

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

Tuesday, October 11, 2005 - 9:00 a.m.
Varner Hall - Board Room
3835 Holdrege St., Lincoln, Nebraska

AGENDA

Meeting Documents:

Click the links in the agenda
or [click here](#) for all documents (x.xx MB - xx pages)

1. Roll Call and Meeting Notice
2. Public Comment
3. Approval of Minutes - [August 9, 2005](#) and [September 13, 2005](#)*
4. Project Reviews
 - [Community Technology Fund Grant Requests](#)*
 - Discussion: 2006 Deficit Budget Requests
5. Statewide Technology Plan - [NITC Strategic Initiatives](#) - Action Items
 - Network Nebraska
 - Statewide Synchronous Video Network
 - State Government Efficiency
 - Security and Business Resumption
 - ([Click here](#) for related action items from the 2004 Statewide Technology Plan)
6. Discussion: Accessibility of Information Technology (Horn)
7. Regular Informational Items and Work Group Updates (as needed)
 - Accessibility of Information Technology Work Group
 - CAP
 - Security Work Group
 - Statewide Synchronous Video Network Work Group
8. Other Business
9. Next Meeting Date

Tuesday, November 8, 2005
(Note: The NITC is scheduled to meet on November 8.)
10. Adjourn

* Denotes Action Item

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

Meeting notice posted to the NITC Website: 15 SEP 2005

Meeting notice posted to the [Nebraska Public Meeting Calendar](#): 15 SEP 2005

Agenda posted to the NITC Website: 6 OCT 2005

**NEBRASKA INFORMATION TECHNOLOGY COMMISSION
JOINT MEETING OF THE TECHNICAL PANEL and the
COMMUNITY, EDUCATION & STATE GOVERNMENT COUNCILS**

Tuesday, August 9, 2005, 9:00 a.m.
Varner Hall - Board Room, 3835 Holdrege
Lincoln, Nebraska

PROPOSED MINUTES

NITC COMMISSIONERS & TECHNICAL PANEL MEMBERS AND ALTERNATES PRESENT: Lt. Gov. Rick Sheehy; Mike Beach, Nebraska Educational Telecommunications; Walter Weir, Christy Horn, and Rick Golden, University of Nebraska; Steve Henderson, DAS Information Technology Services; Kirk Langer, Lincoln Public Schools; and Brenda Decker, State of Nebraska, Chief Information Officer

COMMUNITY COUNCIL MEMBERS AND ALTERNATES PRESENT: Gene Hand, Public Service Commission; John Jordison ; Max Thacker, University of Nebraska Medical Center; Dr. Jerry Easterday, Nebraska Health and Human Services System; Lynn Manhart, Central City Public Library; Steve Williams, Nebraska Department of Economic Development; Roger Keetle, Nebraska Hospital Association; Michael Nolan, City of Norfolk; Ted Smith, Norfolk Public Library; Norene Fitzgerald, York County Development Corporation; Lance Hedquist, City of South Sioux City; and Bob Sweeney, AIM Institute

EDUCATION COUNCIL MEMBERS AND ALTERNATES PRESENT: Arnold Bateman, University of Nebraska; Clark Chandler, Nebraska Wesleyan University; Lois Dietsch, Seward Middle School; Terry Dugas, Nebraska Educational Television; Wayne Fisher, Department of Education; Dr. Terry Haack, Bennington Public Schools; Yvette Holly, University of Nebraska Medical Center; Jeff Johnson, Centennial Public Schools; Becky Kohrs, Nebraska State College System; Mike Kozak, Department of Education; Chuck Lenosky, Creighton University; Dennis Linster, Wayne State College; Rich Molettiere, Omaha North High School; Tip O'Neill, Independent Colleges and Universities; Dr. Ed Rastovski, Wahoo Public Schools; Al Schneider, ESU 5; Dave Wagaman, DAS Budget Division; and Alan Wibbels, ESU 10

STATE GOVERNMENT COUNCIL MEMBERS AND ALTERNATES PRESENT: Beverlee Bornemeier, DAS Information Technology Services; Dennis Burling, Department of Environmental Quality; Randy Cecrle, Workers Compensation Court; Tom Conroy, DAS-Information Technology Services; Josh Daws, Secretary of State; Keith Dey, Dept. of Motor Vehicles; John Erickson, Policy Research Office; Pat Flanagan, Mutual of Omaha; Rex Gittins, Dept. of Natural Resources; Dorest Harvey, Peter Kiewit Institute; Lori McClurg, Dept. of Administrative Services; Jim McGee, Health & Human Services Systems; Glenn Morton, Workers Compensation Court; Jon Ogden, Dept. of Roads; Jim Ohmberger, Health & Human Services Systems; Gerry Oligmueller, DAS-Budget; Mike Overton, Crime Commission; Jayne Scofield, Division of Communications; Robert Shanahan, Dept. of Labor; Rod Wagner, Nebraska Library Commission; and George Wells, Dept. of Corrections

OTHERS PRESENT: Ralph Armendariz, Pinpoint Communications; Rod Armstrong, Nebraska.gov; Tammy Barry, Senator Raikes' Office; Mike Carr, University of Nebraska; Rick DeSchepper, IBM; Jim Emal, University of Nebraska; Dale Fangmeier, DAS Information Technology Services; Linda Fettig, Rural Development Commission; Dave Glover, Nebraska Statewide Telehealth Network; Roger Hahn, Nebraska Information Network; Dan Hoelsing, Laurel-Concord/Coleridge Public Schools; Brad, McPeak, AIM Institute; Linda Salac, Health & Human Services Systems; Bill Schiedler, DAS-Budget Office; Mike Spinharney, MSI; Deb Swanson, QWEST; Kathy Tenopir, Legislative Fiscal Office; Jim Weston, Great Plains; and Jim Zemke, University of Nebraska

STAFF: Rick Becker, Government Information Technology Manager, Anne Byers, Community Information Technology Manager; Tom Rolfes, Education Information Technology Manager; and Lori Lopez Urdiales, Administrative Assistant

CALL TO ORDER AND INTRODUCTIONS

Mr. Weir called the meeting to order at 9:05 a.m. and welcomed members and guests. Introductions were conducted for purposes of the roll call.

OVERVIEW AND MEETING EXPECTATIONS—LIEUTENANT GOVERNOR SHEEHY

Lieutenant Governor Sheehy thanked the Technical Panel for bringing the advisory councils together to begin a collaborative effort that establish the action items that will accomplish the NITC strategic initiatives. Nebraska is moving forward toward network connectivity. This is a vision shared among the councils. The Lieutenant

Governor advised attendees to take the time today to meet members of the other councils. He expressed a need for the councils to be working in unison rather than in silos.

STRATEGIC INITIATIVES: ACCOMPLISHMENTS AND UPDATES

(Click on link for more detailed information.)

Supporting the Development of a Robust Telecommunications Infrastructure

- Nebraska Statewide Telehealth Network, Dave Glover. Connections are being put in place (T1 and fiber), as well as addressing connection equipment issues such as routers, etc. On July 19th, a report was given to the Public Service Commission. The Commission has been an important source of funding for the project. The development of a website for the telehealth network is underway. The project will be working with the Education Council in researching scheduling systems. Collaborative efforts are occurring in addressing privacy issues.
- Network Nebraska, Walter Weir and Brenda Decker. Network Nebraska was the first initiative where the NITC involved all of the advisory councils. The Technical Panel took the lead with regard to the technical aspects. Mr. Weir recognized the following individuals for their part in the development of Network Nebraska: Dave Wagaman, Kathy Tenopir, Dr. Dennis L. Smith, Governor Dave Heineman, Alan Wibbels, and Rick Golden.
- Statewide Synchronous Video Network. Mike Beach. A few years ago, the Technical Panel formed a work group to explore the state's educational networks. The workgroup included representatives from distance education, libraries, higher education, K12 and Educational Service Units. A video standard was developed, and institutions are moving toward meeting that standard. The LB689 Distance Education Enhancement Task Force is now looking at these issues. The Work Group has been exploring state and federal funding options.

Supporting Community and Economic Development

- Community IT Planning and Development, Anne Byers. Through the partnership efforts of the NITC and TAN (Technologies across Nebraska), several Nebraska communities have received assistance with IT planning. New businesses and technology centers have been created and e-government efforts have been enhanced through funding assistance from the IT Planning Mini-grant programs. A needs assessment survey was taken and as a result the TANGENTS newsletter was developed. There is currently a new round of competition for mini-grant projects promoting economic development. The deadline for application for these grants is September 1st.

Promoting the Efficient Delivery of Government and Educational Services

- Digital Education, Tom Rolfes and Alan Wibbels. Mr. Rolfes stated that there are several members who have served on the Education Council prior to 1998. Mr. Wibbels and Dr. Huck have been the co-chairs since its inception. For a couple of new members, today is their first meeting. In Nebraska, education is at a crossroads. Last fall, an E-learning workshop series was conducted across the state. Mr. Zemke, University of Nebraska, assisted with the workshops. This spring, an IT survey was administered to K12 administrators, teachers and technology managers. The results are being compiled. Mr. Wibbels stated that a distance education network is vital. Since 1992 when ESU's were designated by the Legislature to provide technology services to schools, the demands on the networks have increased tremendously and will continue to do so. Farmers' use of IT is increasing in the country. In Nebraska, students are encouraging parents to use IT. Mr. Wibbels invited members to the 20/20 Vision and Technology Leadership Forum, November 1st, at the University of Nebraska-Kearney. The focus of the forum is to discuss what we need to do to prepare our students for the year 2020.
- State Government Efficiency. Walter Weir. The Technical Panel has been working with the State Government Council to develop guidelines and standards to promote government efficiency. After the State Government Council and the Technical Panel have done a thorough review, all standards are posted for a 30-day public comment period. The State Government Council has started a Shared Services project. State agencies are researching services and products that can be shared and exploring where they can collaborate on these enterprise efforts. At a brainstorming session, over 40 shared services were identified. These have been narrowed to the following eight: Directory Services; Blackberry; Business Continuity and Disaster Recovery; Enterprise Licensing for Software and Hardware; E-mail; SANS (Storage Area Networks); and Shared Field Support.
- E-Government, Brenda Decker. The State Government Council has taken the lead on this initiative. With the assistance of Nebraska.gov, the State of Nebraska web site has been redesigned to be

more accessible and citizen friendly, as well as to provide more online services.

Ensuring Security and Business Continuity

- Security and Business Resumption, Steve Henderson. Members received the summary of achievements prior to the meeting. Mr. Henderson stated that the State of Nebraska and the University of Nebraska have been working together to assure security and business continuity. This type of effort is believed to be unique around the country.

NITC'S CHARGE TO THE COUNCILS - LIEUTENANT GOVERNOR SHEEHY

Lt. Governor Sheehy challenged the members of the NITC advisory groups to develop ideas for collaborative action items in which the advisory groups can work together. CAP (Collaborative Aggregation Partnership), Network Nebraska and the Statewide Synchronous Video Network Work Group were given as examples. Lt. Governor Sheehy announced that later in the meeting members will be able to prioritize activities and to sign up for a work groups.

DEVELOPMENT OF COLLABORATIVE ACTION ITEMS SUPPORTING STRATEGIC INITIATIVES STEVE HENDERSON

Mr. Henderson acknowledged the uniqueness of today's meeting in bringing together the NITC Technical Panel and the NITC advisory councils. Members were asked to suspend their own view of the world and to stretch beyond that in order to explore how the state can benefit in the area of technology. One of the challenges we face as a group is a clear understanding of the issues. In addition to brainstorming, members were asked to develop a basic understanding of the issues and priorities. A question was raised regarding the purpose and initiative of the LB 689 Distance Education Enhancement Task Force. Ms. Decker stated that there are three NITC members serving on the LB 689 task force. Tammy Barry, aide to Senator Raikes, was in attendance at today's meeting as well. It was explained that the results of today's brainstorming sessions will be shared with the Distance Education Enhancement Task Force.

Mr. Bateman, Mr. Sweeney and Mr. Dey arrived at 10:25 a.m.

A document was distributed to members that contained descriptions of examples of seven collaborative activities, projects and action items. After discussion, nine more suggestions were added for a total of 16 activities to prioritize. In order to assist with prioritizing, a group activity was conducted where members were given 5 dots to indicate their top five priorities. The sixteen items and the "votes" received were:

1. Exploring a statewide scheduling system for distance learning and videoconferencing. (12 votes)
2. Using high bandwidth flexible use circuits as community aggregation points. (28 votes)
3. Using technology to create health education opportunities for students across Nebraska. (10 votes)
4. Creating a statewide, high bandwidth digital content delivery system using satellite, terrestrial and wireless technology. (27 votes)
5. Improving disaster recovery and business continuity procedures for all public entities. (20 votes)
6. Using web-based Learning Management Systems to stimulate continuing education opportunities for citizens and employees. (2 votes)
7. Implementing homeland security preparedness measures across all sector boundaries. (6 votes)
8. Statewide (rural) economic development and job creation. (31 votes)
9. Policy (state/federal) on shared network assets. (37 votes)
10. Virtualization of computing/storage. (2 votes)
11. Enhance/integrate/personalize individual interaction with state's knowledge & technical resources. (36 votes)
12. Institutional management and "portal" delivery options. (7 votes)
13. Content exchange in a secure manner. (7 votes)
14. Skilled workforce development – technology specialist. (29 votes)
15. Nationwide "survey" of technology best practices. (9 votes)
16. Statewide "test lab" evaluation center. (4 votes)

Discussions followed regarding the activities receiving the highest number of votes, as well as the overlap and interrelatedness among some of the activities. Members were encouraged to sign-up for a work group. Those members who were not present will also have an opportunity to sign up for work groups. It was agreed to form the following five cross council work groups:

Examine policy implications of the use of shared network assets: John Erickson, Dave Glover, Chuck

Lenosky, Yvette Holly, Gene Hand, George Wells, Gerry Oligmueller

Stimulate job creation and economic development and the development of a skilled technical workforce: Linda Salac, Jim Ohmberger, Bob Shanahan, Roger Hahn, Norene Fitzgerald, John Jordison, Anne Byers

Use high bandwidth flexible use circuits as community aggregation points and create a statewide, high bandwidth digital content delivery system using satellite, terrestrial and wireless technology: Dennis Linster, Rich Molettiere, Al Schneider, Michael Beach, Rod Wagner, Randy Cecrle, Roger Hahn, Terry Dugas, Wayne Fisher, William Scheideler, Jon Ogden, Tom Rolfes

Improve disaster recovery and business continuity procedures for all public entities including homeland security preparedness: Linda Salac, Max Thacker, George Wells, Lynn Man, Keith Dey, Josh Daws, Dennis Burling

Make it easier to access information resources in Nebraska though a knowledge management system: Tom Conroy, Jim McGee, Rod Armstrong, Walter Weir, Jeff Johnson, Rex Gittins, John Erickson

Mr. Henderson and Ms. Decker thanked the members and guests for attending and informed them that those persons who signed up for a work group will be contacted by staff.

