2012-2013 marked a year of growth and unparalleled success for Baylor University as we rolled out our new Pro Futuris strategic plan. This 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 technology vendors to select and implement innovative technology to deploy in the new Baylor Stadium, developing innovative and easy-to-use mobile online tools, or providing answers 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 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 for your support!

Pattie Orr
Vice President for Information Technology & Dean of University Libraries
Information Technology Services (ITS) manages Baylor’s information assets and technology infrastructure to support the vision and mission of the university. ITS deploys and supports secure, leading-edge technologies and systems, while remaining committed to providing excellent service. ITS staff also represent Baylor in the higher education community through participation in professional organizations through attending conferences, seminars, and training events; serving on boards and committees for these organizations; and professional presentations. The following report, arranged by organizational departments, summarizes the activities and accomplishments of ITS during the 2012-2013 academic year.

Information Technology Services

Pattie Orr, Vice President for Information Technology
Becky King, Associate Vice President for IT & Deputy CIO
Bob Hartland, Associate Vice President
IT Infrastructure
Vicky Gerik, Assistant Vice President
Client Services
Randy Woodruff, Assistant Vice President
Internet Services
Steven Kucera, Assistant Vice President
Information Systems and Services
Jon Allen, Assistant Vice President & Chief Information Security Officer

Contents

Welcome 1
Introduction 2
ITS by the Numbers 3
ITS Projects 5
Security, Servers & Networks 7
Client Services 9
Information Systems & Services 11
Internet Services 13
**ITS by the Numbers**

### Equipment Supported
- 1,733 Windows Laptops/Notebooks/Tablets
- 1,206 iPads
- 810 Networked Printers
- 4,768 Windows Desktops
- 652 Apple Laptops
- 692 Apple Desktops
- 236 Standard Cell Phones
- 617 iPhones
- 48 Androids
- 3 Blackberrys

### Equipment Installations
- 1,329 Desktops
- 1,396 Departmental
- 500 Laptops/Notebooks
- 300 iPads
- 208 Printers
- 9 Scanners

### Hardware Repairs
- 1,212 Help Desk Calls/Month
- 3,302 calls in August 2012
- 39,274 Total Help Desk Tickets
- 73% resolved with first call
- 4,172 Individual Software OS Issues Resolved
- 3,272 ITS Training Seminar Attendees
- 9,670 Self-Service Help Searches

### Operating Budget
- $14.6 million

### Staffing
- 104 FTE Employees
- 7.13 FTE Student Assistants (A Total of 21 Students)
41,890 Devices Online (peak Nov 2012)
23,650 ActiveSync Devices (peak May 2013)
12,760 Data Drops
800 Wireless Access Points
210 Network Closets
700 Mbs Internet1 Bandwidth
509 Mbs Peak Internet2 Bandwidth Usage
571 Mbs Average Bandwidth Utilization

Servers in Data Center: 530
Virtual Servers: 277
Storage Area Network: 825 TB
Oracle Databases: 57
SQL Server Databases: 275
FileMaker Pro Databases: 375
Documents Scanned/ Stored in Imaging System: 2,382,083
Request for Programming (RAP) Forms: 837
Campus Telephone Units: 8,550
Voice Mailboxes: 3,034
ID Card Door Readers: 727
ID Card Turbo/Aero Readers: 196
Other ID Card Readers: 82
Average ID Card Swipes (per day): 28,448
DVRs: 20
Security Cameras: 387
Emergency Call Boxes: 213
PGP Licenses Used: 1,739

Baylor Website Traffic

eCommerce Transactions 2012-2013

30,569 # of Transactions
$5,978,739 Amount
ITS Projects

ITS was involved with a number of projects that spanned areas both within the university and other professional organizations.
Ongoing Assessment
In spring 2013, ITS participated in the EDUCAUSE annual Study of Students and IT which provides information about Baylor students’ ownership, use and preferences regarding technology and includes comparisons with student results from other participating institutions.

