**THE UNIVERSITY OF TEXAS AT AUSTIN**
**INFORMATION TECHNOLOGY ADVISORY COMMITTEE**
**2007-2008**
**SCHOOL/COLLEGE/ADMINISTRATIVE UNIT VISION PLAN**

Best Practices *(identify any "best practices" that have significantly improved IT programs, infrastructure, operations, cost efficiencies, etc. since the last Vision Plan)*

## School of Architecture

### Best Practices

#### Server Consolidation

We have recently purchased some new server hardware allowing us to reduce the number of servers we support from seven aging servers running three different operating systems to three servers running the same operating system. We anticipate that this will result in a significant reduction in systems administration time while actually improving reliability and availability.

#### ITS Service Hosting

We are using ITS to host our web services, enterprise email services, and some other select data storage. Doing so allows us to have a higher level of security, reliability, and availability for our mission-critical data processes, without having to make large local investments in hardware, software, and person hours.

#### The Boutique Model

We are a small School with specialized needs in many areas. Our IT strategy for adapting to this condition is to find ways to leverage the generalizable IT resources and services provided by ITS and others for our 'vanilla' computational support and service needs, while focusing the energy of our IT organization on the specialized and unique 'boutique' needs of our user community. With the recent changes in ITS and the VPIT Office we are very optimistic about the further implementation of this model through the establishment of new support contracts with ITS.

#### Design Student Computer Policy

By initiating a required student laptop and software policy for our design students, our most intense computer users, we have been able to significantly reduce the amount by which our IT budgets are overtaxed and to simultaneously provide a better distributed computing environment and culture for our students.

## School of Business

## College of Communication

The College has invested heavily in support of College technology. Investments include help request tracking software, desktop and security management systems, server and storage virtualization infrastructure, resource management and scheduling software and advanced video recording and playback systems. We also maintain classroom media control systems common with much of the campus. We are leveraging the University's purchase of the Web Content Management system to improve our overall web capabilities. At every opportunity, we seek a balance between innovation and the benefits obtained through standardized solutions and practices.

We use the Web Help Desk (http://www.webhelpdesk.com/) request tracking system to keep track of patron requests for support, and to provide a two-way communication link to keep all parties abreast of any activity related to their request. Similarly, we use an online system (http://www.onshored.com/) to keep track of equipment checkout and media library requests. Over the last two years, we have relocated our Help Desk to the CMA building, improving our patrons' access to support tremendously. These practices improve efficiency and improve patron experiences.

We deploy a suite of software solutions to help protect University computing resources. Among these are antivirus suites, firewall management systems and Virtual Private Network (VPN) solutions provided through University site licenses (http://www.utexas.edu/its/sds/products/antivirus.html). We also utilize systems to improve the deployment of new, repaired or repurposed computers (Ghost, NetRestore, etc.). We have also led the charge to deploy the LANDesk desktop management solution (http://landesk.com/Products/LDMS/), which provides us with the ability to remotely deploy complete operating systems, individual software packages and security patches. It also provides excellent asset reporting capabilities, so we can determine just exactly what is out there and target the oldest or least capable systems for replacement. Finally, it provides remote control capabilities that let us provide over-the-phone support for our users, saving valuable time and effort. As an example, we can now deploy a lab of twenty computers in under fifteen minutes, down from 3 hours using the previous method.

We continue our deployment of always-ready video recording and streaming systems in classrooms. We have eight rooms with a video camera trained on the instructor or student presenter, microphones covering the entire room and audio and video connections to the media presentation system in the room. With this, we can record both the interactions of presenters and audiences and whatever they are presenting via the projector and audio system in the room. This is meant to facilitate both the regular and ad hoc capture of classroom activities, from lectures to guest presentations to student presentations. An innovative extension of this project is the increasing use of digital video capturing for the Speech and Hearing Clinic. Hundreds of hours of clinical

sessions are recorded, while new ideas for using the system in our research labs are being explored.

We use the University's Web Content Management System (https://webcms.utexas.edu/cms/index.html). This system allows us to implement modern web design and development practices, but keep content providers in control of their content. The WebCMS allows those who care most about what is found on our web sites to contribute, edit and update content, without the need for technical staff involvement. This vastly improves the time-to-publish, which results in more timely and professional updates to web content.

