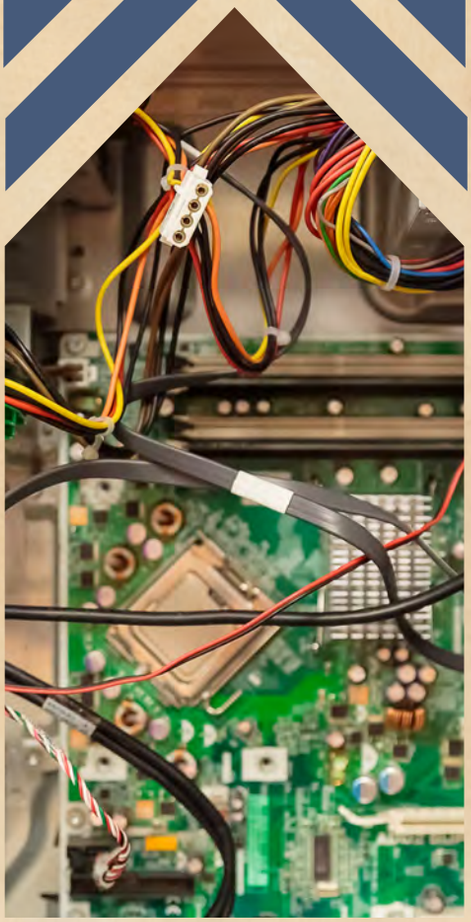
ANNUAL REPORT

2015

Bureau of Information &Telecommunications



Message from the Commissioner

Welcome to the 2015 edition of the Annual Report from the Bureau of Information and Telecommunications. In this version, we've slightly deviated from our past practice of providing snippets of Bureau accomplishments and are trying to provide more information regarding a smaller subset of projects that highlight the creativity, industry, technical skill, and customer service of Bureau employees. As agencies continue the trend of utilizing technology to deliver new or improved services to their clients in efficient, cost effective ways, the Bureau is challenged to improve internal operations and practices.

While the Bureau's software and hardware assets permit us to deliver quality service to client agencies, it is the efforts of our employees to manage, upgrade, plan, migrate and integrate these assets that result in the services agencies receive. This publication notes the internal recognition accorded to Bureau staff through our Employee of the Quarter program and a sampling of the unsolicited accolades received from staff in client agencies recognizing the contribution of individual or collective Bureau employees who assisted in the resolution of an agency issue.

I invite you to take a few minutes to read through this rather slight document. If something should now or later inspire you to consider how changes in the way your agency embraces technology could improve services to your clients or interact with other agencies, please contact us. While we may not have "operators standing by" as suggested by the shopping channel shills, you will find an open and welcoming audience to consider your proposal for network improvements, application development, software acquisitions, migrating phones to VoIP, contracted technical service, or any number of other technology services.

Finally, I encourage you to consider using the services of the Bureau's SDPB Division to stream your public meetings or promotional events. Whether convened to accept comments on proposed agency rules, to solicit comments on proposals or recommendations for action, or the regularly scheduled business meeting of an agency board or commission, it is likely the SDPB staff can help you broaden the audience. Meetings scheduled into certain sites, equipped to support audio or video streaming, can be supported quite easily and inexpensively.

