



DIVISION OF  
**INFORMATION TECHNOLOGY**

# **PERFORMANCE**

**Annual Report 2010**

THE UNIVERSITY OF TEXAS-PAN AMERICAN

# CONTENTS

MESSAGE FROM THE VICE PRESIDENT	4
MAJOR INITIATIVES	5
AWARDS	11
PERFORMANCE REPORT	12
KPIs	12
CALENDAR OF INITIATIVES	15







# MESSAGE FROM THE VICE PRESIDENT

In 2010, the economy and projected shortfalls in the budget of the State of Texas were prominently featured in media outlets, and occupied the attention of leaders at agencies around the State. At the University of Texas–Pan American, all University Divisions were asked to cut their budgets...twice. Through innovation and business discipline, we were able to achieve those cutbacks without affecting services to students, faculty, and staff.

The IT budget cuts an additional \$1.67M, an amount that it will not be possible to compensate for with business process improvements alone. The full effects of the budget shortfall have yet to be enumerated, but they will surely affect the way the University acquires and uses technology for years to come.

It would not have been possible to come this far without the determination of IT's employees to give their utmost to every challenge. Our Support Services staff completed a major milestone in campus computer management by finishing the desktop management project, bringing some 4,500 desktop computers under central management. The central systems that power the University's mission-critical services functioned at 99.9% uptime. Our smart classrooms received 94.9% positive satisfaction ratings, and our new service which lets faculty and staff attend conferences (at no charge) via telepresence received a 97% positive satisfaction rating from attendees.

Performance is the theme of this year's annual report. In the pages that follow, you're going to see a picture

unfold of a team of dedicated employees who care passionately about what they do and the people they serve. Their passion is reflected in their work performance, and their excellence shows through in their work products, which translates to performance improvements for the University.

This year was challenging, to be sure. Challenges are a given in 21st century Higher Education, especially when increasing demands for technology and the rising expectations of our students, faculty, and researchers come face to face with tightening budgets. Confronting those challenges and continuing to fulfill our mandate to our customers and the People of the State of Texas is going to require fiscal rigor, a commitment to a technology governance plan, and the prioritization of technology expenditures in concert with the institution's strategic goals.

As I reflect on my time here, I cannot think of a year when I was more proud of the employees of Information Technology. Without their support and dedication, none of 2010's performance gains would have been possible, and the credit for the achievements illustrated herein goes to all of them.

Sincerely,

A handwritten signature in black ink, appearing to read 'Bob Lim'. The signature is stylized and written in a cursive-like font.

Bob Lim

# MAJOR INITIATIVES

## DRIVING INSTITUTIONAL COSTS DOWN

The Division of Information Technology made several notable accomplishments this year using technology to drive down the cost of doing the University's business. One of the most innovative ideas came from our Support Services area. By purchasing per-seat licenses for certain expensive software packages such as PASW Statistics (formerly SPSS) and Adobe Acrobat Pro, we were able to make these programs available to all faculty and staff for \$265,723 less than if those licenses had been bought individually. See Page 9 for more details.

The Data Center realized significant savings in operating costs and utilities through the implementation of a vigorous server virtualization program. Since 2006, we have avoided spending \$1.65M on facilities, equipment, maintenance, utilities, and administrative personnel. This is primarily due to the intrinsic value virtualization brings to a data center operation, with extra gains achieved because our virtual to physical server ratio beats the industry average — we have 17.4 virtual servers to every physical server, whereas the industry average is only 15.7:1.

### ✓ Significant savings through virtualization

- Substantial savings: \$1.65M cost avoidance in data center
- \$72,000 ongoing utility savings annually
- 17.4:1 virtual:nonvirtual ratio vs. 15.7:1 industry average
- \$265,723 saved by licensing software in bulk

### Information Technology's major initiatives:

- Use the UT System's Arlington Regional Data Center wherever possible
- Business process improvements
- Support research and researchers
- Create a web portal for students

## STUDENT WEB PORTAL

The Student Web Portal, unveiled in September 2010, gave students a customizable web page offering one-click access to the online services they use most: email, Blackboard, financial aid, and tuition and loan payment. The portal has been very heavily used: over 855,000 logins were recorded between September 2010 and March 2011. The home page of the portal can be used to post targeted communications to students—a powerful resource for the University when we need to broadcast a message widely.

