

State of Nebraska Office of the Chief Information Officer

*Information Technology Services
Annual Report - June 2007*

Leading the way...



"Our vision for the years ahead must be about preparing Nebraska to compete in the 21st Century, in an age of technological marvels, new educational challenges, international competition and entrepreneurial opportunity."

*Dave Heineman, Governor
State of the State Address, January 2007*

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CIO UPDATE



Brenda Decker
Chief Information Officer
State of Nebraska

The past year has been filled with opportunities for the Office of the Chief Information Officer to work closely with many of the State agencies to provide services to the citizens of Nebraska. We have been invited to participate in the work being done on the State Retirement System, the Medicaid Management Information System, the Public Safety Communications System, the statewide Distance Education for K-20, and many other projects assigned to State agencies. This report is our annual opportunity to reflect on what we have accomplished over the past year, as well as to identify our future direction for information technology in the State of Nebraska.

You will see in this report that we have spent some time over the past year working toward efficiencies and economies of scale related to the services we provide. In cooperation with various agencies we have rolled out new services such as wireless and virtual machines. Through the leadership of the Nebraska Information Technology Commission, we are making efforts to address new areas such as e-Health.

You will also see a strong emphasis on security and protection of our assets. We have worked hard on securing the State's IT infrastructure both physically and virtually. Our efforts to physically secure the 501 building have intensified and various areas have taken advantage of biometric technology to assure that access is appropriately controlled. Lieutenant Governor Sheehy has requested our assistance working with State agency directors to explore the concepts of disaster recovery and continuity of operations for State Government. What started out as an exploration of recovering from a disaster in the 501 Building, has expanded to a broader and very critical conversation about shared infrastructure and services.

It is an exciting time for Information Technology in the State of Nebraska. We work in an arena that can make a positive difference for all Nebraskans. We have the opportunity to provide the tools that will create a state government that reflects the innovations of the 21st Century, while making strategic investments that will create the efficiencies and economies being demanded by taxpayers.

I cannot emphasize enough the importance of the collaborative efforts between agencies and political subdivisions that exists today. The partnerships that we are all embracing will enable everyone to better stretch resources and gain the efficiencies we are all looking for. Thank you for being part of the States' team and we look forward to another successful year.

Brenda L. Decker
Chief Information Officer



Leadership Team:
Jayne Scofield, Steve Schafer, Tim Cao, Steve Henderson, Brenda Decker, Tom Conroy & Beverlee Bornemeier

NEBRASKA INFORMATION TECHNOLOGY COMMISSION

Vision Statement:

"Promote the use of information technology in education, health care, economic development, and all levels of government services to improve the quality of life of all Nebraskans."

Mission Statement:

"The mission of the Nebraska Information Technology Commission is to make the State of Nebraska's information technology infrastructure more accessible and responsive to the needs of its citizens, regardless of location, while making investments in government, education, health care and other services more efficient and cost effective."

CURRENT NITC MEMBERSHIP:

LIEUTENANT GOVERNOR RICK SHEEHY, Chair,
State of Nebraska

LINDA AERNI, Chief Executive Officer, Community
Internet Systems

PAT FLANAGAN, Information Services Manager,
Mutual of Omaha

LANCE HEDQUIST, City Administrator, City of
South Sioux City

DR. DANIEL J HOESING, Superintendent, Laurel-
Concord, Coleridge, & Newcastle Public Schools

MIKE HUGGENBERGER, Director-Netlink, Great
Plains Communications

DR. DOUG KRISTENSEN, Chancellor, University of
Nebraska at Kearney

DR. JANIE PARK, President, Chadron State College

TREV E. PETERSON, Attorney, Knudsen, Berkheimer, Richardson, & Endacott, LLP

SENATOR MICK MINES, State of Nebraska, Ex-officio Member



Lt. Governor Rick Sheehy, Chair
Nebraska Information Technology Commission

The Nebraska Information Technology Commission (NITC) is an independent nine-member commission established by the Legislature and appointed by the Governor to provide advice, strategic direction, and accountability on information technology investments in the state, and adopts technical standards, guidelines, and architectures. To achieve its mandate, the NITC relies on coordination and collaboration to influence a wide range of information technology issues. The NITC is assisted by five advisory groups:

- The Technical Panel provides analysis and recommendations to the NITC on technical issues.
- The Community Council is composed of representatives from business and economic development, work force development, public libraries and local government. It was formed to identify, prioritize, and coordinate user needs with respect to community information technology.
- The Education Council is a 16-member advisory committee composed of representatives from K-12 and PostSecondary education that was formed to identify, prioritize, and coordinate user needs with respect to educational information technology.
- The State Government Council is a 25-member advisory committee composed of agency directors, state IT professionals, and two representatives of the private sector that was formed to provide direction and oversight for state government information technology vision, goals and policy.
- The eHealth Council is a 25-member advisory committee composed of representatives from public health, consumers, state and federal government, employers, other eHealth initiative groups, health care providers, and other resource providers that was formed to identify, prioritize and coordinate issues within the realm of healthcare and technology.

Each of the NITC advisory groups establish work groups to address specific tasks related to accomplishing the goals and action plans identified in the Statewide Technology Plan. In February of 2007, the NITC approved an updated version of the Statewide Technology Plan "Digital Nebraska: Envisioning Our Future". The NITC identified eight strategic initiatives to achieve their vision and mission. By emphasizing selected strategic initiatives, the NITC exerts its influence to encourage funding of these initiatives and to encourage state agencies to work together to advance these initiatives. A brief description of each initiative follows:

Network Nebraska. The State of Nebraska and the University of Nebraska have engaged in a collaborative partnership that uses existing resources to aggregate disparate networks into a multipurpose core backbone. 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, more affordable Internet access, and better use of public investments.