With no further business, Mr. Weir adjourned the meeting at 12:30 p.m.

TECHNICAL PANEL

Nebraska Information Technology Commission
Tuesday, September 13, 2005, 9:00 a.m.
Varner Hall-Board of Regents Conference Room
3835 Holdrege, Lincoln, Nebraska

PROPOSED MINUTES

MEMBERS PRESENT:

Steve Henderson, Department of Administrative Services, State of Nebraska
Christy Horn, University of Nebraska, Compliance Officer
Mike Beach, Nebraska Educational Telecommunications Commission
Kirk Langer, Lincoln Public Schools
Walter Weir, University of Nebraska

MEMBERS ABSENT: Brenda Decker, Chief Information Officer, State of Nebraska

CALL TO ORDER, ROLL CALL, NOTICE OF PUBLIC MEETING

Mr. Weir called the meeting to order at 9:05 a.m. There were five members present at the time of roll call. A quorum existed to conduct official business. The meeting notice was posted to the Nebraska Public Meeting Calendar on August 18, 2005. The meeting agenda was posted to the NITC Website on September 7, 2005.

PUBLIC COMMENT

There was no public comment.

APPROVAL OF JULY MINUTES

Mr. Henderson moved to approve the [July 12, 2005 minutes](#) as presented. Ms. Horn seconded the motion. Roll call vote: Beach-Yes, Henderson-Yes, Horn-Yes, Langer-Yes, and Weir-Yes. Results: Yes-5, No-0. Motion carried.

STANDARDS AND GUIDELINES – RECOMMENDATION TO THE NITC

At the July meeting, the Technical Panel recommended approval of this standard; however, two changes were discussed but not acted upon. This item is on the agenda again to address the following changes:

- In Section 1.0. change the word "should" to "shall".
- In Section 4, regarding the exemption process, state the following: "The NITC Technical Panel will consider, in consultation with representatives of the Nebraska GIS Steering Committee, the request and grant or deny the exemption."

Ms. Horn moved to recommend the [Geospatial Metadata Standard](#), with the changes discussed, to the NITC for final approval. Mr. Henderson seconded the motion. Roll call vote: Weir-Yes, Langer-Yes, Horn-Yes, Henderson-Yes, and Beach-Yes. Results: Yes-5, No-0. Motion carried.

STANDARDS AND GUIDELINES – REQUESTS FOR EXEMPTION

[Commission of Public Advocacy](#)

Chief Counsel, James Mowbray, was present for the discussion. He expressed the agency's concern regarding the high level need of confidentiality for attorney/client information and communications. Documents are not part of the public domain. Utilizing the state's servers and access to records may violate the Code of Professional Responsibility. The Federal Public Defenders office has their own server in their office - not off site. Since the last Technical Panel meeting, the agency's server has been moved to a locked room to assure more security. Agency staff met with Mr. Becker, Mr. Ritchey and Mr. Carr, and options were discussed.

Mr. Weir moved to grant the Commission on Public Advocacy an exception to the Email Standard with the following stipulations: 1) that a security audit be conducted within three months and 2) the exemption is valid for two years. Mr. Henderson seconded. Roll call vote: Henderson-Yes, Horn-Yes, Beach-Yes, Langer-Yes, and Weir-Yes. Results: Yes-5, No-0. Motion carried.

STANDARDS AND GUIDELINES – REQUESTS FOR EXEMPTION

Department of Roads

The panel reviewed and discussed the agency's request an exception for two applications.

Mr. Beach moved that the Technical Panel, having reviewed the Department of Roads request for exemption from the Identity and Access Management Standard, finds that:

- An exemption is merited for the “Nebraska Automated Truck Permit System (NTAPS)” application based on the following: 1) for the anonymous log-ons allowed by the application, this type of access is not covered by the standard and 2) for the account creation and log-on process, the application is already in production. The exemption is valid for two years or upon an upgrade to the application, whichever comes first.
- An exemption is merited for the “Highway Condition Reporting System (HCRS)” application based on the following: the application is already in production. The exemption is valid for two years or upon an upgrade to the application, whichever comes first.

Mr. Henderson seconded. Roll call vote: Horn-Yes, Henderson-Yes, Weir-Yes, Beach-Yes, and Langer-Yes. Results: Yes-5, No-0. Motion carried.

PROJECT REVIEWS - APPROVAL OF REVIEWERS FOR COMMUNITY TECHNOLOGY FUND GRANTS

Ms. Byers explained that most of the grant requests are for project planning and off the shelf computer software purchases - limited technical aspects. Project reviews are to be completed by the end of September. At the October meeting, the Technical Panel will take action on the project reviews. For the next funding cycle, Mr. Weir suggested including a section in the application on Disaster Recovery plans. Ms. Byers presented the slate of reviewers for approval by the Technical Panel.

Mr. Beach moved to approve the [reviewers for the CTF TIGER grants](#). Ms. Horn seconded the motion. Roll call vote: Langer-Yes, Beach-Yes, Henderson-Yes, Weir-Yes and Horn-Yes. Results: Yes-5, No-0. Motion carried.

PROJECT REVIEWS - BOARD OF BARBER EXAMINERS

Mr. Henderson moved that the Technical Panel, having reviewed the State Records Board grant application entitled "[Barber Licensing System Update](#)" project and based on the technical information provided, finds that:

- The project is technically feasible.
- The proposed technology is appropriate for the project.
- The technical elements can be accomplished within the proposed time frame and budget.

Mr. Beach seconded the motion. Roll call vote: Beach-Yes, Henderson-Yes, Horn-Yes, Langer-Yes, and Weir-Yes. Results: 5-Yes and 0-No. The motion was carried.

TECHNICAL PANEL REVISED CHARTER

Mr. Becker reviewed the recommended changes. Members discussed Section 6.3, Membership Recommendations and Approval. It was recommended to have the State of Nebraska and the University of Nebraska CIOs make a recommendation for 6.2.6 (“One member with expertise in assistive technology.”)

Mr. Langer moved to approve the [Revised Technical Panel Charter](#), with the change to Section 6.3, for final approval by the NITC. Mr. Beach seconded. Roll call vote: Beach-Yes, Henderson-Yes, Horn-Yes, Langer-Yes, and Weir-Yes. Results: Yes-5, No-0. Motion carried.

INFORMATION ITEMS (as needed)

Accessibility, Christy Horn. No report.

CAP, Brenda Decker. The group is meeting today right after the Technical Panel meeting.

Security, Steve Henderson. Steve Hartman, Information Management Services for the State of Nebraska, will chair the work group. He has met with Mr. Carr of the University of Nebraska.

Statewide Synchronous Video Network, Mike Beach. Mr. Beach has been attending the LB689 Task Force meetings. The group has been informed of the issues of scheduling. The work group will be looking at scheduling software.

OTHER BUSINESS

Mr. Weir stated the University of Nebraska and the State of Nebraska have been working together on disaster recovery and have an umbrella agreement. Collaborative efforts for continuity of operations are being discussed. The University is looking forward to additional areas for partnerships.

The University of Nebraska is exploring option to improving high speed research capabilities. An RFP is being developed. The University is experiencing a lot of activity in the area of I.T. project management.

Ms. Becker announced that Chancellor Doug Kristensen, University of Nebraska-Kearney, has been appointed to serve on the NITC and will be attending his first meeting on September 23rd.

MEETING ADJOURNMENT AND NEXT MEETING DATE

The next meeting of the NITC Technical Panel will be held on Thursday, October 11th, 9:00 a.m., Varner Hall, 3835 Holdrege Street, Lincoln, Nebraska.

Mr. Beach moved to adjourn. Mr. Henderson seconded. All were in favor. Motion was carried by voice vote.

The meeting was adjourned at 10:06 a.m.

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

October 5, 2005

To: Technical Panel Members

From: Anne Byers

Subject: Technical Review of TIGER applications

At your last meeting, the Technical Panel approved a slate of reviewers for the Community Council's TIGER grant applications. Community Council members have completed their reviews of the applications. Their reviews are summarized in the attached document.

I am asking the Technical Panel to complete the technical review. Please look over the review summaries. If you would also like to view the applications themselves, they are available at

<http://www.nitc.state.ne.us/cc/grants/TIGER2005/TIGER2005applicants.htm> .

If you have any technical concerns about the projects reviewed, please share them with Steve Henderson. I will be at a conference in Kentucky and will not be able to attend the Technical Panel meeting. If you have any questions for me, I will be happy to respond via e-mail when I return.

Information from the technical review will be included in the review information shared with the Community Council at their Oct. 24 meeting and with the NITC at their Nov. 8 meeting.

TIGER 2005 Review Summaries

Applicant	Project	Budget	Review Scores				Amount Requested
			1	2	3	Average	
Hartington Public Library	Expanding Technology Horizons	5	73	87	86	87	\$2,119.04
Atkinson Public Library	Hometown Competitiveness: Entrepreneurial Training	4	78	81	89	87	\$3,598.00
Wayne Public Library	Computer Course Development	5	76	92	75	86	\$1,680.00
City of Aurora	IT Businesses: Assessment, Marketing, Recruitment	5	89	73	81	86	\$5,000.00
UNL Extension in Burt Co.	Oakland Business Portal	4	78	86	77	84	\$5,000.00
Kearney Visitors Bureau, Buffalo Co.	Implementation of InfoTrac Software	4	79	69	85	82	\$5,000.00
Nemaha County Development Alliance	IT Training Modules for EDGE Program	3	84	75	76	81	\$2,312.50
Lied Imperial Public Library	ETA (Entrepreneur Technology Access)	5	59	76	80	77	\$2,200.00
Village of Hyannis	Village of Hyannis Web Site	4.5	74	56	72	72	\$4,888.00
City of Holdrege	Technology to Market Business Opportunities	0	73	89	51	71	\$3,000.00
City of Valentine	Community Technology Program	5	62	78	55	70	\$5,000.00
TOTAL							\$39,797.54

Project Title: Expanding Technology Horizons

Submitting Entity: Hartington Public Library

Grant Amount Requested: \$2,119.04

Evaluation Score: 87

Executive Summary: The Hartington Public Library serves in providing computer classes and workshops to expand educational and business opportunities in our area. The goal of our project is to replace one half of the aging computers in our public library's technology lab in order to continue to meet with the needs of our current patrons, as well as to serve new patrons. We have established a replacement schedule for our hardware and software in the tech lab, this grant would help us fund the first phase of our update, by purchasing four new computers with Pentium 4 processors with CD-RW drives.

Reviewer Comments: This is a good project. The partnerships between the library, University of Nebraska Extension, and Hartington Economic Development are one of the project's strengths. One reviewer expressed concerns about sustainability. The application states that the library board has included a line item in the annual budget to address technology replacement needs. However, details are missing on exactly how many PCs will be replaced each year. The evaluation plan could also be strengthened.

Technology Requested: 4 computers

Technical Concerns: none

Project Title: Hometown Competitiveness: Entrepreneurial Training Program

Submitting Entity: Atkinson Public Library

Grant Amount Requested: \$3,598

Evaluation Score: 87

Executive Summary: With small rural communities losing businesses and families, local economic development leaders and the Atkinson Public Library are working together to offer business development classes to anyone within Holt County and the surrounding area to encourage the starting, expansions, and management of small businesses. Computer classes would include business feasibility, developing a solid business plan, efficient business management, effective marketing through Web site development, creating brochures, fliers, etc., and marketing strategies for the small business. The students would in turn use this information to establish a business, or increase their present business viability, using the computer and Web. In order to operate a successful business in the 21st Century, owners must be skilled in applicable computer technology.

Working in conjunction with economic development this project is designed to bring jobs and residents to this rural area. With a new library facility ready for use in January, these classes could be a reality at the Atkinson Public Library. In order to accommodate the number of students expected, the information technology needed includes two new computers with Microsoft Office, as well as, salaries for library staff who will serve as instructors.

Reviewer Comments: It is great to see a library involved in economic development. A little more detail could have been provided in the application especially about how the classes are being designed and how the project will be sustained. The application states that the program will result in 10 new jobs being brought to the community. This is perhaps overly optimistic. The evaluation plan is very strong.

Technology Requested: 2 computers

Technical Concerns: none

Project Title: Computer Course Development

Submitting Entity: Wayne Public Library

Grant Amount Requested: \$1,680.00

Evaluation Score: 86

Executive Summary: As a public library providing service to the entire Wayne County we are a central provider of life-long learning for our residents. In response to patron requests, we intend to develop computer coursework to aid in improving office skills and on-line job searching techniques . Through the grant we will create four 2-hour courses (excel, powerpoint, internet searching, e-mail). The project will also include teaching each course twice to work out any kinks. After the project is complete, the developed courses will fold into our current computer offerings, and will continue to be taught by city staff or qualified volunteers. As with all the library programs, these classes will be free and open to the public.

Comments: This is a well-written application. The proposed project is sound and has a high probability of success. However, the project probably won't generate a big economic development impact.

Technology Requested: none

Technical Concerns: none

Project Title:

Information Technology Businesses: Assessment, Marketing and Recruitment

Submitting Entity: City of Aurora**Grant Amount Requested:** \$5,000**Evaluation Score:** 86

Executive Summary: The City of Aurora has a unique opportunity to enhance economic development in Aurora and the area surrounding Hamilton County through the Aurora Technology Center. The Aurora Technology Center, operated under the direction of the Hamilton County Information Technology Corporation (HCITC), serves as a focal point for the incubation of information technology related companies. What has been missing for a number of years is a comprehensive analysis of the information technology needs of area businesses. Once needs are determined, targeted recruitment of companies providing specific services utilized by area business can help to bring new information technology companies to the area creating a symbiotic benefit to all businesses and economic development to the area.

This project proposes to develop and administer an assessment instrument to determine the information technology needs of area businesses and begin a recruitment process to bring those businesses that provide those needs to the local area. This project has gathered the interest of the Aurora Area Chamber & Development Corporation with verbal commitment to provide sustainability following completion of the TIGER grant funding. In order to augment the recruitment process, the project proposes to revamp the marketing material of the Aurora Technology Center. Currently the Center's website is sorely out of date and needs restructuring along with the brochures used for marketing. The TIGER grant will help to launch a long-term sustainable approach to the recruitment of information technology based companies to central Nebraska.

