

**Technical Panel
of the
Nebraska Information Technology Commission**

Wednesday, October 8, 2003 - **10:00 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 (1.0 MB)

1. Roll Call and Meeting Notice
2. Public Comment
3. Approval of Minutes* - [September 17, 2003](#)
4. Voter Registration Project - Secretary of State's Office
5. Update: [Community Technology Fund Projects](#)
6. Technical Architecture
 - Set For Public Comment*

Network Architecture	IP Communication Protocol Standard for Synchronous Distance Learning and Videoconferencing Contracting Guidelines for Upgrade of Distance Learning Services
----------------------	--

- Recommendation to the NITC*

Groupware Architecture	Blocking Unsolicited Bulk E-Mail / "SPAM"	Comment 1: Alternate Version Comment 2
	Blocking E-Mail with Attachments	Comment 1 Comment 2 Comment 3

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, November 12, 2003

10. Adjourn

* Denotes Action Item

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

Meeting notice posted to the NITC Website: 19 SEP 2003

Meeting notice posted to the [Nebraska Public Meeting Calendar](#): 19 SEP 2003

Agenda posted to the NITC Website: 3 OCT 2003

TECHNICAL PANEL
Nebraska Information Technology Commission
Wednesday, September 17, 2003, 9:00 a.m.
301 Centennial Mall South-Conference Room A, Lower Level
Lincoln, Nebraska
PROPOSED MINUTES

MEMBERS PRESENT:

Mike Beach, Nebraska Educational Telecommunications
Brenda Decker, Dept. of Administrative Services, State of Nebraska
Christy Horn, University of Nebraska
Kirk Langer, Lincoln Public Schools, K-12 Representative
Steve Schafer, Chief Information Officer, State of Nebraska
(Rick Becker present for first part of the meeting)
Walter Weir, Chief Information Office, University of Nebraska

CALL TO ORDER, ROLL CALL, AND MEETING NOTICE

Mr. Weir called the meeting to order at 9:07 a.m. Four members were 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 August 15, 2003. The agenda was posted to the NITC Website on September 15, 2003.

PUBLIC COMMENT

There was no public comment.

APPROVAL OF MINUTES

Mr. Beach moved to approve the [August 13, 2003 minutes](#). Ms. Horn seconded the motion. Roll call vote: Beach-Yes, Decker-Yes, Horn-Yes, Becker-Yes, and Weir-Yes. The motion was carried by unanimous vote.

TECHNICAL ARCHITECTURE - RECOMMENDATION TO THE NITC

Mr. Becker stated that the documents have been posted for the 30-day period and that comments were received. The comments were included in the meeting materials. The documents were also discussed at the State Government Council meeting last week.

[Groupware – Blocking Unsolicited Bulk E-mail/Spam](#)

Mr. Langer arrived at 9:11 a.m.

Discussions followed regarding censorship; litigation; specifications for filters; and, clarifying to agencies if this is a standard or guideline. Staff will further develop the document for the next meeting.

Mr. Schafer arrived at 9:25 a.m.

[Groupware – Blocking E-mail Attachments](#)

The State Government Council recommended adopting the guidelines and to include [comment one changes](#). The panel's recommendation was to further develop the document for the next meeting and to have documents be presented together.

[E-Government – Internet GOV Naming](#)

The State Government Council requested more time to review the document. No action was required at this time.

[Security – Wireless Local Area Network](#)

No comments were received. The purpose of document is to acknowledge that more and more agencies are going to wireless technology and the critical point is that state agencies must register wireless devices with the Division of Communications. The registration of access clients was discussed.

Mr. Schafer moved to recommend that the NITC adopt the Wireless Local Area Network Guidelines with the

recommended change of striking the first bullet under 1.1 Registration of Wireless Devices. Ms. Horn seconded the motion. Roll call vote: Weir-Yes, Schafer-Yes, Langer-Yes, Horn-Yes, Decker-Yes, and Beach-Yes. The motion was carried by unanimous vote.

Security – Remote Access

It was recommended to provide list of software and/or refer to state's configuration guidelines.

Mr. Schafer moved to recommend that the NITC adopt the Remote Access Guidelines. Ms. Decker seconded the motion. Roll call vote: Horn-Yes, Langer-Yes, Schafer-Yes, Weir-Yes, Beach-Yes, and Decker-Yes. The motion was carried by unanimous vote.

REGULAR INFORMATIONAL ITEMS

Accessibility Architecture, Christy Horn. A workshop has been designed for Web accessibility. The office is exploring an on-line workshop design. Students are being trained on conducting the hands on workshop. Gallup is working with UNL to make their interactive federal training programs accessible. Real-time captioning is being tested at remote sites.

Security Architecture Work Group, Steve Schafer. On September 26, a meeting will be held to discuss the results of the security assessment and next steps.