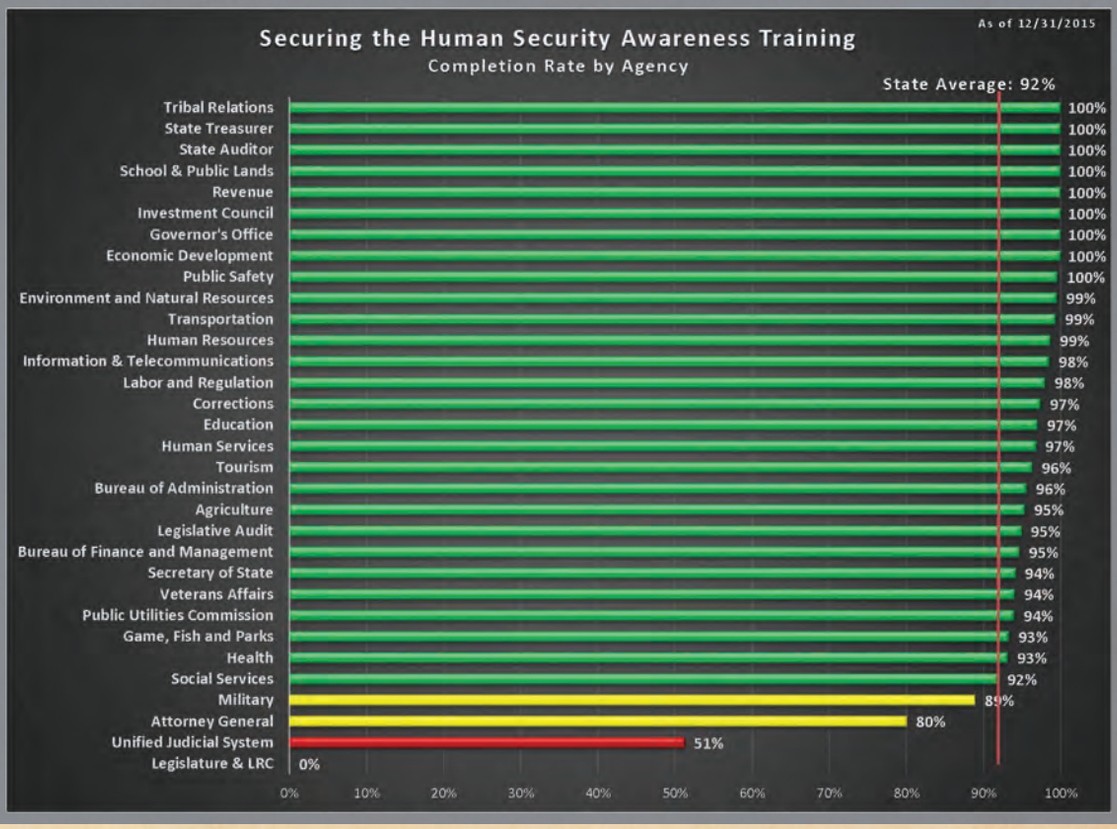
Thank You

David

Cyber Security

Cyber security, the protection of sensitive or private data, continues to be one of BIT's most important and challenging services. Cyber security is a complex issue -- identifying vulnerabilities, mitigating risks, updating or replacing legacy applications, adapting to the increasing frequency of attacks and balancing the human element are mandatory components of a robust cyber security program.

Industry breach reports vary on the exact percentage, but it is a common understanding that the human element is the weakest yet most important component in the mix of cyber security services. In 2015 BIT invested a significant effort educating employees on best practices to follow to safely utilize the state's technology assets. These practices are essential not only at our work locations but must be ingrained in our personal use of technology. The training and education efforts were centered around an online course, *Securing the Human,* which provided a series of video-based modules requiring an investment ranging from 60 – 90 minutes depending on the content selected by the agency. The Executive Branch, constitutional offices and Judicial Branch have been great partners in this effort and we extend our thanks and appreciation to the managers and supervisors who assisted in achieving high completion rates for this class. The graph depicts the completion rate for the class by agency.



2015 also saw the establishment of the Executive Working Group on Cyber Security. Formed on recommendations eminating from the *National Governor's Association Briefing on Cybersecurity*, the group includes representatives from 19 different offices. The goal of the group is to educate and inform senior executives on important cyber security issues in addition to reviewing and discussing policy.

Customer Testimonies

"I wanted to let you know how much I appreciated your dedication and patience in getting this scan taken care of for DPS/SDHP/State Radio and this email just brushes the surface of how complicated this process was and how much your efforts helped in that process."
- Maria King (DPS)

"DOR feels strongly that technology is a strong way for us to engage and serve our customers. The BIT development team is a great partner for us in achieving this goal. We are very appreciative of the quality of work and service from our development team."
– Department of Revenue Secretary, Andy Gerlach

"I can't tell you how thankful I am for our partnership with the K-12 data center as well as BIT services that are provided to both state government and to schools... The infrastructure as well as the breadth of services provided across our districts is truly unprecedented across the country and is admired by many other states. This is due to the vision and leadership within your agency. I am thankful we are able to be a partner in this work."
– Department of Education Secretary, Melody Schopp

"God Bless you!!!!!! Thank you!!!! I just went out and looked at it [DVA web page] and it is great!!!!!!!! Appreciate all that BIT does to assist us."
– Audry Ricketts (DVA)

"THANK YOU for the presentations to the House and Senate Ag and Natural Resource Committees this morning. Your narratives were excellent, your demonstrations well-rehearsed, and BIT support was there when we needed it. Even with the one glitch, members of both committees understood what we are trying to do and why and seemed to be very receptive. You all hit home runs."
– Department of Environment & Natural Resources Secretary, Steve Pirner