Comments: This is a very well written application and the proposed project is sound. The proposed project has the potential for significant economic development benefits. One reviewer expressed concern about spending money to "develop" another survey instrument. A reviewer also suggested that they have an outside resource evaluate their marketing and Web site efforts as part of the project evaluation. No funding is included for training. The coordinator might need some economic development sessions.

Technology Requested: Web development services**Technical Concerns:** none

Project Title: Oakland Business Portal

Submitting Entity: UN-L Extension in Burt County

Grant Amount Requested: \$5,000

Evaluation Score: 84

Executive Summary: This project entails building a business portal for home-based and small businesses to use for advertising and marketing good and services produced in the Oakland (NE) area. The goal is to initially offer a free Web presence to spur growth in local businesses. As these businesses grow and their needs change, so will their Web sites. The business portal will be sustained by having businesses owners pay for modifications, upgrades and more sophisticated back-end applications as needed.

The business portal will include a user-friendly content management system, so that business owners can update and add content to their own Web sites. Training will be provided to help business owners understand the need for a Web presence and how it can benefit them. They will also get help in developing content and graphics for their Web sites. The grant funds the development of the business portal including the content management system, databases and Web page templates.

Reviewer Comments: The proposed project seems like a good, innovative idea and addresses one of the issues with small businesses and Web sites—making web site development and e-commerce easy for businesses. The sustainability of this type of project is always problematic. The individuals who maintain the system will be critical to ongoing success. Any drop-off in enthusiasm, or staff turnover, could paralyze the program. It won't be easy to keep the program running at a high level, but probably worth the try. The budget requests grant funding for 24 months of Web hosting. The award period is for one-year only. The budget will have to be revised.

Technology Requested: Macromedia Dreamweaver Studio MX, Web hosting, contractual services for Web design and programming

Technical Concerns: none

Project Title: Implementation of InfoTrac Software

Submitting Entity: Kearney Visitors Bureau, c/o Buffalo County

Grant Amount Requested: \$5,000

Evaluation Score: 82

Executive Summary: The Buffalo County special events and convention business is currently tracked through a very limited account management database which was custom-made in 2001 by a Kearney computer consulting firm. Account management and tracking software is an integral part of the Kearney Visitors Bureau's daily operation and is necessary to keep accurate and current records of the conventions and special events that bring significant revenue to Buffalo County. The database in use at this time currently houses more than 1,100 accounts. It was not designed to grow as quickly as Buffalo County's special events, convention business, and tourism draw has in the last four years. We have outgrown the original program and need to update it in order to fuel the growth this industry has created in Buffalo County.

To maintain the economic growth Buffalo County has seen in the last few years, and to stay at the forefront of the evolving convention business while capitalizing on tourism in Nebraska and our region, an account management database designed specifically for the Convention & Visitors Bureau industry is a necessity. The TIGER grant will fund the purchase of the InfoTrac software which will allow us to move forward by providing more efficient tracking of the tourism, convention, and special events business Kearney receives. At this time, we are unable to provide any estimated historical revenue which a particular event or convention brings to Kearney and Buffalo County. With the information from InfoTrac at our fingertips we can anticipate, prepare, and adjust to deliver the best services possible and take advantage of opportunities we might otherwise have missed.

Comments: The project is well-defined and the application is well-written. The software would probably be used regularly and would benefit the applicants. One reviewer expressed concerns that the potential benefits from this project are marginal, as this is only a measurement tool which may help but only incrementally. The reviewer also expressed concern that the applicant likely has funding available from its own sources.

Technology Requested: InfoTrac Software

Technical Concerns: Reviewers did not express any technical concerns. However, this type of software installation carries some risk. The Technical Panel expressed concerns about whether the organization has a disaster recovery and business resumption plan.

Project Title: IT Training Modules for EDGE program

Submitting Entity: Nemaha County Development Alliance

Grant Amount Requested: \$2,312.50

Evaluation Score: 81

Executive Summary: The Nemaha County Development Alliance (NCDA) has been a leader in small business development and support for entrepreneurship in Southeastern Nebraska for the past eight years. The centerpiece of our support system is the EDGE (Educating, Developing and Growing Entrepreneurs) Program, a training course sponsored by the University of Nebraska's Center for Applied Rural Innovation. The curriculum for the 14-week EDGE course addresses practically every aspect of small business development, including initial market research, product marketing, financial management, and legal structures. One important element of small business development that is limited in the EDGE curriculum, however, is how information technologies can be used to enhance all phases of business operations and reach new markets beyond local and regional borders. With Nemaha County's universal wireless Internet system becoming operational in early 2006, all businesses, regardless of location, will have broadband access. This technology and accompanying training in its use presents a great opportunity for new and existing businesses to extend their capabilities and participate in the global commercial community. In addition, our progress in reaching these goals might serve as a model for other rural Nebraska communities.

The purpose of the proposed project is to develop training modules on the use of information technology to use with the existing EDGE program that is now taught in 5 Southeast Nebraska counties. Rather than developing a specific course that would duplicate Electronic Main Street or other e-commerce courses, these modules could be used in all aspects of the EDGE curriculum but would also stand alone as a business training tool. The result will be business plans that take maximum advantage of all of the benefits and resources offered through information technologies from initial product and market research to daily operations, tailored to the specific characteristics of each individual business. Adding this dimension to our rural businesses environment should have the dual economic impacts of stimulating new Internet-based businesses and making southeast Nebraska's overall business community more robust and competitive.

Reviewer Comments: While the grant doesn't use technology directly, it could result in an increase in technology usage in the county as a result of the education provided. The benefits of this application are potentially significant. Certainly the project should be sustainable once completed. One reviewer felt that the EDGE program is a very successful program and liked the idea of developing a course module on the use of technology for the program. Another reviewer expressed concerns that the project could be duplicative of existing programs.

Technology Requested: none

Technical Concerns: none

Project Title: ETA (Entrepreneur Technology Access)

Submitting Entity: Lied Imperial Public Library

Grant Amount Requested: \$2200.00

Evaluation Score: 77

Executive Summary: Library will purchase and install the digital networkable copier/scanner/fax, the staff will learn to operate the equipment and then train patrons to use the equipment. Training workshops will be offered to patrons/entrepreneurs as well as one on one assistance during regular business hours.

Reviewer Comments: This project demonstrates local support through the cash match provided through the city budget. The connection between the purchase of this piece of equipment and the economic impact is a bit vague. Several questions on the application are not addressed at all or only minimally addressed. One reviewer expressed concerns that although businesses and individuals do occasionally need to scan, scanning is a pretty low-level technology. The reviewer would rather see the grant funds support projects employing a high level of technology.

Technology Requested: Konica Minolta di 2010f copier with scan kit

Technical Concerns: none

Project Title: Village of Hyannis Web Site

Submitting Entity: Village of Hyannis

Grant Amount Requested: \$4888.00

Evaluation Score: 72

Executive Summary: The project is intended to build and execute an outstanding functional web site for the Village of Hyannis. The site is intended to coordinate with village signage to provide visible web presence and raise awareness for municipal and civic activity, all village and area businesses, entrepreneurs, organizations, churches, and activities. The grant will fund purchase of hardware, software and minimal labor to implement the site. The project will also be sponsored by the Village of Hyannis and volunteers and be coordinated with Nebraska Public Power District, Nebraska Economic Development, and Consolidated Telephone Company.

Reviewer Comments: This is a pretty good application. There should probably be a stronger emphasis on training residents and businesses. It is good to have NPPD and telephone company on board. Village maintenance is also positive.

Technology Requested: laptop computer, color printer, projection unit and screen, Microsoft Windows XP Professional, Adobe Acrobat Reader 6.0, Macromedia Dreamweaver Studio MX with Flash Professional, Norton Antivirus

Technical Concerns: none

Project Title: Technology to Market Business Opportunities and Quality of Life in the South Platte

Submitting Entity: City of Holdrege

Grant Amount Requested: \$3,000

Evaluation Score: 71

Executive Summary: Web-based technology provides a self-help opportunity for South Platte communities to attract economic development. The ***Business Beyond the Farm*** website sends the message that small towns in the South Platte thrive, entrepreneurial businesses prosper, schools educate, and rural Nebraska communities offer attractive amenities and quality of life. TIGER will provide training materials, mileage dollars and equipment to train designated contacts in twenty-three (23) South Platte communities how to use web-based technology to market the assets of their community on the ***Business Beyond the Farm*** website and to build small world networks.

The City of Holdrege and ***Business Beyond the Farm*** request \$3,000 from TIGER grant to purchase a mobile presentation projector and develop and deliver training to designated contacts in twenty-three (23) communities in the South Platte.

Comments:

The concept of the Business Beyond the Farm project and the information presented on the Web site is good. The Web site and project have generated publicity in national media. The project is regional in scope and reasonable to implement and continue. The application doesn't do a very good job describing some of the larger benefits of the overall program—like attracting new residents to the South Platte region of Nebraska. This is a better project than the score indicates. Some questions raised by reviewers include: Who will own the projector? Will the City of Holdrege own the project or will Business Beyond the Farm own it? Who will fund ongoing support?

Technology Requested: projection unit

Technical Concerns: none

Project Title: Community Technology Program

Submitting Entity: City of Valentine

Grant Amount Requested: \$5,000

Evaluation Score: 70

Executive Summary: The Cherry County Economic Development Board is the product of a new, Inter-local agreement between the City of Valentine and Cherry County. This Board, formed on Monday, August 29, 2005, is the first of its kind in Cherry County or Valentine, and is poised to pursue opportunities that will enhance economic development within Valentine and the County. The Board will depend on the work of a director, who will execute, explore, report, and network to achieve the mission, goals, and objectives of the Board. This director will require computer hardware and internet connectivity to conduct these activities. The purchase of this hardware, related software, and internet access, forms the basis of this funding request. Expected outcomes include: completion of a community survey by September 30, 2005; production and city council approval of the resulting economic and strategic plan by October 30, 2005; conduct public education regarding economic development and LB 840 specifically by January 30, 2006; and, passage of a city sales tax ballot initiative including LB 840 authority of using a portion of city sales tax funds for economic development (by March 1, 2006). This project will provide the critical impetus for launching the city and county into an era of unprecedented economic prosperity.

Reviewer Comments: It is really impressive that an organization formed in August 29 was able to submit an application by Sept. 1. The application is well written. The applicant asks for funding for computer equipment for the economic development board. The activities proposed are worthwhile. However, the proposed projects have little to do with technology-related development. One reviewer commented that it was hard to imagine anything that would help more in terms of economic development than assisting in the establishment of the economic development board for a region. Other reviewers commented that a computer is a normal operating expense, and there's nothing innovative about what is being proposed. This should be a normal operational expense. One reviewer expressed concerns that this application should be disqualified for not meeting the cash match requirement. The application lists \$38,921 in matching funds that have nothing to do with the purchase of the computer. The reviewer calculated the actual matching funds as 0.5% of the requested amount.

Technology Requested: laptop computer, 2 desktop computers, LCD projector, color inkjet printer/fax, B/W laser jet printer/scanner/fax/copier, wireless firewall router

Technical Concerns: none

Strategic Initiatives

The NITC has identified eight strategic initiatives, which address the NITC's goals of supporting the development of a robust telecommunications infrastructure; supporting community and economic development; promoting the efficient delivery of government and educational services; and ensuring the security of data and network resources and the continuity of business operations. These initiatives would materially advance the vision and statewide goals as identified by the NITC. By emphasizing selected strategic initiatives, the NITC hopes to encourage funding of these initiatives and to encourage state agencies to work together to advance these initiatives.

The eight strategic initiatives, listed as supporting the NITC goals, are:

Supporting the Development of a Robust Telecommunications Infrastructure

Nebraska Statewide Telehealth Network. The Nebraska Statewide Telehealth Network will improve access to health care, continuing medical education, and bioterrorism training and alerts by connecting all rural and critical access hospitals with regional hospitals, public health departments, state public health laboratories, and the State of Nebraska. As of July 1, 2005, most of the telecommunications lines have been installed, completing phase one of network development. Phase two will address issues such as training, maintenance, scheduling, operations, and governance. The Nebraska Statewide Telehealth Network is a collaborative effort led by the Nebraska Hospital Association.

Network Nebraska. The primary objective of Network Nebraska is to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the state of Nebraska. The Division of Communications and the University of Nebraska engaged in a collaborative partnership that used existing resources to aggregate disparate networks into a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney and North Platte to the Panhandle. Potential benefits of Network Nebraska include lower network costs, greater efficiency, interoperability of systems providing video courses and conferencing, increased collaboration among educational entities, new educational opportunities, and better use of public investments.

Statewide Synchronous Video Network. The primary objective of this initiative is to establish an Internet Protocol-based network that will interconnect all existing and future distance learning and videoconferencing facilities in the State of Nebraska. The 400+ interactive video facilities in Nebraska currently utilize a variety of video standards and bandwidth speeds that prevent interconnection between sub-networks. The Statewide Synchronous Video Network, as envisioned, would use compatible audio and video standards to enable any classroom or facility to connect with any other classroom or facility or to connect with multiple sites simultaneously. Benefits include greater sharing of educational courses and resources; more efficient use of available resources; one-to-many videoconferencing capabilities for alerts and emergency situations; and collaborative development across

The NITC has identified eight strategic initiatives, which address the NITC's goals.



various service agencies.

Supporting Community and Economic Development

Community IT Planning and Development. The primary objective of this initiative is to foster community and economic development in Nebraska communities through the effective use of information technology. The NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership. Technologies Across Nebraska is a partnership of over 40 organizations working to help communities utilize information technology to enhance development opportunities. Technologies Across Nebraska has helped 21 communities develop local plans to utilize technology to enhance development opportunities. Technologies Across Nebraska's quarterly newsletter, *TANgents*, reaches over 1,000 individuals with an interest in technology-related development.

Promoting the Efficient Delivery of Government and Educational Services

Digital Education. The primary objective of the Digital Education Initiative is to promote the effective and efficient integration of technology into the instructional, learning, and administrative processes and to utilize technology to deliver enhanced digital educational opportunities to students at all levels throughout Nebraska on an equitable and affordable basis.

State Government Efficiency. The State Government Council will address multiple items improving efficiency in state government, including shared services; standards and guidelines; and the project review process. The council has identified and is working to implement seven "shared services" for state government agencies. Also, the council will continue to develop standards and guidelines to better coordinate state agency technology efforts. Finally, the council will review and recommend improvements to the IT project review process. Benefits of these activities include lower costs, easier interoperability among systems, greater data sharing, and improved services.

