



2014 ANNUAL REPORT

BUREAU OF INFORMATION & TELECOMMUNICATIONS

Executive Summary

Commissioner's Message

Customer Satisfaction and Testimonies

Administration | Data Center | Development |
Telecommunications | South Dakota Public Broadcasting

2014 Employees of the Quarter

Challenges Ahead in 2015 and Beyond

4

5

6

7-15

16-17

18-19



Mission

The Bureau of Information and Telecommunications (BIT) strives to partner and collaborate with customers in support of their missions through innovative information technology consulting, systems and solutions.

Vision

Through our highly motivated staff, BIT will be a leader and valued partner in providing technology solutions, services and support that directly contribute to the success of our customers.

Goals

1. Provide a Reliable, Secure and Modern Infrastructure

Provide a well-designed and architected secure computing and communications environment to ensure optimal service delivery to business. Architecture and process will be optimized to support agile and reliable computing and communication services.

Technology assets must be high performing and dependable to ensure services are available whenever needed. Centralization, standardization, and collaboration are vital to efficiently leverage investments. To maintain public trust, we must secure data and technology assets through leading security tools, policies, and practices.

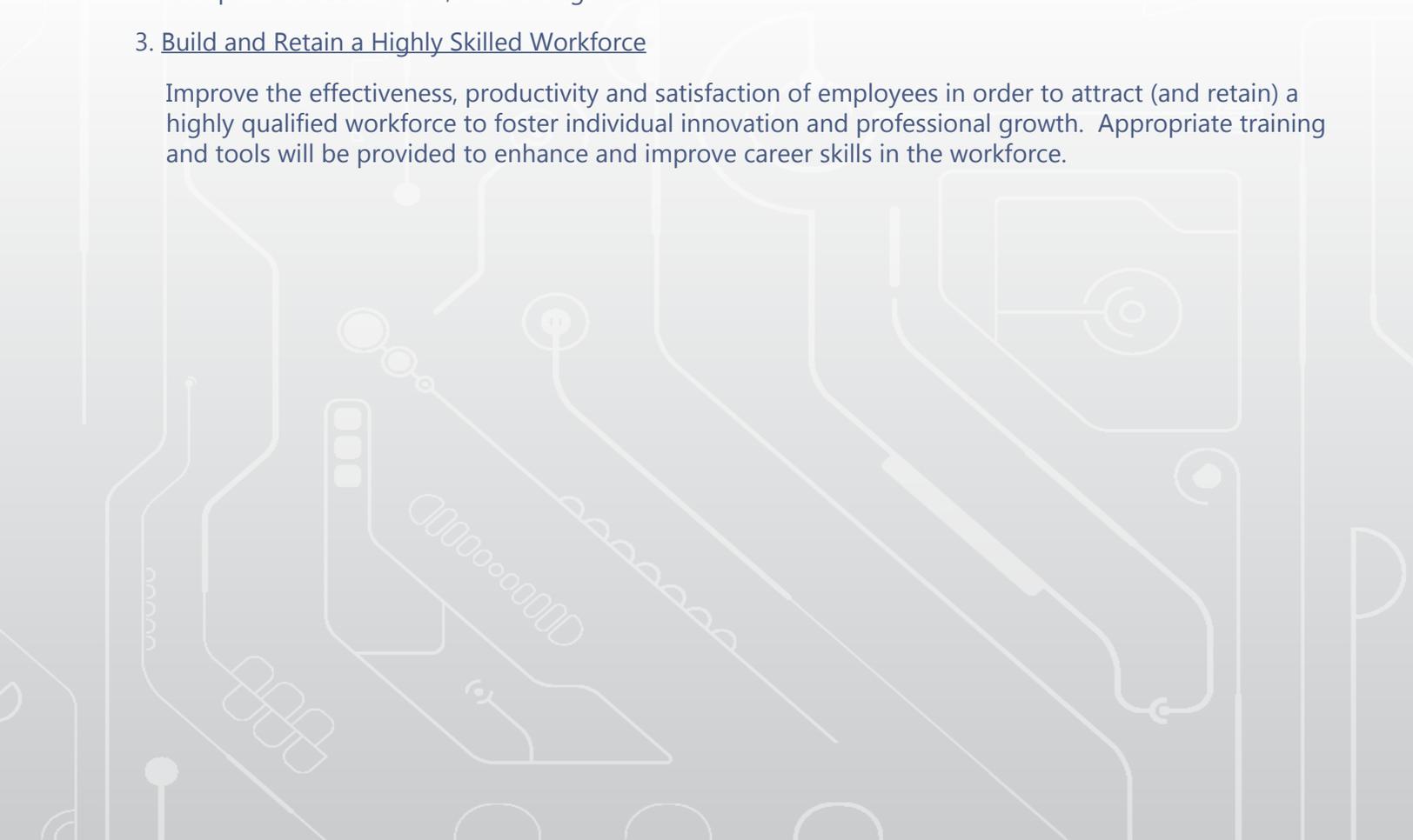
2. Deliver Valued Services at Economical Costs

Develop innovative and cost-effective solutions through collaboration, cooperation and in partnership with our clients. The solution sets include developing customized business solutions, efficient project management services and productive relationships with clients.

