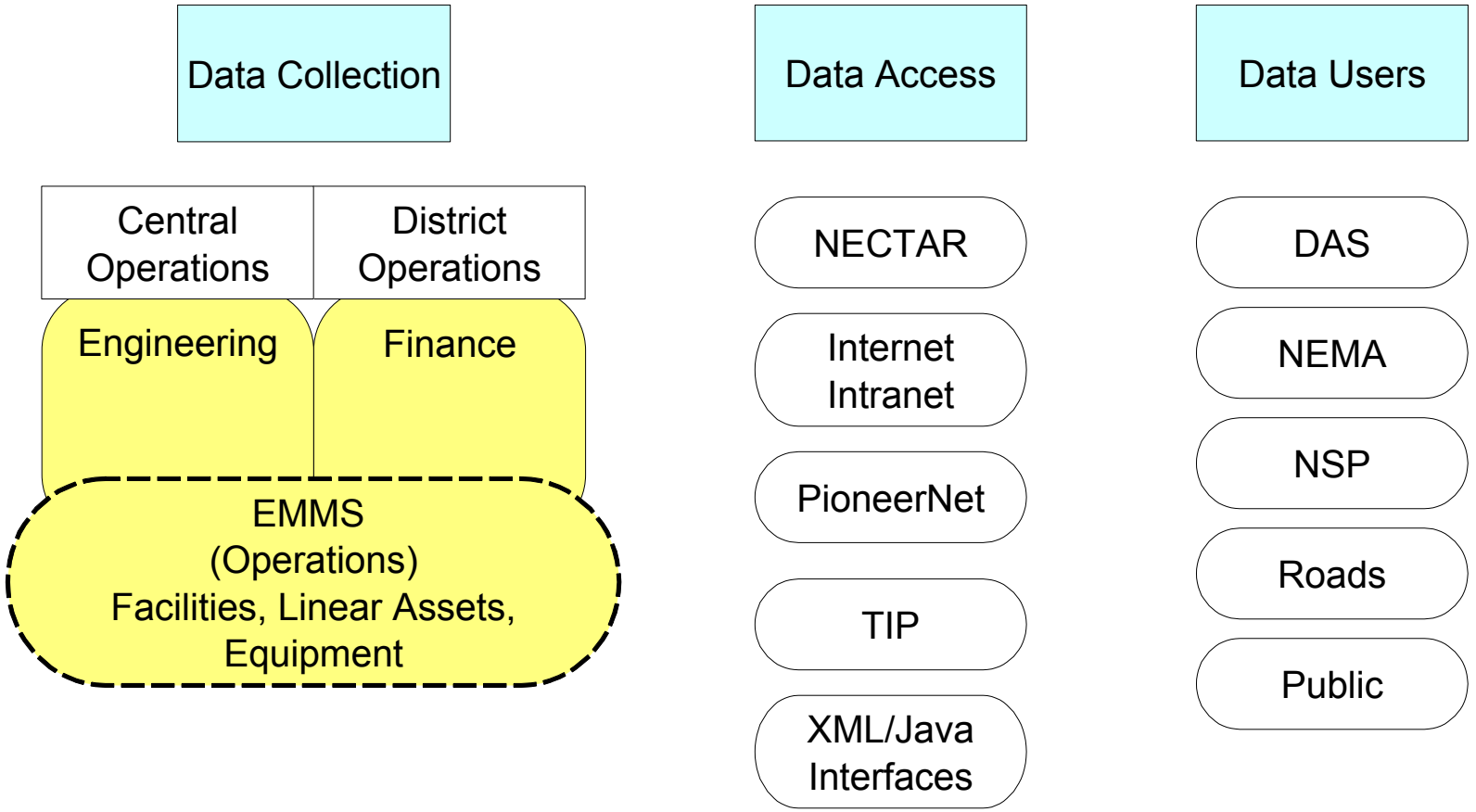
- Promotes the Department mission of providing and maintaining a safe, efficient, affordable and coordinated statewide transportation system for the movement of people and goods
- Maintenance planning for $7B in assets
  - 10,000 miles of maintained roadways
  - 8000 pieces of equipment
  - 610 buildings on 217 sites

