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

OVERVIEW OF CURRENT IT PROGRAMS AND INFRASTRUCTURE

Vision/Mission/Goals of Unit
IT Programs *(IT programs requiring recurring funds for salaries, operations, etc.)*
Infrastructure *(overview of IT system – facilities, CPUs, servers, networking, security, IT-equipped classrooms, etc.)*

• SCHOOLS/COLLEGES

School of Architecture

Mission Statement

The Office of Information Technology is tasked with the provision and management of all information technology resources for the students, faculty, and staff of the School of Architecture. It is our mission to provide secure, reliable, and relevant technologies to support the educational, academic, and service mission of the School.

Computer Lab

The School of Architecture Computer Lab, located in Sutton Hall 1.102, provides dedicated computational, input, and output resources to all students enrolled in classes within the School. There are over sixty standard PC workstations, sixteen standard Macintosh workstations, and seventeen special application or peripheral workstations. The computer lab is open and staffed for 104 hours per week during long semesters, from 8:00 AM to Midnight Sunday through Thursday and from 8:00 AM to 8:00 PM on Fridays and Saturdays.

IO Central

IO Central contains the centralized printing and plotting equipment for the School, large format scanning, equipment checkout (including digital cameras, LCD projectors, and laptops), and provides a central location for students needing IT assistance. The facility adjoins the Computer Lab and has the same hours of operation. It houses a central print server with queues for the various printers and plotters; including eleven plotters, 2 color laser printers, 2 black and white laser printers and a 42” large format scanner.

Digital Fabrication

The School currently hosts four major pieces of technology for digital fabrication: a 3D printer that produces plastic models from digital input, a laser

cutter that cuts and etches sheet material through a printer-style interface, a CNC router that can cut shapes and route surfaces out of sheet material up to 4" thick using a digital control system, and a 3D non-contact laser scanner that can produce three-dimensional digital models by scanning physical objects.

IO Staff

The Computer Lab and IO Central are staffed by twelve half time graduate students per long semester. Six of these positions are funded by Teaching Assistantships, while the other six are paid as salaried Graduate Assistants from ITAC funds. One of the significant changes we have made is to have two IO Staff on duty during most lab hours to provide better service.

Design Student Computer Policy

The School has implemented a student computer policy for all undergraduate and graduate students enrolled in our design degrees: architecture, interior design, and landscape architecture. The students are required to provide a laptop and specific design software. Support of this initiative is provided by requiring extended warranties for hardware issues, leveraging the ITS helpdesk for general hardware and software issues, and providing design application assistance through the IO Central.

Technology Classrooms

The School has two auditoria, seven classrooms/seminar rooms, and two studios with installed projection systems.

Network Infrastructure

Goldsmith Hall has up-to-date networking infrastructure, with a Gigabit backbone, Fast Ethernet to the desktop, and a Cat-5e SCS. The West Mall Building and Battle Hall have been updated to Fast Ethernet networks thanks to generous donations of old network equipment from ITS and the Department of Computer Sciences; their legacy Cat-5 cabling is now at its maximum potential. Sutton Hall has had a partial network upgrade, including a Gigabit backbone, Gigabit service for servers, and Fast Ethernet to select portions of the building; however, it still requires completion of the SCS and additional network equipment to bring it up to campus standards. We are also in the middle of updating our wireless in all four buildings; Sutton Hall was completed last year, and funds have been allocated this year to complete full coverage in Goldsmith Hall.

Server Infrastructure

The School currently has three Windows 2003 Servers: two newer Dell PowerEdge Servers, one runs our intensive printer and plotter services and the other runs our local network file sharing and software licensing; the third server is running legacy web hosting and ftp services and is expected to be phased out by completing the transition to ITS hosting in the next year.

IT Staff

Director of Information Technology

Responsible for IT vision, management of IT staff, administration of all IT related budgets, network administration, server administration, software licensing and distribution, Computer Lab workstation administration, and computer support.

Network Analyst

Faculty and staff computer administration, LAN administration, Computer Lab supply management, security implementation, inventory, BevoBucks and print charging administration, and computer support.