Statewide Synchronous Video Network Work Group, Mike Beach. A series of meetings have been held with the Public Service Commission and with distance learning providers. Currently, long-term service contracts are based on what the vendors can provide and not necessarily on the customer's needs so there is very little flexibility. An additional sentence was added to Recommendation #2 that proposes one or two contracts. The Statewide Synchronous Video Network Work Group will need to review the additional sentence. The Public Service Commission sent a non-committal letter of support and offered assistance in finding other funding resources after the August 26 SSVWG presentation.

Ms. Decker moved to approve the Statewide Synchronous Video Network Work Group Round One Recommendations with the notion of providing ample time for the work group to comment on the additional sentence to Recommendation #2. Mr. Weir seconded the motion. Roll call vote: Decker-Yes, Horn-Yes, Langer-Yes, Schafer-Yes, Weir-Yes, and Beach-Yes. The motion was carried by unanimous vote.

Wireless Project, Steve Schafer. The consultant continues to keep the project on track.

NIS (Nebraska Information System), Steve Schafer. Mr. Conroy will be presenting an update to the NITC at the September meeting.

CAP

Ms. Decker moved to go into closed session to discuss the Phase II RFP review. Mr. Beach seconded the motion. Roll call vote: Schafer-Yes, Langer-Yes, Horn-Yes, Decker-Yes, Beach-Yes, and Weir-Yes. Motion was carried by unanimous vote. The Technical Panel went into closed session at 11:10 a.m.

At 11:40 a.m., Mr. Schafer moved to end the closed session. Ms. Decker seconded the motion. All were in favor. Motion was carried by voice vote.

OTHER BUSINESS

There was no other business.

NEXT MEETING DATE AND ADJOURNMENT

The next meeting of the NITC Technical Panel will be held on Wednesday, October 8th, 9 a.m. at the University of Nebraska-Varner Hall.

Ms. Decker moved to adjourn. Ms. Horn seconded the motion. All were in favor. The motion was carried by voice vote.

The meeting was adjourned at 11:46 a.m.

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

Nebraska Information Technology Commission Community Technology Fund Projects 2002



With the development of a municipal wireless network with funding from the NITC's Community Technology Fund, the South Sioux City Police Department became the first law enforcement agency in the state to access the Nebraska Criminal Justice Information System's Web interface from the patrol care.

Grants support technology development

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. Projects funded through the 2002 Community Technology Fund range from the development of a municipal wireless network used to improve the delivery of local government services to the placement of computers in local learning centers to expand access to educational opportunities in rural areas. This report highlights the projects funded from the 2002 round of the Community Technology Fund and shares lessons that can be learned from these projects.

2002 Community Technology Fund Projects

Project: Wireless Municipal Area Network

Entity: City of South Sioux City

Award: \$13,250

Status: Complete

The City of South Sioux City has installed ten high-speed wireless “hotspots” in the community for use by the police department, fire department, public library and South Sioux City Community Schools. The South Sioux City Police Department became the first law enforcement agency in the state to access the Nebraska Criminal Justice Information System’s Web interface from the patrol car. Through a partnership with the South Sioux City Community Schools, the police are able to view 48 different video surveillance cameras in the Senior High School complex from the patrol car in real time. The South Sioux City School District is utilizing the wireless network to provide connectivity for school board meetings, field research for science class, and real-time updates and weather reports for sporting events. The South Sioux City Fire Department is utilizing the wireless network to gain access to Internet and e-mail at the fire hall. The Fire Department is also using the system to gain access to training resources and to access real-time information on HAZMAT as well. The South Sioux City Public Library is using their wireless access point to provide library patrons an alternative for public access computing. Patrons can utilize wireless-enabled laptops to access the Internet or do homework from the location they feel most comfortable. The South Sioux City Housing Authority is utilizing the wireless network to improve their access to Internet and e-mail.

Lessons Learned:

Much has been learned about the deployment, maintenance, and security of a wireless network. Omni directional antennas were utilized in the early testing and deployment of the network until it was discovered that two antennas installed in a diversity configuration was a far superior set-up. Signal quality and range is greatly enhanced by utilizing the multi-path canceling abilities of a diversity antenna configuration. A service pack upgrade is available for Microsoft Internet Explorer version 6 that enables the 128 bit cipher strength required for law enforcement to access NCJIS. Most of the connectivity done on the wireless also utilizes VPN. Several enhancements to 802.11 security are embedded in the newly released Microsoft Windows Server 2003. The City of South Sioux City plans to implement Server 2003 on all of its servers this fall.

Some of the greatest challenges of the project turned out not to be technical or physical challenges—but more political and policy challenges. Acceptable use policies had to be developed for the library and police department as well as policies for patrons to use library laptops. An agreement had to be reached for the Housing Authority to access the network as well. Often times, the development of policies and agreements is far more complex and time-consuming than the actual installation of the equipment.

Project: Building Information Age Communities Planning Mini Grants

Entity: University of Nebraska Cooperative Extension

Award: \$20,000

Status: Extended until October 31, 2003

In the fall of 2002, eight communities and regional groups began conducting technology assessments and developing a technology plan using the *IT Planning and Assessment Workbook*. As of Sept. 22, 2003, six of the eight communities and regional groups have completed technology plans. Alliance, Custer County, Edgar, Keya Paha/Brown/Rock Counties, West Point and York have prepared technology plans. The remaining two committees are making progress. The Crawford-Harrison technology committee has applied for a grant from the USDA Rural Utilities Service and is waiting to hear if their application has been funded before developing a formal technology plan. The Fillmore County technology committee expects to have their plan completed by the end of October.