"People should be online, not waiting in line."

3. Build and Retain a Highly Skilled Workforce

Improve the effectiveness, productivity and satisfaction of employees in order to attract (and retain) a highly qualified workforce to foster individual innovation and professional growth. Appropriate training and tools will be provided to enhance and improve career skills in the workforce.



EXECUTIVE SUMMARY

Providing information and technology services, delivering dependable and reliable products, fostering cost reductions and maintaining a secure infrastructure are hallmarks of BIT support of state agencies. Continued consolidation and centralization of key information and technology services across the enterprise provides agencies opportunities to achieve more with less. By focusing on the Bureau's strategic direction while aligning agency business needs and goals with available technology options, BIT remains poised to deliver quality, core services to client agencies.

The Project Management Office (PMO) continues to focus on our customers and strives to build strong partnerships with state agencies. The BIT Points of Contact (POC) offer support for an agency's concerns and assist in identifying statewide technology changes that may impact business needs. Effectively managed projects and customer service are coupled within each service BIT delivers.

Security is integrated within each BIT provided service. Cyber security continues to be the number one challenge for BIT as the state's data and technology systems remain an attractive target to cyber criminals. Firewalls, patches and updates, desktop anti-virus, strong passwords and intrusion monitoring are all layers of security that must be incorporated throughout the state's infrastructure to ensure the integrity of the state's data and technology resources.

For the third consecutive year, BIT has successfully demonstrated compliance with Payment Card Industry (PCI) standards. Compliance has been earned by hardening the state's technology systems to permit the convenience of continued use of credit cards by those interacting with state agencies.

To further improve the Governor's goal of transparency in state government, BIT development staff recently implemented the Boards and Commissions web application, providing the public with a detailed list of all active Boards and Commissions in the state. Citizens may search by two different methods for a board/commission as well as review the calendar for upcoming events. Information on the site includes: upcoming calendar of events, agendas, meeting minutes, meeting location, additional documents, board information, board members list and public documents.

South Dakota Public Broadcasting's (SDPB) local TV and radio programming continues to be a vital community resource, producing and broadcasting high-quality, commercial-free programs and valuable community outreach projects that educate, enlighten and entertain. SDPB earned the National Award for Outstanding Service from the National Federation of State High School Associations. The honor recognizes the network's coverage of high school achievement events and the opportunities offered for students to work on productions.

From year to year, we continue to provide core services that embody customer service, efficiency, and security, yielding cost effective solutions to meet the business needs of the State of South Dakota. As you read the 2014 BIT Annual Report, you will note how we continue to be one of the nation's leading centralized state information and technology organizations, how we strive for continuous improvement and how the business needs and challenges we face are similar to those faced by our customers.

MESSAGE FROM THE COMMISSIONER



Each state agency has unique enterprise-wide responsibilities; the Bureau of Information and Telecommunications is no exception. The four BIT divisions provide a variety of services in the information and telecommunications fields recognized in the Bureau name. Some of these are undoubtedly familiar to readers of this publication; other quality services may not immediately spring to mind. Some services in the latter category might include cyber security services, technology contracting services, software compliance services, business continuity / disaster recovery services, public safety communications services, or broadcast public television and radio services.

As you review the Bureau accomplishments and challenges highlighted in this publication, I welcome the opportunity to address any questions you may have regarding the Bureau's delivery of services or plans for any future changes or enhancements to these services.

Thank you,
David

CUSTOMER TESTIMONIES

"STAR Academy East Campus is actively working on their fiber and they report their network is SO much faster. They are tickled pink. Thank you guys so much for all of your efforts to make this happen. It is greatly appreciated!"

- Candy Snyder, Dept. of Corrections

"Thank you and your BIT colleagues for your constant great work! We'll let you know if we run into any hitches."

- James D. Hagen, Dept. of Tourism

"This is excellent news! Great response from you and your staff! Thanks again."

-Denny Kaemingk,
Dept. of Corrections

"You are great to work with. I am looking forward to our continued work on this website!"

-Jonathan Harms, Dept. of Public Safety

"Just wanted to pass on my THANKS again for your efforts in following up on the first Flood Task Force meeting [...]. All of the initiative and homework you folks (BIT & DENR) did, and you did as a team, to prepare showed through loud and clear. In my era, we would have used the word IMPRESSIVE to describe your presentations this morning; the word they use today is AWESOME! In any case, you folks hit a home run. You are the best. Thanks again!"