NDOR
Nebraska
Department of Roads

Business Drivers

- Reduction in FTE's requires NDOR to do more with less
  - 1% savings through better efficiency = $70M
- Improved ability to schedule and execute preventative maintenance of signals, signs, RR crossings reduces chance of accidents
- Global access to data
- Increased management visibility to trends and information
- Legacy integration enhances business model

Fills Strategic Position



NDOR
Nebraska
Department of Roads

Fleet Maintenance

- 8000 pieces of equipment
- Goals:
  - Decrease part inventory, optimize maintenance cycles
  - Lower procurement administrative costs
  - Improve asset use and cost trend information for planning
  - Increase visibility of equipment around the enterprise for co-operative use

NDOR
Nebraska
Department of Roads

Capital Facilities

- 610 buildings on 217 sites
- GIS provides mapped view of assets and rapid, location-based, identification of information and reports
  - Access to floor plans and detail
  - Access to HVAC and utility system information
  - Unlimited facility layer detail
  - Preventative Maintenance planning
- Enhances both operational and disaster planning capabilities

NDOR
Nebraska
Department of Roads

Linear Assets

- 10,000 miles of maintained roadway
- Goals:
  - GIS provides location-based interface to linear and asset information
  - Enhanced planning-to-work-order cycle
  - Increase visibility of roadway elements and asset information along with status
  - Decrease costs and improve planning through trend development

NDOR
Nebraska
Department of Roads

Homeland Security

- Incident Management Needs Near Real Time Information Concerning:
  - People
  - Places
  - Things
- All Homeland Security Incidents lead to Roads

NDOR
Nebraska
Department of Roads

State Contract

- MM is a key productivity suite for any agency
- Extensive vendor commitment for NDOR project ensures other agencies benefit from our experience
- State purchase contract concept benefits from breadth and depth of NDOR business needs

Project Implementation

- Phased process
  - Phased system integration plan
  - Phased introduction to facilities, fleet and linear asset groups based on NDOR priorities and expected return
- Will require close vendor supervision and possible customization based on NDOR-specific requirements

NDOR
Nebraska
Department of Roads

Conclusion

- EMMS is a key enterprise system for NDOR driving > 60% of information and work-related transactions between central and district operations
- Today's management in these areas is largely manual
- Critical for establishing cost and planning controls
- Projected cost of EMMS is based on experiences of other state doing similar projects over several years (MDDOT, TDOT and NCDOT)

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

STANDARDS AND GUIDELINES

XX-XXX IP Communication Protocol Standard for Synchronous Distance Learning and Videoconferencing

Category	**Network Architecture**
Title	**IP Communication Protocol Standard for Synchronous Distance Learning and Videoconferencing**
Number	**XX-XXX**

Applicability

☑ **State Government Agencies**
- ☑ All..... **Standard**
- ☐ Excluding _____.....**Not Applicable**

☑ **State Funded Entities -** All entities receiving state funding for matters covered by this document..... **Standard**

☑ **Other:** Entities electing to pass synchronous video over *Network Nebraska*..... **Standard**

Definitions:
Standard - Adherence is required. Certain exceptions and conditions may appear in this document, all other deviations from the standard require prior approval of NITC Technical Panel.
Guideline - Adherence is voluntary.

Status	☐ Adopted	☑ Draft	☐ Other:_____
Dates	Date: October 8, 2003 Date Adopted by NITC: Other:		

Prepared by: Technical Panel of the Nebraska Information Technology Commission
Authority: Neb. Rev. Stat. § 86-516(6)
http://www.nitc.state.ne.us/standards/

1.0 Technical Standard

All state agencies, entities that receive state funding for telecommunications, and entities that wish to pass synchronous video over the State's statewide network (*Network Nebraska*) shall use IP as their communication protocol for synchronous video.

2.0 Purpose and Objectives

The purpose of this standard is to implement a consistent communication protocol to be used by all entities wishing to pass synchronous, interactive teleconference video over the statewide network.

2.1 Background

IP is the Internet's most basic protocol. In order to function in a TCP/IP network, a network segment's only requirement is to forward IP packets. In fact, a TCP/IP network can be defined as a communication medium that can transport IP packets. Almost all other TCP/IP functions are constructed by layering atop IP.

IP is a datagram-oriented protocol, treating each packet independently. This means each packet must contain complete addressing information. Also, IP makes no attempt to determine if packets reach their destination or to take corrective action if they do not. Nor does IP checksum the contents of a packet, only the IP header.