Community IT Planning and Development. The NITC Community Council has partnered with the University of Nebraska Cooperative Extension and Rural Initiative to form the Technologies Across Nebraska partnership. Through the Podcasting Across Nebraska program, communities are creating podcasts to promote local attractions and events and to provide information to citizens. A quarterly newsletter reaches over 1,000 individuals with an interest in technology-related development.

eHealth. The NITC is forming an eHealth Council to address issues related to the adoption of electronic health records and health information exchange. The widespread adoption of electronic health records, health information exchange, and other eHealth applications is expected to reduce medical errors, improve quality of care, and reduce health care costs for payers.



The newly established NITC eHealth Council held their first meeting on May 21, 2007.

Public Safety Communications System. The statewide telecommunications strategy integrates regional communications systems, the mutual aid frequency plan, and the state communications infrastructure. The Office of the CIO has developed a plan for a statewide interoperable communications network that consolidates a core of state agencies on a single system platform.

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 addresses multiple items improving efficiency in state government, including implementing shared services and adopting standards and guidelines. 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 constituent and client participation. Benefits include improved services for citizens and businesses, and increased efficiency and effectiveness for agencies.

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.

During the past year, the NITC has adopted several new or amended standards and guidelines, all of which can be found at <http://www.nitc.ne.gov> – the Commission's website. By statute – primarily §86-516 – the NITC conducts project reviews and makes recommendations to the Governor and Legislature about those projects. This project review work took on a new level of sophistication with the adoption of portfolio management techniques to evaluate the projects. The NITC has also been active in general project oversight, including projects underway for implementing distance education technology and for the new solutions to be implemented by the Nebraska Retirement System.

ENTERPRISE COMPUTING SERVICES



Tom Conroy
I.T. Administrator
Enterprise Computing Services

Enterprise Computing Services (ECS) supports the large-scale development and processing requirements of State agencies. We build information systems, operate mainframe computers and maintain the high capacity data stores required to conduct State business. Each ECS group has staff members on-call twenty-four hours per day to support State agency business operations.

Production Application Support Services provides 24X7 support for business applications designed and implemented by IT Services. Our application portfolio includes about 800 applications and 10,000 programs developed for 35 State agencies. In the event an issue occurs, the production support team will make a record of the issue, then troubleshoot and resolve it. The resolution will be reported back to the customer. Applications Analysts are available during normal business hours. After normal business hours, support is transferred to the Shift Analyst Support Team. An Applications Analyst is also on-call to provide assistance in resolving the issue.

CICS System Resources Support provides large scale interactive transaction processing environments for business applications. We support over 50,000,000 transactions per month.

Database Management Services for the Mainframe provides installation and support for DB2 and IMS database structures. The service provides a database 'engine' that can be used by all front-end software tools (i.e. Web, TSO, CICS, AS400, Windows) to access the data our customers have entrusted to us for safe and secure keeping. This service safeguards the information from loss, misuse, and corruption by unknown and unauthorized entities.

Mainframe Data Storage supports two storage media: magnetic tape and disk. Tape is used for high volume storage and for backup. Disk is used for data that has on-line requirements, where responsiveness is a prerequisite. Disk data is automatically stored offsite within seconds of being written to primary storage.



CICS Support Team: Mike Berggren, Al Witt, Janak Brahmbhatt & Bill Martin



Applications: Judy Berggren, Rick Staley, Martin Ciecior, John Talken, Linda McKinney-Leonard, Kevin Keller

Software Application Design involves gathering and analyzing the customer business functions, then designing an application solution to meet the prioritized business requirements. Applications Solutions personnel also provide RFP preparation services, assist with the evaluation of RFPs, provide technology planning support, and supply project management services to State Agencies.

Software Application Development involves programming, testing and/or implementation of the business requirements as defined in the Software Application Design phase. We also establish standard best practices for application coding and support.

z/OS (MVS) Computing Resources supports the zSeries (mainframe) hosting platform which provides z/OS (MVS) computing resources for CICS, TSO, batch workload processing, high volume printing, remote print routing and web applications.

Processing Support Services provides support for scheduling, report archiving and automation. Scheduling support involves setting up and maintaining processing schedules for the z/OS and distributed client server platforms, in addition to developing AFP forms overlays. This group also manages report archiving and bundling for distribution. Automation support develops the programmatic routines that enable complex manual operations to be performed in an automated manner.

During the past fiscal year, Enterprise Computing Services has continued to upgrade the services that we provide to State government. This year's major project was the modernization of the tape storage environment. This completes the technology refresh of the storage (disk and tape) service that started last year. The new equipment provides significant improvements in performance, security and capacity, further reducing batch job processing times for production work while the new tape encryption capabilities provide additional protection for State data.



Steve Leech & Kathy Jensvold with new tape storage system

The new storage hardware consists of both a virtual tape system (VTL) as well as an automated tape library (ATL). The VTL utilizes disk drives as cache storage to provide better performance and media utilization for tape datasets. The ATL serves both as a "back end" tape repository for the VTL as well as a source of high capacity cartridges for native tapes, simplifying tape handling requirements. The new tape drives encrypt data as it is written to the tape media. The encryption provides an extra measure of protection for the State's data.



OCIO tape storage area BEFORE new tape storage project.

The IBM zSeries mainframe computer environment has also been upgraded. This upgrade positions us to support the continued growth in client usage of both CICS and z/OS resources as well as to take advantage of technology improvements in the new hardware architecture. We announced a reduction in the charge rates for disk storage, CICS and mainframe z/OS systems effective July 1, 2007.