We have incorporated touch-screen control systems in every College and General Purpose classroom, as well as a number of departmental aqnd College conference rooms (http://communication.utexas.edu/technology/facilities/classrooms/consoles/). This brings them into very close alignment with the standard classroom consoles found throughout the campus, as they were co-developed with the College of Liberal Arts staff and their contract designers. Several rooms also have furniture with built-in network and power connections, to further improve the mobile computing experience.

This year, we began a collaborative effort with the College of Fine Arts (COFA) to share information system infrastructure. Over the last two years, we have deployed a VMware server virtualization and storage system in order to rationalize our increasing server deployments. While we used to maintain over thirty physical servers, we now maintain fewer than ten, but these provide many dozen distinct "virtual" servers, deployed to meet the various needs of the College. COFA needed to build a similar subset of capabilities, but rather than building their own solution, they partnered with us to increase the combined capacity. Our system administrator provides support for the infrastructure, while COFA staff manage their own virtual resources. By collaborating, we save the considerable initial expense of deploying multiple base infrastructures. COFA's needs are met by merely adding to the existing system, at a much reduced capital and maintenance cost.

This virtual server and storage solution supports classroom activities primarily. However, this system allows us to use excess capacity to provide secure, highly available storage to College instructors, researchers and administrators. This is largely an effort to meet the increasing demands to secure data and meet the University's and System's information security policies (http://www.utexas.edu/its/policies/ ). We encourage patrons to store sensitive data on our system, rather than on their own desktop or laptop computers. This allows us to keep a closer watch on such data, as well as provide data replication capability for disaster recovery purposes. We collaborated with the College of Engineering by sharing space within our respective datacenters in order to locate redundant storage and server systems. Data is therefore redundant across facilities. In this way, any loss of utility within either facility can be recovered quickly and reliably.

Finally, we maintain a regular system for maintaining the state of IT infrastructure within the College. This includes the funding model described above, as well as a disciplined

approach to targeting those areas in greatest need of refresh. For example, we license standard software packages that support activities across our departments at a cost substantially less than if the departments were to purchase them separately. Working with the departments, we are able to appropriately fund IT while maintaining a largely static budget.

## College of Education

The College has implemented several "best practices" in recent years. Following are short descriptions of those that have had the greatest impact.

### Network Policies

Perhaps foremost among the College's best practices are the detailed policies governing data network use. These policies, developed by LTC staff, went into effect in July 2004 and require the registration of all COE computers with the LTC's Technical & Network Services. This allows quick response to security breaches, such as rogue servers and other compromised computers. The policies also require logins with a centralized system using complex passwords and a basic security configuration "template."

College-wide implementation of the network policies was completed in 2006. Since their introduction, the policies have reduced the impact of viruses, operating system vulnerabilities, and hacking incidents. Technical staff spend less time managing these security breaches and can more easily distribute to College users the latest virus protection and security updates. Users also benefit from a more cohesive and seamless computing environment.

### Vision Awards

The Vision Awards are certainly an example of a successful best practice. A 2002-2003 Vision Plan project proposed increasing technology integration in College of Education courses by tapping the technology expertise of UT students. The ITAC funded project, dubbed the "Vision Awards," began in 2003 with 10 projects. The program has continued to expand since then with additional funding from the Office of the Dean. Four student employees with a wide range of technology development skills are hired for the "Vision Studio" and work year-round on projects proposed in three-yearly award cycles.

The program supports faculty proposals for technology-based projects that enhanced their teaching and have the potential to improve instruction throughout the College. The quality of Vision Award projects was recognized earlier in 2006 when two of them received Innovative Instructional Technology Awards.

Vision Award projects have been an immediate boon to course instruction, benefiting hundreds of students each semester. The projects allow faculty to integrate technology activities into instruction in ways they have been unable to in the past. The program is making real progress toward the College's goal to improve instruction with technology.

### In-House Development of Management Applications

Another best practice has been the LTC's development of Web-based applications to assist with the management of its equipment and facilities reservation system and of its large staff of technical assistants. Many of these applications were developed by the student employees, and include a time clock, a bulletin board, and the ability to generate statistics on facility-use data. Student workers also developed a Web-based system for reserving LTC computer labs and equipment and tracking inventory.

Recognizing that the importance of Web-based applications will continue to grow, in 2006 the LTC hired a Web applications programmer who had worked on many of the applications as a student. Among several projects, the programmer has developed improved versions of the reservation system and is working on a content management system for the College Web sites.