E-Government. Through the use of technology, state agencies can enhance information sharing, service delivery, and constituency and client participation. Benefits include improved services for citizens and businesses, and increased efficiency and effectiveness for agencies.

Ensuring the Security of Data and Network Resources and the Continuity of Business Operations

Security and Business Resumption. This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the State's information technology resources. Benefits include lower costs by addressing security from an enterprise perspective, cost avoidance, and protecting the public trust.

Each of these strategic initiatives are discussed in greater detail in the following section.

SNDLC pioneers the Digital Frontier

The Southeast Nebraska Distance Learning Consortium (SNDLC), involving schools from Educational Service Units 3, 4, 5, and 6, has been pioneering the digital frontier for Nebraska teachers and students. It is fitting that the effort includes connections to the Homestead National Monument of America at Beatrice, site of the nation's first homestead in 1862. Today, nearly a century and a half later, digital pioneering is expanding learning opportunities through Internet 1 connections to such places as



SNDLC students ask questions of staff from the Homestead National Monument in Beatrice. Photo courtesy of SNDLC

- Little Rock Central High School National Historic Site in Arkansas
- Cabrillo National Monument in California,
- Nicodemus National Historic Site in Kansas,
- Henry Doorly Zoo and Homestead National Monument of America in Nebraska
- Badlands National Park, Minuteman Missile National Historic Site and Mount Rushmore National Memorial in South Dakota
- Arches National Park, Canyonlands National Park and Hovenweep National Monument in Utah.

Educators at each of these sites work with classroom teachers to provide standards-based enrichment experiences that are directly tied to what is being taught in the classroom. Distance-learning technology allows two-way live interaction between the presenter and the students; they can hear, see and talk to each other in real time. Today's students can share the rich history of our country without leaving the classroom, and can interact with students from other states as they discover and share the unique differences that exist in our world today. Best of all, Nebraska teachers and students are setting the stage for students from all over the world to explore the resources of America, as well as those of Nebraska.

Today's students can share the rich history of our country without leaving the classroom.

Nebraska Statewide Telehealth Network



Objective

The Nebraska Statewide Telehealth Network will improve access to health care, continuing medical education, and bioterrorism training and alerts by connecting all rural and critical access hospitals with regional hospitals, public health departments, state public health laboratories, and the State of Nebraska.

Description

The Nebraska Statewide Telehealth Network is an interactive video and data network that provides integration among the hospitals, public health departments, public health laboratories and other entities across the entire State of Nebraska. The major functions of the Network are to improve quality and access to care, particularly in rural Nebraska, to provide patient, provider and community education and to provide another communication source in the event of a natural, man-made or terrorist emergency.

The Nebraska Statewide Telehealth Network is a collaborative effort led by the Nebraska Hospital Association. Partners include:

- Nebraska Hospital Association
- Nebraska hospitals
- Nebraska Public Health Departments
- University of Nebraska Medical Center
- Universal Service Administrative Company
- University of Nebraska System
- Nebraska Information Network
- Nebraska telecommunications companies
- Central Nebraska Area Health Education Center
- Northern Nebraska Area Health Education Center
- Nebraska Panhandle Area Health Education Center
- Nebraska Medical Association
- Nebraska State Government
 - Lieutenant Governor's Office

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- Nebraska Public Service Commission
 - Nebraska Division of Communications
 - Nebraska Health and Human Services System
 - Bioterrorism Preparedness and Response Section
 - Office of Rural Health
 - Nebraska Information Technology Commission
 - Nebraska Office of the Chief Information Officer
 - Nebraska Department of Education
 - Nebraska Educational Telecommunications Commission

By the end of 2005, most of the telecommunications lines will be installed, completing phase one of network development. Phase two will address issues such as training, maintenance, scheduling, operations, and governance. A partnership with the Nebraska Medical Association has been formed to promote use of the network among physicians. The Telehealth Network Education Subcommittee is working to create a listing of educational offerings provided over the network.

The successful implementation of the Nebraska Statewide Telehealth Network may also help lay the foundation for the development of a statewide electronic health record system and the adoption of health information technology. President Bush has made the adoption of health information technology including electronic health records a national priority.

Benefits

A telehealth network which connects all hospitals, providing access to consultations with medical specialists, continuing medical education, and bioterrorism training and alerts is critical to the provision of health care in rural areas of the state. There is a lack of specialist services in rural areas, particularly mental health services. Telemedicine has proven to be an effective way to provide consultations with specialists. Currently mental health consultations and teleradiology are the two most common types of specialist services provided via telemedicine. Rural health care providers also have fewer opportunities for continuing medical education in their community and must often drive several hours to attend training. Continuing medical education is currently being provided via telehealth in Nebraska and has proven to be an effective and efficient method of delivery. It is also critical that all hospitals are connected to a telehealth network in order to prepare health care providers to respond quickly to bioterrorism threats and other public health risks.

The Nebraska Statewide Telehealth Network will provide access to consultations with medical specialists, continuing medical education, and bioterrorism training.

The widespread adoption of health information technology (including electronic health records) is expected to reduce health care costs for employers, reduce costs and increase efficiencies for third party payers, and to improve the quality of health care.

Through the Nebraska Statewide Telehealth Network, Jessica was able to arrange support services for the family; family members in North Platte were able to see Trey and to visit with Jessica; and Trey's neonatologists at Saint Elizabeth and his physicians in North Platte were able to discuss his medical needs and care.

Nebraska Statewide Telehealth Network eases baby Trey's transition back home

Born four months early and weighing only 13.9 ounces, Trey Keifer is a medical miracle. He is the tiniest baby to ever survive at Saint Elizabeth Regional Medical Center. His mother, Jessica, was airlifted from North Platte to Lincoln where an emergency Caesarean section was performed to save her life and hopefully that of her unborn son. Both lives were saved to the amazement of the medical teams.

During Trey's four-month stay in the Saint Elizabeth newborn intensive care unit, videoconferences were set up between Saint Elizabeth and Great Plains Regional Medical Center in North Platte using the Nebraska Statewide Telehealth Network. Through videoconferencing, Jessica was able to arrange support services for the family; family members in North Platte were able to see Trey and to visit with Jessica; and Trey's neonatologists at Saint Elizabeth and his physicians in North Platte were able to discuss his medical needs and care.

Impressed with how well videoconferencing has eased Trey's transition back home to North Platte, doctors and nurses at Saint Elizabeth now plan to regularly set up videoconferences with the families and doctors of infants with special medical needs who reside outside of the Lincoln area.



Jessica Keifer smiles at her son, Trey. Photo courtesy of St. Elizabeth Regional Medical Center

Network Nebraska

Objective

The primary objective of this initiative is to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of service to every public entity in the State of Nebraska. The Division of Communications and the University of Nebraska engaged in a collaborative partnership that used existing resources to aggregate disparate networks into a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney, and North Platte to the Panhandle. The next phase of this initiative is to formalize business relationships and agreements and to enhance rural bandwidth through local aggregation.

Description

The major components of this initiative include:

- Development of a scalable, reliable, and secure telecommunications infrastructure that enables any type of eligible entity (i.e., local and state government, K-12 and higher education, health care institutions) to purchase the amount of service that the entities need, when they need it, on an annual basis;
- Establishment of a catalog of value-added applications that enables eligible entities to pick and choose services that are pertinent to them (e.g., Internet1, Internet2, and videoconferencing);
- Implementation of a network operations center that offers a helpdesk, network diagnostics, and engineering assistance in order to ensure acceptable qualities of service;
- Establishment of a billing or accounting center to accept service orders, extend service agreements, provide consolidated billing, and to maintain customer accounts.

Benefits

Through aggregation of demand, adoption of common standards, and collaboration with network services and applications, participants can achieve many benefits, including:

- Lower network costs;
- Greater efficiency for participating entities;
- Interoperability of systems providing video courses and conferencing;
- Increased collaboration among all K-20 educational entities;
- New educational opportunities;

Through aggregation of demand, adoption of common standards, and collaboration with network services and applications, Network Nebraska participants can achieve many benefits.



Wayne's last mile aggregation provides better services at lower costs

By Dennis Linster, Wayne State College

In November 2002, Wayne City Administrator Lowell Johnson and Wayne State College CIO Dennis Linster presented a proposal to the NITC Technical Panel for approval of a plan to aggregate all of the tax-supported IP-based telecommunication services in Wayne, Nebraska and centrally distribute those services to the tax-supported entities. The initial plan included hosting the telecommunications services for Wayne city offices and NorthStar Regional Services at Wayne State College through a wireless connection. The NITC Technical Panel endorsed the plan as feasible and a promising example of Tier II aggregations among municipalities. The project was named the "Last Mile Project" by their technical team.

Wayne State College had several characteristics that made it a logical service consolidator. The President of the college lent support for this undertaking. The college had a network operating center that was open 24 x 7 and a very high-quality staff to ensure the success of the project. And, the City of Wayne was eager to make this project happen. The technical team chose a wireless transport solution to facilitate a connection between campus and the main city office building. Wireless technology was also used to connect the seven remaining city buildings to the main city office. The city and college technical staffs worked in partnership to make these connections functional. In February 2003 the connection was completed, and it has been working flawlessly since. After more than two years of rain, sleet, snow, high



Wireless antenna and tower arrays connect Wayne municipal public entities with the Wayne State College campus. Photos courtesy of Wayne State College

winds, fog, virus outbreaks, and even power outages, the wireless connection performed very reliably. In 2004, NorthStar Regional Services and Wayne Public Schools were also connected by wireless. NorthStar Regional Services provides community-based services to people with developmental disabilities.

As a Tier II aggregation site, Wayne State College has been able to aggregate public entities' municipal Internet demand with their own and then contract with Network Nebraska for Internet service. The combination has not only improved the quality of service for the involved partners but also lowered costs.

Linster comments about the 'Last Mile Project', "It is evident that the collaboration of support is something that was seriously needed in our community, and likely is needed in other communities as well. Along with the collaboration of support, we have aggregated the services and expanded the opportunities of all partners technically. This is nothing short of a win-win scenario in which the taxpayers are the real winners. Better services, lower costs."

"This is nothing short of a win-win scenario in which the taxpayers are the real winners. Better services, lower costs."

—Dennis Linster

Project 42 joins Network Nebraska, gains bandwidth and reduces costs

By Alan Wibbels, ESU 10

Project 42—a consortium formed by ESUs 10, 11, 15, and 16—serves 163 school districts in 33 counties and covers approximately 32,000 square miles. Over 10,000 faculty and staff have e-mail accounts provided by the consortium and 50,000 students currently use the network to access the Internet and web-based services available both at the ESUs and around the world.

Prior to joining *Network Nebraska*, Project 42's Internet access costs were approximately \$500 per megabit of bandwidth per month (\$10,000 per month for 20 megabit) before the e-rate discount. By moving to the state network, the cost per megabit has dropped to \$150 per megabit per month and Project 42 has been able to expand the bandwidth to 30 megabit. As a result, Project 42 is able to deliver greater bandwidth and experience a savings of \$5,500 per month!

Project 42 anticipates continued reduction in costs as more customers join *Network Nebraska*. Obviously the cost for transport across the state will not be free. However, as more customers share the cost of the transport and the state uses its aggregated purchasing power to buy greater amounts of Internet access, all



By moving to the state network, the cost per megabit has dropped to \$150 per megabit per month.

participants should realize reduced costs per megabit of bandwidth.

In addition to basic Internet services, *Network Nebraska* provides K-12 schools with the opportunity to participate in Internet 2 services and activities as outlined on the Internet 2 (I2) initiative web site (<http://k20.internet2.edu/about/goals.html>). Project 42 has used the high-speed I2 access to download large data files and to create interactive connections with students across the United States. Examples of interactive projects include:

- Sixth graders from Bertrand connected with a senior high class in Texas for a lesson on cotton and its many uses.
- Second grade students from Pleasanton connected with second graders in two communities in Texas and New York to share information about their hometowns and cultural differences.
- Several schools in Project 42 interacted with Mr. Cox, a World War II veteran in Texas, who had survived the sinking of the USS Indianapolis by the Japanese in the South Pacific. Students had the opportunity to hear the story first hand and to interact with him.
- A number of connections have been established with the Lewis and Clark Expedition project for the purpose of training teachers how to use Internet2.



Then Lt. Governor Dave Heineman, UNL Assistant Vice Chancellor Kent Hendrickson, UNK Chancellor Doug Kristensen, and ESU 10 Systems Engineer Ron Cone “turned on” access to Internet 2 by Nebraska schools. July 2004 photo courtesy of ESU 10

Statewide Synchronous Video Network

Objective

The primary objective of this initiative is to establish an Internet Protocol-based network that will interconnect all existing and future distance learning and videoconferencing facilities in the State of Nebraska. Nebraska currently has approximately 300 high school distance learning classrooms, 30 higher education distance learning classrooms, over 50 state agency videoconferencing rooms, and (soon-to-be) over 60 videoconferencing facilities for telehealth in local and regional hospitals. More growth and proliferation of distance learning and videoconferencing equipment and sites is expected in the near future. These 400+ interactive video facilities currently utilize a variety of video standards and bandwidth speeds that prevent interconnection between sub-networks. The Statewide Synchronous Video Network, as envisioned, would use compatible audio and video standards to enable any classroom or facility to connect with any other classroom or facility or to connect with multiple sites simultaneously.

Description

The major components of this initiative include:

- A single, interconnected synchronous video network with various levels of authorization and traffic prioritization;
- An event clearinghouse and scheduling system that would allow registration for interactive video events;
- Development of a network bandwidth management system or network operations center that assures pre-determined qualities of service, depending upon the type of video traffic.

Benefits

Interactive videoconferencing and distance learning developed rapidly across Nebraska in the 1990's. Prior to recognized video standards or a coordinating body, entities were free to adopt any equipment, standard, or system that met their needs. Little thought was paid to interconnectivity or compatibility. Consequently, Nebraska became a state of disparate, redundant systems that prevented multi-jurisdictional collaboration or maximization of educational opportunities outside of a particular geographic boundary or system.

The enterprise benefits of an interconnected video system include:

- Greater sharing of educational courses, events, and training across sub-network boundaries, irrespective of geography;

The Statewide Synchronous Video Network would use compatible audio and video standards to enable any classroom or facility to connect with any other classroom or facility or to connect with multiple sites.



- More efficient use of available resources—more classrooms and sites are available within less distance of the user at more convenient times;
- One-to-many videoconferencing capabilities for news alerts, bioterrorism alerts, or other emergency uses;
- Collaborative development across various service agencies (i.e., medical services to schools, and adult and continuing education opportunities).