"The other thing I want to let your department know is our App for phones is second to none, they did an awesome job with it. I hunt from here to Arizona and no other state had what we have when it comes to mobile apps. Kudos to you guys. And thanks again."
– Chris Hull (GFP)

"Tony is typically the BIT support person I work with when I have issues and he is stellar. He is always responsive and helpful. He gives great customer service and it is appreciated!! I fill out the surveys but I also wanted you to directly know- great guy, the state is lucky to have him on our team."
– Jill Kruger (BHR)

Customer Testimonies

"You are so awesome and helpful! I am always thankful when I see your name!"
– **Deb Halling (DLR)**

"Great job on your efficient work and finding the situation. You are all doing an outstanding job responding to our needs and to the SOS for for working through all of this!"
– **Secretary of State, Shantel Krebs**

"This is why I love working with you guys. Thanks for all you do!"
– **Dawn Hill (DPS)**

"I want to thank you all for putting in your time and effort on Friday night- so we could quickly respond to getting nsome extra IDs added for DCI and DPS for their work in Sturgis. Thanks for recognizing this and providing us outstanding service. It is most appreciated."
– **Tom Valentine (DOR)**

"Thank you again for always taking the time to help us out and never acting like we are a bother. I know you are busy and your time is limited so the fact that you take the time to help us is very much appreciated."
– **Virginia Hanson (DSS)**

"I am so appreciative of all the work we do get done together. Not all DSS divisions have such a great working relationship with their BIT counterparts. Glad we all work so well together."
– **Tonia Bogue (DSS)**

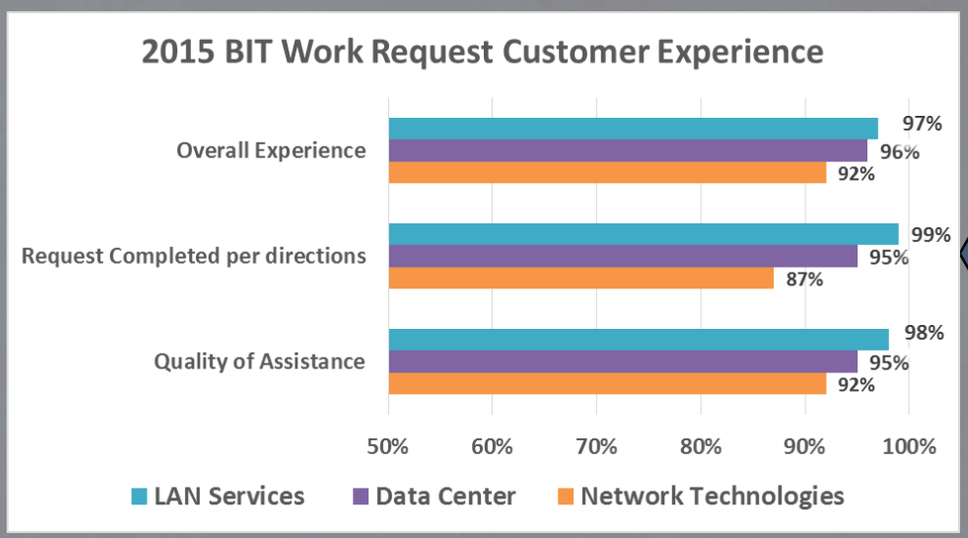
"Thank you so much for your help this afternoon. Have you personally come to our office to figure out what was wrong was above and beyond. You are the best."
- **Deputy Secretary of State, Teresa Bray**

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, and 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.

Sustainability of Customer Service

To reinforce a commitment to customer service, BIT staff attended a Bureau-wide customer service course in April of 2015. Two live presentation sessions were held in Pierre and shared via two-way video to 8 sites around the state. This allowed 334 BIT staff to attend and participate in this event. Highlights from the training include the ability to have an effect on people regardless of title; communicate with positive language; acknowledge emotions and frustrations; utilize analogies to help with understanding and also use humor when appropriate. As the provider of state technology services we understand the need for quality customer service skills by our staff. These types of training events coupled with routine universal assessments of requests clients submit to BIT are an important component of service improvement efforts. The graph below indicates that customers rated their work request experience as either excellent or good.



Administration

Technology Roadmap

We continue to enhance the technology roadmap preparation and tour processes. During each of the Spring and Fall tours, BIT staff met with 32 agencies to discuss technology topics and technology needs of the agencies.

