Information Technology Services

ANNUAL REPORT 2011-2012
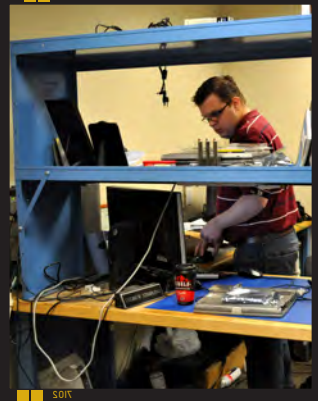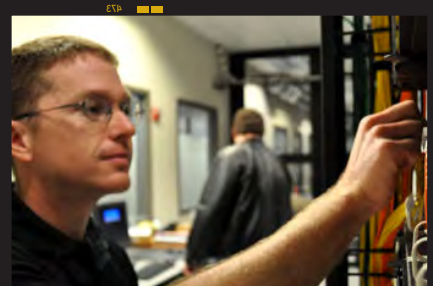
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INTRODUCTION

The Information Technology Services Division manages Baylor's information assets and technology infrastructure to support the vision and mission of Baylor. This division deploys and supports secure, leading-edge technologies and systems, while remaining committed to providing excellent service.

ITS staff members also represent Baylor well in the external higher education community through participation in professional organizations. This participation includes attendance at conferences, seminars, and training events; service on boards and committees for these organizations; and professional presentations.

The following report, arranged by organizational departments within Information Technology Services, summarizes the activities and accomplishments of ITS during 2011-2012.

INFORMATION TECHNOLOGY SERVICES
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Client Services
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Internet Services
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WELCOME

2011-2012 marked a year of unparalleled success for Baylor University that provided Information Technology Services many opportunities to rise to a variety of new and exciting challenges to meet the university's constantly evolving technology needs.

Baylor seeks to be a leader in the higher education community and this call demands a technology infrastructure that explores new horizons in research and development while remaining committed to serve the daily demands of students, faculty and staff.

As Dean of Libraries and Vice President of IT, I have the privilege of serving alongside the many dedicated IT professionals who develop and manage systems that provide reliable and innovative tools to the Baylor family. Whether they are working with AT&T to design and implement a distributed antenna system to improve cellular coverage for Baylor fans at Floyd Casey Stadium, developing innovative and easy-to-use mobile online tools, or providing solutions for over 40,000 technology questions through HEAT Help Tickets and our online Self-Service Help system, Baylor ITS strives to meet the technology demands of every member of the Baylor community.

In the pages that follow you will encounter those in Information Technology Services that strive to ensure that Baylor's most valuable resource — its people — are equipped to lead in their individual fields of work on a local, national and global scale. If you have any questions or are interested in learning more about Baylor ITS, do not hesitate to contact my office.

Thank you so much for your support!

Sincerely,

Pattie Orr

Pattie Orr
Vice President for Information Technology &
Dean of University Libraries
Baylor University

FACTS & FIGURES 2011-2012

Support

Desktops/laptops supported	7,483	Average Help Desk calls/month	2,901
Mac desktops	567	Highest - August 2011	4,136
Mac laptops	465	HEAT help tickets (FS 2012)	34,812
Windows desktops	4,778	% resolved with first call	73%
Windows laptops/notebooks/tablets	1,673	Individual software/OS issues resolved (FS 2012)	3,098
Networked printers supported	1,194	Hardware repairs completed (FS 2012)	2,182
Baylor-owned iPads supported	560	Departmental	1,406
Baylor-owned mobile phones supported	803	Personal (for fee)	776
Blackberrys	67	Computer installations (FS 2012)	2,184
iPhones	406	Desktops	1,091
Androids	63	Laptops/notebooks	495
Standard Cell Phones	256	Printers	160
Number of unique devices online (May 2012)	30,144	Scanners	9
Mobile devices supported for Exchange ActiveSync	>15,000	iPads	429
		Attendees in ITS training seminars (FS 2012)	3,335
		Searches in online Self-Service Help system (FS 2012)	9,835