Numerous schools have taken part in similar NASA programs, live discussions with Nebraska native Astronaut Clayton Anderson, and also the Edgerton Explorit Center's own unique programming.

Edgerton Explorit Center connects to NASA

In December of 2003, the Edgerton Explorit Center (EEC) in Aurora launched its Distance Learning Program by connecting students at the EEC with educators from NASA's Johnson Space Center. Since this time, numerous schools have taken part in similar NASA programs, live discussions with Nebraska native Astronaut Clayton Anderson and also the EEC's own unique programming, which includes "Seeing Through the Eyes of Discovery", "Virtual Dissection" and "Supercold Chemistry". Programs are specifically designed to meet the needs of educators and the Nebraska Department of Education Science Standards.

The EEC Distance Learning Room has the capabilities to connect with almost every school in the state via a direct scheduled connection, through the internet by dialing an IP address or via a transferred satellite connection. School groups, summer camps, scout excursions, business meetings, and educational planning sessions have been conducted with groups from across the state and beyond. The classroom is equipped with a digital microscope camera, document camera, electronic white board, retractable ceiling video screens, and work desks/chairs with microphones.

In January of 2005, the EEC added experiences that were truly interactive. Students who log onto the EEC website during a distance learning event are able to control demonstration equipment from their classroom. This follows directly from Doc Edgerton's philosophy that we all learn best by getting our hands on things.



Members of the first Edgerton Elite Science Camp videoconference with NASA astronaut and Nebraska native Clayton Anderson from the Edgerton Explorit Center's distance learning room. Photo courtesy of Edgerton Explorit Center

Community IT Planning & Development

Objective

The primary objective of this initiative is to foster community and economic development in Nebraska communities through the effective use of information technology.

Description

The NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership. Technologies Across Nebraska is a partnership of over 40 organizations working to help communities utilize information technology to enhance development opportunities. Technologies Across Nebraska facilitates technology-related development by building partnerships, leveraging resources, and strengthening community capacity.

For the past three years, Technologies Across Nebraska has helped 21 communities develop local plans to utilize technology to enhance development opportunities through the IT Planning and Mini Grant program. Through the program, participating communities and regional groups receive a \$2,500 mini grant and assistance from the Nebraska Rural Initiative's Communities of the Future Team and the Nebraska Information Technology Commission. The *Community IT Assessment and Planning Workbook* helps simplify the assessment and planning process for communities. The impact of the program has been significant. Edgar received a \$250,000 Community Development Block Grant to build a community center which will include a technology center. Crawford now has a community technology learning center and wireless broadband service thanks to a \$154,000 grant from the USDA Rural Utilities Service. In Keya Paha, Brown, and Rock Counties, the region now has more class offerings, two community Web sites, and a new technology retail store. In West Point a videoconferencing system has been installed for use by area businesses.

Technologies Across Nebraska's quarterly newsletter, *TANgents*, reaches over 1,000 individuals with an interest in technology-related development. Articles from *TANgents* have been reprinted by several organizations including *Government Technology*. Readers find *TANgents* a valuable source of information. One reader commented, "*TANgents* plays an important role in keeping Nebraskans aware of development and new opportunities to improve IT options for rural citizens in the State. I hope you will continue to provide this service." A recent survey of readers found that 89% felt reading *TANgents* has helped them learn about available resources; and 79% indicated that reading *TANgents* has helped them better understand the importance of IT-related community and economic development.

Technologies Across Nebraska, in partnership with the Rural Development Com-

The NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership.



mission, has also examined e-commerce use by Nebraska businesses and e-commerce training in the state. Nebraska firms appear to be adopting e-commerce at a slower rate than firms nationwide. A 2004 survey of Nebraska businesses found that only 31% of small businesses had a Web site. In comparison, 45% of small businesses nationwide had a Web site in 2001.

Benefits

The potential benefits of information technology to communities, businesses, health care, local government, education, and citizens are numerous:

- Communities can use the Internet to publicize community events, communicate with former residents, and advertise available commercial sites.
- Businesses can use information technology to decrease costs, increase sales, and provide better customer service.
- Local governments can use information technology to more efficiently deliver services and provide information to citizens.
- Students can take advanced placement courses or study a foreign language through distance learning.
- Through telemedicine, patients can receive medical care from specialists and doctors can participate in continuing medical education without leaving their rural communities.
- Citizens can easily access the minutes and agendas of local governments, update their skills through continuing education, and share photos with distant family members.
- The effective use of information technology can improve a community's quality of life and can enhance economic development efforts.

Nearly all residents and businesses in Nemaha County will soon have broadband available to them.

NCDA, JAGWireless partner to bring broadband to Nemaha County

Thanks to the efforts of the Nemaha County Development Association (NCDA), nearly all residents and businesses in Nemaha County will soon have broadband available to them. The Nemaha County Development Association had talked to a number of service providers about providing broadband service over the past 5 years. NCDA's first effort involved collecting the names of Auburn residents and businesses interested in subscribing to DSL and presenting the list to the local telephone company. Satisfied that there was sufficient demand in Auburn, the telephone company began providing DSL.

Over the years NCDCA continued its efforts to work with providers . In 2004, NCDCA began discussions with JAGWireless to provide service to rural Nemaha County. Funding and assistance through Technologies Across Nebraska's IT Planning and Mini Grant and the Nebraska Public Service Commission's Nebraska Internet Enhancement Fund aided NCDCA in their efforts. JAGWireless put up a Web site with information about their planned wireless broadband service. NCDCA publicized the site and encouraged residences and businesses interested in subscribing to register at the Web site. JAGWireless broadband service is expected to be available in Nemaha County in early 2006.

Cuming County redesigns Web site to meet constituent needs

With assistance from a Technologies Across Nebraska IT Planning Mini Grant, Cuming County Clerk Bonnie Vogltance solicited citizen input on e-government services.

"We wanted to make the Cuming County Web site more user-friendly and to find out what specific items residents would want to find and use," said Patty Schinstock, who is working as a consultant to Cuming County on their Web site redesign. "Participants included mayors, county supervisors, school officials, village board members, and residents."

There was widespread agreement that the Cuming County Web site should be used to promote economic development and tourism and should link to community pages. Communities also realized that it was important for them to keep their sites updated. Additional economic development links, a community calendar, and a search option will be added to the redesigned Cuming County Web site. Seasonal pictures will be featured on the site, helping to publicize local events and depicting county life. A list of frequently asked questions (FAQs) will be developed for each office. Fillable forms will also be made available. Nebraska.gov is working with Cuming County on the redesign and plans to have the new site by this fall.

"We wanted to make the Cuming County Web site more user-friendly and to find out what specific items residents would want to find and use."

—Patty Schinstock

Digital Education



Objective

The primary objective of the Digital Education Initiative is to promote the effective and efficient integration of technology into the instructional, learning, and administrative processes and to utilize technology to deliver enhanced digital educational opportunities to students at all levels throughout Nebraska on an equitable and affordable basis.

This initiative will involve the coordination and promotion of several major systems and applications that heretofore have either been developed mostly at the local level or have not been replicated statewide.

The initiative will be dependent upon adequate Internet connectivity and transport bandwidth for learners, instructors, administrators, and for educational attendance sites. A minimum acceptable level of classroom technology will have to be established for the initiative to be successful.

Description

The Digital Education Initiative will recognize that many standalone and disparate software applications are needing to undergo integration and convergence so that an instructor can: 1) research digital content, 2) construct a lesson or unit on a computer in a series of virtual or face-to-face or videoconferencing activities using rich multimedia, 3) assess the learners electronically, and then 4) move the student data to a database or data warehouse, 5) export relevant achievement and attendance data to a web-based student information system so parents, or the students themselves, can view it from home; 6) export data to a statewide student information system; and then finally 7) make “real-time” instructional decisions based upon the recently documented progress of the learners.

The primary components of the Digital Education Initiative would include:

- A statewide telecommunications network capable of transporting voice, video, and data between and among all education entities [see Network Nebraska];
- Ample bandwidth for local and regional transport to accommodate present and future education technology applications [see Statewide Synchronous Video Network];
- Distance insensitive Internet pricing for all Nebraska education entities;
- Development of a statewide eLearning environment so that every teacher and every learner has access to a web-based, digital curriculum;
- Development of a statewide digital resource library so that any teacher or learner will be able to retrieve digital media for use in instructional and student projects;

-
- Synchronous videoconferencing interconnections between all schools and colleges [see Statewide Synchronous Video Network];
 - The means to coordinate and facilitate essential education opportunities for all students through a statewide student information system; and
 - Regional PreK-20 education cooperatives that vertically articulate educational programs and opportunities.

Benefits

Establishing a Digital Education Initiative is critical to Nebraska's future. Internet has gone from a "nice to have" educational application of the 1990's to the "must have" mission critical application of the 2000's. So much of what teachers, students, and administrators do today is tied to Internet-based information and communication. Nebraska's ranking of 6.5 students per Internet-connected computer in the classroom seems to compare favorably with the U.S. average of 8.0 students per Internet-connected computer. (Technology Counts 2005 Report) However, it still makes it challenging for students to complete their digital assignments when they are expected to share six or seven students to a computer.

The benefits of the Digital Education Initiative would include:

- Greater technical capacity for schools and colleges to meet the increasing demands of a more diverse customer base;
- More equitable Internet access for Nebraska schools and colleges that is not dependent upon distance-sensitive pricing;
- A comprehensive Web-based approach to curriculum mapping and organization and automation of student assessment data gathering and depiction;
- The availability of rich, digital media to the desktop that is indexed to Nebraska standards, catalogued, and searchable by the educator or student;
- A more systematic approach to synchronous video distance learning that enables Nebraska schools and colleges to exchange more courses, staff development and training, and ad hoc learning opportunities.

Each of the components of the Digital Education Initiative are vital to future student success in Nebraska. The components are especially pertinent in that these applications and services provide the foundation for capacity building in our schools and colleges.

The Digital Education Initiative will promote the effective and efficient integration of technology into the instructional, learning, and administrative processes and to utilize technology to deliver enhanced digital educational opportunities to students.



"It is not unusual for students to post five to 20 messages on the discussion board the evening before a major exam!"

—Brenda Zabel

Westside High School enhances learning through Blackboard support

A key technology component of the Zoology and Physiology courses at Westside High School is their online support site created using Blackboard.com. Two years ago science teacher Brenda Zabel initiated the course Web site that is expanded and updated each year. Announcements, important documents, assignments, pdf versions of PowerPoint presentations, videos, lecture notes, and practice assessments support every aspect of the courses.



Nebraska's 2005 Teacher of the Year Brenda Zabel assisting a student as she accesses the Zoology course Web site.

Video tutorials on a streaming server let students replicate and review the lab activities they've done while in the classroom. Posted assignments can be printed and completed in a traditional way, or they can be completed electronically, thus allowing students to pace their own work, collaborate with others, and revise as often as they wish before pressing the SEND button. A discussion board provides "virtual office hours." Students may electronically post comments and questions, and classmates and teacher can respond to their postings wherever they are.

"It is not unusual for students to post five to 20 messages on the discussion board the evening before a major exam!" said Zabel. Students also contribute weblinks to outside resources they find while doing independent research. Instructors and students both benefit from these digital resources. Because all these support materials are web-based, students may access them 24 hours a day, seven days a week, and anywhere they have Internet access.

State Government Efficiency

Objective

The State Government Council will address multiple items improving efficiency in state government, including shared services; standards and guidelines; and the project review process. The council has identified and is working to implement seven “shared services” for state government agencies. Also, the council will continue to develop standards and guidelines to better coordinate state agency technology efforts. Finally, the council will review and recommend improvements to the IT project review process.

Description

The primary components of this initiative are:

- **Shared Services.** The State Government Council has identified a number of potential shared services. The council chose seven shared services for further study and implementation at this time. Interested agencies are meeting to further develop these services.
 - Blackberry
 - Business Continuity / Disaster Recovery
 - Directory Services
 - E-mail
 - Enterprise Maintenance / Purchase Agreements
 - Field Support Services
 - SAN (Storage Area Network)
- **Standards and Guidelines.** The State Government Council, working with the Technical Panel, will continue to develop standards and guidelines to better coordinate state agency technology efforts.
- **IT Project Review Process.** The State Government Council and Technical Panel will review and recommend improvement to the IT project review process. This process is primarily used in the review of IT projects as part of the state budget process.

The State Government Council will address multiple items improving efficiency in state government, including shared services; standards and guidelines; and the project review process.

Benefits

Benefits of this initiative include lower costs, easier interoperability among systems, greater data sharing, higher reliability, and improved services.



“The ability to transmit our bid electronically saves us the time and cost of traveling to Lincoln to work on and submit the bid. We like the system.”

—Nancy Jahn

Department of Roads Internet bidding saves contractors time, money

The Nebraska Department of Roads’ (NDOR) first Internet bidding was held November 4, 2004, with 19 contractors participating, according to Liz Wunderlich, NDOR Contracts Manager. Contractors are now able to submit their bid via the Internet using the Bid Express (BidX) Internet bidding service. This method of bidding alleviates the contractors from having to submit paper bids, bid bond forms and a computer diskette on letting day.

Nancy Jahn, Western Engineering Company, Inc., Harlan, Iowa, said they were familiar with BidExpress as they had used it in Iowa for the past two years. She said their estimators like the ease of the system. “Estimators know immediately if the bid is submitted correctly,” she said. “It allows them to make last minute changes in our bid and transmit those changes quickly and easily.”

Jahn said BidExpress also saves them time and money. “The ability to transmit our bid electronically saves us the time and cost of traveling to Lincoln to work on and submit the bid. We like the system.”

John Christensen, Christensen Bros., Inc., Cherokee, IA, said they had used the system in Iowa for about five years and the system worked really well for them. He said it saved a four-hour drive to Lincoln and working late hours in a hotel the night before the bid letting. “Now I can just send it over the computer and go to bed,” he said. “Also, it is real easy to change the bid at the last minute, with a couple of presses of the computer keyboard. It is much more efficient and eliminates mistakes.”

Julie Budnick, Werner Construction, Inc., of Hastings, agreed that the system was much more efficient overall. She said more can be accomplished in less time and with the use of less resources and equipment.