Over 855,000 logins on the Student Portal since September 2010.

The student portal was a collaborative initiative between the Division of Information Technology and the Student Government Association. Student representatives laid out the kind of things they wanted to see in the student portal and we worked with them through an iterative process to create it. A feedback poll conducted within the portal showed a 90% satisfaction rating among student users. The portal has continued to evolve since launch as a default homepage for our internal audience. Working with the Staff Senate and Faculty liaisons, we continue to add relevant features to the portal towards the goal of making it a truly useful service for the entire University community.

## UPDATED EMAIL SYSTEM FOR THE UNIVERSITY

The University's Exchange 2003-based email system was updated to a faster and more powerful infrastructure running Exchange 2010, bringing significant improvements in email service and capacity to all employees. Standard mailbox size increased from 250MB to 1GB in response to faculty and staff requests for more storage space. One of the primary drivers for this need was the increased size and number of attachments that are sent with email messages. Faculty reported that they were exceeding their inbox quota due to students sending messages with large attachments.

- Standard mailbox size increased from 250 MB to 1 GB
- The entire campus was transitioned to new mailboxes over a 16-day period.

IT Support Services also learned that faculty who had to leave the country for an extended period were running into email issues. It was determined that giving all users significantly larger email storage capacity was a priority to facilitate the business of the University as well as faculty research and instructional needs.

With a new email server infrastructure, including 42 terabytes of additional storage, the email upgrade project involved both the Systems Administration staff and the IT Support Services staff. IT Support Services put a carefully-constructed unit testing and user migration plan in motion. Every employee's email was migrated to the new email infrastructure with no interruptions in service and no loss of data. The entire process took only 16 days from start to finish. The default mailbox size is now 1 Gigabyte compared to the 250 Megabytes it was before—a fourfold increase.

Another major improvement made to the email infrastructure is in the area of business continuity. IT's Systems Engineers created a backup email system at the UT System Regional Data Center in Arlington, Texas. During



a disaster, such as a hurricane where UTPA might be cut off from the Internet, the University's email can continue functioning without interruption from our backup facilities in Arlington. Email sent to employees at UTPA will not bounce or be rejected, and will be available when recipients are able to regain access.

## NEW ANTIVIRUS SOFTWARE LOWERS UNIVERSITY COSTS

Another example of how IT is using technology to drive down institutional costs came in August 2010. IT moved the institution to Microsoft Forefront software, saving \$27,000.

## ARDC BUSINESS CONTINUITY BUILD-OUT

For the past several years, the University of Texas System has been building shared data centers in Houston and Arlington, Texas, to give System institutions more ways to drive down costs while improving information technology services. In 2010, UTPA IT completed a major initiative to expand our presence in the Arlington Regional Data Center (ARDC) into full business continuity services and emergency communications infrastructure. The email system, the University's financial and human resources systems, the student information system, and the main web page are all replicated in UTPA's ARDC space. Data from the Edinburg infrastructure is continually replicated at ARDC, providing up-to-the minute systems availability in the event of a sudden outage.

Our ARDC emergency systems were activated for the first time during Hurricane Alex in June. The University's emergency web communications originated from our facilities in Arlington, and all email communications were handled through our backup email facilities there. We had uninterrupted business services as well, and early student registration and online bill payment continued throughout the tropical storm.

June's tropical storm gave us 24 hours to prepare. But

not every emergency gives advance warning. Last winter's rolling blackouts, for example, drove home the lesson that business continuity means being prepared for natural and man-made disasters.

To that end, the UTPA ARDC facilities are continuously replicating business data and email, so that all critical business databases on servers on the Edinburg campus are also copied onto similar systems in Arlington.

## BUSINESS PROCESS IMPROVEMENTS

For the past four years, the Division of Information Technology has been producing a steady stream of improvements to business processes. In calendar year 2010, 20 processes were re-engineered, optimized, or streamlined. Some examples of process improvements completed in 2010:

- Implementation of proactive network monitoring systems that permit real-time, campus-wide notification of network problems. The measurable results: faster response times due to early warning enhancements, thereby resulting in an overall increase in on-campus network reliability.
- Development of a new process that permits Continuing Education students to register and pay for classes online.
- Development and deployment of a change management program to implement best practices and industry standards in the management and control of software and hardware upgrades, updates, and maintenance. This will streamline processes and enhance the delivery of network services while documenting changes and minimizing downtime.