ITS Budget:
$14 million

FTE Employees:
101.5

Security

ID card door readers	615
BearBucks readers	196
ID card verification/ other readers	81
Average ID card swipes per day	31,494
Digital Video Recorders (DVR/NVR)	19
Security cameras	373
Emergency call boxes	217
PGP licenses used	1,588

Systems

Total servers in ITS data center	533	Avg Baylor website page views/month	20,462,124
Virtual servers	275	Avg visits to Baylor website/month	2,061,750
Storage Area Network	636 TB	eCommerce PCI-compliant transactions (FS 2012)	27,653
Wireless access points	750	Total dollar amount of eCommerce transactions	$5,476,437
Universal Power Supplies (UPS)	96	Oracle databases	57
Network closets	203	SQL server databases	254
Data drops	11,960	FileMaker Pro departmental databases	341
Internet1 bandwidth	700 Mbs	Documents scanned/stored in imaging system	1,852,877
Internet2 bandwidth	33 Mbs	Request for programming (RAP) forms received	763
Avg bandwidth utilization	281 Mbs		
Campus telephone units	8,413		
Voice mailboxes	3,067		

Security, Servers and Networks Department

The Security, Servers and Networks Department operates the central campus data center as well as the data, voice, and video networks at Baylor to provide a secure, robust technology infrastructure for the university. The department is also responsible for university information security and technology support for physical security.

NETWORK SERVICES

Dallas & Austin-based Academic Programs

Seamless, high-quality Internet connectivity for all academic programs is a high priority. In Dallas, ITS completed projects to network the Louise Herrington School of Nursing staff who moved to the Baptist General Convention of Texas building and upgrade connectivity for the Dallas Executive MBA program. The network for the Austin Executive MBA program was also improved during a major relocation.

Internet Connectivity

The Lonestar Education and Research Network (LEARN) is a critical partnership for Baylor. In 2011-2012, the university became a member of LEARN-DFW which allowed a transition to a more efficient Internet1 connection and helped replace the previous Internet2 connection with one that can be expanded as needed based on our requirements. Additionally, a redundant connection between Waco and Dallas within LEARN was established for business continuity purposes. We were able to leverage the redundant connection this spring during a network outage in the Dallas area to minimize the effective downtime at the Nursing School.

Wireless Network

A number of infrastructure enhancements were accomplished on the AirBear wireless network including reconfiguration into segments to improve performance and maintenance, upgrades of controller firmware, and renaming of the approved guest network to BU-EVENT. Also, additional AirBear access points were installed for network access expansion and special events.

PHYSICAL SECURITY

ITS physical security group staff members are closely involved in University renovation and new construction to ensure appropriate technology infrastructure is included to support networking, ID card access, security cameras, and more. Major projects in 2011-2012 included the BRIC, East Village residential complex, and Marrs McLean renovation, as well as initial planning for the new football stadium.

Telephone Services

The football stadium telephone PBX was upgraded to improve service and expand voice over IP (VoIP) capabilities. General investigation of multiple VoIP options continues. Also, the telephone services section closed 3,694 help tickets during 2011-2012. These tickets involved moves, phone repairs and troubleshooting, new installations, voice mail issues, and more.

SERVERS

Archival Storage Pods

Two of three approved pods for archival storage were implemented along with the accompanying redundant backup storage in the ITS data center. These pods provide storage for large amounts of critical university data. The first pod was implemented within the Baylor Sciences Building and is used to securely store research data generated and managed by faculty within that facility. The second pod is located in Moody Library and provides storage for important digitized library resources and other research data, primarily in the humanities.

Exchange 2010

ITS server staff studied, planned, tested, and communicated regarding the project to migrate the university email infrastructure to Microsoft Exchange 2010. Migration of student email was accomplished and all faculty/staff inboxes will be transitioned in the summer of 2012. This major upgrade brings improved efficiency in storage, flexibility, and business continuity.