ITS staff also 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
• Teaching Learning and Technology Committee
• Security Working Group
• University Task Force on Advising
• Groups related to use and enhancement of primary information systems

National Leadership
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, LEARN, Internet2 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. ITS hosted the annual LEARN conference and HDI Higher Education Forum meeting.

Innovative Technologies
ITS staff began implementation of a number of new technologies:
• Email in the cloud for alumni
• Individual storage in the cloud
• Wireless card-swipe locks
• Responsive mobile website
• University iPhone/Android app for student information
• Various cloud-based applications

New Baylor ID Cards
The project to distribute new, more secure Baylor ID cards to faculty, staff and students came to fruition. New cards for students were created for those entering in fall 2012.

Judicious Stewardship
ITS reviewed technologies proposed by campus departments for duplication, information security, adherence to standards and integration with current systems. Leveraging consultations with experts from Gartner, Inc., ITS realized substantial cost savings on our Ellucian and Oracle contracts, and received perspective on several other key IT decisions.

Keeping The Lights On
A large part of ITS staff efforts in 2012-2013, as every year, 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).
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.

Information Security
Secure storage and processing of confidential and sensitive information are requirements of various regulations and compliance initiatives. To help achieve an increased level of confidence in this security, ITS Information Security staff selected and installed the Identity Finder tool that can discover this type of protected data on university computers. The software was deployed as a pilot in a limited number of departments and, with adjustments made based on pilot group feedback, will be further utilized in 2013-2014.

ITS Information Security staff also reviewed potential solutions throughout the year to insure that university and regulated data are handled and stored appropriately and that university technology standards are being enforced.
Physical Security & Infrastructure
Campus expansion continued at a rapid pace in 2012-2013. ITS staff planned and implemented a robust and secure infrastructure for multiple construction projects. This included work on communication pathways, access technologies, and security cameras for East Village, the Marrs McLean renovation, the BRIC, the new football stadium, the indoor tennis facility, and more. Additionally, work was accomplished on the 3rd street utility master plan expansion of communications capacity to serve East Village and future locations.

Servers
ITS server staff implemented a new alumni cloud email solution using Microsoft’s Office365 product. This new account provides alumni with an account with 25Gb of mail storage and an alumni.baylor.edu address. The staff purged inactive alumni accounts, provisioned new Office365 accounts, and worked with other ITS staff to support former students in the transition process.

IT staff also made great progress in providing a robust and scalable infrastructure for Baylor’s crucial ERP systems through a project to move those systems from Unix-based servers to Linux servers. ITS staff in this area defined server requirements, installed and configured hardware, and worked with database administrators to accomplish the data migration.

Network Services
ITS addressed the demand for network availability through the initiation of two major projects. First, an RFP to refresh the network core hardware was defined and posted by a representative campus committee. Replies were evaluated and the successful respondents were selected. Hardware was ordered and implementation of the new technology began, to be completed in fall 2013. Second, an expanded partnership with the Lonestar Educational and Research Network (LEARN) was defined and agreed upon. This agreement will provide Baylor with the flexibility to significantly increase bandwidth as needed in future years. Additionally, over the 2012-2013 year, the number of wireless access points on the campus network grew from 695 to 800.

ITS networking staff also discovered an appliance that would incorporate firewall, intrusion protection and web filtering. Palo Alto’s advanced technologies allowed the consolidation and replacement of several pieces of outdated hardware servicing the AirBear and ResNet networks. The cost savings realized by switching web filtering to Palo Alto provided significant funding to complete the upgrade.

Telephone Services
Phones were upgraded for the Piper Center in downtown Waco to provide more reliable and current service. More generally, investigation of multiple voice over IP (VoIP) options continued with potential partners being narrowed in number.
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, operating systems 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.

**Utilization of Heat Software**
The HEAT Help Desk tracking software has been expanded to provide online reporting portals for ITS, Human Resources, Student Foundation, and Admission Services. ITS is also leveraging this resource to monitor vulnerability issues and track their resolution. As a result, there were 40,000 tickets that were successfully completed using the HEAT system.