Employee recruiting/retention efforts

Recruiting talented, motivated employees is an ongoing challenge for the Bureau. Developers with skills used widely with legacy mainframe application but no longer included in most academic programs are even more difficult to recruit. Many other state agencies are similarly challenged when recruiting to fill science related positions. Nevertheless, there are many positive reasons to work for State government, and Bureau recruiters have polished their presentation to potential candidates to emphasize these.

Recruiters frequently and routinely visit Universities and Technical Schools to interact with students to make them aware of the great opportunities offered by a career with the state and to proactively interview any who may be interested in applying for a position. The Bureau invests time in coaching and mentoring new staff so it is important that we continually maintain a challenging work environment with opportunities for staff to learn and grow. Our best recruiting materials are the comments from new employees to friends still on campus describing their challenging and interesting work assignments.

We have increased the number of interns we hire each summer. Many interns have later accepted full time positions with us because we work hard to provide them with meaningful work experiences during their internship.

We allow qualified staff to work from remote locations, which has increased retention rates. While remote management can be challenging, we continue to improve our efforts in this area. Technologies such as Skype assist with communications when remote staff are working with peers.

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 and 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. System and Opera-tions includes data and disaster recovery, operational support and client system monitoring. Major accomplishments during 2015 include:

Establish Disaster Recovery in State:
In 2015, BIT implemented a change to expand internal cloud services. The project focused on installing the key components for an improved and more robust internal Cloud Service. Agency business needs continue to become more dependent on technology and the expansion of internal cloud services to multiple sites allows for planned rapid recovery in the event of a disaster and provides greater efficiencies in hardware by dual purposing servers to provide services for both State government and K12.

Key features implemented in 2015 were:
- Installed server infrastructure in a remote location to host production services in the event of a disaster
- Utilized "replication" for storage between sites to permit "fast failover" – returning systems to service in the event of a disaster at the primary data center
- Upgraded web load balancer infrastructure at both locations – these are the systems that spread workload across multiple servers for maximum efficiency
- Implemented de-duplication and compression technologies to improve storage efficiencies

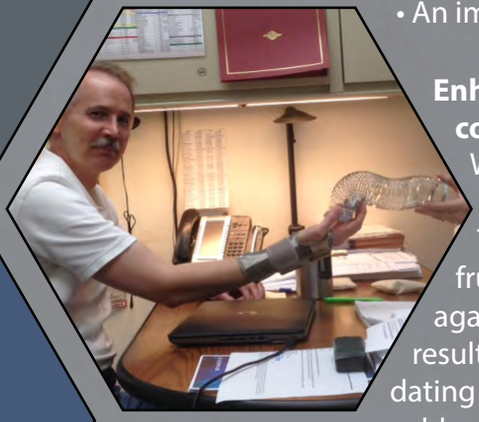
In the first half of 2016, we anticipate adding the following features:
- Completing the testing of automated failover of services to the disaster recovery site
- Initiating the process of generating a list of applica-tions to be included in the recovery plan
- Implementation of failover services for K12
- Completing the implementation of the replacement web load balancers to take full advantage of the new expanded cloud service
- Completing the migration of agency file storage to the rede-signed data storage service

Data Center

Migration of email:
In 2015, we upgraded the State email system to the most recent version. There are approximately 8,300 State accounts, all of which were successfully migrated to the new system. The most noticeable change encountered by email users was in the improved interface when accessing email through a web browser.

Enhancement of ListServ services:
Another email-related communication service available to BIT clients is bulk emailing via a ListServ. In 2015, this application was upgraded to support many new features and options. Responses to these new features and options have been overwhelmingly positive and have resulted in more than a 50% increase in usage of the new system. Some of the new features and options available include:

- Enriched content can be distributed, with many template options available and easier ways to post
- Options to better track the effectiveness of the emails you send, including reporting and tracking of use
- Ability to distribute to many entities, including non-state email accounts
- Better management of older/archive messages
- An improved management interface for use by agency staff



Enhancements/Improvements to the technology RFP and contracting process:
Working with a team of 21 clients, BIT completed an extensive rewrite of the Standard State Technology Contract Terms template. Contracts and RFPs can be tedious and frustrating, but the priority of timeliness must be balanced against a comprehensive and supportable service/product. The result makes the technology contract template more accommodating to agency needs by better explaining technology issues to enable agencies to make informed business decisions for technology acquisitions. This work spanned 19 months and we are grateful for all the positive feedback.

Development

The Division of Development is responsible for providing application development services to all executive branch agencies and constitutional offices. 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.