Webmaster

Design, administration, and content management of the School of Architecture web site.

School of Business

This vision plan establishes the strategic goals for information technology improvements for the McCombs School of Business for Academic Year 2007/2008 and beyond.

As a general statement of policy, we will adopt the most relevant business-related hardware and software technologies for the McCombs School of Business as it becomes commercially available and meets our quality of service needs. We will accomplish this through strategic alignments with a set of premier corporate information technology partners and judicious use of ITAC fees, the business school's information technology fees, tuition allocations, state allocated funds, grants, and donations derived from selected industry and government entities.

Facilities:

The McCombs School of Business currently operates:

- **Data Center:**
  - 80 servers, a three-node SAN, approximately 19TB of storage. Key services include:
    - Exchange 2003 cluster providing 100MB mailboxes for students
    - SQL cluster for enterprise applications and stand alone servers for use by faculty and students for class projects
    - Multiple web servers for hosting the McCombs website, individual student sites and class web projects
    - File servers to provide students with 250-500MB of network storage accessible from both on and off campus
- **Five student computer laboratories.**

- **The Millennium Lab,** our main general use facility, is comprised of 160 workstations, of which six are dedicated to student team use; these six stations have been configured with dual monitors to facilitate working in groups with large documents/spreadsheets. These workstations are 2.53GHz/1GB RAM/DVD-CDRW and 40GB hard drive units running on a 100Mb switched Ethernet network. This lab also has network connections for 166 notebook computers. This lab is open continuously from Sunday at 1pm until Friday at 5pm; it is also open on Saturday.
- **The Mod Labs,** two modular classroom labs, are designed specifically for instructional use. These labs can be reserved for lectures, labs, presentations, and examinations. There are 40 seats in each lab with a removable partition so that the two rooms can be used independently or as one large 80-seat lab. When not reserved, these labs are available for general student use. The computers in these labs are 2.53GHz/1GB RAM/DVD-CDRW and 40GB hard drive units, also running on a 100Mb switched Ethernet network.
- **The PhD Lab,** which contains eight 2.53GHz/1GB RAM/DVD-CDRW and 40GB hard drive workstations, runs extra software in addition to our normal Common Operating Environment (COE) and is reserved for PhD students only.
- **Technology Training Labs,** designed for software application training and other advanced classes. These training facilities are designed for easy customization of OS and software configurations, with typical classes ranging from a few hours to a couple of weeks in duration as needed.

- **Classrooms and additional network & power enabled areas**
  - **Classrooms** have been enhanced with projection equipment, network ports, and connections for laptop computers (both wired and wireless).
  - **The four Cohort Rooms** are classrooms used by the MBA Program for MBA core classes. Each room has power and 100Mb switched Ethernet ports at each of the approximately 85 seats.
  - **The Reliant Productivity Center** is a 250-seat technology-enhanced study area. Each seat is equipped with a 100Mb switched Ethernet port and power outlet. This facility has been designed to provide both individual workspaces and group areas for students to work on team projects. This lab is open continuously from Sunday at 1pm until Friday at 5pm; it is also open on Saturday.
  - **The 3rd Floor Atrium** is an open lounge/work area with 50 power outlets and 100Mb switched Ethernet ports.
- **Wireless network access areas** covering all CBA and GSB classrooms and public spaces. This wireless coverage has led to a marked increase in the use of computers and IT resources both in and out of the classroom.

Infrastructure Maintenance: This project is ongoing.

Infrastructure Maintenance

Successive years of Special Projects have dramatically improved the technology infrastructure of the McCombs School of Business. The challenge now becomes continued funding of hardware maintenance and replacement for network and data center components. We strongly endorse the Network Lifecycle Model proposed by the College of Engineering and agree with the assessment that too many of our systems are vulnerable to single point failures.

Target Audience: All McCombs students, faculty, and staff will benefit from this project by experiencing a more stable computing environment.