CHARTS Team:

- Front Row:** Dennis Korber, Viji Pushkaran, Denise Baum, Kathy Brakhage, Ruth Mattson, Jill Drake, Linda Sestak, Nicole Giebelhaus, Ganesh Srinivasan, Ryan Johnson, Bill Wheeler, Sai Maddipoti, Sakthivel Chidambaram, Art Dieckman, Lisa Schafers
- Back Rows:** Arun Pondicherry, Jim Sawyer, Dick Hawley, Ken Kottich, Michael Colbourne, Vivek Anadaraman, Madhu Vallabhaneni, Marlo Roth, Carol Borschlegl, Ron Clutter, Pat Gill, Srinivas Tadiparthi, Don Bishop, Kiran Poda, Mark Dornbos, Robert Lyons, Rod Wiles, Doug Lannin, Gene Davis, Mike Kirby
- Not Pictured:** Clark Wells, Cindy Cameron, Jen Wolf, Kathy Thaller, Cathy Ekeler, Kalyana Budankayala

On the software front, efforts are underway to reduce the cost of several technical utilities that help us manage our database and production services, reducing our annual software expense by over \$1,000,000. We are also halfway through a significant change to the State's high volume transaction database, DB2. The conversion to version 8 of DB2 positions the State to take advantage of new IBM hardware architectures as well as to provide support for additional data object types. We completed a significant CICS software upgrade to version 3.1 last year as well. Personnel have also played key roles in the creation and evaluation of several large applications software RFPs, including MMIS, the new Retirement system, a point-of-sale system for MMIS, electronic benefits transfer and the Personnel applicant tracking system.



MESA Team: Steve Lovell (OCIO), LaRue Cole (DHHS), Brad Beckmann (OCIO), Claire Speedlin (DHHS), John Canfield (OCIO)

Finally, a team of ECS and DHHS staff implemented an innovative new approach to the periodic global updates to N-FOCUS case files that take place several times each year. MESA (Mass Expert System Architecture) selects master cases based on business requirements and processes them through the N-Focus expert system application, automatically authorizing budgets and generating notices as required. Before MESA, HHSS caseworkers were required to manually process each case, a task that took several weeks. MESA accomplished the work in less than eight hours, allowing caseworkers to pursue higher value work and focus only on exceptions.

INTERGOVERNMENTAL DATA SERVICES



Tim Cao
I.T. Administrator
Intergovernmental Data Services

Intergovernmental Data Services (IDS) was designed to improve the service and efficiency of data exchange between State and local government. Since its establishment in 1993, IDS has been responsible for managing the statewide, shared network that links county governments and state agencies. Today, the IDS integrated network is present in all 93 counties throughout the State, providing critical networking services to state agencies and county offices. During the past year, the Intergovernmental Data Services Team has worked to improve the IDS equipment inventory database and billing accuracy, upgrade infrastructures, and introduce new services. Tim Cao recently joined the Office of the CIO in June of 2007 to lead the Intergovernmental Data Services team.

IBM System i™ Resources – The IBM System i or iSeries servers (a.k.a. AS/400) deliver the power and capacity to run multiple business applications on a single system. By design, the System i family is highly secured and virus resistant. The current IDS network consists of approximately 95 IBM System i servers across the State. There is at least one iSeries server located in every county courthouse throughout the State. The System i servers continue delivering the every day critical computing needs for county offices and state agencies.

Field and Support Services – IDS provides network computing devices, peripherals, and support for data connectivity, terminals, computers, and printers to state agencies and county offices located in all 93 counties. IDS continues to offer common networking devices such as personal computers (PCs), laptops and printers at affordable lease prices. The IDS field technician continues to make service trips to various state agencies and county offices throughout the State on a daily or as needed basis. In addition, the CIO Help Desk continues to play a critical role in supporting IDS product and services. IDS customers are to call the CIO Help Desk to report equipment and service issues.

Asset Management – The IDS team maintains a current inventory of all IDS equipment deployed across the State. IDS provides the wide area network (WAN) infrastructure and computing equipment for various state agencies and county offices throughout the State. Agencies and county offices are billed based on various resource utilizations and the type of equipment and/or services being used. Billing validation processes have been established to assure accuracy and reconciliation on a monthly basis. Additionally, an equipment inventory process has been established whereby each county is physically inventoried and reconciled with billing records. This inventory process has largely helped reduce billing discrepancies. We continue to work with our customers on improving billing and inventory accuracy.



IDS Staff (L/R): Dale Fangmeier, Tim Cao, and Michael Bittinger

Email – In addition to computing equipment, IDS also offers email service to county offices. This service provides a low cost email solution for county offices and dovetails with the State's email system to provide easy access to State email addresses. The customer receives an email address of name@countyname.ne.gov. The email service can be a web-based or a text-based, depending on the bandwidth connectivity and customers needs.

Over the past year, IDS has worked with Network Services to increase bandwidth capacity to many counties from the traditional 56Kbps lines. Network connectivity for many counties have been upgraded to either private Digital Subscriber Lines (DSL) or a more capable T1 at 1.544Mbps, driven by the amount of traffic being generated. Private DSL provides immediate bandwidth relief at a more reasonable cost as compared to a dedicated T1.

The IDS team continued working with the Midrange Systems Support group in upgrading the remaining older AS/400 servers and dated Uninterruptible Power Supplies (UPS). It is anticipated that a total of 36 older servers will be upgraded to more capable units in Fiscal Year 2008. This will help reduce the system administration work related to trying to accommodate several different server models with software/hardware differences and provide new service capabilities as a result of the new hardware. Proper and working UPS units can minimize service interruptions by automatically providing temporary power, without delay or transients, for an orderly shut down of servers during an unexpected local power outage.