New Driver License system:
Replacing a venerable, but somewhat dated 1984 era mainframe application, a new driver license system (SDDrivers) was placed into production January 4, 2016. A collaboration of the Bureau of Information and Telecommunications and the Department of Public Safety, the new application was developed as a customer-centric transaction-based. The new system features a streamlined online renewal application process, automated fee calculations, user access to view all customer pictures within the application, and a Driver Access portal permitting external agencies to view Driver License information and picture history. The application also features security features relating to Personally Identifiable Information (PII), and restrictions related to SSN's with a full audit history of all changes made to customer and Driver License information. On-demand online reports provide the users with the ability to view data in real-time. An interface with UJS data permits DPS to quickly determine if a conviction is sufficiently grave to cause the department to withdraw or revoke a license. This reduces the number of printed reports resulting in savings in time, money, and resources. Performance monitoring metrics were also installed to monitor response times and provide enhanced support. The cost for BIT to build the customized solution was less than 1.5 million dollars; prior to initiating the project with BIT, DPS had received a proposal for a vendor constructed product that would have cost between 5 million and 10 million dollars.

Migration of 18 DENR FoxPro applications and incorporation of GIS capabilities:
The Bureau continues its partnership with the Department of Environment and Natural Resources to convert 37 internally developed FoxPro applications to .Net applications that incorporate GIS functionality. Eight applications had been successfully converted in previous years. In 2015, an additional 11 applications were fully converted and another 7 were partially converted. These systems provide DENR newer technology methods for efficient processing, and easier customer/user interaction with the data. Users are treated to enhanced visual representation of data through efforts to incorporate GIS into the applications. These systems also provide easier online report capabilities, immediate online access to view documents, email creation within the applications, statistical graphs and diagrams, and some interaction with iOS mobile devices.

Development

The new systems save DENR time, money, and resources by providing immediate availability of information and documents to end users. It has resulted in fewer phone calls and greatly reduced retrieval/mailing of documents. In addition to visual, efficient, user friendly systems, the conversion of these applications has also provided support stability to DENR by migrating these systems from an unsupported platform.

Process improvement efforts, Agile development investigation:
2015 was a year of many changes for the Development Division. Standards across Development had become dated and even differed between teams! Past inattentiveness to staff development caused technical skills to lag. The normal approach to application development was traditional Waterfall, a methodology which too frequently fails due to lack of engagement between the client and the development team.

Several process improvement efforts were undertaken to address these deficiencies. New standards addressing Application Documentation, Application Architecture Review, Peer Code Reviews, and Project Management were defined and implemented uniformly across Development. A targeted mentoring engagement with a vendor was used to expose a cohort of seven developers, one from each team, to new application development skills. The knowledge gained by the cohort of developers is now being shared with their "home teams"; they have become catalysts for change. This project also exposed the cohort to Agile practices, Team Foundation Studio (TFS), and new Application Lifecycle Management (ALM) practices. Agile development methodologies are accelerated, iterative development processes featuring frequent client engagement and monthly, weekly and even daily deliverables based on priority requirements. The principles of collaboration, continuous integration, refactoring and promoting ownership are emphasized. While time will be required to fully instantiate iterative development practices, we are well on our way to improve and modernize our development methodology. Improving processes in Development is an iterative, unending effort.

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.

SDPB Fiscal

In the Fiscal Year 2015 (July 1, 2014 to June 30, 2015) SDPB had their best fundraising year to date with just under $3 million dollars raised from over 150 corporations and 11,006 families.

Because of this involvement, the Friends of SDPB were able to:

i. Transfer $1,373,579 to the SDPB Network for programming costs.
ii. Substantially grow the SDPB Endowment with additions of $610,749.
iii. Assist the SDPB Network with the financing for the new SDPB Mobile Video Production Vehicle.

SDPB Television

SDPB Television reached two all-time highs this year: airing the highest number of hours of local content and achieving a record number of broadcasting partnerships in 2015.

Throughout the year, videographers, producers and engineers in SDPB's television department created original, South Dakota-focused programming that simply can't be found anywhere else. SDPB Broadcasted over 900 hours of local programming into serve the informational, educational, and quality entertainment needs of South Dakotans.

In addition to showcasing events, people, and public affairs from around the state on the news magazine **Dakota Life** and **SD Focus**, SDPB chronicled the surprisingly scandalous history of establishing county seats and erecting courthouses in the documentary **Temples of Justice**, which garnered a Midwest Emmy nomination. SDPB also produced **Black Hills Metamorphosis**, the second of two documentaries that closely examine the pine beetle epidemic presently devastating parts of the Black Hills.