**Trend Toward Laptop and Wireless Use**

The move toward the use of laptops and wireless networking provides greater flexibility of access to instructional technology and lowers the costs of equipping, maintaining, and staffing computer lab facilities. The creation of new laptop computing and collaboration spaces in the College will help to further facilitate this trend, and has been a priority in 2006. The LTC remodeled one of its areas to create a large laptop collaborative area. A current year ITAC project has funded the creation of another laptop workspace for students on the third floor of the Sánchez Building.

Through the Laptop Initiative for Future Educators, the use of laptops and wireless networking has even extended into the public schools to enrich the field experiences of teacher education students. The College has also piloted the use of laptop videoconferencing to allow students in field settings at great distances to remotely participate in teacher education courses and receive university supervision. The College has also begun to pilot the use of laptop videoconferencing to support apprentice and novice teachers. The 07-08 project "PROMISE" will further these efforts.

Another goal the College is currently working toward, the installation of ceiling-mounted projectors in most of its classrooms, will provide greater flexibility and convenience for faculty and students and will result in lower costs, because fewer deliveries of computer carts will be needed.

## College of Engineering

Unfortunately our efforts to effectively use Vision Plan funding are being hindered by other campus funding dynamics, because next year's Vision Plan allocated is expected to only be about $120K, a 33% drop in the allocation. This is especially unfortunate since the College of Engineering strives to make such innovative use of this funding and leverages it with matching funds. In addition, this reduction in funding comes at a time when funding should be greatly increased. We think the campus administration and the

College of Engineering Dean's office should make external fundraising for computing resources a high priority in the next several years.

The benefits of a **Virtual infrastructure** cannot be overemphasized and are still emerging as a transformative force across campus in both the data center and now the client desktop**.** The implementation of virtual infrastructures should be considered a key **best practice** which enables access, flexibility and resiliency which heretofore have been unattainable with conventional implementations. It also has implications for significant cost savings in campus-level data centers.

## College of Fine Arts

### *Best Practices*

**Help Desk partnership w/ITS**

Given the relatively small size of Fine Arts, we are always interested in collaborating with other colleges and units on campus to extend our resources and play to our core strengths. Our "Help Desk" operation is a case in point. Several years ago, we explored the possibility of combining our effort with the ITS Help Desk. Because of the apparent complimentary strengths, and the fact that a combination effort would provide much better service to College faculty and staff, the arrangement made sense.

With the equivalent of two and a half full-time equivalents doing desktop support, it was difficult to both answer a trouble line and visit users to install, configure and support desktop computers and software. Conversely, the ITS Help Desk had no capacity to visit users, but had an extensive and effective phone effort. We set the Fine Arts Help Desk up as an "expert group" and redirected all Fine Arts support calls to the ITS operation. Fine Arts faculty and staff were instructed to call the "new reserved Fine Arts Help Desk". The special number presented calls to the same body of ITS consultants used by the rest of campus, while facilitating the tracking of Fine Arts calls. If the problem persisted after the normal "triage" with the ITS consultant, the "trouble ticket" was forwarded through a custom website to the Fine Arts "expert group" for an on-site follow up.

Over the last 4-5 years the system has worked well. The volume of direct calls to our local staff has dropped by about 70% (most problems can be solved over the phone) and our consultants can spend more time with the problems that require on-site assistance. With the recent purchase and implementation of "Remedy" (a customizable software package often used for Help Desk trouble ticket routing), the system promises to be even more effective.

**DASE partnership w/Liberal Arts**

Similar to the Help Desk collaboration, three years ago we engaged in a project that has become known as the Liberal Arts Digital Archive Services (DASE). A joint effort of

Liberal Arts, Fine Arts, and General Libraries, this project consists of building a set of applications for the collection, cataloging, and serving of digital media collections from all over The University. The project gives faculty and students the ability to search diverse collections of hundreds of thousands of images, videos, audio files, and other media. Users are able to download files or organize them into online collections accessible from within DASE. A special feature gives faculty the ability to quickly create online slide shows and share them with students either online or projected in class. A two-screen option in the slideshow feature allows faculty teaching in dual screen auditoriums to organize and format dual screen shows and present different slides on each screen.

DASE is now in production and heavily used. "Media Browser", the search, browse and display portion of DASE, allows users to search, organize personal collections, and create slideshows. "Collection Builder", the collection maintenance tool, allows collection managers to upload images, organize catalog records, and input metadata. These applications have constantly expanding sets of functionality and work primarily with digital images at present, although some video and sound files are contained within the system. In order to address intellectual property issues, access is gained by using an EID login.