ClearView Off-site Data Center

Important strides were made in IT disaster recovery this year when hardware was added to Baylor's space allocation at ClearView, an off-site high security data center, to support additional data storage and virtual servers. A redundant authentication service is also housed at this remote site.

INFORMATION SECURITY

Campus ID Cards

Information Security staff led a project in coordination with Human Resources and Marketing and Communications to redesign the campus ID card templates for students, faculty, staff, auxiliary staff, and spouses. The new cards have a completely different look with a more secure design that includes the new Baylor mark. IT began distributing these new ID Cards in the spring term.

PCI

Technology support for University PCI compliance work continued to be a major project for the Information Security section. A thin client technology infrastructure was deployed in multiple areas and numerous consultations were conducted with University eCommerce vendors and financial processors.

INFRASTRUCTURE

Football Stadium DAS

In partnership with AT&T, ITS worked with Facilities and Athletics staff members on installation of a new Distributed Antenna System (DAS) at Floyd Casey Stadium that greatly improved cellular communications for emergency, personal, and university/athletic marketing purposes. The DAS infrastructure includes 84 interior and 96 exterior antennas and was implemented in time for the first home football game. The system is designed to allow other carriers to improve their signal strength using this system.

CLIENT SERVICES DEPARTMENT

Client Services represents the primary point of contact for Baylor ITS. Comprised of highly-skilled, technical staff members, Client Services provides installation and disposition of computers and printers, hardware repairs, mobile device support, departmental application and server support, Help Desk operations, and software resolutions for all departmental computers on campus. The staff works together seamlessly to resolve issues as quickly as possible while maintaining an excellent customer satisfaction rating.
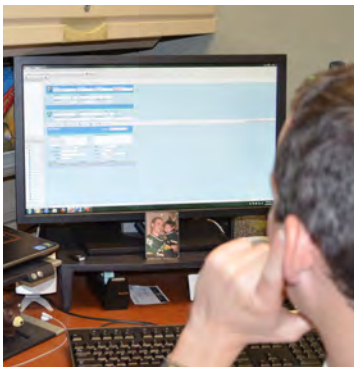
HEAT Help Desk System Grows

ITS provided consultation and support for the further expansion of the HEAT Help Desk System, which is used in ITS to track the reporting and resolution of campus technology issues. Human Resources, Admissions Services, and Student Foundation also leverage this resource to improve services and responsiveness. Additional upgrades (9.5.2 and 9.5.3) were applied to HEAT to keep this critical application up to date.

Installations

Client Services provided installations for 1,765 laptop/desktops/servers/printers/scanners. The installation area processed over 6,500 boxes of computers and accessories over a one-year period.

Mobile Device Support

Support for university-owned mobile devices continues to increase. Presently, we are supporting 560 iPads, 406 iPhones, 67 Blackberry devices, and 63 Android phones. In addition, we support over 15,000 mobile devices that access our Microsoft Exchange servers via ActiveSync.

Operating System Issues

Client Services resolved 3,098 software and operating system-related issues.

Seminars

The staff provided instructor-led seminars for 3,335 attendees.

Apple Developer Account

Client Services staff worked with Apple representatives to create an institutional Apple developer account for submission of Baylor departmental iPhone and iPad apps through the Apple Store.

Repairs

In addition to completing 776 personal hardware repairs, ITS staff resolved 1,406 departmental computer hardware repairs for a total of 2,182 completed repairs. Personal hardware repairs generated $40.998.02 revenue (after taxes).

Help Desk

Staff resolved 73% of service calls to the Help Desk at the first-call resolution level.

LANDesk

Through LANDesk, the staff used 9,343 remote control sessions to support clients' help calls.

iPads

ITS continued to integrate iPads into the campus technology environment. Part of this work involved developing a secure checkout system for iPad distribution and deployment of the system in several academic and administrative areas. Also, ITS consulted with departments on specific implementations of iPads. Some of the areas using iPads were Athletics, New Student Programs, and the Board of Regents. When released, the iPad3 was seamlessly assimilated into the campus iPad environment.