Lessons Learned:

1. Community technology planning requires a substantial time commitment from technology committee members and facilitation by energetic, committed community leaders. The mini grant program provided an incentive for communities to focus on technology planning.
2. The *Community IT Planning Workbook* simplifies the planning process. Participants liked the workbook and appreciated not having to develop their own assessment and planning tools. Participants suggested that sample plans and a glossary of technology terms be included. These changes were made to the revised *Community IT Planning Workbook*. In addition, the facilitator's guide was revised and includes tips gleaned from working with the participating communities as well as tips from community leaders. Additional worksheets to help committees plan supplemental assessment activities, build community support, develop a technology plan, and plan implementation activities were also developed.
3. Sometimes forming a technology committee can attract the attention of telecommunications providers, facilitating discussions between the community and providers on the availability and deployment of advanced services.
4. Documenting community needs through the assessment process can assist in the preparation of successful grant applications.

Future Plans

Six more community and regional groups are participating in the 2003-2004 IT Planning and Mini Grant Program. Ord, Homer, and Hastings have already held their initial committee meetings. Other participating communities include Dakota City, Maskell, and Lexington.

Project: Digital City Hall

Entity: City of Ashland

Award: \$7,629

Status: Complete

The City of Ashland purchased a LaserFiche system to scan city documents into a format that is easily searchable, provides more convenient access to the public and staff, and allows for secure, off-site storage of city records. Many members of the community are eager for the documents to be in a digital format and be accessible via the city's Web site.

Lessons Learned: Through the project, staff has learned the importance of technology and how critical digital preservation is. It would be beneficial to have a staff member and computer dedicated to this project.

Project: City of Aurora Utilities GIS

Entity: City of Aurora

Award: \$25,000

Status: Complete

The City of Aurora designed and created a utilities database that captures all the necessary information items desired by city administrators and staff. By using GIS resources currently available from other governmental jurisdictions, the City of Aurora has demonstrated that GIS can be an affordable and useful tool for smaller communities in Nebraska. The City of Aurora has entered into an agreement with Hamilton County to share software that both agencies require. This has already generated an immediate \$3,000 in savings. In addition, the City of Aurora has exchanged utilities information with NPPD in exchange for new 2002 imagery flown by NPPD, saving the city the expense of duplicating the imagery and saving NPPD the expense of creating the utility data it requires.

Initial benefits of this project include the general overhaul of the utilities system. The creation of the GIS and records management system has forced the city field crews to locate all services in the field (for example, buried valves and manholes). It is also forced field crews to perform preventative maintenance on items that may not have been considered, leading to more expensive repairs and/or utility outages at a later date.

Lessons Learned:

Communities undertaking a similar project should begin contacting engineering companies holding digital data early. Creating and signing agreements with these companies takes time. GPS data collection was much more rapid when crews went out beforehand to locate features with spray paint, allowing GPS collection crews to move rapidly through the city.

Project: Electronic Archiving of Medical Records

Entity: Franklin County Memorial Hospital

Award: \$22,292

Status: Complete

Franklin County Memorial Hospital has implemented an electronic medical records system. The hospital has scanned 150 medical records from paper to electronic storage, created batch indexes and created a database that is accessible by password security, for reference. The PaperStore software has allowed the hospital business office to convert month-end financial reports to electronic storage, accessed through the hospital's Dairyland Software for fiscal reporting. Primary beneficiaries are the patients and providers. Having access to current information on patients will improve patient outcomes. A secondary benefit is improved compliance with HIPAA as privacy and security are improved with a password and firewall protected software.

Lessons Learned:

Ample time for scanning should be allotted. Future projects should carefully evaluate the time required to collate charts and create the patient index. Other hospitals undertaking a similar project should budget for one to two full-time equivalent staff members to scan the documents. Scanning requires staff who are detail-oriented and have both computer and organizational skills.

Project: Sarpy County GIS Base Map Interlocal Agreement

Entity: Sarpy County

Award: \$25,000

Status: Complete

The Sarpy County Geographical Information System Coalition was created to develop a unified GIS in Sarpy County. This grant has partially funded the development of a GIS land base map through a contract with an engineering firm with assistance from a software/technical consultant. The development of a single county-wide land base map will allow each entity to overlay specific information without having to duplicate the efforts required to create and maintain basic information regarding the location and description of streets, lots, rivers, section lines, etc. The development of the GIS will greatly enhance the accessibility of information to local government departments, decision-makers, and to the public. As an example of the initial uses of the system and the preliminary data available, the Assessors office has been able to provide the public better information during the assessment process by utilizing the aerial photos and legal lots in conjunction with the state soils information. This project has also improved communication between Sarpy County and its cities. This has improved many processes and workflows between the participating entities.