South Dakota Public Broadcasting

In fall, SDPB-TV received an award from the National Educational Telecommunications Association (NETA) for **Putting History to Work: The Economics of Historic Preservation**, produced in partnership with the South Dakota State Historical Society.

Additionally, SDPB received six nominations for the 2015 Upper Midwest Regional Emmy Awards. These nominations include:

- Temples of Justice [Documentary/Historical]
- Dakota Life [Magazine]
- A Day in South Dakota [Magazine]
- Inspiring Dreams [Promotion: Program - Single Spot]
- Landscapes of South Dakota [Promotion: Program - Single Spot]
- Winning Team [Sports - Program Story]

SDPB Radio

Like their counterparts in television, the staff of SDPB Radio worked throughout the year to provide quality news, public affairs and arts programming for South Dakotans via airwaves and Internet. Hundreds of hours of local music - from South Dakota and Black Hills symphonies to JazzFest in Sioux Falls to Spearfish "banjo babe" Jami Lynn - were recorded and aired.

SDPB Audience Growth

Reports from Nielsen rating service document the steady growth in the SDPB television audience countering a trend of declining audience for most PBS and many commercial stations. While audience growth has oscillated, the trend has been steadily upward. In November 2015, Nielsen reported 142,287 separate individuals (rating services label this measure the total cumulative audience) tuned in and watched programming on the SDPB main channel. Total cumulative audience measures for preceding years were: 113,190 in 2014, 135,900 in 2013, 130,000 in 2012, and 110,000 in 2011. Growth of SDPB audience has resulted from high quality local programming, higher profile PBS offerings, improved promotion efforts by SDPB, and a mutually beneficial relationship with SDHSAA to broadcast and stream high school activities.

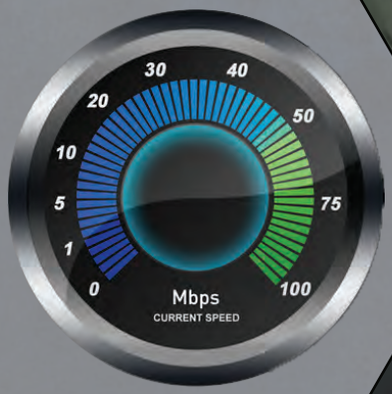
Telecommunications

The Division of Telecommunications is responsible for providing the network and desktop support infrastructure as well as supporting all desktop and mobile users. The division is comprised of LAN Services, Network Technologies and Engineering. LAN Services manages personal computers, software and peripherals. Network Technologies designs and administers communication services to state, county and city governments, K12 and the Board of Regents. Engineering provides telephone services, video conferencing sites, state radio tower sites and electronics and South Dakota Public Broadcasting (SDPB) tower sites and electronics.

Network Improvement

The computer networks operated by the Bureau serve the diverse and challenging needs of the executive and judicial branches of government, public Higher Education, and public K12 students and faculty. Reliability and security are paramount concerns given South Dakota's critical dependence on computers and the sensitive nature of the data they contain. It is challenging to operate and maintain current network while concurrently engineering and planning investments in the technologies that will deliver tomorrow's network connectivity.

The Bureau monitors, tracks, and logs the utilization and performance of all computer networks on a minute-by-minute basis. This immense pool of data forms the foundation of data-driven decisions to increase telecommunications capacity across our network. By analyzing historical trends, soliciting client feedback, reviewing technology purchases and requested upgrades, and monitoring emerging industry changes, Bureau staff are able to forecast, design, engineer, and size networks to meet our clients' ever increasing consumption trends. By joining State, K12, and Higher Education networks under one umbrella, we achieve economies-of-scale, driving costs down while optimizing performance.



License Compliance

To assist state agencies better track computer devices and ensure software license compliance, the Bureau initiated an Information Technology Asset Management (ITAM) project. Licensing and utilizing an ITAM system, the Bureau is able to identify technology devices connected to the network and interrogate computers to identify software products installed on each device. This information is compared with software purchasing to determine software compliance. The first phase of the ITAM project focused on compliance of the State's most popular software. The project has a true statewide scope as agencies were able to share licenses, allowing the state to reach full compliance at the end of December. Being proactive with license compliance will assist in future software license audits.

Telecommunications

Skype for Business
State government in South Dakota has been utilizing contracted collaboration services for almost a decade. Driven initially by the Department of Education to find a more efficient means of curriculum development, we have offered the LiveMeeting, Lync, and now the Skype for Business platform to state personnel for purposes of desktop sharing for collaboration and cost/travel avoidance. Skype for Business has become an integral part of operations for many of our work force; with the service averaging 150,000 minutes per month.