E-Government

Objective

The State Government Council will continue to implement action items that further the use of e-government to improve services and increase the efficiency and effectiveness of agencies. The e-government principles guiding the council are:

- E-government should be considered a continuous process of using technology to serve citizens and improve agency operations;
- Internet technologies create new opportunities for major change, including self-service, integration of information and services, and elimination of time, distance and availability of staff as constraints to providing information and services;
- Agencies have responsibility for performing statutory functions, which means that agency directors must retain ownership of data, responsibility over the use of information technology, and prioritization of projects within the agency to achieve the greatest benefit;
- Cooperation is critical to achieving the goals of e-government, in order to integrate information and services and allow the easy exchange of information;
- An enterprise approach is essential to e-government, including the topics of accessibility for disabled persons, architecture, directories, funding, portal, privacy, security, and other issues; and
- E-government is defined as the use of technology to enhance information sharing, service delivery, constituency and client participation, and governance by transforming internal and external relationships.

Description

The three goals for e-government are:

- **Government-to-Citizen and Government-to-Business.** Anyone needing to do business with state government will be able to go to the state's Web site, easily find the information or service they need, and if they desire, complete all appropriate transactions electronically. Areas to be addressed include citizen portal enhancement; business portal enhancements; education portal; and forms automation.
- **Government-to-Government.** State agencies will improve services and increase the efficiency and effectiveness of government operations through collaboration, communication, and data sharing between government agencies at all levels.

Internet technologies create new opportunities for major change, including self-service, integration of information and services, and elimination of time, distance and availability of staff as constraints to providing information and services.



- **Government-to-Employee and Internal Operations.** Agencies will examine internal operations to determine cost-effective e-government applications and solutions. The purpose of these efforts is to improve efficiency and effectiveness by replacing manual operations with automated techniques.

Benefits

The primary benefits from the use of e-government are:

- Improved services for citizens and businesses.
- Increased efficiency and effectiveness for agencies.

BillTracker allows our office to put additional resources toward meeting constituent needs in our district because we've significantly reduced the time we spend wading through daily legislative updates.



BillTracker allows legislative offices to devote resources to constituent services

Each year, hundreds of legislative bills, amendments and resolutions are introduced in the Nebraska Legislature. Tracking legislative activity in a paper-based environment drains resources from the offices of elected officials, agency staff, businesses, statewide associations and others interested in the legislative process.

A partnership between the Nebraska Legislature and Nebraska.gov led to the introduction of the BillTracker service in 2005. The system allows users to establish profiles to monitor legislative activity and receive automated e-mail updates each day. According to one legislative staff member, "BillTracker allows our office to put additional resources toward meeting constituent needs in our district because we've significantly reduced the time we spend wading through daily legislative updates."



Banks, title companies and law firms obtain records from their offices using JUSTICE

In rural Nebraska, businesses such as banks, title companies and law firms often serve a clientele that extends across multiple counties. In the course of doing business, it is often necessary to obtain court records from multiple counties. Until recently, this required a visit to each individual courthouse, requiring personnel resources and the associated time and expense.

With the introduction of JUSTICE court records searches in early 2004, these businesses can now obtain court records statewide (185 of 186 county and district courts) online. From the convenience of their offices, these businesses can search and retrieve the records they need without the time and expense of visiting each individual county.

From the convenience of their offices, these businesses can search and retrieve the records they need without the time and expense of visiting each individual county.

Security and Business Resumption



Objective

This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the security of the state's information technology resources. Information security will serve statutory goals pertaining to government operations and public records. These include:

- Insure continuity of government operations (Article III, Section 29 of the Nebraska Constitution; Nebraska Revised Statutes Sections 28-901 and 84-1201);
- Protect safety and integrity of public records (Nebraska Revised Sections 28-911, 29-2391, and 84-1201);
- Prevent unauthorized access to public records (Nebraska Revised Statutes Sections 29-319, 81-1117.02, and 84-712.02);
- Insure proper use of communications facilities (Nebraska Revised Statutes Section 81-1117.02); and
- Protect privacy of citizens (Nebraska Revised Statutes Section 84, Article 7).

Description

Major activities include:

- Developing an overall security strategy, including policies, security awareness, and security infrastructure improvements;
- Network security standards and guidelines;
- Education and training;
- Authentication (directory services project);
- Disaster recovery for information technology systems (as part of a broader business continuity planning);
- Compliance with federal privacy and security mandates;
- Security assessments.

Benefits

Benefits will include lower costs by addressing security from an enterprise perspective, cost avoidance, and protecting the public trust.

Portable system can be deployed for emergency communications

In 2004 the State's Division of Communications received federal grant money for the purchase of telecommunications equipment. The goal of the Division of Communications was to design a self-contained telecommunications system that could be deployed anywhere in the state at a moment's



notice. Criteria was developed in order to make the system as flexible as possible, and meet telecommunication needs in a variety of circumstances. Once the criteria was laid out a system was designed, purchased, and built with the following capabilities:

- 24 analog trunks for connectivity to the public telephone network
- 24 digital trunks for connectivity to the public telephone network
- 6 Motorola bag phones with analog adapters that serve as PBX trunks
- 32 analog telephone extension ports w/telephone sets
- 8 wireless ports w/wireless handsets capable of operating within 1square mile of system
- 7 multi-line digital telephone sets
- 1 multi-line attendant console
- 4 port voicemail system
- 8 IP telephone ports w/telephone sets capable of operating anywhere on the state network
- Equipment capable of delivering three 30 mile wireless broadband connections for connectivity to an available IP network or Internet
- CISCO routers and switches for workstation and laptop connectivity
- 3 portable gasoline generators capable of operating entire system for extended periods of time

The telephone system and its components are rack mounted in a 3'x3'x5' box with wheels. All other auxiliary components and telephone sets are packed in durable wheeled plastic containers. The entire system is self-contained and able to be palletized for easy transport.

With federal funding, the State has designed and purchased a self-contained communications system that could be deployed anywhere in the state at a moment's notice.

Date of Last Revision: March 7, 2005

Nebraska Information Technology Commission Strategic Initiatives

Strategic Plan For Network Nebraska

Objectives

The primary objective of this initiative is to develop a broadband, scalable telecommunications infrastructure that optimizes the quality of network services to every public entity in the State of Nebraska.

Benefits

Through aggregation of demand, adoption of common standards, and collaboration with network services and applications, participants can achieve many benefits, including:

- Lower network costs;
- Greater efficiency for participating entities;
- Interoperability of systems providing video courses and conferencing;
- Increased collaboration among all K-20 educational entities;
- New educational opportunities;
- Competitiveness with surrounding states; and
- Better use of public investments.

Current Status

The Division of Communications, the University of Nebraska, Nebraska Educational Telecommunications Commission, Department of Education, Public Service Commission, and the Nebraska Information Technology Commission have formed the Collaborative Aggregation Partnership (CAP) to guide and implement Network Nebraska. The Division of Communications and University of Nebraska have entered into a memorandum of agreement to formalize their participation in this joint effort.

Using existing resources and aggregating existing demand from state government and the University of Nebraska, CAP has developed a multipurpose core backbone extending from Norfolk, Omaha, Lincoln, Grand Island, Kearney, North Platte, and Alliance. A shared circuit also connects Scottsbluff to the backbone at Grand Island.

State and University circuits have been moved to the backbone to take advantage of the economies and efficiencies offered by aggregation. The K-20 community has started to migrate to this service as contracts have allowed. Project 42 (consisting of ESUs 10, 11,

15 and 16) has purchased services from Network Nebraska to serve the schools in their areas.

A contract has been signed for Internet 1 service that will allow Network Nebraska to begin to offer lower rates to network participants. This could significantly increase participation in Network Nebraska. Internet 2 service is also available to educational participants through the University of Nebraska.

Future

The major components of this initiative include:

1. Development of a scalable, reliable, and secure telecommunications infrastructure that enables any type of eligible entity (i.e. local and state government, public and private K-12 and higher education, health care institutions) to purchase the amount of service that the entities need, when they need it, on an annual basis;
2. Establishment of a catalog of value-added applications that enables eligible entities to pick and choose services that are pertinent to them (e.g. Internet1, Internet2, and videoconferencing);
3. Investigate possible implementation of a network operations center that offers a helpdesk, network diagnostics, and engineering assistance in order to ensure acceptable qualities of service;
4. Investigate establishment of a billing or accounting center to accept service orders, extend service agreements, provide consolidated billing, and to maintain customer accounts.

Recommended Actions

(NOTE: These recommendations are still subject to change, pending additional advice from those entities that are participating in this strategic initiative.)

Action items for Network Nebraska for the remainder of FY 2005.

- 1) Develop and offer Internet I services to eligible network participants by January 10, 2005
 - University of Nebraska signs contract with provider for Internet I services no later than August 31, 2004.
 - Division of Communications purchases Internet I services from the University no later than September 15, 2004.
 - Collaborative Aggregation Partnership (CAP) agrees on rates to be charged to eligible network participants for Internet I services no later than September 15, 2004.
 - Working through the NITC and the various Councils, CAP will distribute information related to the new Internet I charges to eligible network participants during the months of October, November and December 2004.

- Orders will be taken by CAP for new service and the circuits will be provisioned during the months of October, November and December, 2004.
 - Internet I service turned up the first working day of January, 2005 for initial orders.
 - a. Lead Entity: CAP, in cooperation with staff of UNCSN and DOC, and assisted by NITC Councils.
 - b. Timeframe: August, 2004 – January, 2005.
 - c. Funding: No additional funding required for this action item.
 - d. Status (March 2005): Network Nebraska Internet service has been extended to eligible participants at a unit price approximately 50% of the October 2003 unit price. In addition, a service provider was contracted to provide redundant service out of the Omaha area. As of March 2005, an estimated 250,000 persons are being served by Network Nebraska Internet and transport services within state government, higher education, and K-12. This includes all four campuses of the University of Nebraska, two state colleges, three of the six community colleges, and all or part of the schools represented by ESUs 10, 11, 15, 16, and 18.
- 2) Identify Tier II communities that offer opportunities for aggregation for services onto the network – ongoing.
- Both the University and the State will begin by providing a list to CAP of the communities where service is currently being provisioned that indicates the total amount of bandwidth currently being consumed no later than September 15, 2004.
 - CAP will analyze the listings for opportunities to aggregate the existing service when coupled with other opportunities within the community no later than November 15, 2004.
 - CAP will order service for the next Tier II community aggregation no later than January 15, 2005.
 - New service will be provisioned by the provider and the move of existing service will be coordinated by CAP with the customer between January and March of 2005.
 - Opportunities for the next Tier II community will be explored and started over again no later than May 15, 2005.
- a. Lead Entity: CAP.
 - b. Timeframe: September, 2004 – May, 2005
 - c. Funding: No additional funding required for this action item.
 - d. Status (March 2005): Additional Tier II communities are still being considered. Wayne, Nebraska is aggregating Internet service from municipal and education entities through wireless service provided by Wayne State College. Tier II aggregation discussions have also occurred with Mid-Plains Community College in North Platte, UNK and ESU10 in Kearney, and the municipalities of Scottsbluff and Gering.
- 3) Create a Service Level Agreement for use by CAP and the eligible network participants no later than November 1, 2004.
- CAP will work with appropriate legal counsel to establish a Service Level Agreement that will detail the service that is being provided to the client.

These meetings will take place thru August and September with a final draft document due September 30, 2004.

- CAP will review the document with agency and university leadership, as well as the Chair of the NITC with final approval no later than October 15, 2004.
 - CAP will make the final adjustments to the document and the document will be ready for distribution to eligible network participants by November 1, 2004.
- a. Lead Entity: CAP, in cooperation with University of Nebraska and State of Nebraska legal staff.
 - b. Timeframe: September-November, 2004
 - c. Funding: Cost for legal services assumed by UNCSN and DOC.
 - d. Status (March 2005): The Service Level Agreement has been developed and distributed to eligible network participants and suggested changes are now being reviewed.
- 4) Create a Network Nebraska Level 1 Helpdesk no later than November 1, 2004.
- Members of CAP will estimate the numbers of calls that they are currently taking regarding information about Network Nebraska over the months of July and August 2004. That information will be collected by the CAP chair at the September 2004 meeting.
 - A subcommittee of CAP consisting of the technical people will conduct a review of help desk software during the months of August and September. A recommendation will be brought to the CAP group at the October 2004 meeting.
 - CAP has determined that the Level 1 Helpdesk will reside at NET. In order to transfer calls between the members of CAP, the NET telephone system will need an upgrade. This upgrade will be accomplished no later than October 31, 2004.
 - A toll-free number will be installed for use by the Level 1 Helpdesk and eligible clients. The toll-free number will be ordered by September 15, 2004 and turned up for service no later than November 1, 2004.
- a. Lead Entity: Nebraska Educational Telecommunications staff, in cooperation with CAP.
 - b. Timeframe: July-November, 2004
 - c. Funding: Cost for the toll-free number (888-NET-NEBR or 888-638-6327) service and cost for toll free calls minimal.
 - d. Status (March 2005): Call center is up and running staffed by NET.
- 5) Create a Network Nebraska Website no later than December 15, 2004.
- CAP will identify URL for website no later than August 15, 2004.
 - The office of the NITC will identify initial information for the web site and present the information to CAP at the September 2004 CAP meeting.
 - After approval from CAP, a "test" web site will be developed by and hosted at Nebraska On-Line no later than October 15, 2004.
 - CAP members will test the web site and make suggestions to the NITC staff through November 30, 2004.
 - Final changes will be made to the web site and the site will be unveiled to the users no later than December 15, 2004.

- a. Lead Entity: University of Nebraska Computing Services Network staff, in cooperation with CAP and staff of the NITC.
 - b. Timeframe: August-December, 2004
 - c. Funding: No funding required for this action item.
 - d. Status (March 2005): Network Nebraska website, www.networknebraska.net is posted and fully functional. Additional documents and resources are being added and linked as needed.
- 6) Meet with the Technical Subcommittee of the Nebraska Statewide Telehealth Network to discuss issues related to network administration and management.
- a. Lead Entity: Technical Panel
 - b. Timeframe: May 31, 2005
 - c. Funding: No funding required for this task
 - d. Status (March 2005): Ongoing.

Date of Last Revision: March 4, 2005

Nebraska Information Technology Commission Strategic Initiatives

Strategic Plan for the Statewide Synchronous Video Network

Objective

The objective of this initiative is to achieve a statewide synchronous video network capable of enhancing educational opportunities and citizen services through the exchange of interactive video between and among various sectors.

In order to accomplish this, a number of tasks must be completed.