**Virtual Server and Storage Project with College of Communication**

Recent concerns regarding data security and the prospect of more restrictive regulation make additional efforts to protect data advisable. Complicating factors like the increasing size of storage devices in desktop systems, the more frequent use of large media, and the impracticality of backing up data for hundreds of machines to large, network mounted tape drives suggest that new strategies are required. With the recent purchase of a large Storage Area Network (SAN) by the College of Communication, one such new strategy has become available.

During the last fiscal year, Fine Arts staff investigated various network attached storage options for our users, but the modest funding available precluded all but a few, sort-term solutions. Conversations in the Tech Deans group revealed a collaboration opportunity with the College of Communication in their project, with the additional possibility of reducing the number of physical servers we manage. To initiate the collaboration, Fine Arts contributed the funding necessary for additional virtual server licenses and hardware capacity needed to support our users. IT staff then developed scripts that leverage the campus ID management and Active Directory systems (provided by ITS) and the College of Communication Storage Area Network. Taken together, we anticipate better desktop management and a substantial amount of secure, convenient storage for each faculty and staff member.

When fully deployed (during FY 2006-07), each Fine Arts faculty and staff member will have up to 2 Gigabytes of managed storage, available both on and off campus and accessible through the user's EID. Additionally, current physical servers (many running instances of Filemaker Server) will be converted to virtual machines, leveraging the same

installation to provide more reliable service while reducing the amount of staff time needed to manage those servers. This project could ultimately be scaled up to meet the needs of a larger part of campus.

## School of Information

Since the last Vision Plan, the School of Information has implemented the following practices that may be of interest to other academic IT programs. IT Services staff (including full-time and student support staff) have:

- Installed various VMWare virtual infrastructure systems has provided a number of benefits, including:
  - Increased performance and reliability of services migrated from aging hardware;
  - Streamlined deployment of new servers based on templates;
  - Implemented more efficient use of hardware resources and corresponding rack space savings.

- Provided technology-related training and training materials to students, faculty, and staff at the University of Texas in the forms of online tutorials, short courses, one-on-one interaction and other means. Teaching Assistants, full-time staff and part-time staff assist in these endeavors.

- Tracked student use of lab space and lab resources in order to better allocate limited existing space and prepare for use of space in the FAC.

- Joined Tech Deans from other University of Texas colleges in the purchase of computers and other materials in order to obtain better costs.

- Performed formal usability testing for technology training materials generated at the school, and are increasing testing through the use of the Information eXperience lab currently located at the FAC.

- Updated Keyserver software in order to facilitate the tracking of software licenses. We are currently examining the use of license tracking software with mobile devices.

- Interviewed instructors to facilitate the utilization of technology in the classroom and in the Information Technology Lab as well as grant-related research projects.

- Assisted in the grant-request process to assess and evaluate technology needs and possible impact on staff support.

- Worked with faculty and records managers to ensure that electronic records are being properly maintained.

## Jackson School of Geosciences

## School of Law

- Permanent technology installations in classrooms using less expensive and less complicated equipment that better fit Law School instructional technology needs. See Appendix 1 (photographs of installations).
- Continuing use of faculty-staff directory to improve on-line systems and serves as a centralized authorization system for the law school.
- A centralized student communication system allows the same information to be used in many different ways. Our LawMail system allows students to send out emails to fellow interested students, post announcements on a weekly email update sent to all students, and list announcements on a web portal and new digital signage system. All of the announcements must be approved by the Student Affairs Office.
- Use of video-conferencing facilities to allow long-distance collaborative learning, such as the class taught simultaneously in Mexico and Austin.
- Peer security and code evaluation on all current systems invaluable.
- Enhancements/upgrades for systems 5+ years or older to bring them up to current standards and OWASP standards
- Documentation on all desktop and administrative databases to meet the current BPM requirements.

## College of Liberal Arts

LAITS best practices evolve in response to three factors: growth in the department's responsibilities, accumulating experience with creating effective course materials, and ongoing installation of and upgrades to technology infrastructure. Best practices typically result from efforts to increase productivity so that output and effectiveness can grow even when budgets remain flat. All best practices stem directly or indirectly from sustained efforts by LAITS to find new and effective ways to use technology to help faculty teach and students learn. Current Liberal Arts best practices are illustrated below.