To meet the greater bandwidth needs and increase efficiencies, we have been working with our customers to upgrade existing 5250 terminal equipment and rewiring the county courthouses. IDS now has CAT-6 network cabling in all courthouses and has installed additional network connections in many court rooms over the past year to accommodate the additional capacity requirements. This has been needed to accommodate the transition from the 5250 terminal and printer architecture to the new and more versatile personal computer and printer architecture. IDS continues to deploy personal computers at customers' requests as replacements for the 5250 terminals.



Mike Bittinger checking cables.

IDS will start a scheduled refresh of the older equipment, including computers and printers in Fiscal Year 2008. This shall become an ongoing process as equipment reaches the end of its life cycle.

IDS has been working with customers' requests on several other projects, including replacing dot matrix printers with the new and more capable Dell 1700 series laser printers, resulting in a cost savings and improved performance. We have been able to reduce the monthly lease rate by migrating from the dot-matrix printers to laser printers. Another project has been the ongoing replacement of old high end laser printers with new high end laser printers. Since January 2006 IDS has deployed over two hundred laptops and desktop computers to customers across the State. We recently completed a desktop image project for the new desktop computer model (Dell Desktop 745). Deployment for this new model began in early June 2007.

IDS continues working with customers to improve service, develop and offer new products and services, meeting the ever increasing needs of our customers across the State.



Mike Bittinger working with Lancaster County office staff to install and check equipment.

FINANCIAL SERVICES



Steve Schafer
I.T. Administrator,
Financial Services

The purpose of the Financial Services area is to align fiscal resources to achieve the strategies of the Office of the CIO. Activities include cost recovery planning, rate setting, asset management, contracts, enterprise licensing, and reviews of agency purchases of information technology goods and services. Assisting with customer service and business development are other vital responsibilities. Steve Schafer leads the financial services team.

Procurement (IT Procurement Reviews and Approval) – Section 81-1117 requires that "No state agency shall hire, purchase, lease, or rent any information management item listed in subsection (a) of this section without the written approval of the information management services administrator." This and similar statutes are the legal mandate for the IT procurement reviews. Legislative objectives include finding economies, avoiding unnecessary duplication of information management operations and applications, and complying with technical standards.

Procurement (Telecommunications Equipment and Services) – Sections 81-1120.01 through 81-1120.39 require that the Division of Communications coordinate the purchase, lease and use of all telecommunications equipment and services. Requirements identification, procurement, ownership, and day-to-day operational aspects of telecommunications equipment and services will be closely coordinated with your organization.

Enterprise Contracts and Vendor Agreements – The State Government Council has designated enterprise purchasing and maintenance agreements as a shared service that would benefit all agencies. The Office of the CIO will facilitate master agreements and will aggregate purchases with major vendors in order to provide access to better pricing.

Customer Accounts – The Financial Services area, in cooperation with DAS – Central Finance, will help agencies with setting up and managing their accounts, understanding invoices, getting detailed billing data, and resolving problems.

Rates and Fees – The Office of the CIO depends on revenues from services to pay more than 99% of its total budget. Only the cost of staff and expenses to support the Nebraska Information Technology Commission and its councils are covered by direct funding from the Legislature.



Steve Schafer and Greg Barth, Central Finance, crunch numbers

It is essential to set rates that recover all costs and are fair and equitable to the customer. The Office of the CIO must comply with federal accounting and audit standards governing cost recovery (OMB Circular A-87). Basically, this means that cost recovery plans (and rates) must not discriminate against federal programs. The rate structure cannot allow one service to subsidize another service, and any excess revenue must be returned to the rate payers through a reduction of rates in the future.

The Office of the CIO conducts a thorough review of cost recovery methods (budgets and rates) prior to the start of each fiscal year. Most rate changes are done in conjunction with the state's biennial budget process, but the Office of the CIO carefully monitors expenses and revenues throughout the year.

Service Catalog and Service Level Agreements – The Financial Services area is responsible for developing and maintaining the service catalog and service level agreements. These documents describe our services, define expectations, and provide metrics wherever feasible. All rates are now published with the service catalog on the website for the Office of the CIO.

Shared Services Business Case – Documenting the costs and benefits of shared services is part of the process of deciding whether to provide a shared service. It is also an integral part of the rate setting process.

The Financial Services team continues to focus on enterprise agreements with major providers as a key cost saving strategy. This year we again coordinated purchases of IBM licenses and maintenance agreements, including the Enterprise License Agreement (ELA -- for new purchases of software and annual license renewals), Contract Handling International Solution (CHIS – for hardware maintenance), and Software Maintenance Agreement (SWMA). The total discount to all participating entities for FY2006 was over \$500,000. The total savings for FY2007 was \$610,000, and savings in FY2008 are projected to be \$518,000.

In preparation for the FY2008/ FY2009, Biennial Budget Request, we undertook a comprehensive review of budgets and rates. Rates will be published as part of the biennial budget instructions. Although a few rates are increasing, most are holding stable or dropping.

During the past year, the Office of the CIO developed new rates or conducted detailed rate reviews for the following services:

- Desktop Leasing Package
- Citrix Remote Access Service
- E-Fax Service
- Kronos Time Reporting Service
- Load Balancer
- Rack Mounted Device Hosting Service
- Spam Protection
- Storage Area Network
- Tape Backup Service
- Web Application Housing
- Website Hosting



Karen Sarnecki, Tammy Sherrill, Gloria Esquivel, LaVetta Boucher

The Financial Services area led the effort to develop a service catalog that describes all of the services offered by the Office of the CIO. The service catalog, service level agreements, and a complete list of rates are available on the website of the Office of the CIO.