- Steve Pirner, Dept. of Environment & Natural Resources

"BIT is always so great to work with. Thank you for your creative talents and efficient work!"

-Emily Kiel, Dept. of Game, Fish & Parks

"Thank you very much for helping us throughout this entire process and dealing with all of our questions! You are very helpful!"

-Donielle Gustafson,
Bureau of Human Resources

"We thought the roadmap was very helpful for our office and look forward to BIT coming to Sioux Falls for a security consult at our office."

-Jarrod Edelen, State Investment Council

"Having staff from the Bureau of Information and Technology (BIT) on your team ensures success. The Department of Veterans Affairs appreciates the expertise that BIT brought to our projects and the knowledge they have on new products to assist us in reaching our targeted audience. BIT maintains an open dialogue to ensure all parties are focused on the same vision."

-Audry Ricketts, Dept. of Veterans Affairs

"Thank you so much for your efforts on DPS's behalf in negotiating the quote for our network connection with the Pennington county merger. The Department of Public Safety really appreciates your help!"

-Maria King, Dept. of Public Safety

"Thanks again for putting on the Roadmap discussion. It is very helpful for our department in planning/budgeting for the future."

-Thomas Hart,
Dept. of Labor & Regulation

"I want to thank you again for the hard work and tremendous output. We are very pleased with the result!"

-Tom Valentine, Dept. of Revenue & Regulation

ADMINISTRATION

BIT Administration is responsible for budget and financial operations, coordination of security efforts, special projects and initiatives, legislative support and activities, strategic planning, project management and points-of-contact responsibilities, a system of mass communication services including public and press relations, marketing and social media, implementation and oversight of information and technology policies within state government. The Commissioner and Deputy Commissioner provide administration and direction to all areas and functions of BIT.

Significant Accomplishments

- Continued to enhance the technology roadmap preparation and tour processes. The Project Management Office, with the assistance of BIT Managers, worked to increase attendance of multiple levels of agency administration at roadmap meetings which allowed more in-depth discussions on technology concerns and questions.
- Over 720,000 performance tests and nearly 2 million signal strength tests were performed statewide to confirm service availability as part of the Department of Commerce's National Telecommunications and Information Administration's (NTIA) State Broadband Initiative (SBI). Updated online PDF and interactive maps continue to provide the most accurate representation of the state's broadband deployments.
- Continue to improve cyber security through daily operational reviews, participating in federal and regulatory audits, sharing information with state, federal and other partners and continued awareness and education of our clients through many outlets.
- The State Broadband Initiative equipment grant program completed the final round of awards, providing 44 institutions with over \$313,000 in equipment to support projects and improvements in their offices. Over the life of the program, grant recipients were provided \$1,027,000 in equipment; including recipient grant match, the total climbs to \$1,268,000 in technology projects at 154 separate locations. All equipment has been verified as installed and operational.
- An additional 40,000 homes and businesses were plotted, verified, and included in our geographic information system (GIS). This verified data supports a variety of activities including Department of Revenue tax collection efforts and the next-generation system of location-based 911 emergency services.
- Implemented quarterly government communications meetings for public information officers across state government. Topics included connecting people and government with the use of social media, email, and SMS; understanding and utilizing Google Analytics for state agencies; and strategic communications plans.
- Streamlined recruitment efforts and partnerships with post-secondary campuses as part of an effort to increase interest in BIT job opportunities in hopes of recruiting and retaining the best and brightest students in the state.

DATA CENTER

The Data Center consists of three programs: Database Administration, Technical Administration and Integration, and Systems and Operations. Database Administration includes application hosting, data access, backup and recovery procedures over a dozen enterprise class database systems. Technical Administration and Integration includes email services, web administration, mainframe, server and virtual server administration, and storage and account management. Systems and Operations includes data and disaster recovery, operational support and client system monitoring.

Significant Accomplishments

- Acquired and implemented a mobile device management solution to help BIT and agencies better manage the security of state data on over 2,200 mobile devices used by employees.
- Upgraded the physical servers underlying the state's private cloud (virtualized) infrastructure. Compared to the previous equipment, the new hardware has twice the processing performance and approximately three times the memory.
- Collaborated with a team of agency representatives to assist the state's imaging vendor in bringing their product in-line with state performance expectations.
- Successfully demonstrated compliance with Payment Card Industry (PCI) standards for the 3rd consecutive year. PCI governs the state's ability to perform online credit card transactions.
- Performed the 23rd successful annual mainframe disaster recovery drill.
- Collaborated with the Department of Public Safety Emergency Operations Committee to provide standard text to assist agencies incorporate the capabilities of the state's Disaster Recovery and Backup/Recovery systems into agency COOP planning.
- Enhanced and improved reliability of disaster recovery services through a series of technology upgrade projects:
 - Installed new backup/recovery software facilitating the migration of backups from tape to disk.
 - Increased storage capacity of the state's core disk storage system.
 - Moved to a new mainframe disk system that permits improved security of mainframe based data through complex encryption. This project also involved an update of the mainframe's high speed data transfer software.
- Began to offer SharePoint services to client agencies. SharePoint offers collaboration tools, workflow, document versioning, task tracking, file sharing, and other services supporting project collaboration and cooperation.
- Updated the thin client/application infrastructure to increase program adaptability and improve performance.