- Identification of a single audio and video standard for low-bandwidth distance learning and videoconferencing;
- Acquisition of upgrade or replacement equipment and/or software that ensures compliance with the audio and video standard;
- Development or purchase of a scheduling system or enterprise resource management program that allows potential users to A) know the location and availability of resources, and B) set up or reserve ad hoc or regularly scheduled events with other entities;
- Development of a network bandwidth management system or network operations center that assures pre-determined qualities of service, depending upon the type of video traffic;
- Development of an event clearinghouse that allows promotion, marketing, and registration for interactive video events;
- Development of training modules for new users;
- Development of a cost and funding algorithm to allow shared use of the statewide backbone for interstate distance education and videoconferencing.

Benefits

Since 1992, various entities within the State of Nebraska have spent an estimated 20 million dollars on interactive video capture and display equipment, fiber connectivity, and engineering design charges to provide for distance learning and videoconferencing. Considered cutting edge technology in the early years of operation, this investment resulted in over 300 high-quality, videoconferencing classrooms using multiple, incompatible video protocols spread over numerous separate political subdivisions. These service regions were established when groups partnered together to set up

interlocal agreements in order to receive grant funds, enter into contracts and hire staff to exchange high school and college classes. Other smaller videoconferencing networks were set up by other state agencies and hospitals but were not interoperable with the school and college sites.

In order for Nebraska to maximize the potential of its investment in interactive videoconferencing and to create unprecedented educational opportunities, all videoconferencing sites in this State must be in compliance with the State video compression standard and stakeholders must agree to work collaboratively to enhance the benefit for all end users.

Current Status

Currently, Nebraska enjoys one of the most robust distributions of local connectivity and bandwidth among any of its rural neighbors. This equates to 192 DS-3 (45 megabit per second, JPEG and MPEG2 video) circuits to high schools served by telephone companies and 112 high school sites that are served by cable companies with 100 megabit per second, full duplex, fiber circuits with H.263 video. Only about 10 high schools are left in rural areas of the State without high bandwidth connections, many at their own choosing. Other state agency and telehealth videoconferencing circuits consist of single or double dedicated T-1 (1.55 megabit per second) lines.

Nebraska high school distance learning classrooms are some of the busiest in the nation; with each classroom being used about 50% of the school day across the entire system. Taking high school credit courses and higher education dual credit and college credit courses at a distance, students are able to fulfill graduation requirements and expand their high school experiences with opportunities that are unavailable at their local high school. Some high schools permit community and adult education classes in the evening hours.

Distance learning consortia (interlocal agreements between neighboring districts) often are able to share the talents of one qualified instructor across several schools and sections of students each semester.

Unfortunately, due to the high costs of transporting high bandwidth (JPEG) video signals, distance learning consortia have been unable to afford course exchange with consortia in other parts of the State, thus limiting their credit course offerings and educational opportunities.

The original 10-year contracts between the distance learning consortia and the telephone company providers for JPEG video service will begin expiring in the Spring of 2006. With no chance of contract extensions for JPEG video service, the schools will need to upgrade to an H.323 Internet Protocol communication standard, new codecs (Coder-Decoders) to accommodate the H.263/H.264 video standards, and switch/router technology at the school site to manage the resulting data network. The later of the JPEG consortium contracts are not due to expire until 2009 but the industry has chosen to no longer manufacture nor repair JPEG video equipment, thus prompting an early conversion of these contracts to IP video.

Whereas Nebraska's (telco provided) interactive video efforts have been mostly localized with high bandwidth video, most other States have converted or are converting to IP video and have been trying to realize further educational programming through ad hoc enrichment activities and use of Internet2.

The current network will not be able to meet the future distance learning applications and the bandwidth needs for the Internet and Internet2. Therefore it is necessary to convert to the next generation distance learning (data) network.

Future

Nebraska has enormous potential to assemble one of the country's best telecommunications networks for education, health care, and government. The Nebraska Information Technology Commission and its advisory groups have fostered a collaborative environment for participative decision making among several major subsectors. The Collaborative Aggregation Partnership, a team of University of Nebraska, Division of Communications, and Nebraska Educational Telecommunications staff have been successful in negotiating statewide backbone contracts for scalable bandwidth for public entities. Technological developments and breakthroughs in routing technology in the past two years have greatly enhanced the quality of service related to IP-based, H.26X video compression.

The new Statewide Synchronous Video Network design incorporates the requirements established by the Statewide Synchronous Video Network Work Group of the Nebraska Information Technology Commission. This network design has the flexibility to support both proprietary and standard protocols, and allows the school full access to the available bandwidth. The network can grow to meet any bandwidth or application requirements, and has any optical interface available from Ethernet to OC192.

This network design is consistent with the goals of the Nebraska Information Technology Commission and will integrate into Network Nebraska. Most importantly for those who qualify, this network is eligible for E-rate discounts. All consortiums and member schools benefit because this is a plan toward statewide services and interconnectivity. Not only is video bandwidth available, but also data applications such as the Internet and Internet2. Asynchronous distance learning applications such as Blackboard, WebCT or Angel become a reality with the bandwidth that will be made available, and multiple classrooms become much more affordable.

The contracts for the current distance learning networks begin to expire in the next two years. This network is leading edge technology, is of carrier grade quality, and is scalable to meet any growth demands.

The vision of the future statewide synchronous video network includes the umbrella capacity for any interactive video unit to be able to interconnect with any other interactive video unit, regardless of location. The vision of the future also includes assurances for network security and quality of service within a particular sub-network (i.e. telehealth, State Patrol, K-12 distance learning). Most end users are in agreement that the State should purchase or contract for a single software scheduling system that can remotely

turn on a specific video unit, log system usage statistics, allow promotion of ad hoc education events, and secure permission for usage from local site coordinators.

Recommended Actions

(NOTE: These recommendations are still subject to change, pending additional advice from those entities that are participating in this strategic initiative.)

A. Identification of a single audio and video standard for low-bandwidth distance learning and videoconferencing.

Actions include:

1. Approval of the H.263/H.264 video compression protocol and G.722, G.722.1, and G.728 audio compression protocols by the Nebraska Information Technology Commission.
 - a. Lead Entity: NITC Technical Panel
 - b. Timeframe: September 9, 2004
 - c. Funding: No funding required for this task
 - d. Status (March 2005): Completed.

B. Acquisition of upgrade or replacement equipment and/or software that ensures compliance with the audio and video standard.

Actions include:

1. Development and submission of a Congressional funding request to fund upgrade of classroom and networking resources necessary to bring K-12 and higher education distance learning facilities into compliance.
 - a. Lead Entity: NITC Technical Panel's Statewide Synchronous Video Work Group
 - b. Timeframe: September 3, 2004
 - c. Funding: Actual request estimated at \$13 million; no funding required to develop the request.
 - d. Status (March 2005): Congressional request of \$9.8 million was submitted on September 8, 2004. The funding request was declined.
2. Designation of a fiscal entity to oversee bidding, ordering, delivery and installation of equipment.
 - a. Lead Entity: To be named.
 - b. Timeframe: March 2005
 - c. Funding: No funding required for this task.
 - d. Status (March 2005): The white paper, "Converting distance learning networks to a high bandwidth, flexible infrastructure" provides several options for bidding and procurement of equipment and services. The Distance Education Enhancement Task Force, if created as described in LB 689, would provide recommendations for this action item by December 31, 2005.

3. Equipment RFP, bidding, ordering, delivery and installation of equipment
 - a. Lead Entity: To be named
 - b. Timeframe: August 2005 - July 2006
 - c. Funding: Funding to oversee this task included in Congressional request.
 - d. Status (March 2005): The Distance Education Enhancement Task Force, if created as described in LB 689, would provide recommendations for this action item by December 31, 2005.

C. Development or purchase of a scheduling system or enterprise resource management program that allows potential users to know the location and availability of resources, and/or set up or reserve ad hoc or regularly scheduled events with other entities.

Actions include:

1. Research scheduling systems and enterprise resource management programs.
 - a. Lead Agency: NITC Technical Panel's Statewide Synchronous Video Work Group
 - b. Timeframe: September 2004-December 2004
 - c. Funding: No funding required for this task.
 - d. Status (March 2005): Research continues on this action item.
2. Purchase or develop a scheduling system and/or enterprise resource management program.
 - a. Lead Entity: To be named.
 - b. Timeframe: Summer, 2005
 - c. Funding: To be determined.
 - d. Status (March 2005): The Distance Education Enhancement Task Force, if created as described in LB 689, would provide recommendations for this action item by December 31, 2005. Timeframe likely to be delayed until summer, 2006 at the earliest.

D. Explore options for a network bandwidth management system or network operations center that assures pre-determined qualities of service, depending upon the type of video traffic.

Actions include:

1. Explore options for a network operations center that assures particular qualities of service.
 - a. Lead Entity: Network Nebraska (Collaborative Aggregation Partnership)
 - b. Timeframe: Ongoing
 - c. Funding: Funding to complete this task to be determined.
 - d. Status (March 2005): The Distance Education Enhancement Task Force, if created as described in LB 689, would provide recommendations for this action item by December 31, 2005.

E. Development of an event clearinghouse that allows promotion, marketing, and registration for interactive video events.

Actions include:

1. Development of a web-based clearinghouse that allows originators to post events and users to register for or view the date, time and frequency of individual events.
 - a. Lead Entity: Statewide Synchronous Video Work Group
 - b. Timeframe: Fall, 2006
 - c. Funding: To be determined.
 - d. Status (March 2005): The Distance Education Enhancement Task Force, if created as described in LB 689, would provide recommendations for this action item by December 31, 2005.

F. Development of training modules for new users.

Actions include:

1. Development of training modules to accompany equipment orientation.
 - a. Lead Entity: NITC Technical Panel's Statewide Synchronous Video Work Group, in cooperation with commercial equipment manufacturer.
 - b. Timeframe: June-August, 2006 (Corresponding with equipment deployment)
 - c. Funding: To be determined.
 - d. Status (March 2005): The Distance Education Enhancement Task Force, if created as described in LB 689, would provide recommendations for this action item by December 31, 2005.

G. Development of a cost and funding algorithm to allow shared use of the statewide backbone for interstate distance learning and videoconferencing.

Actions include:

1. Research models from other States' education networks.
 - a. Lead Entity: NITC Technical Panel's Statewide Synchronous Video Work Group, in conjunction with Network Nebraska (Collaborative Aggregation Partnership)
 - b. Timeframe: Ongoing
 - c. Funding: No funding required for this task.
 - d. Status (March 2005): The Distance Education Enhancement Task Force, if created as described in LB 689, would provide recommendations for this action item by December 31, 2005.

Date of Last Revision: March 7, 2005

Nebraska Information Technology Commission Strategic Initiatives

Strategic Plan For Security and Business Resumption

Objectives

This initiative will define and clarify policies, standards and guidelines, and responsibilities related to the protection of the state's information technology resources. Information security and business resumption will serve statutory goals pertaining to government operations and public records. These include:

1. Insure continuity of government operations (Article III, Section 29 of the Nebraska Constitution; Nebraska Revised Statutes Sections 28-901 and 84-1201);
2. Protect safety and integrity of public records (Nebraska Revised Sections 28-911, 29-3519, and 84-1201);
3. Prevent unauthorized access to public records (Nebraska Revised Statutes Sections 29-3519, 81-1117.02, and 84-712.02);
4. Insure proper use of communications facilities (Nebraska Revised Statutes Section 81-1117.02); and
5. Protect privacy of citizens (Nebraska Revised Statutes Section 84, Article 7).

Information security refers to policies and procedures that are aimed at preventing problems that would threaten the safety and integrity of information resources. Business resumption refer to plans and activities aimed at responding to an event in a manner that mitigates the severity of problems and accelerates recovery.

Benefits

A strategy for security and business resumption of information technology systems is essential for meeting the statutory objectives listed above. In addition, there are several federal laws and regulations regarding privacy and security of information. These include HIPAA (Health Insurance Portability and Accountability Act), IT Requirements for Public Health Preparedness and Response for Bioterrorism (Center for Disease Control), Sarbanes-Oxley Act of 2002, Help America Vote Act of 2002 (HAVA), Graham-Leach-Bliley Act (GLBA), and the Family Education Rights and Privacy Act (FERPA).

Some of the federal laws carry substantial penalties. In particular, HIPAA imposes civil penalties of up to \$25,000 per person, per year, per standard as well as criminal penalties from \$50,000 and one year in prison to \$250,000 and 10 years in prison (when malice, commercial advantage and personal gain are involved).

Security is also important for protecting critical systems that impact large numbers of people in the state. A few examples include:

- Unemployment assistance (\$2.2 million paid out per week to 18,000 people)
- Child support (\$4.4 million paid per week to 20,000 recipients)
- Medicaid claims (156,000 claims per week; \$21.4 million payments per week)
- NFOCUS payments for multiple human services programs (\$26 million paid each month for 185,000 cases)
- State accounting and payroll system
- Law enforcement
- Tax collection
- Homeland Security functions

The FBI conducts an annual survey of computer security issues affecting U.S. corporations, government agencies, financial institutions, medical institutions, and universities. The 2004 CSI/FBI Computer Crime and Security Survey included the following findings:

- 79% of survey participants reported one or more security incidents;
- 78% reported virus attacks;
- 59% reported insider abuse of Net access;
- 49% reported laptop/mobile theft;
- 39% reported system penetration;
- 37% reported unauthorized access to information;
- 15% reported abuse of wireless networks;
- 10% reported misuse of public web applications, and
- 7% reported web site defacement.

The 2004 survey is available at: http://i.cmpnet.com/gocsi/db_area/pdfs/fbi/FBI2004.pdf.

An additional justification for attention to computer security issues is the National Strategy to Secure Cyberspace, published by the Department of Homeland Security in February 2003. One of the priorities of the national cyberstrategy is "Securing Governments' Cyberspace." The foundation for the federal government's cybersecurity includes:

- Assigning clear and unambiguous authority and responsibility for security priorities;
- Holding officials accountable for fulfilling those responsibilities, and
- Integrating security requirements into budget and capital planning processes.

The national cyberstrategy encourages state and local governments to "establish IT security programs for their departments and agencies, including awareness, audits, and standards; and to participate in the established ISACs (Information Sharing and Analysis Centers) with similar governments."

Adequate security is also essential to expansion of e-government. Surveys show that concerns about security is one reason that the public is cautious about using on-line services, especially for conducting financial transactions or providing personal information.