Other accomplishments during FY2007 include preparing a financial plan for the statewide distance education network and a cost model for a consolidated email system. The Financial Services team assisted with financial reviews of several major procurements, including the scheduling system for the Distance Education Council, purchase of codecs for the statewide distance education system, and an Applicant Tracking System for DAS – Personnel.

During the next year we will continue many of these efforts. Opportunities for cost savings can be realized by reviewing the various software and hardware products that the State continues to use that are purchased one at a time. There appear to be more opportunities to save money through statewide contracts.

NETWORK SERVICES



Jayne Scofield
I.T. Administrator, Network Services

It is the mission of the Network Services Team to provide efficient, economical and reliable telecommunications services to our clients. The Network Services Team is responsible for end to end support from your desktop through the wide area network. This includes voice and wireless services, desktop, server, cabling, VPN's, firewalls, video conferencing and wide area network services. These services include the design, planning, coordination of installation, and support of those services. Jayne Scofield leads the Network Services team.

Broadband/DSL Services - Assists with the design, installation and operation of broadband networks.

Campus Connection - Enterprise design, installation and operation of the State packet switched fiber optic campus network, including VPN connectivity.

Computer Based Training - Training over the internet in your office or at home.

Data Backup - Weekly, offsite storage of data included in the data storage service for use in the event of data loss.

Desktop/Server Support - Performs software installation, hardware and software troubleshooting, assists with printing problems and anti-virus issues; Provides domain services, server backup and file restoration.

Firewall Service - Installation and maintenance of the appropriate firewalls at the agency level as well as enterprise level.

Local Area Network Cabling - Installs and maintains cabling facilities for the transmission of voice and data for State agencies.

State Government Directory - Annual telephone directory of agency information and personnel.

Storage Area Network - Shared storage for networked Intel and RISC architecture servers. Includes network attached storage (NAS).

Video Conferencing - Managing 17 sites throughout the State.

Voice Interpreter Services - A voice interpretation service over the telephone for the translation of over 140 languages.

Voice Services - Assists with the design/installation of a telephone systems and equipment that will best fit an Agency's needs.

Wide Area Network Installation/Implementation - Design, configuration and assistance to connect to the wide area network to share data with remote locations throughout the State.

Wireless Services - Assists with the selection and ordering of cellular and satellite phones, pagers, and radios.

This year, the Network Services team spent a considerable amount of time on the bidding and implementation of the first phase of LB1208. This bill was passed during the 2006 Legislative session and charged the Office of the Chief Information Officer (OCIO) with bidding out the transport services, scheduling software and codec's for the schools located in Nebraska for distance education purposes. The RFP for transport and equipment was bid through the State Materiel Division, with content input received from the University of Nebraska, ESU's and school representatives. The transport services for Phase 1, which are the schools in northeast Nebraska, was awarded to both Qwest and Windstream, the scheduling software awarded to Renovo and the codec bid awarded to CallOne, Inc. and Cytek Media Solutions. We continue to work closely with the schools to ensure that federal erate requirements are being met and the distance education network for these schools will be available by the time school starts in the Fall of 2007.



Renee Bramhall, Vicki McElroy, Sandie Trvrz, and Lori Lopez Urdiales look over the new State Directories.

As a result of the bid for equipment, we were able to award a contract to MSI to standardize on Cisco routers for not only the distance education network but also for the State. Starting in July of 2007, we will begin a router refresh program similar to the edge switch program we currently have in place. Our Wide Area Network team also completed a refresh of both the data transport services to northeast Nebraska, and the pilot project of Network Nebraska to western Nebraska. Both areas were awarded to Windstream. This team worked in conjunction with the email team to deploy an enterprise SPAM appliance this past year.



WAN Team: Erik Schmersal, Kaleb Kref, Ben Mientka, Don Phares, Brent Marshall, Sandi Gauchat.

Not pictured: Brett Jungren.

Several of our teams have been involved with meeting the cabling and infrastructure needs for the new Eastern Nebraska Veteran's Home being built in Bellevue. Our Field Services Team has spent countless hours ensuring all of the necessary cabling is in place and the voice and data teams have worked to ensure that their voice and data needs are being met. The Field Services Team has also continued with the upgrading of the cabling in the state IT building (501 S 14th Street). Third and fourth floors were finished this fiscal year and we are currently working on first and second floors with the goal to have them completed first quarter of 2008.

Prior to the 2007 legislative session, we established public wireless services in the rotunda area of the Capitol, and have received favorable comments about the service. We continue to work on our policies and plans as we further deploy wireless.

The voice and wireless services team, completed an RFP for services in the Scottsbluff/Gering area with a contract award to both Allo Communications and Embarq. We currently have an RFP on the street for wireless services with an expected award date of June 2007. In addition to working on the new Veteran's Home in Bellevue, we have also completed a pilot of unified messaging using Microsoft Exchange. We successfully deployed this service to a small group located geographically throughout the State. This team also received additional homeland security grants and has taken the opportunity to upgrade our portable telephone system. A new trailer was purchased and we moved the equipment from our van to this trailer as well as upgraded the equipment to make it more compatible with services the State is either currently using or will be deploying in the near future.



Desktop Support: Ken Mitchell, Aaron Weaver and Stan Schmidt (standing).

Our Desktop/Server continues to grow our customer base. The desktop leasing program has grown from 37 to 87 over the past year, our blackberry customers from 50 to 130 and a new service of virtual machines has grown to 24 in the six months it has been offered. We continue to standardize more processes and are working on a standard image for the OCIO as well as reorganizing our domains.