DATA CENTER CONTINUED

- Initiated a review of the technology contracts/RFP process with several clients. A number of improvements made the process more focused and responsive.
- Upgraded the state's Interactive Voice Response system to improve reliability.
- Enhanced door security access by adding the ability to print color images on the door access cards and providing each agency the opportunity to customize cards assigned to their employees.
- Continued efforts to negotiate a shared financial risk with vendors if data in their care is breached. This has been and will continue to be a challenging task.



DEVELOPMENT

The Division of Development is responsible for providing application development services to all executive branch agencies, constitutional offices and the Legislative Research Council (LRC). The main focus of the analysts and programmers is to evaluate the value, cost and risk of computerization possibilities, then apply application development technologies and best practices to help agency partners meet their goals. Application development services include: providing business analysis, application design, application development, testing, implementation, enhancements and support of information systems. These services are provided on a variety of platforms, including web-based, desktop, mainframe and AS400. Development also supports a number of vendor applications licensed by agencies.

Significant Accomplishments

- Streamlined the Big Game Licensing System and Small Game Licensing System into a Unified Licensing Application for the Department of Game, Fish, and Parks (GFP). The upgrade modernized the code and reduced costs for GFP by improving the check-out process.
- Improved customer service to the Department of Transportation (DOT) construction contractors by developing and launching an online contractor Q&A forum, allowing contractors to send questions to the DOT and receive answers in a fast, efficient manner, ensuring that all bidding parties are given the same information, and simplifying the issuance of Addenda.
- Upgraded 360 business applications to amend software versions to address security vulnerabilities associated with outdated technology.
- Developed a new Extraordinary Cost Fund Application for the Department of Education (DOE) allowing school districts to annually apply online for Extraordinary Cost funds utilizing an expanded set of accepted application types. The application permits DOE to approve funds granted to schools to better serve students with disabilities. The additional funds enable districts to more quickly acquire extra equipment or services.
- Completed the migration of 35 application-application interfaces improving performance and maintainability.
- Implemented the Boards and Commissions web application—simplifying searches by interested individuals seeking meeting agendas, dates and locations, Board and Commission member lists, archived meetings, etc.
- Completed two new Department of Agriculture systems: Log Finder, which improves utilization of hardwood and softwood, and Campfire Permit, which more efficiently allows property owners to apply for or renew a fireplace permit.
- Implemented a Legislative change that removes eye exam requirements when a citizen is renewing their Driver License through the online Department of Public Safety Driver License Renewal application.
- The Department of Public Safety Driver License Scheduler was rewritten to permit individuals to schedule appointments, via an online interface, for license renewal or scheduling a drive test. The new scheduler allows each traveling exam station the ability to customize the station's calendar.

DEVELOPMENT CONTINUED

- Enhanced the existing Disease Reporting application for the Department of Health (DOH) so that health-care providers can submit reports of sexually transmitted diseases online.
- Rewrote the DOT Cash Forecasting application incorporating new functionality which supports decision processes to optimize the amount of construction project work that can be accomplished given the available funding. DOT must continually forecast the year ending cash balance in order to avoid over expenditure and minimize under expenditure. The Cash Forecasting system accounts for variables such as fuel costs, fuel tax collection, and project delays.
- Converted four FoxPro systems for the Department of Environment and Natural Resources. The Property search for Spill Sites, Tanks Database, Recycling Facilities, and Dry Draw Location Notice applications were re-written with interactive geographic information system technology.