Touch-screen Check-in

Client Services staff members worked with the Counseling Services department to implement a new touch screen system for patient check-in at the counseling office in the McLane Student Life Center.

Simplifying Desktop Backups

Client Services staff developed and released a CheckBackup application for both Windows and Macintosh systems to help clarify the process of data backups on individual campus computers. This application indicates the most recent backup of the system and allows for execution of manual backups.

Tracking & Updating IT Assets

There are now approximately 7,700 technology assets being tracked on the campus network using the LANDesk Inventory Management System. Last year, printers were added to the departmental LANDesk technology reports to better support budget planning for technology upgrades. Several improvements were made to the custom data process to ensure more up-to-date information is captured from departments. Additionally, the LANDesk Patch Management module was implemented for distribution of critical patches to all university-owned systems.

FileMaker Databases

We assist in the development, design, support and hosting of 341 departmental databases.

INTERNET SERVICES DEPARTMENT

The Internet Services department coordinates and directs the university's Internet presence, systems and activities. The Internet Services Department is a component part of a hybrid structure reporting to both ITS and Marketing and Communications.

Internet Services works with other ITS professionals, as well as web designers, web masters, online specialists and campus clients in helping bring to life many important and high-profile university-wide initiatives. Internet Services also works with web personnel to support the projects and plans of the schools, colleges, centers, institutes, departments and other organizational entities within the university. The team delivered an abundance of solutions and support this year to enhance the continuing evolution of access to the Internet for information.
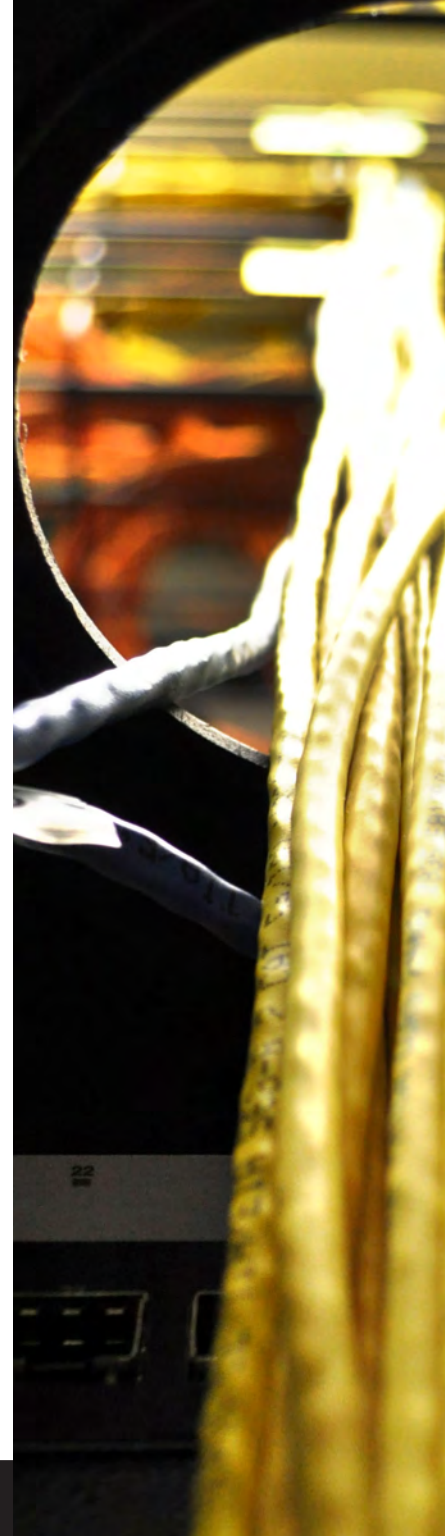
UNIVERSITY MOBILE PRESENCE