Lessons Learned:

The main thing learned from this project is the critical role all participating members must play. A project of this size and with seven jurisdictions involved requires a huge amount of communication and organization. It is important to solidify the partnerships needed to accomplish your project. Hiring a GIS Coordinator at an earlier stage would have made the project run a lot smoother and taken some of the burden off of staff.

Project: Sink or Swim—Educating the Rural Labor Pool

Entity: Central Community College

Award: \$18,518

Status: Complete

Central Community College placed computer work stations and printers in 9 learning centers located in South Central Nebraska. Training sessions were held for learning center managers. Between mid-January and mid-May 2003, approximately 500 people have used the computers for a total of 282 hours at the ten sites. Nearly 60 percent of the users were Central Community College students completing course assignments. Enrollment in Central Community College credit courses from Spring 2002 to Spring 2003 at the nine learning center sites increased 52%.

Lessons Learned:

One of the unexpected outcomes from this project has been the realization that a large number of persons in these nine communities (Alma, Axtell, Blue Hill, Franklin, Harvard, Hildreth, Lawrence, Nelson, Orleans, and Superior) have very limited access to computer technology. Many adults have expressed an appreciation of the availability of additional computers for public use. As a result, an interest in pursuing computer-related training has increased.

Project: Basic Scanning Classes

Entity: LaVista Public Library

Award: \$3,612.06

Status: Complete

Basic scanning classes are now offered at the LaVista Public Library to the public and staff of the City of LaVista, LaVista Public Library, and Metropolitan Community College.

Lessons Learned:

The project reinforced the fact that teamwork is essential. People are always willing to go the extra mile.

Project: Interactive Video/Distance Learning Network

Entity: Valley County Hospital

Award: \$19,623

Status: Six-month extension granted

The development of a statewide telehealth network has delayed implementation of this project. As plans for the statewide telehealth are developed, Valley County Hospital will be better able to determine how to proceed with this project.

Project: Interactive Video/Distance Learning Network

Entity: Cherry County Hospital

Award: \$11,136

Status: Six-month extension granted

The development of a statewide telehealth network has delayed implementation of this project. As plans for the statewide telehealth are developed, Cherry County Hospital will be better able to determine how to proceed with this project.

Project: Connect IT Omaha

Entity: Omaha Public Library

Award: \$25,000

Status: Terminated by mutual agreement

The grantee opted not to implement this project.

Community Technology Fund Grants

1998-2002

Year	Recipient	Project	Award
2002	City of Ashland	Ashland Digital City Hall	\$7,629
2002	Sarpy County	GIS Base Map Interlocal Agreement	\$25,000
2002	LaVista Public Library	Basic Scanning Classes	\$3,612.06
2002	Cherry County Hospital	Interactive Video/Distance Learning Network	\$11,136
2002	Valley County Hospital	Interactive Video/Distance Learning Network	\$19,623
2002	Omaha Public Library	Connect IT Omaha	\$25,000
2002	City of Aurora	Utilities GIS	\$25,000
2002	Central Community College	Sink or Swim--Educating the Rural Labor Pool	\$18,518
2002	University of Nebraska Cooperative Extension	Building Information Age Communities Planning Mini Grants	\$20,000
2002	Franklin County Memorial Hospital	Electronic Archiving of Medical Records	\$22,292
2002	City of South Sioux City	Wireless Municipal Area Network	\$13,250
2001	City of Aurora	Aurora Technology Center	\$25,000
2001	Lower Platte North NRD	Common Framework for Integrating Surface Water Data	\$24,800
2001	Bruun Memorial Public Library, Humboldt PublicSchool Library Table Rock-Steinauer School Library	Taking Resources and Information Online (TRIO)	\$18,600
2001	Southeast Community College	Technology-Based Education for Health Occupations	\$18,195
2001	Beatrice Public Library	Senior Connection	\$22,932
2001	Commission for the Deaf & Hard of Hearing	Telehealth	\$25,000
2001	Omaha Tribe of Nebraska	Omaha Tribe Online Information Technology Plan	\$25,000
2001	Village of Brainard	Brainard Community Technology Center	\$18,495
2001	Kimball County Hospital Clinic	Integrated Practice Mgmt & Electronic Medical Record Proj.	\$25,000
2001	Village of Greeley	Greeley Learning and Technology Center	\$23,500
2001	City of Lincoln	City of Lincoln Technology Infrastructure Audit	\$23,500
2001	Central Community College	From Plowshares to PCs: Creating a Learning Community	\$23,500
2000	Norfolk Public Library Columbus Public Library Northeast Nebraska Community College Library	ONE Library	\$25,000
2000	Kearney Public Library	Public Internet Access Enhancement	\$19,380
2000	Public Library System, Holdrege	Public Library System Web Catalog	\$9,218
2000	University of Nebraska Cooperative Extension Center for Rural Community Revitalization AIM Institute	Connecting Nebraska E-Business Project	\$52,000
2000	Elmwood-Murdock Public Schools	Web Parent Teacher Project	\$22,270
1999	University of Nebraska	Nebraska Electronic Main Street Program	\$9,990
1999	City of Wayne	NRICHN (NE Nebraska Regional Information Clearinghouse)	\$2,000
1998	Dakota City Public Library	Dakota City Teleliteracy: Train the Trainers	\$3,600
1998	City of South Sioux City	South Sioux City E-Commerce Initiative	8,340
1998	City of Lincoln/Lancaster County	Project Interlinec	\$23,520
1998	University of Nebraska	Roving Computer Lab and Training for NE Nebraska	\$28,000
1998	Lincoln Area Agency on Aging	GOAL Computer Center	\$4,000
1998	Partnership for Rural Nebraska	Nebraska Teleliteracy and Electronic Commerce Initiative	\$85,000
1998	Chase County	Chase County Video Development	\$8,095
1998	Southeast Nebraska Development District	Teletraining for Emergency Responders	\$22,000
1998	Panhandle Area Development District	Capacity Building, Communication & Cooperation	\$6,225
1998	City of Superior	Business Incubator/Technology Project	\$41,480
	TOTAL		\$834,700



