THE UNIVERSITY OF TEXAS AT AUSTIN
INFORMATION TECHNOLOGY ADVISORY COMMITTEE
2008-2009
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)*

Accessibility Institute

Best Practices

Web accessibility is typically a new topic for students. We hire students with varying degrees of computer experience and from all different disciplines. We have developed a process of training these students that involves educating and training, self-study, group collaboration, and hands-on experience in order to help them understand what accessibility is, what Web accessibility standards/guidelines are, how they can be implemented on a Web site, and how screen readers and screen magnifiers behave and are used. Addressing accessibility from multiple perspectives seems to increase the pace of learning, and including users with disabilities on the student team increases understanding of the perspective of users with disabilities. We want our students to take this knowledge into their areas of study and future work environments.

School of Architecture

Best Practices

Server Consolidation

We are committed to running as few servers as possible to provide the services necessary to run our local operation. We currently have one file sharing and licensing server, one print server, and a legacy internet information server.

Web Based Calendaring and Reservation System

Our recent investment in web development is eliminating paper waste and improving the efficiency and availability of our facilities and equipment by providing enhanced EID based access to room and resource scheduling.

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 missing-critical data processes, without having to make large local investments.

The Boutique Model

We are a small School with specialized needs in many areas. Our IT strategy

for adapting to this condition 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.

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 distributed computing environment.

School of Business

Best Practices

Student Collaboration: This year the College of Business has deployed SharePoint and remodeled physical spaces to enhance student collaboration. SharePoint offers students very robust, easy to use tools for storing the Excel, PowerPoint and Word documents they are creating as part of their class work in an online location that is both secure and easy to get to. More importantly, they are able to leverage the McCombs active directory to easily find and provide collaborators with access to whatever files they choose. SharePoint has very effective tools for managing documents and also provides a customizable workflow process for routing documents through multiple reviewers. SharePoint replaces static network file shares, which could not be shared with others and offers significant improvements over the much more basic WebSpace service provided by ITS.

In response to student feedback, the college also remodeled the Reliant Reading Room study space. Large cubicles were replaced with full-enclosed meeting rooms to combat the noise problem which hampered the quiet study of individuals sharing the space. Overall group study space was increased and several of the meeting rooms were made oversize to accommodate groups needing to practice presentations. Early feedback has been positive and more changes are planned to better meet the needs of small groups in our computer labs.

Resource Virtualization: We are fully committed to the use of virtualization technologies to improve service delivery, resource flexibility, and reducing costs. We have made significant progress in moving server resources to virtual environments and are now in the process of adding desktops, primarily lab and kiosk-type environments, to our virtual infrastructure. The cost of entry is high, so centralized resources would need to be provided to make it cost effective for small units, but the advantages are indisputable for us.

College of Communication

Best Practices

The College has invested heavily in support of 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. Our Help Desk is located in the CMA building, improving our providing fast and easy patron access. 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 to use our 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 aged 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. Last 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 manages 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 University 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 have 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.

DIIA

Best Practices

DIIA's services and resources support best practices by streamlining existing processes, allowing better communication and collaboration between faculty and students, training faculty in the effective use of technology, allowing faculty and students to use more technology in their classrooms, and enabling DIIA to more effectively evaluate, assess, and implement emerging technologies on campus.

College of Education

Best Practices

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

IDEA Studio

The IDEA Studio in the Learning Technology Center is a best practice in the College because it supports innovative uses of technology in education and helps faculty and their students make better use of the technology infrastructure. The IDEA Studio provides technology integration support to College of Education faculty. Its services range from drop-in support for faculty who need help using their computer applications, to examining course syllabi to find ways to utilize technology to improve teaching and learning. The IDEA Studio also provides classroom training for students working on technology-based projects, customizing the training to fit the project and the students' level of experience.

The IDEA Studio support model emphasizes consultation and collaboration. The highly skilled IDEA Studio staff, most of whom have graduate education in curriculum and instruction, help faculty articulate goals, research options, and choose the most effective technology tools for their needs. The IDEA Studio also encourages innovation and research into the use of technology in education. In recent years, the IDEA Studio has helped faculty examine such topics as the use of desktop videoconferencing in teacher training and support and the use of online tools to teach difficult concepts.