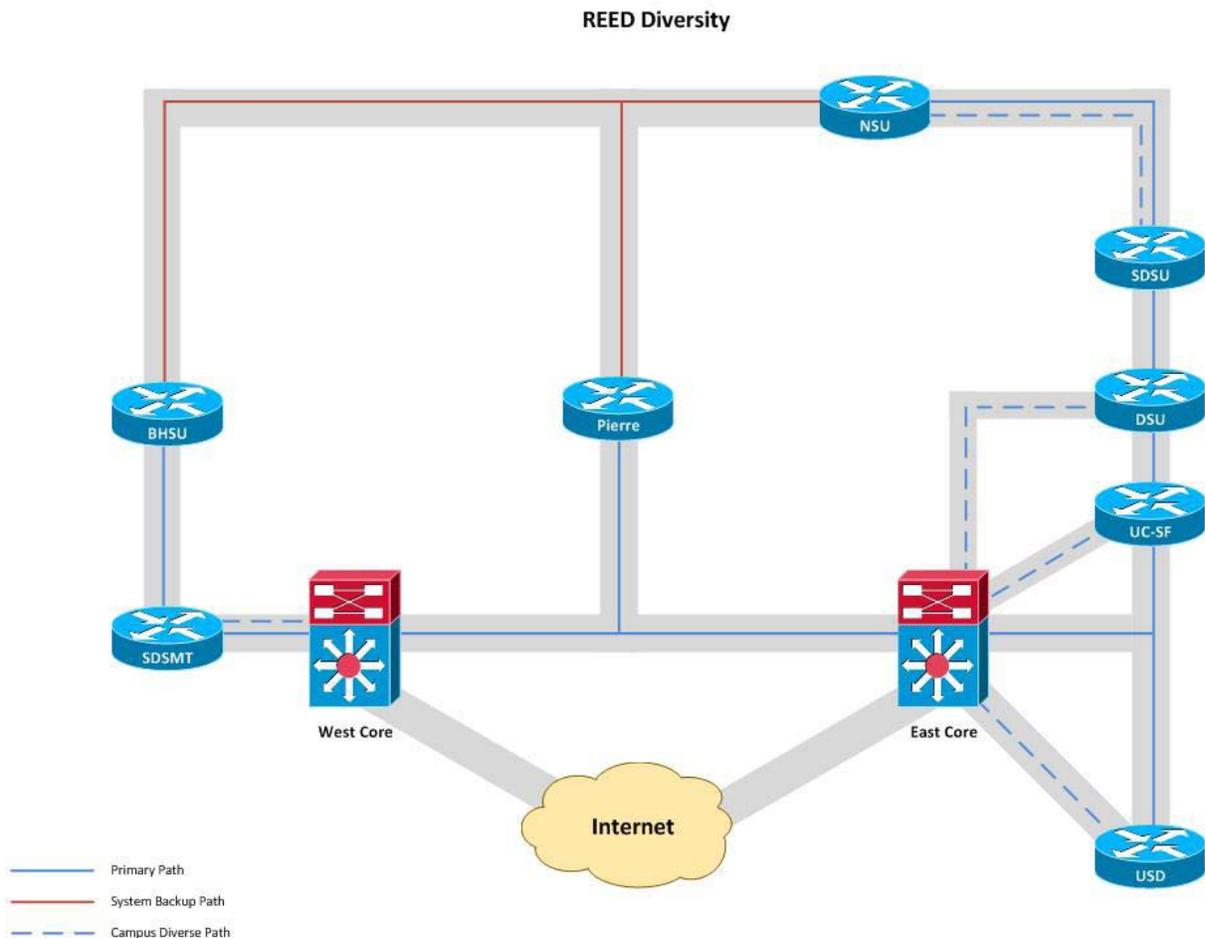


TELECOMMUNICATIONS

The Division of Telecommunications is responsible for providing the network and desktop support infrastructure as well as supporting all desktop and mobile users for state government. The division is comprised of LAN Services, Network Technologies and Engineering. LAN Services manages the state's personal computers, software and peripherals (printers, scanners). Network Technologies designs and administers communication services to state, county and city governments, K-12 and the Board of Regents (along with the public for video purposes only). Engineering provides telephone services (voicemail, long distance), video conferencing sites, state radio tower sites and electronics and South Dakota Public Broadcasting (SDPB) tower sites and electronics.

Significant Accomplishments

- Upgraded internet-facing technology to improve network throughput from 1Gbps to 10Gbps. Usage trends had suggested issues could occur in early 2015 without this upgrade.
- Implemented diverse fiber paths for five REED (Research, Education, and Economic Development) network sites. This involved connecting SDSU, USD, DSU, SDSM&T and University Center in Sioux Falls with a diverse 10 gigabit network connection. Diversity entailed separate telecommunication equipment, fiber optic cable, fiber routes, and in-building paths. These connections allow each campus to survive a last-mile fiber cut and continue network services to the campus. NSU and BHSU are scheduled for 2015 and 2016, respectively.