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	<input checked="" type="checkbox"/> State Government Agencies <input checked="" type="checkbox"/> All..... Standard <input type="checkbox"/> Excluding Not Applicable <input checked="" type="checkbox"/> State Funded Entities - All entities receiving state funding for matters covered by this document..... Standard <input checked="" type="checkbox"/> 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 <u>NITC Technical Panel</u> . Guideline - Adherence is voluntary.
---------------	--

Status	<input type="checkbox"/> Adopted <input checked="" type="checkbox"/> Draft <input type="checkbox"/> Other:_____
Dates	Date: October 8, 2003 Date Adopted by NITC: Other:

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)



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	<input type="checkbox"/> State Government Agencies
	<input type="checkbox"/> All..... Not Applicable <input type="checkbox"/> Excluding Not Applicable <input checked="" type="checkbox"/> State Funded Entities - All entities receiving state funding for matters covered by this document..... Guideline <input checked="" type="checkbox"/> Other: Distance Learning Consortia and affiliated partners..... Guideline
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	<input type="checkbox"/> Adopted <input checked="" type="checkbox"/> Draft <input type="checkbox"/> Other: _____
--------	--

Dates	Date: October 8, 2003 Date Adopted by NITC: Other:
-------	--

1.0 Guidelines

Entities that receive state funding for telecommunications and public entities that are approaching contract expiration for existing distance learning services are recommended to A) negotiate two contracts at the local level; one contract for procurement and maintenance of connective terminal hardware and a second contract for transport OR to negotiate one contract 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 B) make transport contract expiration dates co-terminus with the *Network Nebraska* core transport contracts.

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 192 school districts joined together during the years 1996-2002 to form nine separate interlocal agreements for the purposes of applying for and receiving lottery 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 technology chosen at the time was JPEG (Joint Photographic Experts Group) that delivered near-broadcast quality at approximately 8 megabits per video channel.

In 2001, the major supplier of these 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 NAS (Network Attached Storage) 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)



NEBRASKA INFORMATION
TECHNOLOGY COMMISSION

TECHNICAL STANDARDS AND GUIDELINES

XX-XXX Blocking Unsolicited Bulk E-Mail / "SPAM"

Category	Groupware
Title	Blocking Unsolicited Bulk E-Mail / "SPAM"
Number	XX-XXX

Applicability	<input checked="" type="checkbox"/> State Government Agencies <input type="checkbox"/> All Not Applicable <input checked="" type="checkbox"/> Excluding higher education institutions Guideline
	<input type="checkbox"/> State Funded Entities - All entities receiving state funding for matters covered by this document Not Applicable <input type="checkbox"/> 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	<input type="checkbox"/> Adopted <input checked="" type="checkbox"/> Draft <input type="checkbox"/> Other: _____
Dates	Date: August 8, 2003 Date Adopted by NITC: Other:

1.0 Guideline

Agencies shall be allowed to evaluate and implement methods for blocking SPAM e-mail, even if some legitimate messages are blocked. Most e-mail should be accepted. Allowing the unhindered flow of legitimate state correspondence is a primary consideration of this standard. Minimum guidelines for State agencies implementing SPAM blocking methods are:

1. Must notify the e-mail originator that their message was blocked and say why.
2. Should notify e-mail originator, when possible, of alternative methods for delivering legitimate mail.
3. Should notify e-mail originator, when possible, of how to resume sending email to the state without being blocked.
4. Should not block a high volume of legitimate incoming e-mail.
5. Should not place an undue burden on Nebraska citizens for legitimate communications with the state.

2.0 Purpose and Objectives

The need for the state to access information on the Internet also allows for access from entities on the Internet into the state infrastructure, unless precautions are implemented. This guideline addresses the burden on state resources due to unsolicited bulk e-mail (UBE), spam and how state agencies may address the issue. (The term "spam" is used to denote mass unsolicited mailings, .) Agencies cannot expect to "solve" all problems that arise from bulk e-mail, only mitigate them. Policy recommendations for generally acceptable bulk e-mail practices are not addressed in this document. Agencies should use these recommendations when developing policies concerning what outside e-mail to accept.