Our Public Safety Team continues to assist the Nebraska Emergency Management Agency with coordinating all public safety communications projects. Since 2004, approximately \$46M has been funded for the completion of these projects. During this past year, the state has been formalized into seven regions plus the "State" being a region. During the last legislative session, the legislature funded building a public safety communications system for all State law enforcement and investigation agencies. Early 2007, a bid was awarded to Concept to Operations to do an assessment of the tower infrastructure, as well as other deliverables, which will assist us in our preparation of the RFP, to be released in the Fall, for the Statewide Radio System. This team has also developed interoperability standards, worked with locals to adopt a statewide mutual aid frequency plan, as well as their continued involvement in 700/800 MHz planning.



Public Safety Team: Ray Ryan, Radio Shop Manager for the City of Lincoln, shows the inside of the tower shelter to team members Mike Jeffres, Pam Kemper and Chris Heinze.

The State of Nebraska planned and sponsored the Midwest regional conference for NASTD – State Technology Professionals Serving State Government. This was held at Mahoney State Park in May 2007.

PLANNING AND PROJECT MANAGEMENT



Steve Henderson,
I.T. Administrator
Planning and Project Management

Planning and Project Management staff members contribute to the mission of the Office of the CIO by virtue of their work in a wide variety of assignments. Those assignments include strategic planning, supporting the Nebraska Information Technology Commission (NITC) and its supporting councils and workgroups, project management, staffing the Nebraska Intergovernmental Data Communications Advisory Council (NIDCAC), enterprise solutions planning, business continuity, disaster recovery, security policy and Geographic Information Systems (GIS). Steve Henderson leads the Planning and Project Management team.

Facilitation Services - Consultation on an "as available" basis about meeting design, process design, and/or facilitation of actual meeting sessions.

NITC and NIDCAC Staff - Staff support to the Nebraska Information Technology Commission and the subordinate councils, panel and workgroups, along with similar support for the Nebraska Intergovernmental Data Communications Advisory Council.

Disaster Recovery and Business Continuity – Leadership to continually improve the disaster recovery capabilities for the entire organization. We also lead the Shared Service effort to offer appropriate Business Continuity and Disaster Recovery services for all agencies, boards and commissions. We assist in the statewide effort to determine business priorities for recovery.

Enterprise Solutions Planning – Staff work with other elements of the organization as well as state agencies to identify opportunities for shared services and products.

Security - Efforts related to an enterprise view of security, including the development of appropriate policies, better integration of operations and policy, and relationship-building with the University for more joint security efforts.

Geographic Information System Steering Committee - Staff support for the efforts of the GIS Steering Committee, along with facilitation of the Shared Services effort on GIS.

Project Management - Consultation about appropriate tools to use when conducting project management and general advice about defining and managing a project. On an "as available" basis, "real time" detailed project management services can be purchased on a billable basis.

A highlight for the Project Management Office (PMO) this year was the award received from Computer Associates (CA) for the effort to implement Clarity (the state's primary project management software tool) within the Department of Roads. The significance of this partnership effort, and the resulting award, is more evident when considered in context of the list of other award winners. This was truly a global competition, with a limited number of total awards offered. Nebraska joins organizations from India, Britain, Chile and Scotland in receiving this award. Staff members from the Project Office were also involved in the development of the Office of the CIO Service Catalog, and in establishing better connections between Kronos, a timekeeping system used in a number of agencies, and NIS. Efforts during this past year to utilize Portfolio Management techniques to evaluate technology projects were well-received by the NITC. Finally, the PMO continues to offer traditional project management support to highly complex and visible projects within the



Back row (L/R) Jim Ohmberger, Larry Zink, Tom Rolfes, Steve Schock, Skip Philson, Steve Henderson, Steve Hartman. Front Row (L/R) Rick Becker, Janet Wheatley, Anne Byers and Dave Berkland .

state. One such example is the effort to implement a number of new distance education initiatives as created from last year's legislative bill 1208.

Disaster Recovery and Business Continuity remained very much a center of significant activity during this past year. The partnership efforts with the University to improve resiliency continue, and were highlighted by the state's greatly improved ability to quickly recover data, made possible by the acquisition of new, far more sophisticated and advanced storage equipment. Efforts to similarly improve recovery of computing capabilities may be forthcoming in the next year. Support for the Lt. Governor and his leadership to better position agencies for recovery and continuity of operations have continued during the past year. The Shared Services

group related to Disaster Recovery has continued to meet, exploring dependencies and assumptions among the participating agencies and how those perceptions would likely affect recovery.



Steve Schock and Skip Philson with Computer Associates awards.



Cyber Security Conference was held on April 18, 2007. Approximately 140 persons attended.

Efforts to improve security remained a high priority this year. The state hired ManTech International to perform the most extensive vulnerability testing ever, scanning over 1600 servers for vulnerabilities and compliance with industry standard security settings. Tests for security related to wireless activity were also performed, documenting rogue devices and the physical and logic security of the wireless access points. A number of security standards were adopted this past year by the NITC. The State of Nebraska installed a new SPAM appliance that filters all email traffic for SPAM, viruses and malware. Last but certainly not least, the Nebraska Cyber Security Conference was held once again this year at SCC Continuing Education Center on April 18th, where nearly 140 IT workers from state and local government and those in the education community gathered to hear Howard Schmidt and Ira Winkler speak on emerging threats in cyberspace.