College of Communication

Overview of Current IT Programs and Infrastructure

The mission of the College of Communication, according to Dean Roderick Hart, is four-fold:

As the most comprehensive academic unit of its kind in the United States, the College of Communication is too large and too complicated to have but one mission. Instead, its mission is four-fold:

An intellectual mission: (1) to ensure that the traditional arts and sciences remain central to the study of human communication, (2) to collaborate with faculty members in the arts, humanities, and social sciences across campus to address the most pressing issues of the day, and (3) to make communication training central to the educations of all University of Texas undergraduates regardless of major.

An entrepreneurial mission: The world is being made smaller by the Communication Revolution and the College must work to understand what that means by (1) building close ties to the communication professions, (2) vigorously pursuing interdisciplinary activities, (3) staying current with new interactive and aesthetic technologies, and (4) pursuing an increasingly international agenda.

A pedagogical mission: Here is our future: We live in an era of media convergence where once-separate industries - radio, television, advertising, newspapers - are being folded into vast media conglomerates. The College must prepare its students in multiple ways as a result, helping them reach across the various communication disciplines for new insights, new skills, new forms of expression, and new kinds of employment.

A social mission: The mass media are implicated in all that happens today. Political campaigns are heavily determined by media perquisites; enlightened health care depends on savvy information campaigns; the nation's youth are being inundated with popular culture; the world has become unknowable without a

discerning press. This collection of facts makes communication training both a practical matter and a moral one as well.

The University of Texas is devoted to generating intellectual excitement in its students, transforming their lives, and turning them into leaders. That is the College of Communication's business as well.

IT Programs

The Dean's Office operates Business and Technology Services (BATS). The Technology Services group represents the bulk of technology support available in the College. We support every department, research unit and program in the College. Our web site is http://communication.utexas.edu/technology/. Along with other Dean's Office units, we receive administrative support from Business Services. Currently, Technology Services consists of twenty-one full-time employees and typically around half that many part-time student workers. Skills and duties revolve around three primary areas: Customer Support, Engineering and Instructional Design/Web Development. We also have a dedicated datacenter and network administrator.

Customer Support provides direct patron support. Our Help Desk solves technology problems for College owned computers, audiovisual systems in classrooms, and provides limited support for personally owned student or faculty systems (liability limits the extent to which we can help). Media Services manages the Media Center and related facilities to provide checkout equipment, media duplication, a media library and playback facilities. Finally, Lab Operations maintains College and departmental computer labs and provides assistance for faculty, staff and students using our labs.

The Instructional Design and Web Group helps faculty and staff to develop and implement instructional technologies, and supports the development of both our academic and administrative web presence.

The Engineering team is responsible for long-term projects, large-scale "roll-outs" of technology equipment, providing purchasing specifications, and maintaining our inventory of computers for rapid deployment. Engineering's primary focus is to free up time-consuming and complex logistical tasks from the other units, so that they may provide more efficient and effective service to our patrons.

Technology Infrastructure

We maintain technology equipment in six buildings (CMA, CMB, LAC, UA9, WWH and UTFI on 5th Street). We have over 900 College-owned computer systems, 300 printers and over 40 servers. All of these are connected by one of the more advanced networks on campus. We employ multiple Gigabit and 10-Gigabit connections to the campus network, and now provide Gigabit connections to our computer lab desktops.

Our Help Desk maintains the standard security practices on campus, ranging from the deployment of anti-virus and firewall software provided by University site license, to advanced software deployment and desktop management systems (see Best Practices below). Our staffing levels have increased over the past decade as demand for Help Desk services have increased. Consequently, while we used to provide only email or voicemail methods of contact, we now have a direct phone line and physical help desk location in close proximity to our patrons and facilities.

Today, thirty classrooms (College, departmental and General Purpose) and conference rooms are outfitted with instructional media systems. These consist of a digital projector, an audio system, audio and video sources (VCRs, DVDs, etc.) and laptop connections. Many of these rooms include built-in computers and high quality document cameras. These rooms largely conform to the standard classroom control system deployed throughout the campus, through a cooperative effort with many colleges. We have deployed over sixty wireless access points throughout our buildings to provide Internet access for our increasingly mobile computer population.