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

2.1 Overview

The terms spam, unsolicited bulk e-mail (UBE), and unsolicited commercial e-mail (UCE) all refer to the mass posting of e-mail messages.

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

The goal of this guideline is not to eliminate all forms of bulk e-mail but instead to move part of the burden of dealing with unsolicited e-mail from the recipient to systems administrators. These guidelines should encourage professionalism among

e-mailers, allowing state workers to identify official correspondence more easily while not cutting off access to all bulk e-mail.

2.2 Conforming E-Mail

Most e-mail should be accepted. E-mail that conforms to the following guidelines should not be rejected without good cause. These guidelines on conforming e-mail help administrators as well as recipients to establish a chain of responsibility for the e-mail, and aid automated re-direction or deletion when appropriate. Non-conformance to these guidelines does not imply the agency must necessarily reject the message, but senders who repeatedly send non-conforming e-mail are recognized as unnecessarily adding to the administrative burden of the state's e-mail systems. In general, state agencies should accept bulk e-mail that meets the following minimum requirements.

(1) The sender is identifiable and can be contacted by e-mail. The e-mail contains a valid e-mail address for the sender of the message. If the originator of the message is not the same as the person or company actually sending the message, valid e-mail contact information for both is present.

Valid return addresses allow state workers to respond to e-mail directly, if appropriate, without resorting to the phone, postal mail, or any other method that may be unavailable or inconvenient. Phone numbers and/or postal addresses may be included in addition to the e-mail reply addresses.

(2) The sender discloses how the means of obtaining the e-mail address. The message contains a statement on how the sender obtained the recipient's e-mail address. State agencies and their workers have an interest in how the e-mailer obtained the e-mail address, and this is a vital part of the "chain of responsibility" required of bulk e-mailers. Details of how the addressee got on the list can be given by including lines such as the following within the body of the e-mail message: "This e-mail list was derived from your attendance at the Fall COMDEX conference."

(3) The recipient must "OPT-IN" before being sent any repeat mailings. If the e-mailing was unsolicited, then this must be a one-time-only mailing. A recipient who does not want to receive additional mailings on a topic must not be forced to perform any action. Any repeat mailings can only be as the result of an explicit action on the part of the recipient, such as a request for additional information or to be added to a list.

(4) The sender identifies the e-mail address the message was sent to. Whether for a single mailing or for an opt-in list, the sender must include within the body of the message a statement identifying the full e-mail address the message is being sent to, such as: This message was sent out to: joe.smith@state.ne.us This inclusion allows users and administrators to keep track of e-mail that might pass through multiple computers, aliases, or internal agency e-mail lists before reaching the final recipient, and to help identify e-mail being sent to persons no longer employed by the agency or no longer working in the same capacity.

(5) The recipient is informed how to be removed from the mailing list. The recipient must be informed how to be removed from the mailing list within the body of the message. Just because a recipient doesn't want to be on a particular list does not imply they want to refuse all unsolicited e-mail. The remove instructions must distinguish between being removed from the current list, and all lists maintained by the sender. Merely directing the recipient to a general "list of people who don't want to be on lists" is not sufficient to comply with this guideline.

(6) The message is "reasonably targeted" to the addressee. An unsolicited e-mail should only be sent to someone who might reasonably, in high percentage, be interested in reading the message. See the definitions of "targeted", "narrowed", and "indiscriminate" e-mail lists, below.

2.3 Examples of E-Mail That Should Be Rejected

(1) E-mail that cannot be traced to a valid source computer. When the apparent originating computer of an e-mail has no name, or an invalid name, such as when that computer's name does not appear in the Domain Name System (DNS) database of computer names, that e-mail may be rejected. As with any other rejection criteria, e-mail senders with legitimate state business may be denied access because their computer is merely miss-configured, or because of some temporary outage within the DNS database. Invalid source addresses, however, are the mainstay of senders who don't wish to be properly identified, and this is one area where many illegitimate senders can be eliminated.

(2) E-mail relayed without permission. E-mail that was relayed without permission through another computer in an effort to disguise its origin or to place the burden and expense of e-mail delivery upon another computer may be rejected out of hand.

(3) E-mail from addresses or domains posted on the state's subscribed black list. E-mail that is received from sources that have a history of delivering spam. This list of sources are provided to the state through a subscribed service.

2.4 Methods for Blocking SPAM

SPAM Blocking techniques have costs, effectiveness, and usage issues to consider. Agencies may investigate and use the following methods:

DNS Reverse Name Look-up - Blocks SPAM from the most troublesome SPAM producers. This method is easy to implement but has the greatest risk of blocking legitimate email. IT is very difficult for Email senders to understand or fix problems.

White list - Blocks almost all SPAM, but is difficult to implement and confusing for external email senders to understand. Many Email senders will refuse to add their ID to a state white list.