### Efficient Management and Administration

Expanding resources dedicated to the Faculty Course Development Projects create a need for more efficient and effective project management and rigorous grant administration. The LAITS focus on supporting classroom instruction also opens opportunities to improve instructional administration.

**Project Management**

LAITS has developed a set of formal roles for departmental oversight of any project awarded departmental resources. Each project gets a producer—a senior member of the LAITS staff—who assigns resources for the project, troubleshoots administrative problems, and oversees the project's progress.

Each project is also assigned a project manager charged with 1) supervising the progress of the project, 2) consulting with grantees/clients on design and technical questions, 3) ensuring that appropriate equipment and technology are available to faculty and content and technical producers working on the project, and 4) exercising ground-level management to ensure the project's progress and cost effectiveness. Project managers are experienced LAITS development staff assigned on the basis of their area of expertise.

**Grant Administration**

LAITS employs a grant administrator for projects receiving grant funds. The grant administrator handles all purchasing, appointments, and financial reporting, and provides administrative staff support for the producer, project manager, and faculty client. These tasks were previously handled by the faculty members and their respective departmental staff. Centralization of these tasks in the hands of a single grant administrator saves hundreds of hours of administrative time and thousands of dollars through bulk purchasing and improved financial oversight.

The producer, project manager, and grant administrator complement one another, ensuring that both the administrative and production needs of each project are managed by knowledgeable and engaged professionals. In addition to greater productivity and more effective use of funds, this organization creates a more productive and predictable consulting environment for faculty clients and increased communication among LAITS staff.

**Instructional Administration**

***OPERA*** is a leading example of a LAITS-produced management application intended to streamline tasks at the intersection between instruction and administration. Created to help manage the experimental requirement in lower-division Psychology, the ***OPERA*** system is used by 2,500 students each semester. It allows teachers and students to focus on instruction instead of the busywork of fulfilling requirements.

**Centralized, Scalable, and Reliable Services**

More efficient and productive provision of LAITS digital assets and IT services often results from centralization of asset and services management and closer attention to the

scalability and reliability of applications and services. LAITS professionals work to develop core applications and provide well-tested, well-supported hardware and network resources.

**Digital Collection Services**

In response to Liberal Arts departmental and faculty requests to build custom websites to host images and other digital media collections, LAITS developed Liberal Arts ***Digital Archive Services (DASE). DASE*** *<https://dase.laits.utexas.edu/>* is a core application with a wide range of functionality that provides access to digital collections from a single platform. *(See Appendix I for details.)*

**Collocation of Mature Web Applications**

Liberal Arts faculty often set up servers and develop applications that, when mature, may require significant amounts of attention and generate substantial network traffic. Since faculty members usually do not have the expertise or funding to maintain production servers, LAITS assists in migrating these applications and/or servers to our professionally managed enterprise-class server facilities. Two examples are the ***Texas German Dialect Project*** *<http://www.tgdp.org/>* developed by Dr. Hans Boas of Germanic Studies, and ***eSkeletons*** *<http://www.eskeletons.org/>* developed by Dr. John Kappelman of Anthropology.

**Scalable and Reliable IT Services**

As Liberal Arts strives to improve the availability of critical file and web server systems, LAITS has followed the lead of ITS in focusing on products that are well-tested, well-supported, and have an existing base of experience and expertise on campus. For example, the LAITS-implemented storage architecture central to the file server installation in Mezes Hall consists of Network Appliance Filers and Apple Xserve RAIDs. These tools allow the department to scale file systems as demand grows without the need to migrate data. Similarly, Citrix NetScaler Application Switches permit smooth scaling of application demand through the addition of additional compute servers without downtime. Network Appliance Filers provide needed file system redundancy in three critical LAITS server installations in Mezes Hall, Burdine Hall, and the Bernard and Audre Rapoport Building.

**Extensible Tools and Templates**

LAITS seeks to templatize, generalize, and reuse instructional and software assets whenever and wherever possible.

## Instruction

Language instruction offers a leading example of instructional template construction, generalization and reuse. LAITS helped developed ***Spanish Proficiency Exercises*** *<http://www.laits.utexas.edu/spe/>,* a site providing hundreds of video examples of native speakers performing language tasks ranging from "counting to ten" to giving a presentation to a high-school sociology class. The site includes related vocabulary, phrases, and grammar points and is used by over 3,000 UT students enrolled in introductory Spanish each semester. The site has inspired faculty developers, with LAITS support, to extend the design and concept to other languages using tools and templates from the original project.