Network and Information Security Policies

Perhaps foremost among the College's best practices are the detailed policies governing network and data security. These policies, developed by LTC Technical & Network Services staff, have served as a model for the network and information security policies of other colleges on campus. The policies require the registration of all COE computers, which allows quick response to security breaches. The policies also require logins with a centralized system using complex passwords and a basic security configuration "template."

Since their introduction in 2006, 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.

During the ISORA data risk assessment performed this summer, the LTC Technical & Network Services team developed an interview flow chart and a form for recording the data gathered. These resources were used by many other departments on campus, and have provided a best practices template for the annual assessments.

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 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. 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. The quality of Vision Award projects was recognized in 2006 when two of them received Innovative Instructional Technology Awards.

Trend Toward Laptop and Wireless Use

The move toward the use of laptops and wireless networking provides greater flexibility of access to instructional technology, promotes collaboration, 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 continues to be a priority. The LTC remodeled one of its areas to create a large laptop collaborative area, and an 06-07 ITAC project 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" is currently furthering these efforts.

Another goal the College continues to work toward, the installation of ceiling-mounted projectors in most of its classrooms, has begun to provide greater flexibility and convenience for faculty and students. Users plug their own laptops into the system, thus lowering costs because fewer deliveries of computer carts are needed.

College of Engineering

Best Practices

Generation 5 Classroom Multimedia Teaching Podiums with On-Tough intercom

Our "Robo-Podiums" are height adjustable, movable and reduce barriers between students and faculty. If any problems do arise, the OnTouch intercom systems beckons help with the touch of a button – Service Desk personnel can ten assist with remote controls for the room or field operatives can be rapidly dispatched as needed.

Studio Classroom 2 reinvention with Ardence and Sofricity

The Ardence and Softricity technologies have offered us the opportunity to reinvent our student lab implementations providing cost-savings and flexibility for rapid CPU imaging and software deployment. A fall forum was held to promote and educate the campus regarding these technology underpinnings.

Security enhancements, working with ITS

SafeBoot encrypted hard drives – Engineering pioneered the ability to encrypt entire hard drives and this work paved the way for the campus standard.
Similarly IPSec has secured the transport of information between servers and client CPUs.

DyKnow and Tablet PCs

Leveraging DIIA insights, the DyKnow project continues to gain traction as it brings interactive annotation into the classroom between faculty and students, leveraging the increasing, yet gradual, popularity of Tablet PCs.

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 that of 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 2.5 "Full Time Equivalents" for 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 5-6 years the system has worked well. Although no statistics are available to confirm this, we suspect that 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.

Earlier, 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.

We continue to deploy a system where each Fine Arts faculty and staff member can 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) are being 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.

Jackson School of Geosciences

Best Practices

We are in the process of migrating to the Austin domain. This allows a single logon for users and should help make us more efficient by outsourcing some of the current mundane tasks so that our IT staff have time to work on more critical matters. We have also moved all administrative and committee files and data to a SharePoint site so that all sensitive data is protected but easily accessible by appropriate staff and faculty.

Graduate School

Best Practices

Since the last Vision Plan report, the Graduate School, working with Student Information Services, developed a Graduate Coordinator toolkit and a Recruiting Portal.

The Graduate Coordinator toolkit consolidates graduate student information from application for admission to graduation. A Program of Work submission system is currently in process.

Included in the Recruiting Portal is a customized online Graduate School application for admission and the ability to upload resumes and letters of recommendation. The first version of this portal is up and running. Enhancements are currently being made to the interactive prospective student portion of the system.

Harry Ransom Center

Best Practices

Installation of data projector, sound system, and automatic controls in the Tom Lea Room

The Ransom Center installed a data projector, a sound system with speakers, and an automatic control system for the enrichment of the classroom presentation functionality in this room. This $14,000 installation was funded by the Ransom Center.