Blacklist - Likely to block 60% of SPAM but is likely to block a small percentage of legitimate email. It is fairly easy to implement, email senders are notified the mail was blocked, and many know what a blacklist is.

Router Blocking - Looks at a manually prepared list of site domain names or IP addresses to block. This method only blocks specific email known to be a problem. This method may not impact the worst SPAM producers. It is easy to implement, but is manually intensive to maintain. Users may not understand the cryptic message sent by a router.

Filtering - May block a significant number of SPAM Messages at a fairly low cost. Some legitimate messages may be blocked. It is fairly easy to implement. Users will see a customized message from most systems. One type of filtering is "Content Filtering". It involves searching for text in body, subject, or the sender information. Another type of filtering is "Blocking", which is based on the number of addresses in the recipients field. It can also use the file extension name or the size of memo.

Personal Rules - User creates rule to delete from in-box. The cost is high, because each individual has to learn how to set up rules. Usually, rules are not very effective against the worst SPAM producers.

2.5 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/>) is also a source of information.

3.0 Definitions

3.1 Targeted e-mail list

A "targeted" e-mail list is a collection of e-mail addresses where the sender may reasonably expect that all or nearly all of the addressees will be interested in the solicitation. An example of this would be a list of conference attendees, where the conference host may reasonably assume that past attendees will be interested in notification about future, similar conferences. Targeted lists are generally acceptable.

3.2 Narrowed e-mail list

A "narrowed" e-mail list is a collection of addresses that can be expected to contain a higher-than-average percentage of addressees interested in the solicitation. An example of this would be the use of a list of computer conference attendees to send a solicitation for the purchase of computer cabling services. While such conference attendees may be more likely than the general population to have an interest in such a solicitation, such a broad solicitation might be an unreasonable transfer of costs from the sender to the recipient when only a small percentage of the total recipients

are likely to be interested, even though that percentage is higher than would be found on an indiscriminate list.

3.3 Indiscriminate e-mail list

An "indiscriminate" list is one where the sender would have little or no reasonable expectation that the addressee would have more interest in the solicitation than the general population. An example of this would be the sending of a notification of "investment opportunities" to e-mail addresses culled randomly from posters to Usenet newsgroups. "UBE/Spam" e-mail is identified most often with indiscriminate e-mail. The sending of solicitations to state workers as part of a indiscriminate e-mail list is almost always unacceptable.

4.0 Responsibility

Information Management Services Division may investigate and implement methods for the mail routing server, which IMServices supports. Other agencies may elect to share this service or set up their own.

5.0 Related Policies, Standards and Guidelines

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>

Blocking Unsolicited Bulk E-mail / "SPAM"
Comment 1: Alternate Version

Glen Riedel

09/05/2003 02:23 PM

To: Rick Becker/DASCIO/NEBRLN@NEBRLN

cc: State SPAM Workgroup, Lotus_Administration_Voting_Agencies, Lotus_Notes_Collaboration_Steering_Committee

Subject: SGC Blocking Unsolicited Bulk E-Mail

Rick:

Here is the final version of the State Spam Workgroup's document on Blocking Unsolicited Bulk Email.

Please use it to replace the existing version that was presented to the NITC - Technical Panel.

Please let me know if there are any upcoming meetings that this will be discussed so I can answer any questions that may arise.

Thanks!

Glen Riedel, CNE
Senior IS Analyst
Nebraska Dept of Insurance
402.471.4432

09/10/2003



NEBRASKA INFORMATION
TECHNOLOGY COMMISSION

TECHNICAL STANDARDS AND GUIDELINES

XX-XXX Blocking Unsolicited Bulk E-Mail / "Spam"

Category: Groupware

Title: **Blocking Unsolicited Bulk E-Mail / "Spam"**

Number: **XX-XXX**

Applicability

- State Government Agencies**, excluding Higher Education
..... **Standard**
- State Government Agencies, all** **Not Applicable**
- 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: September 5, 2003

Date Adopted by NITC:

Other:

1.0 Technical Standard

Agencies shall be allowed to evaluate and implement methods for blocking Unsolicited Bulk Email (UBE) or spam in relation to their changing email 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 email statistics to determine its effectiveness and to help reduce the non-delivery of legitimate email.
2. UBE blocking methods must attempt to send notification to legitimate originators of blocked email with the following information:
 - a. The email 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 DASIMS managers.

Knowledge sharing - A public web site should be created to share State of Nebraska research on UBE issues.

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 legitimate 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 (www.ims.nol.org/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](http://www.ietf.org) 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 Policies, Standards and Guidelines

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>

Blocking Unsolicited Bulk E-mail / "SPAM"
Comment 2

Dennis Burling
IT Manager
NE Environmental Quality
402.471.4214

Blocking email

section 2.2 number 3 second sentence, should readreceive additional email.....