Four years of continuous improvement in business processes have resulted in much more efficient operations;

but the slimmed-down operations have ironically provided more challenges during the budget-cutting of the past twelve months. Not having budgetary fat to cut means that reductions must begin with essential services, rather than holding them back as last-resort items. Budgetary planning in the coming Biennium must consequently face some hard decisions in dealing with a long-term budget shortfall.

## MANAGED DESKTOP COMPUTERS

Acting under the advice of the Executive Cabinet, Information Technology began the process of bringing all desktop computers in the Academic Computing Labs and all offices on campus under central management. By the end of March 2011, 4,554 computers had been made a part of the University's campus-wide sign-on system, and had been configured to receive security and antivirus updates. This is a major step forward in protecting UTPA's computer users and the information stored on desktop computers, and gives everyone a more consistent and reliable computing environment.

## BULK SOFTWARE SAVINGS

Users of computers under central management also receive free access to software such as Microsoft Office, Adobe Acrobat, Endnote, and PASW Statistics. Acrobat, Endnote, and PASW are all available through a special licensing arrangement that Information Technology has made with the publishers for the benefit of the entire campus. For example, IT acquired 300 concurrent licenses for Adobe Acrobat. When a user wants to use Acrobat, a license is checked out of a keyserver that keeps track of how many licenses in total are in use. There are many hundreds of users of Adobe Acrobat, but there are almost never more than 300 simultaneous users. Keyserver technology helps IT save the whole University money on software license fees. In FY 2010, IT saved the University \$265,723 on software licenses that departments would have otherwise had to fund out of their own budgets.

## SUSTAINABILITY

IT is also leveraging the managed desktops to promote sustainability at UTPA. Special power-saving configurations have been applied to all managed computers, to cut electrical consumption when the computers are not in use. Estimates are that the University will save \$168,000 in utility costs in the coming year through the application of power-saving settings to all the computers on campus.

## MOBILE APPLICATION FOR SMART PHONES

In Fall 2010, The Division of Information Technology deployed UTPA's new iPhone app, bringing campus information, news, maps, Library information, class schedules, and announcements directly to smart phones. Following that we plan to release mobile apps for BlackBerry and Android, as well as a mobile-enabled web site. Blackboard and Tegrity will also be integrated into our mobility app. Students will be able to access all of these services from a smartphone.

## PUTTING THE POWER IN THE HANDS OF THE USER

One of Information Technology's long-term projects has been to give users the power to manage their own technology services wherever possible, and significant advances were made in that area in 2010. Data from Support Services' trouble ticket system showed that a large percentage of customer requests were for help in resetting passwords, and for assistance with configuring laptop computers for UTPA's wireless network.

## FORGOTTEN PASSWORDS SELF-SERVICE

IT developed a password self-service system that enables students to set secret security questions for use

in resetting a forgotten password. Students can also recover their username online through the Password Self-Service application if they need a reminder. This service previously required a personal visit to the Help Desk. In the coming year a similar service will be deployed for employees.

## SIMPLIFIED WIRELESS CONFIGURATION

To address the needs of hundreds of students who bring laptop computers to campus, IT Support Services has implemented XpressConnect to simplify the process of connecting laptops and smart phones to UTPA's wireless network. Because UTPA employs advanced security protocols on its wireless network, many computers require special configuration to connect. XpressConnect walks users through an easy step-by-step procedure that automates the configuration process, saving students an in-person visit to the Help Desk to set up their laptops. This is especially valuable during the heavy rush period at the start of every semester when new students are in a hurry to get online and don't have time to wait in line for assistance.

## WIRELESS UPGRADE

The campus-wide wireless network is heavily-used by students and is one of the key student-oriented benefits of the University's technology infrastructure. IT has made sure the University's Internet connection keeps pace with growing student demand for bandwidth. Over the past year, we've increased wireless bandwidth 30% and currently supply students with 400mbps, which is the largest capacity wireless service in higher education in the Rio Grande Valley.