School of Information

Best Practices

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:

- Extended the warranty on lab PCs from three years to four, allowing us to lengthen, our replacement life-cycle from 18 to 24 months. This longer life-cycle not only costs less in the long run, it simplifies budgeting so that we are purchasing lab PCs every other fiscal year, instead of two out of every three.
- Used the existing helpdesk / ticketing system to improve the workflow of IT-related purchases. The new workflow will decrease time from initial request to final purchase, ease reporting and accounting processes, and provide a single point of documentation for every step of a given purchase.
- Deployed and evaluated a wide array of open-source software packages that provide important functionality without licensing fees, including course management systems, secure instant messaging (IM), digital asset management, and online collaboration tools.
- Established and implemented a curriculum for teaching iSchool students technology-related skills needed for success at the school. These "boot camps" were a collaboration of student staff in our IT Lab and the local student chapter of the American Society for Information Science & Technology (ASIS&T), and included instruction on iSchool and UT resources, common office applications, creating Web portfolios and addressing usability and accessibility.

School of Law

Best Practices

- Innovative implementation of SharePoint for Journals and Organizations radically improved workflow and collaboration for our students. This innovation not only saves time, enhances the student experience and improves accessibility but also saves significant funds by reducing the number of law school supported computers.
- Implementing an Apple Laptop Initiative to compliment our existing Dell Laptop initiative extends significant cost savings to a large contingent of student Apple users.
- Permanent technology installations in classrooms using less expensive and less complicated equipment that better fit Law School instructional technology needs.
- 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 and mobile unit 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

Best Practices

Planning New Building Technology

College and departmental technical staff responsible for installing equipment often are not included in new building and renovation planning until a late stage in the design and construction process. The resulting mistakes have cost the University millions of dollars. SEA and ACES are two recent cases where technology installations were expensively redesigned at the last minute or equipment was replaced soon after the facility opened. Liberal Arts now involves technical staff in every stage of building planning, design, and construction. The appropriate staff members review design documents, attend weekly project meetings, and are integral parts of construction teams. This practice has greatly increased the return on investment in the South Mall and Garrison renovations, and it will pay dividends in the new Student Activity Center and the new Liberal Arts Building.

Centralized Management of Technology Projects

LAITS has developed a set of formal practices and roles for management and administration of technology. 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 both to faculty and the 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. Each project also 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.

LAITS administrative staff handle purchasing, appointments, and financial reporting, while simultaneously providing administrative 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 responsibilities not only frees faculty to focus on teaching and preparation of instructional content, but it also increases the productivity of departmental administrative staff by allowing them to focus on more familiar, non-technology responsibilities. Central bulk purchasing and improved financial oversight save the College thousands of dollars each year.

Central Co-location and Hosting

Liberal Arts encourages faculty members and departments to innovate with instructional software, application servers, and server hardware configuration. When applications go into production or become mission critical, LAITS recommends that applications be moved to LAITS professionally-managed, enterprise-class servers — or that dedicated server hardware be moved to the LAITS data center in Mezes Hall.

Hardware Cost-per-year Budgeting

Historically, a large proportion of College instructional computers have been purchased during building, lab, and classroom renovations. This results in wildly different size generations of computers and huge variations in yearly replacement costs. Planning and budgeting have been complicated, and the College has had only an imprecise notion of the actual yearly cost of owning its computer inventory.

LAITS is now beginning to budget computer costs for labs, classrooms, and other instructional applications on a hardware cost-per-year basis. Departments, faculty, and lab and classroom managers are allocated $250 to $400 per year for each computer and must stay within that budget. For example, a lab manager allocated $300/year could decide to purchase $900 computers and replace them every three years — or purchase $1500 computers and replace them every five years. The amount allocated varies according to the needs of the application. When this cost-per-year model has been fully adopted, Liberal Arts will be able to accurately calculate the true annual cost of its computers, providing a solid basis for long-term budget planning.

Leveraging ITAC to Attract Outside Grants

For years Liberal Arts has sought to multiply ITAC dollars by seeking outside funding for Vision Plan projects, especially those with both instructional and outreach components. Significant successes include Texas Beyond History <http://www.texasbeyondhistory.net/>, the Archive of Indigenous Languages of Latin America <*http://www.ailla.utexas.org/*>, the Texas German Dialect Project <http://www.tgdp.org/>, and eSkeletons <http://www.eskeletons.org/>.