In the realm of GIS, significant progress was made at obtaining major new GIS databases for the state. Joint work efforts among the Department of Roads, the State Patrol, Douglas and Sarpy counties, the Public Service Commission and the U.S. Census Bureau led to a first version of a street centerline-address database. Negotiations were completed to obtain new Orthoimagery for the entire state at dramatic savings (approximately $\frac{1}{100}$ of market value). New high-resolution imagery for urban areas of the state was obtained, and through tremendous collaborative efforts, was extended beyond the traditional and expected areas in the southeastern portion of the state to include cities of Norfolk, Columbus, Grand Island, and Kearney, along with Madison, Dodge, Saunders, Cass, Adams and Buffalo counties. The Office of the CIO also assisted in the efforts to remap all of Nebraska's surface water features. This project involved multiple state agencies, the University of Nebraska, federal agencies, and local natural resource districts. Finally, as somewhat of a "spin off" from the GIS Shared Services work, a group of agencies continues their collective effort to develop a data exchange network intended to facilitate easy and effective GIS data exchange and sharing.

TECHNOLOGY SUPPORT SERVICES



Beverlee Bornemeier
I.T. Administrator,
Technology Support Services

The help desk has seen many changes since its creation over 20 years ago, including a staff growth from 2 to 5. We have combined help desk experience of 38 years which helps us quickly identify your request. Platforms have changed and grown from mainly mainframe to AS/400, Local Area Network, and web. We have all experienced changes in technology while trying to accommodate an emphasis on security. Providing a single point of contact for our customers remains our primary goal. In 2007 we are concentrating on additional self-serve tools to help our customers quickly find their own answers or easily submit their requests. These options are through a mail-in database (GWI.support@CIO.NE.GOV) and through an End User Desktop URL (helpdesk.cio.ne.gov). These tools allow us to take each request in the order submitted and by priority. The End User URL tracks scheduled and unscheduled downtimes which aids the customer in planning their day and sometimes eliminates the need to call.

Nebraska Directory Services continues to see growth in the number of applications for which it provides authentication of identity. Additional enhancements planned for 2007 include a portal that will allow users to reset their own NIS passwords during Open Enrollment. The self-service password reset will open the door for other web-oriented applications. This is in addition to other security features NDS can provide like graded authentication, reverse proxy, Active Directory synchronization, SSL encryption and wildcard or self-signed digital certificate support.



Help Desk Team: Pat Cruz, Adam Cederlind, Jason Meyer, Mark Weatherwax, & Dave Rasmussen

Email – Currently the Office of the Chief Information Officer offers two types of email. Lotus Notes is considered the State's Business class email, with basic email being offered through either World Client or Exchange Basic Mail. With business class email, agencies are given access to fully supported suite of services that include calendaring, recurring events, mail lists, and more. The service also provides statewide email routing, anti-virus software, and SPAM detection of incoming email traffic. During the past year, the SPAM and virus protection that was enabled processed over 156,000,000 messages, with 90% of incoming emails either blocked or quarantined as SPAM or viruses. Basic email has been offered as an alternative to agencies to provide a basic email system with limited capabilities such as calendaring. The service does not include support by OCIO staff, and any problems resolution is done on a time and material basis with the agency. The Office of the CIO hosts less than 20% of the email used by State agencies, with 10 other agencies hosting their own solutions. In order to gain efficiencies and economies of scale, over the past year numerous discussions have taken place about consolidation to a single email platform for Nebraska State Government.



Web Development Team: Front Row L/R: Rich Burns, Vicky Sindelar, Wes Majerus, Khaleel Thotti; Second Row: John Danley, Kay Reznicek, Kevin Cueto; Third Row: Angie Dunn, Keo Smith, Sridhar Teegala, Ashruf Hussain; Fourth Row: Juli Jurgens, Rose Linnertz, Sam Fifer, Dino Cehic; Fifth Row: Tod Wyrick, LaVern Goens, Ramakrishna Rotte; Last Row: Joel Hebrink, Himanshu Amin

The Office of the CIO Web Design and Development Team has been working on several large-scale web-based applications. Currently a new Budget Request and Reporting System is being developed for the State Budget Office. Also being developed is a new online permitting system for the Nebraska Game and Parks Commission. In addition to the design and development of web applications and database driven web-based systems, this team designs, develops and hosts numerous State websites including sites for Governor Heineman and Lt. Governor Sheehy. The team developed an RSS news feed

feature that has been incorporated into the Governor's website, streamlined the way citizens navigate the Governor's website, and has also provided additional audio and video features including the creation and display of virtual tours. These virtual tours give individuals with internet access and a web browser a chance

to see such sites as the Nebraska State Capitol, The Governor's Office, and the Governor's residence without having to leave the comfort of their home, office, or local library.



MidRange Systems Support Team: Kevin Smith, Mike Whisler, Donna Ruhl, John Dolsky

This past year was an unusual year for the Midrange Systems support group as no major upgrades were required of the AS/400 systems (iSeries) located in the county courthouses. We are finalizing a plan to replace 36 of our oldest systems beginning this next fiscal year (July 2007).

The purchase price of the new systems is much less than when the old systems were purchased and have many more times the processing power and disk storage. During the past year, we were able to acquire and install a "hot site" for the purpose of disaster backup. A processor is located here in the 501 building with all the current applications software loaded. If a disaster should occur in any remote site, we will load data from backup tapes and have the system available via the network (or even moved to a county) to any county location in less than two days. Our team also

assisted in the migration to new hardware and software for NIS last fall, we did a successful proof of concept on using network storage from an iSeries system, we laid the groundwork for secure FTP and are starting implementation. In addition, we are now storing/retrieving documents for close to 40 county courts, we have replaced about 50 UPS systems with new ones that now carry a five year warranty and we have tested and evaluated thin client PCs to replace public access green screen terminals.