**Expansion of Self-Service Solutions**
The Self Service Knowledge Portal was expanded to include Human Resources solutions as part of their “AskHR” implementation. This tool provides 24/7 access to research HR and technology solutions. Help tickets can be created by the client through these portals. Over 9,200 sessions were utilized this past year and over 2,500 tickets were created by our clients.

**Installations**
Client Services provided installations for 2,046 laptops, desktops, servers, printers and scanners. The installation area processed 7,039 boxes of computers and accessories over a one-year period.

**Mobile Device Support**
Support for university-owned mobile devices continues to increase. Presently, ITS supports 810 iPads, 617 iPhones, and 48 Android phones. In addition, ITS supports over 23,000 mobile devices that access our Microsoft Exchange server via ActiveSync.
Operating System Issues
Client Services resolved 4,172 software and operating system-related issues.

Departmental Server Projects
ITS staff provide specialized support for application software systems selected by campus departments to meet their Pro Futuris goals. Among many other projects, Client Services worked with the ITS Security Group to develop and implement an image for laptops, in addition to a process for securely transferring files for the Psychology department in order to comply with the strict HIPAA requirements. They assisted the Physical Plant with their implementation of a server-based system that monitors the campus irrigation system in order to maximize resources and minimize water waste. The system broadcasts weather and water information from various locations back to a central server so that the best decisions possible can be made about water sprinkler utilization.

Seminars
The staff provided instructor-led seminars over a variety of technology offerings for 3,272 attendees.

Repairs
In addition to completing 804 personal hardware repairs, ITS staff resolved 1,396 departmental computer hardware repairs for a total of 2,200.

Help Desk
Staff resolved 72% of the service calls to the Help Desk during the first-call.

LANDesk
Through LANDesk, the staff used 8,397 remote control sessions to assist clients with their help calls. Client Services continues to use this asset tracking system to track and manage software upgrades and patching for over 7,800 technology assets on the campus network.

Board of Regents iPad App
Client Services implemented the BoardVantage application by providing the configuration, access setup, training and support to greatly improve efficiency and communication for the ongoing work of the Board of Regents.

Improved Reporting for Desktop Backups
The development of a new tool to monitor backup status has allowed Client Services to take a more proactive role in detecting missed or failed backups of client’s computers by providing more accurate information, such as the date of the last backup and when the next backup is scheduled to run. As always, clients may initiate their own backup using the Check Backup utility that is installed on their Baylor-owned computer.

FileMaker Databases
Client Services hosts and supports over 350 departmental databases across 6 FileMaker servers and develops complex FileMaker solutions enabling clients to efficiently manage data for student probation and suspension notifications, campus newspaper advertisement sales and billing, student conduct violations, museum membership tracking and billing, Social Work field assignments, and Procurement Services vehicles tracking - to highlight a few.

Software Offerings
Client Services continues to practice judicious stewardship of university funds by consulting and negotiating with some of our major software vendors, such as Microsoft, Adobe and Symantec to provide our campus with the latest technology tools in a highly secured environment.
The Information Systems and Services Department (ISS) 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.
**Advancement**
ISS continued to give high priority to support for University Advancement by participating in a review of internal processes that resulted in a number of technology enhancements:
- Created new easier-to-use AlumniSearch application
- Created a new simplified web-based contact entry application
- Reworked and created new Confidential/Skybox prospect reports
- Integrated data from Fundraisers for stadium brick sales
- Built a process for matching undergraduate admissions applicants’ parents to constituent records

**Improved Efficiencies**
- Eased handling of summer groups on campus by developing an app to track & provide benefits.
- Implemented changes in registration times where students register in groups to improve system performance.
- Developed an online travel expense reporting process to supplant the current Excel-based expense report.
- Supported the integration of the Bear Foundation System with the university’s ticketing system.
- Automated the Faculty Terms of Appointment process by creating a system to manage the data.
- Implemented a system to better manage and track I-9 data.