## RESOLVING MORE ISSUES ON FIRST CONTACT

Analyzing performance data from the Help Desk, IT Support Services identified first-call resolution of customer issues as an area for improvement. A Bomgar remote-assistance appliance was deployed to give technicians the ability to provide hands-on remote support over the network to customers who call the Help Desk. With the Bomgar device, customers grant the Help Desk technician permission to work on their computer over the network. Once the Help Desk technician ends the support session, it cannot be re-started without the customer's permission.

Remote assistance lets support services use fewer staff to handle more service requests. First-call resolution improved 12% after implementing Bomgar. This is 19% better than the Education sector average of 63%.

Prior to Bomgar, our first-call resolution averaged 70%; after implementing Bomgar, our first-call resolution rose to 82%, a 12% improvement.

## LEARNING STUDIO

The Learning Studio has been an unqualified success. In its first year, it went from being relatively unknown to being booked continuously. 4,436 students used the Learning Studio between March 1 and April 27, 2010. During the 2010 Fall semester, over 12,000 customers, mostly students, used the Learning Studio to study, learn, and collaborate.

# AWARDS

**2**

**ADDY AWARDS**

for Internet Services

**1**

**BEST OF THE WEB AWARD**

for Internet Services

**4**

**ADDY AWARDS**

for Technology Services

**2**

**SUMMIT CREATIVE AWARDS**

for Technology Services

Internet Services was recognized three times in 2010 for outstanding achievements in web design. The team received Addy awards for the redesign of the [www.utpa.edu](http://www.utpa.edu) home page, and for the New Students web site [newstudent.utpa.edu](http://newstudent.utpa.edu). The Center for Digital Education recognized Internet Services with a Best of the Web award and cited the team for continuing to improve learning through technology even in the face of tough economic times.

Technology Services garnered four Addy Awards and two Summit Creative Awards for producing a line of 30-second videos that promoted student life, UTPA traditions, and Bronc Pride on Rio Grande Valley television

stations. All five videos were produced by Omar Cantu and directed by Michael Sandoval. The "It's All Right Here" series featured real UTPA students talking about why they attend the University and was a very successful way to communicate the UTPA message to the community and prospective students.

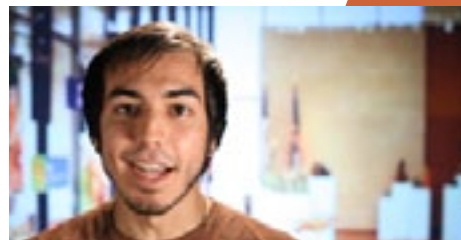


Figure 1: Scene from Addy-Award-winning "It's All Right Here"

# PERFORMANCE REPORT

One of IT's business process improvements for 2010 was the introduction of the use of Key Performance Indicators (KPIs) for measuring IT's progress towards its strategic goals. KPIs are quantifiable metrics gathered through a variety of methods such as logs, surveys, statistics, and service records. Vice President Lim often quotes the old saying that "you can't know where you're going until you know where you have been," and

the major focus of KPI collection this year has been to build a foundation of data on which future directions can be planned. As IT builds mastery in this emerging area of managerial expertise, KPIs will be used to benchmark IT against other universities as well as industry standards and our own past performance. KPIs will be aligned with UTPA strategy and vision and used to give a clear picture of the role IT plays.