TELECOMMUNICATIONS CONTINUED

- Updated 47 K-12 school sites with a variety of bandwidth upgrades ranging from 100Mbps to 2Gbps.
- Partnered with the DOT, Division of Criminal Investigation, Department of Public Safety (DPS) and the local Police and Public Works departments to install a state-of-the-art video communications project. All the entities can view communications statewide and year-round.
- Upgraded over 800 clients statewide from Blackberrys to newer iPhones or Windows phones.
- Provided training to enhance the skills and knowledge of network infrastructure for LAN Services staff. This internal training allows BIT to provide quicker response times for our clients. Network Technologies, in conjunction with LAN Services, continues to provide network support on a daily basis.
- Streamlined the process for K-12 technologists to contact BIT and K-12 Data Center for support with a new ticketing system written by the K-12 Data Center. This system also allows district technology staff to implement their own internal ticket system.
- Implemented Internet egress-port filtering based on recommendations of an outside security consultant. This is the practice of monitoring and potentially restricting the outbound flow of data leaving the state network.
- Installed over 300 Voice over IP (VoIP) phones, bringing the total to over 1,000. This represents approximately 10% of the total state phone count. The VoIP technology permits the state to utilize data networks for voice communication and will eventually allow calls between connected sites to flow over the state wide area network.
- Provided enhanced coverage of public safety radio communications to McPherson County, northern Edmunds County, and western Brown County. This brings the total number of networked radio sites (two way radio service) to 58.
- Completed the upgrade to the public safety radio system—the network controller, site electronics, and recording equipment—which will ensure continued support for the radio system through 2025.
- Expanded the publicly accessible networks in the Capitol Building to further support connectivity of visitors.
- Updated the legacy video scheduling system to ensure that sites are connected accurately and securely. BIT maintains an extensive network of video conferencing equipment in K-12 schools, higher education facilities, and other publically accessible sites. These sites are networked through common video bridging equipment. The bridging equipment and associated scheduling system allow the system to accurately connect sites for meetings, extended classrooms, continuing education, and other purposes.

TELECOMMUNICATIONS CONTINUED

- Online assessment tests were successfully administered in K-12 districts during the 2013-2014 academic year. Tests were delivered to 70,540 students and 99.6% of these tests were completed. There were no issues related to Digital Dakota Network (DDN) infrastructure, though some local issues were identified. Additional funding for bandwidth upgrades authorized by legislature was instrumental in eliminating any network bottlenecks.
- Facilitated the annual K-12 I/T training program (DDN I/T) held on the campus of Dakota State University. The training offered to K-12 technologists is tailored for the software, hardware and architecture supported by DDN. DDN I/T is a longstanding, very successful partnership between BIT, Department of Education, K-12 Data Center, DSU, instructional staff and the K-12 schools. Ninety-four technicians representing eighty-three districts attended the 2014 DDN I/T session. Ninety-seven percent of participants rated the program outstanding!
- The DDN provided email for 20,834 educators and 56,353 students, processing 648 million messages.
- The staff's high rating of Good/Outstanding satisfaction continues with this year's K-12 survey results with a rating of 94.17%.



SOUTH DAKOTA PUBLIC BROADCASTING

South Dakota Public Broadcasting (SDPB) is a vital community resource producing and broadcasting high-quality, commercial-free programs and valuable community outreach projects that educate, enlighten and entertain. SDPB is the best source for South Dakota history, documentaries, in-depth news programming and conversations with thinkers and newsmakers. SDPB features news and information on stories that preserve the past, examine the present and look ahead to the future. Learn more about SDPB Television, SDPB Radio, SDPB Online Services, and SDPB Education and Outreach by visiting sdpb.org.

Significant Accomplishments

- Hired two new staff dedicated to digital, online and social media engagement. Goals were established with the primary goal of increasing traffic to the SDPB website. Website visits were up 23% during SDHSAA Football and Volleyball championships.
- Extended the agreement between SDPB and SDHSAA to provide broadcast coverage of high school state championships through 2020.

- Awarded the National Award for Outstanding Service from the National Federation of State High School Associations. The honor recognizes the network's coverage of high school achievement events and the opportunities offered for students to work on productions.



National Award for Outstanding Service

- Launched a year-long multi-media project, "Landscapes of South Dakota", in June of 2014 as a series running in tandem with the South Dakota 125th birthday celebrations—the series provided opportunities for audience participation through submission of photos documenting life in South Dakota on a specific day.

- Produced and broadcasted a record number of local production hours and content related to the 2014 election across television, radio and internet. This included high-profile live US Senate and Governor primary debates and live prime time general election debates for US House, US Senate and Governor.

- SDPB-TV marked an increase of 91% over 2012 in viewership of educational children's programming. Each week, SDPB TV serves an average of 38,000 children aged 2-11 with educational programming.

- Revitalized outreach and promotion through a number of events. SDPB organized, assisted, sponsored, promoted and participated in events across the state that drew over 25,000 people (not counting the 125,000 at JazzFest and uncounted thousands at SDHSAA events). Some of the events included Ira Glass (Sioux Falls), The Address presentations (Pierre, Yankton, Hill City), Glenn Miller Orchestra Concert (Rapid City), Neutrino Day (Lead), Storybook Land Festival (Aberdeen), Outdoor University (Rapid City & Sioux Falls), Outdoor Family Fest (Brookings), Roosevelt's screening (Rapid City), Rock Garden Tour performance (Spearfish), South Dakota Symphony Concert celebrating SD 125th (Sioux Falls), SD Festival of Books (Brookings & Sioux Falls), plus JazzFest (Sioux Falls).