Individual departments within the College also maintain technology support infrastructures. Communication Sciences and Disorders and Journalism each employ technical support staff to maintain their clinical and broadcast television equipment, respectively. Radio-TV-Film staff work closely with students during the various production and postproduction phases, and are called upon to match hardware and software capabilities to aesthetic vision. Advertising and Communication Studies employ Graduate Assistants to support their labs. Departments are primarily responsible for determining the nature and scope of activities within their facilities. Technology Services works with the departmental staff to help facilitate their needs.

Because many Communication courses are not taught within the Jesse H. Jones Communication Complex, our faculty cannot always depend upon their classes being scheduled in University classrooms that meet their technological requirements. It is critical that the colleges continue to improve the University's classroom technology capabilities, through the combined efforts of the Tech Deans & Directors Group and Technology Classrooms Committee.

College of Education

Overview of Current IT Programs and Infrastructure
Mission and Goals

Through its mission of teaching, research, and service to the state and nation, the College of Education at The University of Texas at Austin prepares outstanding teachers and other educational leaders and advances society's knowledge of teaching and learning. An integral part of the College's mission is to prepare education professionals who understand, and are skilled in, the educational uses of technology. The College is committed to preparing educators who can effectively use and teach with technology so

that they can, in turn, impart to their students the skills and knowledge necessary for a complex 21st century economy, with its critical need for workers who can use a wide variety of technology.

The College has worked to fulfill this mission by utilizing technology to facilitate instruction, collaboration, and inquiry in all its undergraduate and graduate programs. The College's commitment to this mission is demonstrated by its educational environment enriched with high-speed data networks, numerous technology facilities, and the training and support necessary to make the best use of these tools. In recent years, the College has carried this commitment further, working towards making technology available anytime, anywhere in a distributed technology environment.

The College's Vision Plan Committee has developed the following technology goals that have been addressed on an ongoing basis by previous Vision Plans and other technology initiatives:

- Continue systematic College-wide strategic planning of information resources and technologies that include all students, faculty, administrators, and staff.

- Develop high levels of technological competence in the College's students, faculty, and staff.

- Provide access to high performance digital services and global online resources to support teaching, research, and service.

- Provide access to information technologies for all members of the College community and provide the support and experience needed in a range of technology applications and environments likely to be encountered in the workplace of the 21st century "Knowledge Society."

- Infuse technology into all phases of teaching, research, and service and develop new models, tools, and strategies of instruction based on the latest technologies.

- Provide students, faculty, staff, and other community partners with online collaborative environments and network access, both on and off campus, to promote the sharing of the information they need for study, teaching, research, and administration.

Programs

Laptop Initiative for Future Educators (LIFE)

The Laptop Initiative for Future Educators (LIFE), now in its ninth semester, is a major step toward the fulfillment of these goals. This groundbreaking initiative requires all teacher education students entering the professional development sequence to acquire a prescribed laptop computer and software, and is designed to immerse preservice

teachers in a technology-rich learning environment of ubiquitous access to technology tools, Internet-based resources, and online communication systems in both their coursework and field experiences. Faculty and clinical supervisors are also equipped with the same equipment and software and are given curriculum development support.

This complex program requires considerable recurring funds for the salaries, equipment, and resources necessary to effectively carry out its operations. Extensive training is provided to faculty and students. A wide array of peripheral technology equipment is available for checkout to students for multimedia assignments created with their laptops, as are loaner laptops when theirs must be sent for repair. The Laptop Help Desk provides walk-in technical support for students, and the Application Support Center (ASC) provides help with software. A coordinator manages this extensive range of efforts and resources, and provides information to other higher education institutions interested in developing their own laptop programs.

Several Vision Plan projects in recent years have addressed LIFE-related needs, such as the project to provide technology kits equipped with projectors, digital cameras, and camcorders to the apprentice teacher cohorts for use in their field experience schools, and the project to establish an application support center.