IP provides several services:

- **Addressing.** IP headers contain 32-bit addresses, which identify the sending and receiving hosts. Intermediate routers use these addresses to select a path through the network for the packet.
- **Fragmentation.** IP packets may be split, or fragmented, into smaller packets. This permits a large packet to travel across a network, which can only handle smaller packets. IP fragments and reassembles packets transparently.
- **Packet timeouts.** Each IP packet contains a Time To Live (TTL) field, which is decremented every time a router handles the packet. If TTL reaches zero, the packet is discarded, preventing packets from running in circles forever and flooding a network.
- **Type of Service.** IP supports traffic prioritization by allowing packets to be labeled with an abstract type of service.
- **Options.** IP provides several optional features, allowing a packet's sender to set requirements on the path it takes through the network (source routing), trace the route a packet takes (record route), and label packets with security features.

In the two decades since their invention, the heterogeneity of networks has expanded further with the deployment of Ethernet, Token Ring, Fiber Distributed Data Interface (FDDI), X.25, Frame Relay, Switched Multimegabit Data Service (SMDS), Integrated Services Digital Network (ISDN), Asynchronous Transfer Mode (ATM), and most recently Multi Protocol Label Switching (MPLS). The Internet protocols are the best-proven approach to internetworking this diverse range of LAN and WAN technologies.

The Internet protocol suite includes not only lower-level specifications (such as TCP and IP), but specifications for such common applications as electronic mail, terminal

emulation, and file transfer. The Internet protocols are the most widely implemented multi-vendor protocol suite in use today. Support for at least part of the Internet protocol suite is available from virtually every computer vendor.

IP multicasting (the ability to send IP datagrams to multiple nodes in a logical group) is an important building block for applications such as video. Video teleconferencing, for example, requires the ability to send video information to multiple teleconference sites. If one IP multicast datagram containing video information can be sent to multiple teleconference sites, network bandwidth is saved and time synchronization is closer to optimal.

2.2 Objective

The objective of this standard is to permit interoperability of distance learning systems throughout the state. When all have adopted this and other standards prescribed by the state, educational opportunities will be expanded because any entity will be able to share resources with any other entity. All such traffic will be able to pass through *Network Nebraska* backbone connectivity, and the aggregated use of this network will lower overall costs for participants.

3.0 Definitions

3.1 Synchronous

Occurring at the same time. When applied to video, it means that two or more parties in different locations are conducting a simultaneous audio/video exchange over the network.

3.2 Teleconference

Video traffic where participants at separate locations communicate at the same time with one another through video and/or audio links.

3.3 TCP/IP

A protocol for communication between computers, used as a standard for transmitting data over networks and as the basis for standard Internet protocols. *Transmission Control Protocol/Internet Protocol.*

4.0 Applicability

4.1 State Government Agencies

All State agencies are required to comply with this standard.

4.2 State Funded Entities

Entities that are not State agencies but receive State funding for telecommunications (i.e. Legislative appropriations, Education Innovation Fund, Nebraska Universal Service Fund, ESU Core Services, Infrastructure Fund, etc.) are required to comply with this standard.

4.3 Other Entities

Entities that are neither State agencies nor state-funded entities but choose to use the State-funded *Network Nebraska* for purposes of transmitting or exchanging synchronous video must comply with this standard.

5.0 Responsibility

5.1 NITC

The NITC shall be responsible for adopting minimum technical standards, guidelines, and architectures upon recommendation by the technical panel. (N.R.S. 86-516 §6)

5.2 *Network Nebraska* Operational entities

The Collaborative Aggregation Partnership, composed of the University of Nebraska Computer Services Network, the Department of Administrative Services--Division of Communications, and Nebraska Educational Telecommunications, will be responsible for sharing the responsibilities of the network operations portion of *Network Nebraska*. The responsibility for identification and mitigation of non-compliant entities with respect to the IP communication protocol standard resides with the Collaborative Aggregation Partnership.