## Software and Web Development

Work on ***DASE*** and similar core services led LAITS to develop a PHP programming model or framework that allows for rapid development of both large and small applications. In one recent example, a custom application to dynamically handle content for a list-style web page was produced in 45 minutes.

## Core Asset Development

LAITS seeks to develop *all* of the assets that support successful Liberal Arts classroom instruction including instructional content, instructors, students, and instructional infrastructure.

## Instructional Content

The publication of ***Francais Interactif*** *<http://www.laits.utexas.edu/fi/>,* ***Tex's French Grammar*** *<http://www.laits.utexas.edu/tex/>,* and ***Texas Politics*** *<http://texaspolitics.laits.utexas.edu/>* illustrate the success of LAITS best practices in developing online, multimedia teaching resources for large enrollment courses. These models incorporate content found in traditional texts, enrich the text with high quality audio, video, and graphics, and provide free unrestricted access to UT students.

## Faculty

The annual faculty development workshop illustrates LAITS efforts to involve and support faculty in the creation, management, and dissemination of digital instructional materials. Faculty attendance at this in-service educational technology seminar continues to grow. Similarly, a joint initiative between LAITS and the Government Department, the AI Professional Development program, provides advanced graduate students serving as assistant instructors with technological assistance and support as they teach large enrollment core courses.

**Students**

The Student Technology Assistant program successfully employs students to assist faculty with classroom development projects. These students work one-on-one with faculty on instructional development projects, receive ongoing training and supervision from LAITS professionals, and staff the recently opened LAITS Development Lab that offers Web technology assistance to instructors and staff on a walk-in basis.

**Classrooms**

LAITS continues to install and maintain classroom technology consoles in all Liberal Arts classrooms. These are essential to effective classroom use of digital assets. The current modular console design—which continues to evolve as funding for new hardware and software becomes available—allows the main equipment rack to be easily removed from the console cabinet. Along with improved cable termination and management, all cable connections are made on a single interface plate. This speeds console construction, simplifies maintenance, reduces failures, and cuts support costs.

## College of Natural Sciences

### Maintaining Facilities

The College of Natural Sciences has been entrusted with millions of dollars of student fee money over the last decade, and we are dedicated to protecting that investment for the benefit of current and future students. Maintaining instructional facilities and repairing/replacing equipment as it ages is a huge expense.

Some examples: The college places more than 1,000 computers in front of students. With a four year life cycle, 250 must be replaced each year at a cost of around $300,000. The college has more than 100 LCD projectors in its technology classrooms and science labs. Replacing aging projectors at a cost of $4,000 each costs $100,000 a year. Simply replacing projector lamps when they burn out costs more than $50,000 per year.

The college funds two full-time staff and 25 student assistants to maintain its classrooms. We employ off-campus specialists to clean the fabrics and floors in our rooms, remove gum and food stains, and repair and repaint when needed. Web resources: Classroom Maintenance and User Support Team

### Innovation

In addition to maintaining its existing facilities, the College of Natural Sciences uses ITAC funds to support innovative uses of information technology in its instructional programs. The college has leapfrogged traditional Podcasting and provided its students with recorded lectures that include multiple video windows in addition to audio. Students can now watch a recording of their instructor working a math or science problem on a document camera while listening to the explanation. Web resource: Lectures on Demand and news story

Technology is enriching the experience of students in science labs. Cameras attached to microscopes allow the instructor to project the image from any microscope onto the projection screen for viewing and discussion by the entire class. Scientific equipment now interfaces directly with computers, so students in labs can focus on learning instead of transcribing and graphing data.

Natural Sciences has lead the university in the use of student response systems, which allow faculty to ask students questions during class to identify misunderstandings or miscommunications. This year, every general purpose classroom will be equipped with a new radio frequency student response system from eInstruction.

Information technology provided with ITAC funds plays an important part in several innovative programs in our college, including the Freshman Research Initiative, UTeach, and the Texas Interdisciplinary Plan (TIP).

## School of Pharmacy

The College of Pharmacy continues to be among campus leaders in the utilization of streaming video. Because the College has an extensive distance education program involving three UT satellite locations, San Antonio, El Paso, and Pan American, whose coursework is chiefly taught using videoconferencing, this was a natural outgrowth of a long-standing practice of recording those video-taught lectures and making them available, at the faculty member's discretion, to students for their review. The College currently captures, encodes, and offers as streaming video fifteen to twenty hours per week of course material.