**Infrastructure Improvements**
- Upgraded Banner, PeopleSoft, NolijWeb, AdAstra, BearQuest, Business Objects, RMS and the Oracle DBMS.
- Made progress on the migration of university ERP systems to a Linux environment.
- Changed the database system of the room scheduling system
- Moved the BearsAbroad system to the cloud.

**Admissions**
- Automated the loading of new application types into Banner
- Improved the processing of transcripts and test scores for applicants.
- Supported the Baylor@MCC program.
- Completed improvements for the new student orientation process
- Consulted with Admissions Services to create more efficient business process.

**Financial Systems**
ISS staff developed the PeopleSoft Financial, Khalix and BearQuest systems.
- Enhanced grant proposal routing
- Upgraded PeopleTools to version 8.5.2.
- Enhanced financial system reporting and provided data archiving.
- Improved BearQuest personnel and course action requests.
- Planned a major upgrade to Khalix that will be implemented later this year.

**Student Support**
ISS staff completed requested enhancements to many applications that support students including the unified advising system, the class schedules application, the equivalent course request system, wait lists, the MAP-Works system and the School of Education’s applications for teacher certification.

**Security and Compliance**
ISS staff is engaged with security and compliance of application systems and data. Staff is committed to protecting data and ensuring Baylor remains compliant.
- Coordinated with clients during the implementation of critical Java updates to protect university information assets.
- Served as liaison between ITS and both internal and external IT auditors.
- Implemented process improvements and adherence to best practices

**Security and Compliance**
ISS staff is engaged with security and compliance of application systems and data. Staff is committed to protecting data and ensuring Baylor remains compliant.
- Coordinated with clients during the implementation of critical Java updates to protect university information assets.
- Served as liaison between ITS and both internal and external IT auditors.
- Implemented process improvements and adherence to best practices
The Internet Services Department is the Information Technology component of a hybrid structure reporting to both ITS and Marketing and Communications. Internet Services takes the lead on providing the technological tools and solutions to support the university’s Internet presence, systems and activities.

Internet Services works with other ITS professionals, as well as web designers, web consultants, and electronic communication specialists to bring to life many important and high-profile university-wide initiatives. In addition, the department works with a range of personnel from the colleges, schools, 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.
**eCommerce**
Continued to enhance the Baylor online eCommerce environment through:
- Implementing the capability to handle recurring payments for donations to the university with a full administrative interface for campus process managers.
- Developing additional tools to support credit card processing within Development.
- Creating numerous online forms for support of various approved departmental eCommerce needs.

**Go Baylor**
Internet Services staff members worked closely with the Graduate School on the development of a goBaylor Grad system to support the recruitment of graduate students. That system will be deployed in the next fiscal year. The department also worked closely with Admissions Services to enhance and expand the comprehensive goBaylor environment to better serve the information needs of prospective and admitted students. These updates included:
- An improved undergraduate application process with integration of the Baylor Select and Texas Common Application, as well as updates to the online Baylor application.
- An updated registration process for the important Invitation to Excellence event.
- An enhanced process to gather applicant parent information.
- Development of an improved goBaylor technology infrastructure.
- Enhancements to the scholarship calculator and financial aid estimator.

**Mobile**
Internet Services continued its emphasis on providing critical university information in a mobile-friendly fashion.
- Developed a new comprehensive campus map for both the full web and mobile web environment.
- Deployed new responsive version of the full Baylor website to take best advantage of device screen size.
- Separated mobile-only web tools into the m.baylor.edu web-based application.
- Added faculty directory and enhanced other directories to optimize for the mobile user.
- Enhanced graphics to maximize impact on mobile platforms.

**Baylor Stadium**
- Internet Services developed, monitored and supported the online application for the Baylor Stadium Bricks fundraising project in partnership with the outside firm contracted for this endeavor.
- Completed programming for a highly customized giving system to support the Stadium Club Seats capital giving campaign.