We feel that the current budget climate places us under an obligation to redouble our efforts to find new sources of support for instructional projects. In 2007, LAITS began aggressively seeking federal and foundation funding to expand the impact of ITAC funding. All Strategic Development Projects are being analyzed for outside funding potential, and all Liberal Arts Faculty Course Development Grant recipients are encouraged to submit proposals to appropriate public and private grant programs. LAITS staff are leading the effort to research opportunities and submit funding proposals, including the following in the past 12 months:

- 4 to the National Endowment for the Humanities (NEH)
- 3 to the Department of Education (DOE)
- 2 to the MacArthur Foundation
- 1 to the Texas Bar Foundation

Two were funded — most notably, a DOE FIPSE (Fund for the Improvement of Post-Secondary Education) award for the Texas Language Technology Center in the amount $545,154. Two were declined, and six are still pending. We plan to further increase the rate of applications over the next two years.

Modular Design for Classroom Technology

LAITS is committed to the development of modular designs for classroom consoles. Such design — which continues to evolve as funding for new hardware and software becomes available — allows most equipment to be integrated into consoles in a mass-production facility, and then be quickly installed in the classroom. Modular design minimizes labor cost and allows equipment modules to be easily removed from the console, thereby simplifying maintenance. The improved cable management also greatly reduces failure and cuts support costs.

Re-granting ITAC Funds with Centralized Administration

Historically, Vision Plan project proposals were prepared by central College staff on behalf of departments and faculty in a more or less ad hoc manner. This placed decisions on project funding in the hands of staff, rather than students and faculty. The alternative was to include project details in the Vision Plan for review by the ITAC. But for a college the size of Liberal Arts, the inclusion of faculty project details meant that Vision Plans were hundreds of pages long.

Funding lag was also a serious problem. Since Vision plans are completed in the Fall preceding the funding year, projects had to be planned a year before funding. Worse, the many technology projects to be completed over the summer had to be planned and proposed 18 to 20 months before funds became available.

For the past six years, Liberal Arts has addressed these problems by holding a re-granting competition for faculty and department technology projects. *(See the discussion of Faculty Course Development Grants in section 1.2 above.)* The students, faculty, and staff on our IT Grant Review Committee — some of whom are also ITAC members — assure that funding decisions are properly vetted and that funds are available in a timely fashion.

Web-based Graphical User Interfaces (GUIs) for Undergraduate Research

Research data that requires extensive manipulation and research software that requires complex scripting or programming are effectively inaccessible to most undergraduates in the context of a semester-length course. LAITS supports the development of instructionally-oriented, web-based GUIs for data analysis software and research data whenever possible. These GUIs provide access to software and data for non-programmers among students enrolled in Liberal Arts courses and the world at large.

Sharing Volume Pricing

Liberal Arts continues to invite smaller units to participate in volume pricing generated by its large, systematic bulk purchases of technology equipment and software. Over the past 8 years, this practice has saved the University — especially ITAC budgets — many hundreds of thousands of dollars.

Student Developers

Student technology assistants have historically been assigned to faculty members on a one-to-one basis, with the faculty member being responsible for planning and overseeing the students' efforts. Projects languish if the faculty member is either inexperienced in managing developers or simply too busy. And, if the student does not possess the necessary skills or the project is not finished when the student's limited tenure is over, then the faculty member must look elsewhere for help. As a result, most instructional technology project are never fully completed and many are of little or no value.

With the Student Technology Assistant (STA) program, LAITS has improved upon the traditional 'research assistant' model for student developers. STAs work as specialists on team projects under the supervision of professional staff — essentially, as part-time members of the LAITS development staff. Projects are managed by full-time staff who assign tasks to STAs based on their skills and experience. STAs may specialize in HTML and CSS, art and design, video production, Flash, database programming, or any of a number of other technologies. While simple projects may be completed by a single STA, complex ones may employ a large number. When STAs graduate, others step up to continue the work on incomplete projects.

STAs spend their working hours in the Development Lab where professional staff and other STAs are always available to lend a hand. This fosters a sense of camaraderie that makes working as an STA a valuable and satisfying experience, and makes STA-staffed projects a pleasure for faculty members. *(See* <http://www.laits.utexas.edu/its/stamovie.mov> *for a short video about the STA project or visit the STA webpage at* <http://www.laits.utexas.edu/sta/>.)

UT Libraries

Best Practices

ITAC funding has been critical to the Libraries success in achieving goals for the use of information technology in support of UT's mission. Those information technology related goals are:

Ensure intellectual and physical access to all collections in campus libraries.