6.0 Related Documents

6.1 Video and Audio Compression Standard for Synchronous Distance Learning and Videoconferencing

(http://www.nitc.state.ne.us/standards/video/video_standard.pdf)

IP Communication Protocol Standard....
and
Contracting Guidelines for Upgrade of DL Services
Comment 2

From: Roger.Hahn@alltel.com
Sent: Thursday, November 06, 2003 10:19 AM
To: rbecker@cio.state.ne.us
Cc: trolfes@cio.state.ne.us; wfisher@nde.state.ne.us
Subject: Comments due by November 10th

NIN INPUT on Technicl Standard...

DATE: November 6, 2003

TO: Rick Becker

FROM: Roger Hahn

SUBJECT: Comments for the NITC Technology Panel

My comments are in the attached document. Further comment, for your consumption, on item 2.2 in the "Contracting Guidelines" we support continuing the 45 MBPS Distance Learning Connectivity but the current contracts do not in any way state that the schools / consortiums are paying for 45 MBPS of bandwidth. Major - major - major anti-trust and FCC legal problems for Qwest if they are selling 45MBPS bandwidth at a discount to only a select group of customers.

<<NIN INPUT on Technicl Standards due to NITC Tech Panel by Nov 10th.rtf>>

Jerry Freeberg, here at NIN, is devoted almost full time to running technology and pricing technology for the statewide replacement of the JPEG systems. The Work Group that provides us with direction or reviews our scenarios is comprised of:

- Deb Swanson ..... Qwest Communications
- Roger Adams ..... Qwest Communications
- Steve Edie ..... Alltel Communications
- Mari Sanders ..... Alltel Communications
- Jim Weston .... Great Plains Communications
- Terry Eriksen ..... Northeast Nebraska Telephone Co.
- Ed Cole ..... Curtis Telephone Co.

If you have any questions, please contact me.

Thx ..... Roger

SUBJECT: Comments due to NITC Technology Panel by November 10th

The Nebraska Information Network offers comments on two of the items on the NITC Web Site in the section **"Standards and Guidelines Posted for Comment".**
The items are:

>>> IP Communication Protocol Standard for Synchronous Distance Learning and Video Conferencing

>>> Contracting Guidelines for Upgrade of Distance Learning Services

For >>>> IP Communication Protocol Standard for Synchronous Distance Learning and Videoconferencing:

.... 2.1 Background: Last paragraph >>> capability to multicast is not unique to IP protocol. This feedback in no way suggests that IP should not be approved as the standard, but at the same time there should not be misleading inferences in this document.

.... 2.2 Objective: I believe this statement needs to be expanded to explain that some vendors proprietary versions of IP protocol or at least proprietary versions of the video and audio "standards" that are transported via IP protocol will not permit interoperability between distance learning systems without some version of a gateway. Need to elaborate that proprietary systems will not meet the standards. **This is offered as a mind jogger for your experts to address.**

For >>>> Contracting Guidelines for Upgrades of Distance Learning Services:

.... 1.0 Guidelines: Concerning two options for new contracts .... Option "A" will likely result in foregoing hundreds of thousands of dollars of E-Rate (Federal USF Funds). With a separate contract for "connective terminal hardware" (CODEC) the schools or consortiums will be submitting a separate request for E-Rate dollars for equipment. The E-Rate program puts request for equipment dollars in the priority two allocation of Federal USF dollars and almost none get funding >>> have to be in the higher free and reduced lunch program percentages, i.e., 90% and above .....

At the meeting with the Nebraska Public Service Commission I sensed a lack of concern in that the State USF Fund or grant dollars could be used for equipment. Grant dollars are hard to obtain and there are plenty of other excellent uses for the State USF dollars.

..... 1.0 Guidelines: Item "C" (Format point ... options "A" and "B" are choose one or the other. Item "C" is a standalone decision and not an option in place of "A" or "B") Just trying to be helpful in finalizing your excellent work.

I do have a problem with item "C" in that making any new distance learning contracts co-terminus with the *Network Nebraska core transport contracts* will have the providers recovering investments over a very shortened period of time and thus result in higher cost for the distance learning networks. Also there is an issue in that there is no fixed contract terminating date on the *core transport contracts,* i.e., believe the first contract was a five year contract with a possibility of three one year renewals. So is it a five, six, seven or eight year contract.

..... 2.0 Background: "Most recently, the cable-based interconnect systems have upgraded to digital video compression over 100 megabit, flexibly provisioned circuits" gives a direct inference that the telephone company systems are not on digital facilities >>> have been 100 % digital from day one thus the superb quality of video and audio.