EMPLOYEE RECOGNITION

On a quarterly basis, each division nominates an employee for bureau-wide recognition. The nominator identifies the employee's merits that motivated the nomination as well as additional background information.

2014 Employees of the Quarter

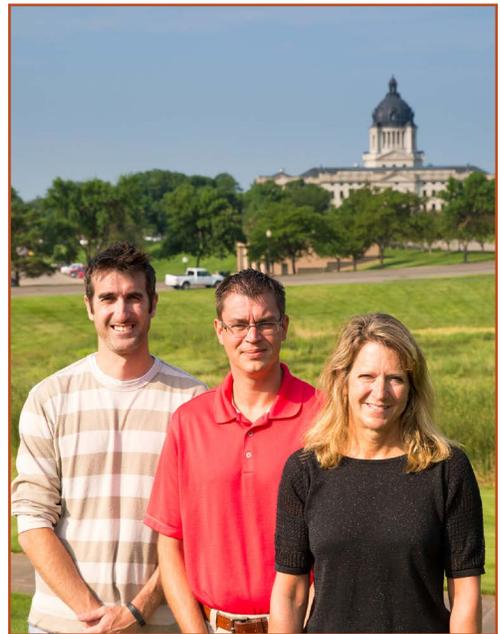
In honor of their outstanding performance, service, and dedication to BIT, state government and the citizens of South Dakota, we gladly recognized the following staff in 2014 for their high standards of excellence.

□ Craig DeTample, a Technology Engineer II, was the driving force behind developing and now running the state's Technology Review process. Other duties include providing data analysis, reporting on legislative committee meetings, assisting in financial tracking, and coordinating the BIT internal phases of the State Technology Roadmap process.

□ Chris Marsh manages the state's Geographic Information System (GIS) resources and works with state agencies to implement the use of GIS. In addition, he works with state, federal, local and county governments on sharing geographic information.

□ DJ Hausmann is a Technology Engineer III of the Technical Administration & Integration Team in the Data Center. His primary role is coordinating, implementing and presenting the State's first Microsoft SharePoint environment. DJ also performs physical infrastructure duties including rack mounting, wiring, inventory, and multiple levels of server administration.

□ Betty Hanson, a Technology Engineer II, stays busy ensuring software compliance, maintaining asset management and lifecycle on hardware and software across executive branch state agencies. Betty has also been instrumental in the testing and implementation of Microsoft Lync.



EMPLOYEE RECOGNITION CONTINUED

- Dan Maxfield, a valued member of the Integration Team, supports and maintains virtualization servers utilizing VMware—helping BIT move ever farther into the expanding world of virtualization.
- Norm Harrod, a Software Engineer III, works in all phases of information systems development—primarily on systems requiring internet and/or intranet web application front ends, database design, reports, and scheduled data migration packages.
- Jay Etzkorn is a Technology Engineer Manager I and manages day-to-day operations of DDN Video—550 endpoints which includes K-12, Technical Institutes, State Government, and State Universities. Scheduling, room design and installation, Core Network Bridging equipment, troubleshooting, and budget are his areas of responsibility.
- Tanya McDermott is a Software Engineer III for BIT Development Team 4. Her duties include working with vendors, contractors, State and Federal entities; DSS large project lead (Economic Assistance (EA) and Medicaid Management Information System (MMIS)), MMIS systems analyst for multiple sub-systems; and mentoring new analyst staff.
- Jan Newman, a Technology Engineer IV, focuses on project management and special projects such as Dept. of Education School and Nutrition Programs, South Dakota Broadband Initiative, Continuity of Operations, and Legislation Tracking.
- Andy Ogan, a Technology Engineer III, has successfully led the efforts of the South Dakota Broadband Initiative program, a \$7M+ program to inventory broadband across SD. Andy's duties include local and wide-area networking design and implementation for state government, K-12, and higher education. Other duties include research and analysis of network trends, technology reviews, and technical writing.



CHALLENGES AHEAD IN 2015 AND BEYOND

We all understand the importance of staying abreast of ever-evolving technology. Our staff continues to work collaboratively with our customers and partners to gather information on new potential technologies while weighing the benefits and risks of implementation. While challenging, this provides an opportunity to improve BIT and state systems and processes, better align our security measures to recommended norms, and ensure we recruit, develop and retain a highly skilled workforce to continue achieving our strategic goals.