Internet Services staff members made great strides in providing important and useful university information in a mobile web format. Early fall saw the roll out of a much improved mobile-friendly set of websites including a campus map, online directory, schedule of classes, news and events, Move2BU, New Student Experience, AirBear setup instructions, and more. This project included designing a mechanism to detect mobile devices, providing users with choices about accessing mobile vs. full-browser versions of the site, managing content so that it would be accessible on either platform and presenting the web pages appropriately. Additional programming delivered linking of appropriate information across the online directory (mobile & full browser), faculty directory, campus map (mobile & full browser) and schedule of classes (mobile & full browser).

goBaylor

The already comprehensive goBaylor website was further expanded to serve the information needs of university prospective and admitted students. Internet Services staff worked with staff members in Admissions Services and other areas to improve the goBaylor system's functionality, such as the ability to review and accept financial aid awards.

ONLINE FACULTY DIRECTORY

At the request of the Office of the Provost, Internet Services staff led the way in creating the new Online Faculty Directory which replaced the paper faculty directory that had been published for years. The new directory uses Baylor ID card photos and is able to display the most up-to-date information from university information systems in a very appealing format. This online directory has more information than the previous printed directory with easy navigation capabilities. However, the online directory can still be printed, in full or in part, if desired. The move from the paper to an online directory provides better stewardship of university human, natural, and financial resources.

eCommerce

In 2011-2012, ITS Internet Services staff continued to support the growing eCommerce processing for the university:

- Rewrote the system administration tools for the *ad hoc* eCommerce system to improve both reporting and management of approved eCommerce forms.
- Enhanced this *ad hoc* eCommerce system so that it continues to function when systems from our partner TouchNet are down for maintenance.
- Developed mechanisms and systems to enable "add on" gifts on other forms. This provides the capability to easily include online gifts with event registration and other forms.
- Launched online deposit capabilities for Truett Seminary and the School of Social Work incoming students.

Additionally, there was dramatic growth in the secure PCI-compliant *ad hoc* eCommerce system:

- Total revenue generating transactions, excluding refunds, grew from 20,908 to 27,653 (32% increase).
- Total revenue grew from $4.05M to $5.48M (35% increase).

Information Systems and Services Department

The Information Systems and Services Department provides consulting, analysis, application development, job scheduling, reporting, training, and implementation services for University enterprise resource planning systems, as well as other information systems. In addition, the group provides high-level administration for relational databases that support systems and applications spanning the administrative and academic areas.

This group also has responsibility to ensure the integrity and security of the university's most critical administrative data. This job is accomplished through vigilant implementation of approved Enterprise Resource Planning (ERP) system access requests, periodic reviews of that access with client departments, careful adherence to change control procedures, testing of backup and restore procedures, and partnerships with internal and external IT auditors in the evaluation of processes.

BEARWEB

ITS staff modified the BearWeb self-service application for faculty/ staff and students to provide enhancements for data collection and administration. These modifications included:

- Allow students to change and manage meal plans.
- Give students the ability to electronically send accommodation letters to faculty via email.
- Create a printer-friendly formatted unofficial transcript for students.
- Add new functionality to capture and update employee office location information.
- Support changes to direct deposit information related to employee expense reimbursements.

REGULATORY COMPLIANCE

Emergency Alert
ISS staff made changes to support the requirement that students and employees be asked each year for their emergency contact information and whether they want to opt out of receiving notifications. New splash pages were designed (one for students, one for faculty/staff) to gather this information.

Bacterial Meningitis Vaccination
A process was created to load registration holds for students until documentation of compliance with the new bacterial meningitis regulation is received by Health Services. When documentation of compliance has been received and entered into the student system, the registration hold is deleted and an email notification is sent to the student.

SCHOLARSHIP SYSTEM

To track student awards from outside scholarships, ISS staff, working with the Cashier's and Financial Aid offices, designed and programmed a custom system to help those offices manage these awards previously handled by a paper process. The system allows for entry and management of these awards and has an automated process that will calculate awards for students taking into consideration any outside funding.