Voice Over Internet Protocol (VoIP)
The current analog Public Switched Telephone Network (PSTN) has been in use for over 100 years and reached technical maturity in the 1980's. For the past 20 years, voice services over data networks, or VoIP, has been in development and deployment worldwide. Over the last 10 years, VoIP has been a dominating presence in the industry, with regulatory and market pressure ensuring this is our future voice communications. The State of South Dakota implemented our first VoIP system with the Department of Labor office/call center in 2010, and have been upgrading obsolete facility phone systems with this technology as policy since. There are currently 1,210 devices on line at this point out of a total potential of 8,568 state (non-Regent) lines. Future plans include a continuing rollout of these devices during remodels or facility system obsolescence, ultimately with a goal of networking all devices to allow local calling statewide.

Employee Recognition

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

Kristina Cottingham, a Software Engineer II for Development Team 2, has been assigned the project lead on several technology upgrade projects, such as the AG40 Campfire Database system for the Department of Agriculture Wildland Fire Division, where she has received praise from clients and coworkers alike. Kristina has excellent organization as well as communication skills, enabling her to succeed in a multitude of team environments.

Ki Weingart serves as a Technology Engineer for BIT and has worked for the State of South Dakota helping to satisfy our clients' needs for over 36 years! Over his years with the state, Ki has supported every mainframe disaster recovery drill, many trouble-shooting events, and has received countless late night calls from Operators requesting him to fix Abends after hours. Ki is a positive, helpful team player who is always willing to assist in any way he can.

Carrie Tschetter, a member of the Project Management Office and Point of Contact for four state government agencies, is known for her high standards of excellence in project management and customer advocacy. Carrie has taken an active role in project meetings for her assigned state agencies and has volunteered herself to manage a few projects when assistance was needed. With twenty prior years of service to the State of South Dakota, Carrie has been an extraordinary asset to the agency as a whole.

Nic Penning is a Technology Engineer for BIT's security team. He spends a majority of his time analyzing information security threats which aids in hardening the defense of the State of South Dakota's network infrastructure. Nic has been involved in statewide vulnerability scanning, which is part of a larger project to map out the security vulnerabilities statewide and put together a more comprehensive plan to reduce the attack surface. Nic's passion for security is an inspiration to many. He is a valued member BIT's security team.

Alan Peterson served as a Technology Engineer IV for BIT. He was with the state for 45 years and with BIT for 39 of those years before retiring in December. Alan started off in what was the state's first Database Management System. Some of that team eventually formed a Database Administration Group supporting the new technology, with Alan as one of the founding members. He was definitely a team player and his years of experience and skills made him a valuable member of the BIT team.

Employee Recognition

Elise Bunkers works for the development division of BIT as a Software Engineer II. Elise created BIT's Application Portfolio management system, which is used to track information about BIT's 800+ custom applications. In addition she was one of the first BIT developers to incorporate responsive web pages, enabling the displayed website to auto-resize depending on the viewing device. Elise has been a dynamic player in many major projects, which can be attributed to her high standard of excellence.

Randy Sullivan has been with state government for 39 years and has been a member of the BIT Finance Team since 1996. He serves as a Purchasing Agent, primarily in charge of coordinating technological, broadcasting and radio equipment purchases for all divisions of BIT. Randy's software and hardware data for BIT purchases have been extremely instrumental in resolving some of the issues that have been encountered. His versatile knowledge of information has enabled him to succeed in a variety of different tasks, making him a vital member to not only the Finance Team, but BIT as a whole.

Miguel Penaranda was selected from a pool of great candidates in 2005 when BIT began looking for someone with creative talent, graphics skills and great website design abilities. Miguel quickly developed an outstanding rapport with agency staff and webmasters, working with them to solve their development problems and improve their websites. Currently Miguel serves as a Security Engineer for BIT and was nominated for EOQ based on a request from the Department of Public Safety. This request is unique in the case that an agency had been so impressed with Miguel's outstanding service that they felt compelled to request that he be recognized for it.

Todd Mahoney is a Technology Engineer IV for BIT. One of Todd's passions is automating system-level work and tuning. Together with his BIT Imaging partner, Ken Hutchinson, he led the recently completed detailed integrity review of 12.3 terabytes of imaging data as part of the migration to the newest version of the software. Todd's years of work as an imaging software reseller and support technologist have put him in good standing to support his team in speaking up about the value and effective use of imaging at the state. These qualities among many others make Todd a valued member of BIT and the Data Center.