Of note is a recent new wrinkle in video streaming, podcasting. While the Thanksgiving 2005 Newsweek featured a story on this "revolutionary" method of delivering classwork, the College of Pharmacy began delivering near-podcasts of lecture material earlier in the Fall 2005 semester. The term 'near-podcast' deserves a definition.

True podcasting is s subscription service. Users subscribe to audio material that is delivered to iTunes or other audio management software, then transferred if desired to an iPod or other device. While this term has been applied to the simple downloading of audio files for end use similar to podcasting, it is not quite in accord with the accepted definition of this jargon. Thus, the downloading of audio files for student use by the College is called near-podcasting. We began experimentation with this activity in Fall 2005, upon request by a faculty member. The faculty member had been persistently asked for this service by one of her class members who has a long commute to school. And this is a perfect utilization of class-related audio files, be they podcasts, near-podcasts, and so on.

At the time of this writing, the LRC is waiting for the availability of new software for its encoder that will allow the streaming format for students to migrate from MPEG 4 to Flash. As part of the increased capability of the Flash platform, students will be able to request an audio file of any offered video stream on the fly.

## LBJ School of Public Affairs

Implementation of a Microsoft System Management Server combined with the Symantec Security console significantly improves management of our Windows based computers. This has improved our security and enhanced our ability to stay up to date with patch management.

We are participating on a per-seat basis in the campus ESRI license (managed by the College of Liberal Arts) and based on usage may become a fully participating partner in this license agreement.

## School of Nursing

Security – As directions are developed by the Vice President for Research's office concerning security of research data, staff have begun to prepare the researchers and their staff for possible changes in their procedures.

Social Security numbers have been removed from all administrative databases.

Spamcaster was added to Barracuda 200 anti-spam and anti-virus firewall to protect the SON incoming e-mail stream. This allows domain-level spam filtering and whitelisting, but not at the individual-level.

Faculty and staff workstations require passwords for login and display a banner before login containing disclaimers and terms of use.

All PCs feature anti-virus and firewall software and are set to automatically download and install Windows and Norton anti-virus updates.

Macs are set to check for OS updates automatically

## School of Social Work

The School has implemented several 'best practices" in recent years. Below are four with the greatest impact.

Service Contracts

We contract with LAITS to provide classroom support for consoles. They operate their help line for faculty and furnish personnel for daily pre-class checks of the console equipment. We pay them an annual fee for the service. We hope that ITS can begin

providing services at reasonable cost for a variety of IT functions from backup to desktop support.

Wireless

The implementation of wireless has improved student access while reducing overall costs. With building wide implementation we are able to deliver full access, encourage student laptop purchase and incorporate handhelds and PDA's into our instruction. At the same time we can reduce our need for additional wiring, reduce support and maintenance of joint use workstations, and cut back on lifecycle replacement of workstations. A recent survey showed that student ownership and use of laptops has not reached a point where we can justify laptop requirements nor change joint use facilities into a "learning space" design, but that is our future goal.

Support with GA's

The School is at a disadvantage by not being able to provide annual funding for increased staff support. Our formula allocation is not sufficient to hire additional permanent staff nor is a one-time allocation regular enough to support the recurring cost of permanent positions. With increased use of technology in the classrooms, security issues, and demand for Web materials our staff resources are exhausted with day-to-day support and administration. The School has only two full-time professional technical staff responsible for all network administration, Web resources, training, technical support , IT classrooms, the LRC computer lab, student support, and faculty IT projects related to curriculum development. The School strongly supports the use of GA's to fill gaps in staff support. We encourage faculty to request GA's and have used them to provide student support and coverage in the LRC. We offer GA positions as a financial assistance incentive in recruiting new students. Students with GA positions benefit greatly from both the applied learning environment and the financial assistance.

Utilization of University Resources

As a small School we recognize the significant advantage we gain by working in partnership with other departments, schools, and programs on campus. For example, we contract with LAITS for daily checks of our classroom consoles, ITS for print services in our student lab, and the Business School for consultation and setup for our computer classroom and student lab workstations. We use the ITS helpdesk for most first response faculty and staff support. Faculty have developed materials with DIIA consulting and Fast-Tex programs. These partnerships and University-wide support initiatives significantly reduce our operating costs and greatly enhance the pool of shared knowledge utilized by the entire University.