GRANT MANAGEMENT PHASE II

ISS staff continued with Phase II of the PeopleSoft Grants Management System implementation as staff built a customized proposal entry front end with the ability to properly route proposals and tie together supporting documentation. This functionality will be heavily used by the principal investigator involved with the research. ITS staff also dedicated time to working with the billing module and the ability to create custom invoices.

ADVANCEMENT

In support of important advancement efforts, ISS staff continued work, in partnership with University Development personnel, to improve and expand both the BayBI (Baylor Business Intelligence) and the online DevNet systems. Also, major modifications to the Ruffalo Cody Development Call Center interface with Banner Advancement were accomplished to support the move to outsourced management of that call center.

ONLINE REIMBURSEMENTS

This project provided employees the ability to update their direct deposit information from BearWeb for expense reimbursements similar to the way payroll direct deposit information is managed. This work required building an interface linking Banner Human Resources data to PeopleSoft Financials (TRAX). Also, TRAX was converted to use the employee ID number as the vendor ID for employees, eliminating the dependency on the 5 character TRAX vendor ID.

GENERAL ITS

ITS was involved with a number of projects that spanned other areas both within the university and other professional organizations.

IN 2011-2012:

In the spring of 2011, Baylor participated in the annual ECAR Study of Undergraduate Students and Information Technology. ITS staff reviewed the results and created summary reports that were presented to numerous academic, administrative, and advisory groups.

ITS staff researched and, in some cases, began implementation of a number of technologies:
- Email in the cloud
- Off campus disaster recovery options
- Wireless card swipe locks
- Mobile technologies
- IPv6
- Dashboards
- Social Media

ITS staff participated in and, in some instances, led various campus advisory and governance groups including:
- Library/ITS Advisory Council
- Library/ITS Student Advisory Group
- Academic Technology Directors
- Administrative Department IT Liaisons
- Data Standards Committee
- Security Working Group
- Groups related to use and enhancement of primary information systems

Baylor participated in the 2012 Merged Information Services Organizations (MISO) survey of students, faculty, and staff regarding library and IT services. Results were received in late spring and will be summarized in the summer of 2012.

Digital Signage

ITS staff led and served on a diverse campus committee that completed detailed research and evaluation of digital signage/display options with the goal of developing a campus standard configuration for recommendation to departments. Implementation began in the summer of 2011 and several campus locations are now using the system.

PROFESSIONAL DEVELOPMENT

ITS staff served in leadership roles in numerous professional organizations, and both attended and presented at conferences. These included (but were not limited to) EDUCAUSE, ECAR, Help Desk Institute, HDI Forum for Higher Education, SIGUCCS, ACUTA, and various vendor and systems user conferences and training. ITS staff also contributed to conferences and seminars with a number of professional presentations and sessions.

Connecting with Clients via Social Media

ITS clients, particularly students, are increasingly using social and mobile media to communicate and gather information. Using our @BaylorITS_Help and @BaylorITS_Alert Twitter accounts, staff members responded to concerns and requests from constituents and notified followers of planned and unplanned system outages. Also, with the dramatic increase in the use of mobile devices by the Baylor community, dependable campus Wi-Fi access is expected. After consultation with the Library/ITS Student Advisory Group and working with the Library/ITS marketing and communications staff, NATE was born. NATE asks students to send a text message to a specific number when they are experiencing Wi-Fi problems on campus. The data they are asked to send is Name, Area (location), Time, Equipment (NATE). ITS staff members are then notified to address reported issues.

KEEPING THE LIGHTS ON

A large part of ITS staff efforts in 2011-2012 were dedicated to ensuring the stability and security of the university technology environment. This work included assuring service availability and accomplishing compliance initiatives. Service availability consists of response to systems outages, support for standard software applications, disaster recovery/business continuity projects and maintenance of technology assets. Compliance initiatives include regulatory, vendor, and security upgrades, operating system and software version implementations, legal and operational regulations support (i.e. FERPA, HIPAA, PCI DSS), and internal and external audit requirements (i.e. change control, applications security review).

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