Only one of the two cable-based interconnect systems have Changed to digital technology. The other cable system is still using Analog technology.

"Qwest announced that they would no longer support nor install JPEG Technology." Qwest, to the best of my knowledge, never stated they would not support JPEG Technology. I believe they stated it would become increasingly hard to support JPEG Technology >>> there is a night and day difference in these two statements.

Qwest stopped installing JPEG equipment but did not stop placing Into service additional equipment that had already been installed.

Independent telephone companies in Nebraska and most multi State telephone companies in Nebraska have purchased additional JPEG equipment in the last twelve to eighteen months to have equipment on hand to fully support the JPEG Networks through to contract expiration and possibly beyond if issues have not been worked out for funding replacement technology.

.... 2.2 Objective: "The objective of this guideline is to permit users to access all the bandwidth for which they are paying."

The users are not paying for an amount of bandwidth, they are paying for a defined quality of video and audio service regardless of the amount of bandwidth being used. All of the telephone industry contracts are written in terms of a video service being provided for educational use. To interpret this service offering in terms of bandwidth would cause some major legal problems for portions of the telephone industry in Nebraska.

Thx ..... Roger

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

STANDARDS AND GUIDELINES

XX-XXX Contracting Guidelines for Upgrade of Distance Learning Services

Category	**Network Architecture**
Title	**Contracting Guidelines for Upgrade of Distance Learning Services**
Number	**XX-XXX**

Applicability

☐ State Government Agencies
- ☐ All.....Not Applicable
- ☐ Excluding _____.....Not Applicable

☑ **State Funded Entities -** All entities receiving state funding for matters covered by this document.....**Guideline**

☑ **Other:** Distance Learning Consortia and affiliated partners.....**Guideline**

Definitions:
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Status	☐ Adopted	☑ Draft	☐ Other:_____
Dates	Date: October 8, 2003 Date Adopted by NITC: Other:		

Prepared by: Technical Panel of the Nebraska Information Technology Commission
Authority: Neb. Rev. Stat. § 86-516(6)
http://www.nitc.state.ne.us/standards/

1.0 Guidelines

Entities that receive state funding for telecommunications and public entities that are approaching contract expiration for existing distance learning services are advised to make every attempt to take advantage of the NITC efforts to aggregate services and contracts. As new contracts are contemplated for distance learning, it is recommended that discussions minimally include consideration of the following options: A) negotiate two contracts at the local level; one contract for procurement and maintenance of connective terminal hardware (CODEC) and a second contract for transport (preferably the use of *Network Nebraska*); or B) to negotiate one contract for connective terminal hardware and transport as long as the end-user has full access to and flexible use of all bandwidth on the network and has the ability to upgrade video encoding equipment as desired; and C) make transport contract expiration dates co-terminus with the *Network Nebraska* core transport contracts (contact the DAS-Division of Communications for more information).

2.0 Purpose and Objectives

The purpose of this guideline is to make the contracted services portion of distance learning contracts more flexible for the end-user and the provider and better able to accommodate future technology applications.

2.1 Background

Approximately 297 school districts joined together during the years 1996-2002 to form 11 separate interlocal agreements for the purposes of applying for and receiving lottery and Federal funds for interactive distance learning as served by telephone companies over DS-3 (45 megabit) circuits, or cable-based interconnected systems. Many of these consortia agreed to long-term video service contracts (10 years) broken up into two and four year increments. These same high school participants and Educational Service Units also negotiated for one or two T-1 (1.544 megabit) data circuits over the same DS-3s for Internet access. The video compression technologies chosen at the time was JPEG (Joint Photographic Experts Group) that delivered near-broadcast quality at approximately 8 megabits per video channel or analog video. Most recently, the cable-based interconnected systems have upgraded to digital video compression over 100 megabit, flexibly provisioned circuits.

In 2001, the major supplier of the JPEG Codecs (coder-decoder) announced that this technology would no longer be manufactured. This inspired Qwest Communications (then U.S. West) to also announce that they would no longer support nor install JPEG technology in its 14-state service area.