Advance current information literacy program to develop user competencies in information seeking and critical inquiry, emphasizing point-of-need instruction in online environments as appropriate to various academic disciplines and departmental cultures.

Develop and maintain a robust digital infrastructure capable of providing multi-channel access to our electronic information at the point-of-need, supported by adequate staff and resources.

Implement a new suite of digital services that addresses evolving user behavior, improves users' access and control of their digital environments, leverages the Libraries investment in content and existing infrastructure, provides compatibility with campus systems and can adapt to new and evolving digital environments.

College of Natural Sciences

Best Practices

Several departments, as well as the dean's office, have multimedia labs offering students access to high-end computers with specialized software, large format printers, color printers, and scanners. Most departments run their own servers, providing web space, file storage, and e-mail to students.

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. 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

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 leads the university in the use of student response systems, which allow faculty to ask students questions during class to identify misunderstandings or miscommunications. Every general purpose classroom is equipped with a 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 Division of Statistics and Scientific Computation.

School of Pharmacy

Best Practices

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-five hours per week of course material.

Interest in podcasting has grown to the point where installing this relatively inexpensive infrastructure universally has become practical and valuable. To this end, the College installed direct-to-mp3 audio digitizing units in each of the two large, PA-equipped General Purpose classrooms. Also, users of the College's video streaming content can request an mp3 file for download in addition to being able to view a video stream.

Another item deserving discussion is the use of the College's Classroom Response System. At the time of purchase, the system from TurningTechnologies called TurningPoint (TP) was chosen because it was the only system that allowed our College's remote sites to participate with 'clickers.' The company introduced its latest software just in time for implementation in Fall 2007; note that a not-uncommon fit of patches, upgrades, poor documentation, and fragmented support was experienced. At the time of this writing, November 2007, the company has just issued a bug fix and software consolidation for the software that was rolled out in August.

Other colleges who are interested in this multiple-site enabled system are encouraged to contact Pharmacy LRC staff. It works as promised but demands a high level of support, and the software remains in flux which creates further support demands. Hardware compatibility among the company's systems is haphazard. This and other issues make adopting this system a decision deserving of much consideration.

All that said, Pharmacy faculty have implemented the system and are finding it valuable. We expect to install the system universally in our spaces so that all faculty can avail themselves of this technology.

LBJ School of Public Affairs

Best Practices

We've moved our mySQL databases from a local computer to ITS hosting which has improved the reliability and security of the dynamic content on our website.

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

Best Practices

We have moved over 20 SON printers to a private network for increased security and are in the process of moving the last 4-5 printers to that network.

The Sensitive Number Finder utility was made available to all SON personnel to help them determine if CAT 1 data was on their machines, and a survey was distributed for faculty and staff to complete concerning the types of sensitive data on their machines. Response to the survey was about 30% but was adequate for risk assessment purposes. Completed UT's ISORA risk assessment survey. Our security profile of actual incidents is well above UT average.

We are moving to restrict permissions on workstation logon accounts and make all users aware of their security responsibilities.

Significant IT time is being spent on reviewing SON procedures and compliance with policy UTS 165. Estimated IT staff time in dealing with the requirements of this policy is 20% - 30%.

We're noticing significant burn-in damage to a number of monitors due to the required disclaimer notice that is displayed constantly when the machine is unused.

We are going to discontinue use of Spamcaster to see whether the benefit is worth the cost. If a significant increase in spam is noticed, we will reinstate the service.

Virtually all SON PC workstations are running fully patched Windows XP. We have no plans to move to Windows Vista. We are acquiring about a dozen Macs so that all SON Mac workstations will be able to run Leopard (Mac OS X 10.5).

School of Social Work

Best Practices

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 network to desktop support.

Wireless

The implementation of wireless has improved student access while reducing overall costs. We deliver full access throughout the building. In the future, as more students own laptops, we hope to reduce our need for new wiring, reduce support and maintenance of joint use workstations, and cut back on lifecycle replacement of workstations.

Support with TA/GA's

The School is at a disadvantage by not being able to provide annual funding for increased staff support. Our ITAC allocation has not been sufficient to hire additional staff nor 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 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 TA/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 these positions as a financial assistance incentives 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 professional 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.