- Succession planning, as with all enterprises, is a crucial responsibility within BIT. At the conclusion of FY14, nearly 10% of the existing BIT staff was retirement eligible. Within 5 years, that number jumps to 27% and leaps to 40% for the 10 year mark; both statistics exceeding state government averages. Those numbers create significant concern. As these key individuals leave, with them go their valuable knowledge, skills, leadership, institutional knowledge and experience. Recruiting qualified personnel is a major challenge that needs to be addressed—our ability to keep technology operational is dependent upon it. BIT leadership must consistently ensure institutional knowledge of projects, processes, and exceptions are documented for use by others.
- Cyber security broke out from trade publications and into the mainstream news media in 2014. Sony Entertainment, The Home Depot, JP Morgan Chase, Apple, and the state government of Montana are well-known American entities that suffered embarrassing cyber security incidents. Protecting state data is a 7x24x365 responsibility across legacy and mobile platforms. In 2015, we hope to better engage our agency partners in this responsibility. Cyber security is not a BIT-only challenge. All individuals with access to state technological resources share the responsibility of practicing cyber security hygiene. Enhanced technological tools, better training and analysis from experts, client education and continuing to evangelize adherence to best practices is our mission.

An adjunct challenge to the Bureau's cyber security goals is the increased expectation regarding industry compliance and federal audit rules. While this increased regulation generally brings greater restrictions and improvements in cyber security, the unfunded mandates generate fiscal concerns and occasionally create technological conflicts with proven practices.

The Internet of Things (IoT), connecting embedded computing devices, is becoming mainstream. These devices can participate in environmental monitoring, infrastructure management, industrial applications, energy management, health care, building automation and transportation systems. Because many of these devices run unmanaged operating systems and contain security vulnerabilities, BIT must develop tactics around providing this service in a secure and reliable manner.

- The processes and procedures that support our applications development environment are a priority in 2015. Design and architecture, peer code reviews and documentation are key steps in the application lifecycle management. Those areas must be managed on a regular basis to ensure we deliver high performing systems which upon implementation can be effectively maintained and supported into the future. As the I/T project workload increases so does the complexity of creating and managing a resource allocation plan across projects. This involves scheduling people with varied skills so that they are available at the appropriate time in the project schedule and ensuring technological assets are delivered on-time. This is further complicated when a new unplanned project with an immediate need arrives to be shoehorned into the allocation plan, when a project expands greatly in scope or integrating new state/federal mandates into an ongoing project.

- South Dakota Public Broadcasting (SDPB) faces the on-going challenge of capital equipment replacement and maintenance of significant infrastructure. A remote production vehicle and tower replacements are immediate needs to address.

CHALLENGES CONTINUED

- The reliance, and dependence, on high performing, highly available systems increases annually. BIT has significant goals in 2015 to ensure clients are able to continue providing vital services to the public when logistical problems arise. We continue to establish redundant networking, compute and storage facilities to provide fail-over services.
- Project Management is an integral component of successful Information Technology projects. In 2015, agencies will see modifications to the manner and methods employed by BIT to manage the project portfolio while more efficiently utilizing our time and that of our clients.
- Asset management was an important endeavor in 2014, and we learned many lessons from our research and evaluations. In 2015, we will begin to implement projects and agencies should soon begin to see significant progress in this area.
- Nearly all of our VoIP rollout to date has been tied to end-of-life key systems, remodel/rewire projects, and required services (such as call centers) that are not adequately served by legacy Centrex services. We've learned from these projects that we need to more formally engage with client agencies on long range planning for timelines and budget impacts.
- Our clients constantly seek to improve services to constituent clients through improved technology. Some of the important agency initiatives include updating and/or replacing applications regarding:
 - Driver's licensing and online testing systems;
 - Mobility solutions for SD Works Self Service, Work Search Log, verification & violation checking for sporting game licenses, Lottery inventory;
 - Submitting of data electronically for various federal programs;
 - Implementing the 10th revision of the Internal Classification of Disease (ICD-10) standards;
 - Rewriting the State Treatment Activity Reporting System (STARS);
 - Integrate local transportation program data and functionality for the Concept to Contract system;
 - Establish the plan and methodology for the eligibility system regarding Supplemental Nutrition Assistance Program (SNAP), Temporary Assistance for Needy Families (TANF) and Medical program services;
 - Rewrite contractor prequalification system;
 - Establish License plates on demand;
 - Implement the Statewide Automated Victim Information and Notification system;
 - Ensure compliance to the Uniform Interstate Family Support Act;
 - Survey System of Community Adjustment Training Centers;
 - Electronic filing of all tax returns;
 - E-statements of reporting for Lottery establishments;
 - State budgeting system replacement;
 - Improved member management of the SD Retirement System;
 - Implementing Workforce Management at the Human Services Center and South Dakota Developmental Center;
 - Electronic Medical Records for Developmental Center and Correctional Health;
 - Procurement Management across state government.



bit.sd.gov | blog.bit.sd.gov