In 2002, the Nebraska Legislature authorized $3 million in lottery funds to be used for the Distance Education Network Completion grants that affected 45 high schools throughout the State. The Legislation stipulated that these schools were to become part of existing consortia using existing technology. As these original agreements come to the end of their service period (2006-2012), it is in the mutual best interest of the provider and end-user that this technology be replaced and the contract terms be modernized as soon as possible.

2.2 Objective

The objective of this guideline is to permit users to access all the bandwidth for which they

are paying. It will allow providers to continue service and to expand networks as required by updating the systems they use to NEBS (Network Equipment Building System) standard compatible equipment. It will allow interoperability between users among multiple consortia. It will permit new telecommunications services on the DS-3 connections in use and permit increased speeds on current services such as access to the Internet.

3.0 Definitions

3.1 CODEC

A device that encodes video and audio into data and decodes data into video and audio. CODEC stands for coder/decoder.

3.2 Interlocal agreement

An official written agreement between two or more publicly funded entities.

3.3 T-1

A data circuit that provides throughput of 1.544 Mbps.

3.4 DS-3

A data circuit that provides throughput of 45 Mbps.

4.0 Applicability

4.1 State Funded Entities

Entities that are not State agencies but receive State funding for telecommunications (i.e. Legislative appropriations, Education Innovation Fund, Nebraska Universal Service Fund, ESU Core Services, Infrastructure Fund, etc.) are encouraged to follow this guideline.

4.2 Other Entities

Entities that are neither State agencies nor state-funded entities but choose to use the State-funded *Network Nebraska* for purposes of transmitting or exchanging synchronous video are encouraged to follow this guideline.

5.0 Responsibility

5.1 NITC

The NITC shall be responsible for adopting minimum technical standards, guidelines, and architectures upon recommendation by the technical panel. (N.R.S. 86-516 §6)

6.0 Related Documents

6.1 Video and Audio Compression Standard for Synchronous Distance Learning and Videoconferencing (http://www.nitc.state.ne.us/standards/video/video_standard.pdf)

6.2 IP Communication Protocol Standard for Synchronous Distance Learning and Videoconferencing (draft)

Contracting Guidelines for Upgrade of DL Services
Comment 1

I was asked to submit comments on the Guidelines for Upgrade of Distance Learning Services. The STEP consortium was the first K-12 Distance Learning consortium in the state and our schools have benefited greatly from the support of the state and the technology advances that have occurred over the past 10 plus years. Our consortium was started in large part from grants obtained from the state and Federal government. The system was increased to 9 schools with another grant about 8 years ago. At that time the push was to be sure that all distance learning pods be built in such a fashion that they would be able to participate across lines with others.

Three years ago the state set a standard for what the minimum specifications would be so that in the future all distance learning systems would be able to compatible with one another. Again the state legislature in an attempt to be sure that this happened not only set a standard but helped to fund our consortium so that we would be in compliance with other distance learning systems across the state.

Since that time many of the systems have upgraded or are making plans for upgrade and now the standard is different again. I understand the need to watch the new technologies and to adopt that which is not only better, but is also more cost effective. Although I understand that philosophy and believe in it, it continues to baffle my mind that each time someone decides to upgrade the STEP system seems to get further and further behind. Each year we have schools that ask me why is it that other schools can interconnect be we can't. My response is and has been that because of differences in systems, it isn't possible. I am now getting schools asking why don't we just join another system. Frankly, I have no answers and from what I read in your request for input, I don't see us getting any closer with this proposal.

Again, I would tell you I have and continue to support the decisions made by this group, but it does not appear that the people making the decisions in this whole process are giving any consideration to those who are not currently a part of committees serving the NIT. I do not believe that it is in the far reaching interests of the entire state for some portions of the system to be left out of this process. Perhaps I have not paid close enough attention but it seems that more consideration needs to be given to all distance learning pods or by state mandate have one or two provide services to all of the rest.

As far as the transport is concerned, unless I'm not understanding the proposal, this will not benefit our system since we do not originate service at an ESU. I understand that transport from the Service unit will benefit us but a lot of our costs are prior to getting to a Service Unit connection. If this is the case, then again I guess we are the Step children left out in the dark once again. I thank you for listening to my concerns about this issue.