Current Status

Every version of the Statewide Technology Plan of the NITC has included one or more action items pertaining to security for information technology systems. Past achievements include:

- Establishing the Security Work Group, with broad representation from state government and education sectors, to provide a forum for sharing information and developing standards and guidelines. Agendas and minutes are located at: <http://www.nitc.state.ne.us/tp/workgroups/security/index.htm>.
- Adopting a comprehensive set of security policies in January 2001 by the NITC. These policies include: Information Security Management, Access Control, Disaster Recovery, Education, Training and Awareness, Individual Use, Network Security, and Security Breaches and Incident Reporting.
- Publishing three security handbooks tailored to security officers, IS technical staff, and the general user.
- Offering training on the use of the security handbooks.
- Developing detailed information on:
 - Incident Response and Reporting Procedures;
 - Disaster Recovery Planning Procedures;
 - Wireless Local Area Network Guidelines;
 - Remote Access Guidelines.
- Sponsoring a Security Awareness Day (July 15, 2002).

All NITC policies, handbooks, procedures and guidelines are available at: <http://www.nitc.state.ne.us/standards/index.html> (under Security Architecture).

In 2002, the Nebraska Emergency Management Agency (NEMA) added a provision to the State Emergency Operations Plan that requires “Each state agency and local government (to develop) a continuity of operations plan and a disaster plan for information technology.” In 2003, NEMA awarded \$75,000 to the Department of Administrative Services (DAS) for a “Continuity of Operations Study”. DAS has contracted with a company specializing in developing business continuity plans. The outcome will be a complete business continuity plan for all divisions of DAS. It will also provide a template that can be used for other agencies. By including a ‘train-the-trainer’ concept as well as involving multiple agencies in the project, DAS intends to encourage development of business continuity plans in all agencies.

The NITC has also funded two security audits. In March 2004, Omnitech conducted a limited security assessment of the state’s network. The external vulnerability scan identified a total of 2,720 potential vulnerabilities with the following breakdown: 91 high-risk, 640 medium risk, and 1,989 low risk. Twelve agencies had one or more high-risk vulnerabilities. Agencies are in the process of evaluating the assessments and what steps they need to take. Not all of the potential vulnerabilities can or should be removed but all of the high and medium risk vulnerabilities will be accounted for by the agency responsible for the host that is vulnerable. In 2003, the results were 3,262 potential vulnerabilities (136 high risk, 1,182 medium risk, and 1,944 low risk). Seventeen agencies last year had one or more high-risk vulnerabilities.

These summary statistics indicate some progress in reducing the number of potential vulnerabilities, but the March 2004 results underscore the need for more attention on securing our information assets. These potential vulnerabilities may expose state government to the risk of disruption of services, legal liability, and financial loss.

Several agencies have undertaken special projects and initiatives to improve security of information technology systems. These include:

- Department of Administrative Services
 - Implemented layered security and firewall management of the state's network;
 - Developed directory services capability for better authentication and identity management;
 - Updating the disaster recovery plan for Information Management Services Division;
 - Distributing security notices from the Multi-State Information Sharing and Analysis Center to agency security contacts.
- Health and Human Services
 - Designated a security officer for information technology;
 - Implemented HIPAA Privacy and Security regulations;
 - Developing agency security policies and procedures;
- Department of Roads
 - Designated a security officer for information technology;
 - Updating the disaster recovery plan for information technology services;
 - Developing agency security policies and procedures.
- University of Nebraska
 - In collaboration with DAS-IMServices, NU is developing a shared, fast recovery capability, through mutual assistance of physically distant data centers. Fiber optic cable has been installed between the State and University.
 - Hired a University Information Security Officer
 - Work is progressing on the design and implementation of a Directory Service / Identity Management System.
 - Disaster recovery plan is going through major revisions to update and incorporate new options.
 - UN has implemented various firewalls in locations where it is needed.
 - Implemented a University-wide security focus group to share information, patch management, awareness training, incident reporting, and other educational opportunities.
 - University-wide licensing for McAfee Anti-Virus Software
 - Implemented various federally mandated regulations (HIPAA, GLBA, FERPA).
- Multiple Agencies
 - Implementing recommendations stemming from the March 2004 Network Perimeter Security Sweep.

Future

Security is a continuous effort to manage the risk to information systems. The expense of security safeguards must be cost effective and commensurate with the value of the

assets being protected. Security must be balanced against other business needs, such as providing public access or remote access to information.

The previous section demonstrates the progress that is being made. Further improvement in security and disaster recovery is needed in several areas:

- Monitor and reduce the number of vulnerabilities of computer systems;
- Provide better patch management, including enforcement of patch management policies;
- Promote survivability of systems as a security strategy;
- Demonstrate the ability to recovery critical computer systems following a disaster, including table top exercises of disaster recovery plans;
- Improve awareness on the part of users regarding security policies and sound security practices;
- Insure adequate security for wireless systems through encryption capabilities and other means;
- Deploy intrusion detection and protection technologies to protect critical infrastructure;
- Provide redundant services for critical infrastructure such as additional Internet access points;
- Plan for additional infrastructure to extend the distances for shared disaster recovery facilities.

Finding cost effective and workable solutions to these problems is essential to a good security program for state government.

Recommended Actions

(NOTE: These recommendations are still subject to change, pending additional advice from those entities that are participating in this strategic initiative.)

SECURITY

A. Conduct annual independent security audits

In the latest computer crime survey by the FBI, 82 percent of respondents indicated that their organizations conduct security audits. Multiple federal programs require periodic computer security audits, including HIPAA, HAVA, and Bioterrorism grants from the Center for Disease Control. Computer security audits are a widely accepted best practice across the public and private sector.

Actions include:

1. Request funding for the CIO to contract for security audits.
 - a. Lead Entity: CIO
 - b. Timeframe: September 1, 2004
 - c. Funding: No funding required for this task
 - d. Status (March 2005): Completed.
2. Investigate opportunities for aggregating efforts of several state agencies that face federal requirements for security audits.

- a. Lead Entity: CIO
 - b. Timeframe: November 1, 2004 (and on-going)
 - c. Funding: No funding required for this task
 - d. Status (March 2005): Working with agencies.
3. Prepare RFP and Scope of Work
- a. Lead Entity: CIO (with assistance from Security Work Group)
 - b. Timeframe: January 31, 2005
 - c. Funding: If technical assistance is required for preparing the RFP, the cost will be paid either from the NITC grant or the budget of the Office of the CIO.
 - d. Status (March 2005): RFP underdevelopment, to be released Spring/Summer 2005.
4. Conduct 2005 Security Audit
- a. Lead Entity: CIO
 - b. Timeframe: April 30, 2005
 - c. Funding: A grant application is pending before the NITC. The CIO is requesting funding for annual security audits as part of the FY2006 / FY2007 budget request.
 - d. Status (March 2005): Pending release of RFP.

B. Implement centralized directory services

An analysis of security risks identified the need for an Enterprise Directory that provides identity management, single sign on, and role-based/policy-based authorization. In response to this need, IMServices is now implementing a directory services system that will be available to all agencies. Under the direction of the CIO and the NITC, a Work Group was established to make recommendations regarding business rules, policies and procedures for implementation. The system will provide single (or reduced) sign-on using role based authentication and authorization

Actions include:

- 1) Establish an authentication standard to be submitted to the NITC to seek approval by the March 2005 meeting
 - a) Propose standard to State Government Council
 - Lead Entity: IMServices
 - Timeframe: September 16, 2004 meeting
 - Funding: No funding required for this task
 - Status (March 2005): Completed.
 - b) Propose standard to NITC Technical Panel
 - Lead Entity: IMServices
 - Timeframe: December 14, 2004 meeting
 - Funding: No funding required for this task
 - Status (March 2005): Completed.
- 2) Content Management offerings to customers
 - a) Implement the Content Management structure for all agencies -
 - Lead Entity: IMServices
 - Timeframe: March 31, 2005
 - Funding: IMServices
 - Status (March 2005): Work underway.

- 3) Two-factor authentication
 - a) Propose standard to NITC Directory Workgroup
 - Lead Entity: IMServices
 - Timeframe: September 30, 2004 meeting
 - Funding: No funding required for this task
 - Status (March 2005): Timeline to be revised.
 - b) Propose standard to SGC
 - Lead Entity: IMServices
 - Timeframe: December 2004 meeting
 - Funding: No funding required for this task
 - Status (March 2005): Timeline to be revised.

- 4) Pilot single sign-on
 - a) Provide Web-Based Single sign-on (WSSO) guideline to any client/application that desires it.
 - Lead Entity: IMServices
 - Timeframe: September 30, 2004
 - Funding: IMServices
 - Status (March 2005): Timeline to be revised.

C. Implement incident reporting requirements

Very few agencies are complying with the NITC's incident reporting requirements. Centralized reporting serves the goal of increasing awareness of vulnerabilities and threats to state government as a whole. In particular, centralized reporting is necessary to discern patterns, identify areas of vulnerability, allocate resources, and develop statewide solutions. Centralized reporting does not substitute for internal reporting to management, reporting to law enforcement, or mobilizing a computer security incident response team (CSiRT). Agencies should develop procedures for internal and external reporting that will meet the needs of centralized reporting with little or no additional work.

Actions include:

1. Review incident reporting procedures to determine need for changes in what is reported and the reporting requirements.
 - a. Lead Entity: CIO
 - b. Timeframe: December 31, 2004
 - c. Funding: No funding required for this task
 - d. Status (March 2005): Completed. DOC developing an incident reporting process.

2. Communicate reporting requirements to agencies.
 - a. Lead Entity: CIO
 - b. Timeframe: March 31, 2005
 - c. Funding: No funding required for this task
 - d. Status (March 2005): Pending completion of previous item.

D. Network Security and Network Management

DAS Division of Communications (DOC) has made changes to implement a layered approach to network security. DOC and many agencies have focused more attention on network management, including patch management, virus protection, and intrusion detection.

Actions include:

1. Configure all public state IP addresses (164.119) behind the state's firewall complex
 - a. Lead Entity: DOC
 - b. Timeframe: December 31, 2004
 - c. Funding: DOC
 - d. Status (March 2005): Completed.
2. Implement an intrusion detection and prevention system on the State's Internet connection as a part of a layered defense.
 - a. Lead Entity: DOC
 - b. Timeframe: March 31, 2005
 - c. Funding: DOC
 - d. Status (March 2005): On schedule.
3. Investigate and recommend an enterprise solution to ensure that encrypted traffic adheres to State security requirements.
 - a. Lead Entity: DOC
 - b. Timeframe: March 31, 2005
 - c. Funding: Funding not needed.
 - d. Status (March 2005): On schedule.
4. Evaluate and recommend options for providing encryption to clients across the state's Wide Area Network
 - a. Lead Entity: DOC
 - b. Timeframe: June 30, 2005
 - c. Funding: Funding not needed.
 - d. Status (March 2005): On schedule.

BUSINESS RESUMPTION

E. Promote disaster planning for information technology systems, in conjunction with agency business continuity plans

Disaster recovery plans for information technology must be linked to an overall agency business continuity plan. A strategy for security and business resumption must encourage completion of agency business continuity plans in order for disaster recovery plans for information technology to be effective. Because many agencies depend on DAS for networking and computing services, it is essential that DAS develop a disaster recovery plan for its facilities and services.

Actions include:

1. Conduct an "executive overview" briefing (orientation exercise) to state agencies (using either the State Government Council or the Security Work Group as a

- forum) explaining the progress and current and future activities in the development of disaster recovery plans.
- a. Lead Entity: DAS – IMServices, DAS Division of Communications, and CIO
 - b. Timeframe: December 31, 2004
 - c. Funding: No funding required for this task
 - d. Status (March 2005): Pending completion of DAS contract with vendor.
2. Encourage agencies to develop agency business continuity plans and disaster plans for information technology by seeking funding sources, providing training on developing plans, and providing technical assistance. The focus should be at the business level.
 - a. Task: Identify funding sources
 - (1) Lead Entity: CIO
 - (2) Timeframe: November 30, 2004
 - (3) Funding: No funding required for this task
 - (4) Status (March 2005): Pending completion of action item 1 above.
 - b. Task: Identify next set of agencies for developing business continuity plans
 - (1) Lead Entity: DAS Risk Management
 - (2) Timeframe: February 1, 2004
 - (3) Funding: The cost of preparing business continuity plans by agency is itemized in the DAS contract. Sources of funding have not been identified.
 - (4) Status (March 2005): Pending completion of action item 1 above.
 3. Identify and develop procedures for common elements that should be addressed in all or most business continuity plans and disaster recovery plans for information technology.
 - a. Task: Investigate and communicate the availability of insurance to cover costs relating to replacement, repair and recovery services
 - (1) Lead Entity: DAS Risk Management (subject to approval by DAS)
 - (2) Timeframe: May 31, 2004
 - (3) Funding: No funding required for this task
 - (4) Status (March 2005): Pending completion of action item 1 above.
 - b. Task: Develop and communicate policy and procedures for expedited purchasing of goods and services related to a disaster
 - (1) Lead Entity: DAS Materiel with DAS IMServices as a critical stakeholder (subject to approval by DAS)
 - (2) Timeframe: March 31, 2005
 - (3) Funding: No funding required for this task
 - (4) Status (March 2005): Pending completion of action item 1 above.

F. Implement shared disaster recovery facilities

Mission critical systems have three common requirements. Recovery times must be measured in hours, not days or weeks. Recovery facilities should be physically separated so that they will not be affected by a single disaster. There must be staff available to assist with the recovery efforts. Achieving these requirements is very expensive. Sharing disaster recovery facilities, and establishing a collaborative approach to disaster recovery is one strategy for managing costs. DAS IMServices

and the University of Nebraska are jointly developing a fast recovery capability using mutual assistance of physically separated data centers

Actions include:

1. Develop a shared recovery capacity serving state government and the University of Nebraska.
 - a. Lead Entity: DAS IMServices and NU
 - b. Timeframe: ongoing
 - c. Funding: The cost and source of funding have not been determined.
 - d. Status (March 2005): Initial hardware and communications capabilities in place. Additional implementation work ongoing.
2. Conduct a briefing for state agency information technology staff (orientation exercise) describing the disaster recovery activities that will be performed by IMServices and the disaster recovery testing that has been completed.
 - a. Lead Entity: DAS IMServices
 - b. Timeframe: March 31, 2005
 - c. Funding: No funding required for this task.
 - d. Status (March 2005): On time.

G. Encourage testing and updating of disaster plans

Testing is the only way to insure that a disaster recovery plan is adequate and the organization is able to implement its plan.

Actions include:

1. Evaluate current status of testing and recommend testing strategies for different kinds of systems
 - a. Lead Entity: CIO
 - b. Timeframe: June 30, 2005
 - c. Funding: No funding required for this task.
 - d. Status (March 2005): October 2004: DAS performed a "table-top" disaster recovery exercise; November 2004: NEMA sponsored a statewide table-top exercise; and April 2005: a NEMA sponsored DAS exercise is scheduled.