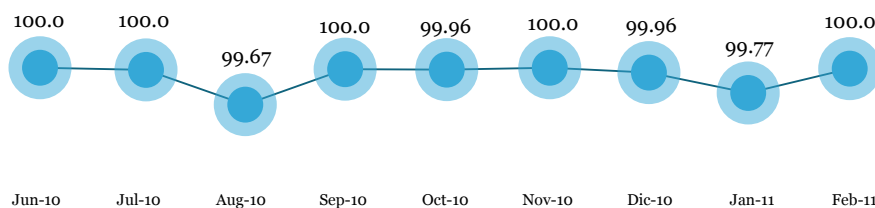
## KPIs

### Critical infrastructure systems uptime: Monthly average, June 2010 to February 2011

99.31%

utpa.edu  
web service  
off-campus  
availability

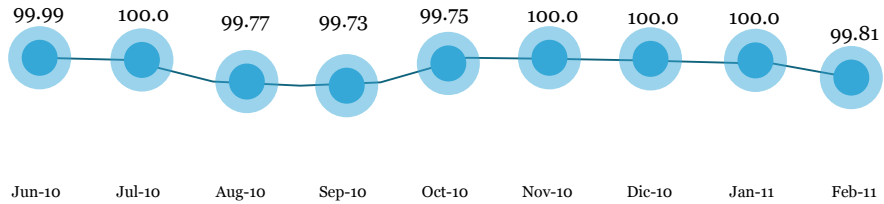
### Web Portal



99.90%

Banner  
Systems  
uptime

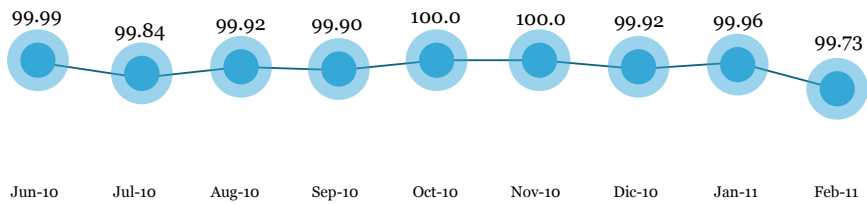
## Banner Student System



99.92%

Oracle  
Systems  
uptime

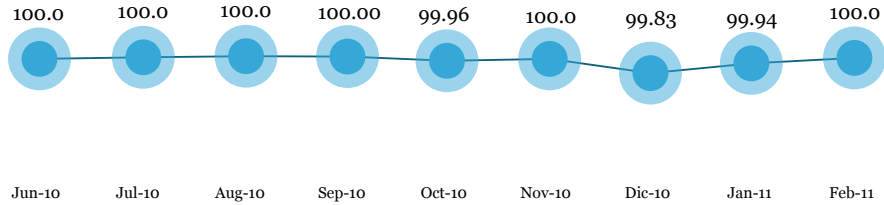
## Oracle E Business Suite



99.97%

Exchange email system uptime

## Campus Email



99.95%

utpa.edu web service on-campus availability

99.88%

Data Center Internal network uptime

99.98%

Telephone System uptime

99.972%

File services system uptime

99.93%

Student web portal uptime

99.97%

Arlington shared Data Center-based storage systems

99.99%

Spam Filter Uptime

99.98%

CORE payments uptime

99.917%

Apex Applications uptime

99.99%

Internet connection uptime

99.72%

Campus wireless network uptime

## CUSTOMER SATISFACTION RATES

- **94.91% of faculty said classroom media presentation systems improved their ability to deliver curriculum effectively**
- **85% first contact resolution issues on help desk: Sept 2010 to March 2011**
- **93.82% Satisfied or very satisfied rating with Computer Support Help Desk**

# CALENDAR OF INITIATIVES

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## May 2010

- Received a \$50,000 grant of services-in-kind from Microsoft and Dell for consulting on Forefront antimalware implementation and Microsoft application virtualization
  - Migrated Exchange customers from old to new system: 5076 customers in space of 30 days
- 

## June 2010

- RGV Fiber Network-BroadbandUSA Grant (BTOP)
    - + \$15,697,856 Grant
    - + \$3,882,816 UTPA infrastructure cost avoidance
    - + \$820,800/year ongoing cost avoidance
- 

## July 2010

- Instituted use of KPIs
- 

## August 2010

- Implemented Bomgar for remote assistance
  - Deployed Microsoft Forefront Client security, saved University over \$27K
  - 2010 Digital Education Achievement Award: Higher Education Website winner
- 

## September 2010

- IT support for successful NSF grant for 1,600 core compute cluster, \$460K
  - Added wireless to coastal studies lab. Same login/password as main campus.
  - UTPA takes top national award for best higher education website—Best of the Web
  - MyUTPA student portal goes online
    - + Introduced capability to conduct targeted communications with students
    - + 855,000 logins since go-live on August 30, 2010
- 

## October 2010

- Reduced time needed to reset student passwords from 15 minutes to 2 minutes
- 

## November 2010

- Renamed over 3,000 computers automatically as part of desktop management effort.
  - Acquired Cloud Path Xpressconnect to let customers self-service the process of connecting to our secure wireless network
- 

## December 2010

- 60% of campus desktop computers centrally managed
- Completed the centralization of 4,554 computers in March 2011
- Power saving deployed to desktops with \$168K annual savings



DIVISION OF  
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