Rich Schlesselman, Sup't./STEP Director
Anselmo-Merna Schools
PO Box 68
Merna, NE 68856
rschless@esu10.org

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

STANDARDS AND GUIDELINES

Blocking Unsolicited Bulk E-Mail / "Spam"

Category	**Groupware**
Title	**Blocking Unsolicited Bulk E-Mail / "Spam"**
Number	

Applicability

☑ **State Government Agencies**
- ☐ All ..... **Not Applicable**
- ☑ Excluding Higher Education ..... **Guideline**

☐ **State Funded Entities -** All entities receiving state funding for matters covered by this document..... **Not Applicable**

☐ **Other:** _____ ..... **Not Applicable**

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Prepared by: Technical Panel of the Nebraska Information Technology Commission
Authority: Neb. Rev. Stat. § 86-516(6)
http://www.nitc.state.ne.us/standards/

1.0 Guideline

Agencies shall be allowed to evaluate and implement methods for blocking Unsolicited Bulk Email (UBE) or spam in relation to their changing e-mail needs, even if some legitimate e-mail is blocked. State Agencies that choose to adopt UBE blocking methods must meet these minimum standards.

1. Agencies must periodically review blocked e-mail statistics to determine its effectiveness and to help reduce the non-delivery of legitimate e-mail.

2. UBE blocking methods must attempt to send notification to legitimate originators of blocked e-mail with the following information:
   a. The e-mail was blocked.
   b. Possible reasons for non-delivery and information on how to restore legitimate communications.
   c. List of alternate methods of communication that maintains reasonable levels of convenience and places no undue hardship on the sending or receiving party.
   d. Links to related state statutes, standards, or guidelines used.

Cost sharing - Where feasible, agencies should work to pool resources to reduce costs to Nebraska. Agencies seeking to purchase UBE-blocking tools should consult with IMServices.

2.0 Purpose and Objectives

This standard addresses the burden on state resources due to UBE and how state agencies may address the issue. Agencies cannot expect to "solve" all problems that arise from UBE, only mitigate them.

UBE creates a significant drain of technical and operational resources. In 2003, the state will receive an estimated 2 million UBE messages for approximately 12,000 employees using e-mail. These numbers will likely continue to rise. UBE needs to be reduced to the extent possible without adding excessive costs or exceptional risks to normal flow of legitimate e-mail.

2.1 Overview

The terms spam and Unsolicited Bulk E-mail (UBE) both refer to the mass receipt of e-mail messages that are usually inappropriate for state operations.

Any automated means of sorting out UBE from e-mail messages sent by the public, vendors, or other state agencies will typically result in the rejection of some valid e-mail. Agencies should take special effort to ensure that the public can conveniently contact state agencies for official business. Blocking legitmate e-mail communication with the state should be minimized.

2.2 Other Resources

The Internet Mail Consortium (IMC) has published several reports on the problem. “Unsolicited Bulk Email: Mechanisms for Control” (http://www.imc.org/ube-sol.html) lists the technical and legal solutions being discussed and how they affect Internet mail users. “Unsolicited Bulk Email: Definitions and Problems”

(http://www.imc.org/ube-def.html) provides precise definitions of UBE and spam issues.

The Coalition Against Unsolicited Commercial Email (http://www.cauce.org/).

The State of Nebraska UBE resource web site (http://www.ims.state.ne.us/spam).

3.0 Definitions

3.1 Spam

A common term for UBE is "spam", although that term encompasses a wider range of intrusive transmissions. For instance, the term "spam" originated in the realm of Usenet news, not email. There, individuals cannot request or refuse bulk email, although some newsgroups explicitly permit or encourage its inclusion as a part of the group charter. For further information, see RFC2635 at the Internet Engineering Task Force, http://www.ietf.org.

3.2 UBE

Unsolicited Bulk Email, or UBE, is Internet mail ("email") that is sent to a group of recipients who have not requested it. A mail recipient may have at one time asked a sender for bulk email, but then later asked that sender not to send any more email or otherwise not have indicated a desire for such additional mail; hence any bulk email sent after that request was received is also UBE.

4.0 Applicability

Agencies with their own mail servers can utilize the standard UBE filtering methods provided by the State Internet email gateway. To reduce duplication costs, agencies should consider utilizing the State Internet email gateway before implementing their own.

5.0 Responsibility

Information Management Services Division may investigate and implement UBE filtering methods on the State Internet e-mail gateway, which IMServices supports. Other agencies may elect to share this service.