NEBRASKA INFORMATION TECHNOLOGY COMMISSION

TECHNICAL STANDARDS AND GUIDELINES

xx-xxx Blocking E-mail with Attachments

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

Applicability	<input checked="" type="checkbox"/> State Government Agencies <input checked="" type="checkbox"/> All..... Guideline <input type="checkbox"/> Excluding: _____..... Not Applicable <input type="checkbox"/> State Funded Entities - All entities receiving state funding for matters covered by this document..... Not Applicable <input type="checkbox"/> 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	<input type="checkbox"/> Adopted <input checked="" type="checkbox"/> Draft <input type="checkbox"/> Other:_____
Dates	Date: August 13, 2003 Date Adopted by NITC: Other:

1.0 Technical Guideline

1.1 Blocking E-Mail with Attachments

E-mails that include attachments with certain extensions should 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 extensions listed below 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. Inter-Agency mail going through a SMTP gateway with the extensions listed below will be blocked. All other attachments should be allowed to pass through and agencies can determine what other safeguards to activate on their mail servers.

Extensions to be blocked at the SMTP server:

scr - screensaver	bas - basic
bat - batch	cmd - command
com - command, executable	cpl - control panel applet
exe - executable program	inf - set up
msi - install control file	msp - probably a windows installer patch
mst - windows installer transform	reg - Microsoft registry
vbs - visual basic	pif - windows program information file
wsf - Windows Script File	

1.2 Alternative Methods for Receiving Files

If an individual needs to receive an attachment with one of the extensions above, the sender can be asked to rename the file extension. For example, Proposal.exe.ForSue

Other alternatives for transmitting files should also be considered, including FTP; Web-based document retrieval; and document repositories.

2.0 Purpose and Objectives:

It is important to take steps to protect our 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 Definitions

N/A

4.0 Applicability

State Government Agencies – Agencies using E-mail are encouraged to follow this guideline.

5.0 Responsibility

Anyone running a State SMTP Gateway should consider following this guideline.

6.0 Related Policies, Standards and Guidelines


[\(http://www.nitc.state.ne.us/standards/\)](http://www.nitc.state.ne.us/standards/)

Security Policies – Information Security Management

Ron Ritchey

09/02/2003 11:10 AM

To: Rick Becker/DASCIO/NEBRLN@NEBRLN

Subject: Re: Blocking E-Mail with Attachments - Final Draft 

Blocking attachments in email are usually handled in two different ways. One is blocking the entire message if it has an unwanted attachment and the other is to remove any unwanted attachments before passing the message through. This document only discusses the first so we should probably add a section that talks about the latter. I would suggest the following additions. I didn't change the blocking e-mail with attachments section. Just included with my changes.

1.0 Technical Guideline

Attachments with specific extensions should not be allowed into the State network and mail systems. There are two standard ways to accomplish this. The first is to block any message that contains specific attachments from being delivered. The second is to remove any attachment with the unwanted extension before allowing the memo into the State.

Blocking E-Mail with Attachments

E-mails that include attachments with certain extensions should 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 extensions listed below 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. Inter-Agency mail going through a SMTP gateway with the extensions listed below will be blocked. All other attachments should be allowed to pass through and agencies can determine what other safeguards to activate on their mail servers.

Removing Attachments Before Delivery

If the process of "**Blocking E-Mail with Attachments**" is not used, an agency can strip the unwanted attachment before allowing it to be delivered.

Here are some additional extensions that Symantic recommends blocking.

ade – Microsoft access project extention	asp – active server pages
adp – Microsoft access project	crt – security certificate
chm – compiled HTML help file	hta – HTML application
hlp – windows help file	ins – internet communications settings
js – JScript	isp – internet communications settings
jse – JScript encoded file	mdb – Microsoft access application
lnk – shortcut	mde – Microsoft access MDE database
mst – visual test source file	msc – Microsoft common console document
pcd – photo CD image	shb – document short cut
sct – Windows script component	

shs – shell script object
vb – VBScript
vsd – visio drawing
vst – targa bitmap file
ws – wordstar file
wsf – windows script file

url – Internet shortcut (Uniform Resource Locator)
vbe – VBScript encoded file
vss – Visual sourcesafe file
vsw – visio workspace file
wsc – windows script component
wsh – windows scripting host settings

Blocking E-Mail with Attachments
Comment 2

Ron Ritchey

08/21/2003 02:56 PM

To: Rick Becker/DASCIO/NEBRLN@NEBRLN

cc:

Subject: Fw: blocking e-mail with attachments

I haven't been able to review this entire document, but the part that suggests renaming a document to Proposal.exe.ForSue could get blocked by some systems because they don't look at just the extension, they look for .exe anywhere in the file name. ProposalEXE.ForSue should work. Zipping and sending in a zip file should work as well, unless we want to try to block attachments in zip files. Some software can do and some can not.

09/10/2003

Blocking E-Mail with Attachments
Comment 3

Dennis Burling
IT Manager
NE Environmental Quality
402.471.4214

Just a couple of quick comments for you....

Blocking email comments

I still disagree with the list for blocking email attachments. While the sending and receiving of a virus is a problem, it will not take long for those that wish to send a virus to use a new extension and have it sent anyway.

Also, there is no proposal under the alternate methods for the zipping of files and sending with a zip extension. Would this not be another possibility?