Learning Technology Center

The Learning Technology Center (LTC) supports the College of Education's instructional and research activities by providing computer, digital media, and telecommunications facilities, equipment, and services. Through the work of the LTC staff, many new technologies have been made available in the College in recent years. The LTC developed and maintains the College's computer networks, both wired and wireless, and server system. Several large-scale technology facilities have been designed and constructed to serve faculty and students in five buildings, including a Distance Learning Classroom and Model Technology Classroom. The center also provides nine other computer lab facilities, with both Mac and PC platforms. These include an Assistive Technology Lab with specialized hardware and software to teach students about adaptive equipment for people with disabilities, and a Laptop Compatible Classroom where students can plug in power to their own laptops during classes. The LTC checks out peripheral equipment, such as digital camcorders, to students free of charge, and delivers equipment, such as mobile laptop labs, to College classrooms. (See "Infrastructure" section below for more details.)

The LTC's IDEA Studio assists College of Education faculty with the integration of technology into their curricula. The Technical & Network Services team provides desktop technical help for College faculty and staff. The LTC also employs a Web Designer who maintains and updates the College's Web site and assists departments and centers with their sites. And through the leadership of its Director, Dr. Paul E. Resta, the LTC has been involved in a number of research projects and collaborative initiatives that advance the use of technology to meet the needs of teachers and students throughout the state and nation.

These wide-ranging, high-quality resources and services require a large and skilled staff. The LTC employs 22 regular full- and part-time employees and 23 hourly part-time employees. Its IT-related funding consists of ITAC allocations (LTC personnel handle all ITAC-related purchases, and the resources purchased for many ITAC projects are housed and managed in the LTC), and a percentage of the flat rate tuition that all College of Education students pay each semester. (See "Funding Sources" section below for more details.) In addition to this college-wide program, some of the College's academic departments have IT personnel, for the most part concentrated on maintaining departmental Web sites.

Infrastructure

Below is a list of the computer labs or IT-equipped classrooms within the Learning Technology Center and their resource specifications. All labs have PRS laser printing and image scanners available.

- Advanced Applications Lab, SZB 324: 40 Apple iBooks, wireless network, instructor console, dual rear screen projection.
- Distance Learning Classroom: Instructor console, rear screen, video cameras and microphones, technician-operated, providing interactive audio and video links via the UT network, telephone, or webcast.
- Multimedia Research and Development Lab, SZB 439A: 10 Power Mac G5s with Superdrives, 10 Del Pentium 4s with DVD burners, instructor console, and ceiling-mounted projection.
- Macintosh Lab, SZB 439B: 30 iMac G5s with Superdrives, instructor console, and ceiling-mounted projection.
- PC Lab, SZB 439C: 24 Dell Pentium 4s with DVD burners, instructor console, and ceiling-mounted projection.
- Model Technology Classroom, SZB 439E: 25 Apple iBooks, wireless network, instructor console with rear screen projection, 2 plasma screens.
- Laptop Collaborative Area: Group and individual seating for 40 to use laptops wirelessly, collaborate, study, and charge laptop batteries.
- Open Lab, SZB 439: 6 Dell Pentium 4s and 6 17" LCD iMac with Superdrives. Always "open" for student walk-in use.
- Laptop Compatible Classroom, SZB 518C: Wireless network and power for student-supplied laptops, large screen projection, seating for 23.
- Assistive Technology Lab, SZB 518E: Specialized hardware and software to demonstrate accommodations for the needs of people with disabilities.
- Open Lab, SZB 536: 8 Dell Pentium 3s, 4 Power Mac G4s with Superdrives, and 10 laptop-use stations with power and wireless network. Always "open" for student walk-in use.
- Science Education Technology Classroom, in SZB 316: 30 iBook laptops in a mobile laptop cart and 4 science lab tables.
- Kinesiology Lab in BEL 844: 13 Dell Pentium 4s with DVD burners.