6.0 Related Documents

Nebraska Information Technology Commission, Individual Use Policy:
http://www.nitc.state.ne.us/tp/workgroups/security/policies/individual_use_policy.pdf

State of Nebraska Acceptable Use Policy of State Data Communications Network,
http://www.doc.state.ne.us/policies/datausage.html

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

STANDARDS AND GUIDELINES

Blocking E-mail Attachments

Category	**Groupware Architecture**
Title	**Blocking E-Mail Attachments**
Number	**XX-XXX**

Applicability

☑ **State Government Agencies**
- ☐ All ..... **Not Applicable**
- ☑ Excluding: Higher Education ..... **Guideline**

☐ **State Funded Entities -** All entities receiving state funding for matters covered by this document..... **Not Applicable**

☐ **Other:** _____ ..... **Not Applicable**

Definitions:
Standard - Adherence is required. Certain exceptions and conditions may appear in this document, all other deviations from the standard require prior approval of _____.
Guideline - Adherence is voluntary.

Status	☐ Adopted	☑ Draft	☐ Other:_____
Dates	Date: October 8, 2003 Date Adopted by NITC: Other:		

Prepared by: Technical Panel of the Nebraska Information Technology Commission
Authority: Neb. Rev. Stat. § 86-516(6)
http://www.nitc.state.ne.us/standards/

1.0 Guideline

Agencies may prohibit certain attachments from being transmitted through e-mail. There are two common ways to accomplish this. The first is to block any message that contains specific attachments from being delivered. The second is to remove any prohibited attachments before allowing the e-mail to be delivered.

1.1 Blocking E-Mail with Prohibited Attachments

E-mails that include attachments with certain extensions may be blocked at the SMTP gateway. Setting up the blocking criteria at the SMTP gateway will stop incoming Internet mail with those attachments from being delivered. The blocking will also stop outgoing Internet mail with those attachments from being sent. If any of the blocked extensions are detected, the e-mail will be deleted and a standard non-delivery report (NDR) will be returned to the sender stating that the e-mail was not delivered.

1.2 Removing Prohibited Attachments Before Delivery

An agency may also remove any prohibited attachments before allowing the e-mail to be delivered.

1.3 List of Extensions - Attachments which may be blocked

See Addendum.

1.4 Alternative Methods for Sending or Receiving Files

If an individual needs to send or receive a file with one of the blocked extensions, other alternatives for transmitting files should be considered, including: FTP; Web-based document retrieval; renaming the file; or “zipping” the file.

2.0 Purpose and Objectives

It is important to take steps to protect the state’s computing environment against the threat of viruses. Attachments with certain extensions are often used in virus attacks because of their execution access and the amount of damage they can cause.

3.0 Applicability

State Government Agencies – Agencies running a State SMTP Gateway should consider following this guideline.

4.0 Related Documents

(http://www.nitc.state.ne.us/standards/)
Security Policies – Information Security Management

[NOTE: A prior version of this document was posted for comment. After reviewing the comments received, the State Government Council adopted several changes, including making this document a “guideline.” Staff made revisions to the document to reflect the intent of these changes and to clarify language in the document.]

Addendum
List of Extensions - Attachments which may be blocked

ade – Microsoft access project extension
adp – Microsoft access project
asp – active server pages
bas – basic
bat – batch
chm – compiled HTML help file
cmd – command
com – command, executable
cpl – control panel applet
crt – security certificate
exe – executable program
hlp – windows help file
hta – HTML application
inf – set up
ins – internet communications settings
isp – internet communications settings
js – JScript
jse – JScript encoded file
lnk – shortcut
mdb – Microsoft access application
mde – Microsoft access MDE database
msc – Microsoft common console document
msi – install control file
msp – probably a windows installer patch
mst – windows installer transform
pcd – photo CD image
pif – windows program information file
reg – Microsoft registry
scr – screensaver
sct – Windows script component
shb – document short cut
shs – shell script object
url – Internet shortcut
vb – VBScript
vbe – VBScript encoded file
vbs – visual basic
vsd – visio drawing
vss – Visual sourcesafe file
vst – targa bitmap file
vsw – visio workspace file
ws – wordstar file
wsc – windows script component
wsf – windows script file
wsh – windows scripting host settings