Change Management works closely with all teams in the Office of the CIO in communicating, coordinating, scheduling, monitoring and controlling changes to the Information Technology environment. It also has partnered with State Building Division, Office of the Capitol Commission and University of Nebraska in changes that impact Office of the CIO services to its clients. Change Management ensures that changes involving Hardware, Software, Environment, Production Processing Schedule and Client Acceptance Testing are carefully planned and coordinated with minimal disruption to the client. During this past six months 264 change entries were opened, reviewed and processed through the Change Management System. Risk and impact changes were reviewed, approved or delayed by managers. The mission for Change Management is to ensure that changes to all Office for the CIO environments are carefully and deliberately implemented with minimal disruption to the client community.



Technical Assistants: JoDee Steele, Carrie Fegley, Nancy Richters



Lotus Notes Team: Matt Kuta, Nancy Taylor, Marcia Stewart, Dale Hermsen, Rose Splittgerber, Jim Buehler

Information Technology Assistance (ITA) is a Lotus Notes application used to display specific on-call support personnel information. It is a reference tool to locate on-call support staff, technical teams, vendor support numbers, helpdesks and agency contact information. During the past year security was built in to allow teams to update their own support and team information. Reports have been created displaying primary and secondary job on-call information for specific teams. Currently a notification agent is being developed for reviews and for sending reminders.

Training worked with the Lotus Notes development team in the development and implementation of a paperless reimbursement process at the division level. The process was implemented in January/February of 2007. Also, the Computer-Based Training (CBT) documentation was updated this past year and is posted on the training portal. A new RFP for computer based training will be released for bid in July 2007.

SHARED SERVICES

Since the shared services concept was introduced in 2005, much has been accomplished. A number of services have now been deployed for more than a year (examples include Blackberry and Virtual Server capabilities). Originally, shared services through the Office of the Chief Information Officer were driven by the State Government Council of the NITC (Nebraska Information Technology Commission). The relationship with the State Government Council and the NITC will certainly continue, but the Office of the CIO may also introduce additional shared services activities above and beyond those that already enjoy formal NITC sponsorship. Examples of this possibility include the emerging work on "Voice Over IP" (VOIP) and on Voice Response Unit (VRU) technology. The groups are open to all interested agencies. A running update on each service is maintained on the NITC website. The balance of this article provides brief updates on a number of the most active shared services groups. In each case, the service is listed by name, followed by the primary sponsor for the service within the Office of the CIO.

Business Continuity/Disaster Recovery: (Steve Henderson)

The Business Continuity and Disaster Recovery Shared Services group continues as a forum in which technical and/or detailed discussions of continuity and recovery issues are discussed. As the Lt. Governor's ongoing dialog with agency directors begins to include more operational considerations to support and overall policy strategy, this group provides an excellent "sounding board" for consideration of such details. Ongoing efforts to review, evaluate, and establish NITC standards in this discipline remain an important component of the group's work.

Directory Services: (Beverlee Bornemeier)

The core directory services identified and agreed upon by this group remain in place. As the state moves forward with the most recent email initiatives, potential integration of directory services capabilities with technologies within the email environment will be an important effort. It is anticipated that as new major systems (examples: the new retirement system; the new Medicaid system) are deployed, they will utilize directory services.

E-mail: (Beverlee Bornemeier)

This shared services group was involved in early discussions about possible migration and consolidation of e-mail systems. Information has now been distributed throughout the state about the plans to migrate to a consolidated Microsoft Exchange environment. Participants in this shared services group will be part of the groups involved with implementation over the coming 24 months.

Enterprise Maintenance/Purchase Agreements: (Steve Schafer)

The Office of the CIO maintains enterprise agreements with many software providers for the state, including IBM and Microsoft, and continues to work on other agreements. The annual licensing and maintenance agreement with IBM saved more than \$600,000 in FY2007. A newly re-negotiated contract with Computer Associates (another major software vendor) will save the state more than \$1,000,000 per year. Efforts are underway to develop a new contract with a software reseller that will streamline purchases of the most commonly used software in state agencies. Future efforts will focus on aggregating purchases under these contracts to achieve better pricing.

Field Support Services: (Tim Cao)

The Field Support Services group will further define options for providing appropriate IT support for the State. The intention remains to identify and implement ways in which agencies can work together to support equipment and staff at office locations across the state.

Temporary IT Staffing Services: (Beverlee Bornemeier)

In the coming months, the group will develop and issue a Request For Proposal (RFP) and ultimately award contracts for firms to provide contractual staffing assistance to the State of Nebraska. A shared services group will be involved with shaping this replacement for the existing awards under "110z1."

GIS (Geospatial Information Systems): (Larry Zink)



Pictured left to right: Karisa Vlasek, UNO-NASA Nebraska Space Grant & EPSCoR Office; Justin Wilkinson, NASA-Johnson Space Center, Houston, Texas; Ed Kelley, Nebraska Department of Roads; and Michael Peterson, UNO Geography Department. Mr. Wilkinson was a plenary speaker for the symposium. Mr. Peterson was the recipient of the symposium's "Excellence in GIS" award.

Street Centerline-Address Database. Thanks to the combined efforts of the Nebraska Public Service Commission, the Department of Roads, and the Nebraska State Patrol, a statewide Street Centerline-Address Database has been assembled to support the Patrol's new Computer-Aided Dispatch (CAD) activities. Ongoing efforts are still underway to further enhance this database and to develop a model for sustained maintenance.

Internet Mapping Services. An intergovernmental geospatial data-sharing group has been formed. That group continues to work on obtaining the appropriate hardware, software and technical assistance to implement a data-sharing and internet mapping service. Some grant funding for hardware has already been obtained, and additional funding is being sought from the state's Information Technology Collaboration Fund and from the State Records Board.