Jordan Block started as an intern with BIT Development team 2 in May and was hired as a full time Software Engineer after two months of interning. Since joining BIT in May, Jordan has been working on the DENR 37 FoxPro System rewrite project and has excelled at everything he has been working on within that project. Prior to the 2015 calendar year, the project previously had eight systems completed in a course of two years. Within the 2015 calendar year alone, there is projected to be 17 new systems completed. Jordan's advanced skillset has made him successful in every project he has encountered.

Linda Plett has been with BIT for 19 years and currently serves as a Technology Engineer for the IT Asset Management (ITAM) team. Linda does most of the backend database work and works with state agencies by presenting to them their installed software. She has been very proactive in working with the vendor to pass along ideas and resolve issues that have arisen with their software. Linda has the ability to light up any room she walks into, a quality that carries over into the customer service she provides to agencies. Linda truly does make BIT shine a little brighter.

Challenges Ahead

While the Bureau faces challenges, we face them with optimism that we will develop solutions to these and others that arise. Bureau employees embody an eagerness to utilize technology to resolve our clients' business problems or to assist them to more effectively and efficiently deliver services. Properly managed and channeled, creativity, attention to detail, and technical skill yields cost effective, quality, and innovative solutions for our clients.

1. **Cyber Security.** While the number of attacks and threats has decreased in some areas, increases have been seen in many other areas. The Bureau sees challenges in continuously educating staff to mitigate emerging risks. Scanning new and updated applications prior to moving to production has been a standard practice for Bureau developed applications for many years. We need to expand this practice to regularly scan all production applications in 2016. We also need to ensure this practice is extended to all third party / vendor business applications as well. As always, the Bureau will continue efforts to educate all state employees of the best practices for cyber security.

2. **Windows 10 and Office 365.** Microsoft, similar to other providers of applications used across the enterprise, is migrating their business model to incorporate subscription-based licensing. The Bureau has been collaborating with Microsoft to define a plan that will allow the state to move forward with subscription-based licensing without unduly burdening agency budgets. Expect to see more on this topic in the coming months, particularly associated with the 2016 Spring Roadmap discussions.

3. **Broadcast facility maintenance.** The Bureau is responsible for the broadcast facilities (towers and equipment) used by State Radio and SDPB. Organizations recruiting staff for these functions are facing challenges nationwide.

4. Continuing the recently initiated **process improvement** and development modernization processes within the Development division is a necessity. Our initial efforts have achieved positive results and provide motivation to move forward.

5. **Recruiting and retaining** employees in all Divisions is a challenge. Our success appears to wax and wane with the national economy. A properly constructed Career Banding program can help with retention but additional flexibility and more responsiveness to regional markets is imperative.

6. The next phase of the **ITAM project** will examine other software products along with our most popular vendor. The ITAM team will look at products that have a significant number of installs statewide and/or have a high dollar value. The list of other software products is being gathered from several sources – Agency Point of Contacts, agency contacts and LAN Services technicians.

7. **Internal improvements.** A survey of Bureau employees suggests the vast majority are loyal to BIT and our mission. They see themselves and their immediate peers as engaged in delivering quality services to Bureau clients. Survey results also suggest a need to improve communication between Divisions and among teams within each Division. The Bureau is embarking on several new initiatives to improve our communication practices.

1

GOAL ONE:
Provide a Reliable, Secure & Modern Infrastructure

technology assets services well-designed
optimal service delivery
secure computing high performing Centralization
collaboration policies & practices standardization communications
security
ensure
efficiently leverage investments
agile & reliable
dependable secure data
maintain public trust

2

GOAL TWO:
Deliver Valued Services at Economical Costs

Develop projects services cost-effective
clients
innovative
collaboration efficient project management
customized software solutions cooperation
partnership productive relationships solutions
People should be online, not waiting in line.

3

GOAL THREE:
Build and Retain a Highly Skilled Workforce

effectiveness
professional growth
career enhance & improve
highly qualified workforce
foster
training
individual innovation attract
productivity & satisfaction
career skills improve retain
tools
workforce

Keeping In Touch

bit.sd.gov

blog.bit.sd.gov

BIT.HelpDesk@state.sd.us

605.773.4357

ReportSpam@state.sd.us

bit_sd

Produced by the South Dakota Bureau of Information and Telecommunications
200 copies | $5.90 | Pryntcomm