Additional computer equipment available for classroom delivery:

- Mobile presentation carts: 2 available in SZB, 1 available in BEL with MacBook with PowerPoint, wireless network connection, projector, and speakers.
- Mobile Laptop Class Cart: One cart is equipped with 25 MacBooks for dual platform use, one with 25 iBook G4s, one with iBook G3s, all with wireless network connection.

Video editing facilities include:

- 3 Digital Video Editing Bays in SZB 537: Power Mac G5s with iMovie or Final Cut Pro, 2 editing bays have DVD Recorders.
- Stereo Audio Mixing Room in SZB 537: Microphone, tape, and CD inputs with audio mixer.

Other equipment available for student and faculty checkout includes:

- Mini DV Camcorders
- Digital Still Cameras
- iSight Cameras
- Image Scanners
- Apple and PC laptops
- LCD Projectors
- FireWire Hard Drives
- Conference Phones

The Learning Technology Center's Technical & Network Services team maintains the College's computer data networks and servers and works hard to continually update these systems. Pertinent data on these systems include:

- The LTC oversaw the complete rewiring of the Sánchez Building and construction of new data closets in 2005. The switched data network now has 100% full duplexed 100 Mbps Ethernet connectivity with 1580 active network nodes spanning 5 buildings.
- 46 wireless access points provide wireless networking in 4 buildings.
- TeachNet, the COE e-mail and conferencing, and chat system averages 3,520 logins per day.
- The College has 33 servers, running Mac, Windows, and Unix systems.
- The College's Web server averages 88,700 requests per day.

College of Engineering

OVERVIEW OF CURRENT IT PROGRAMS AND INFRASTRUCTURE

Engineering continues on its diligent commitment to foster world-class learning through the innovative and appropriate integration of technology into the curriculum.

- Enhance the educational **experience** through student- centered learning
- Provide a supportive **environment** to nurture STUDENTS, faculty, and staff
- Foster a first-class learning **community** that reaches beyond the classroom

Engineering's heritage of Learning Resource Centers, Studio Classrooms, laptop mobility carts, robust server infrastructure, Faculty Innovation Center, deployment of Multimedia Teaching Podiums (60 classrooms), pervasive wireless infrastructure (130 access points in 5 buildings) and Laptops for Learning Initiative (now entering its 11th year) depict the consistent efforts of the College to identify and address the practical roles of Information Technology to improve pedagogy.

Engineering leverages the ITAC allocations for visionary IT projects at typically greater than a 100% matching level. We have yet to commit any Vision Plan funding toward recurring expenses and we aspire to continue this commitment.

The primary sources of funding available to the College of Engineering to support the IT infrastructure and activities are through student fees. Currently we are in the midst of a transformation from a collection of fees (Instructional Resources fee, Instructional Technology fee, Information Technology fee, and Graduate LRC fee) toward a flat-rate tuition fee. Historically these sources of funding have been incrementally consumed by increases to operational obligations and rate increases have not kept pace with needed funding amounts. The impact of the flat-rate tuition upon this situation has yet to be determined.

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

Overview -

Mission

Originally formed in 1995 to address the growing needs of the College, the Information Technology division works to enhance instruction, research and administration in the College of Fine Arts.

. . . technology transforms traditional disciplines

Until recently, technology was used to help with instruction in the traditional disciplines. A new trend is developing toward digital technologies transforming the disciplines themselves – not just facilitating their instruction. Three of this year's project proposals involve such transformations: Digital Photography Classroom Laboratory, MBE Recording Control Room/Lab, and Digital media Resource Center. In each case, the project is intended to support a *new media* vision of a traditional discipline – digital photography instead of traditional film; digital recording technology as a part of the traditional musician's skill set; digital media incorporated into traditional theatre production. This is an important trend because it demonstrates not only student and faculty comfort with information technology in general, but also their willingness to make it an integral part of their art.

Important cooperative efforts

This year, we will continue to participate in joint projects with the College of Liberal Arts, the College of Communications and General Libraries. Proposals to advance these projects are included under separate cover.

For example, the "Digital Archive Service", a joint project between Liberal Arts and Fine Arts received funding for the past three fiscal years, and has been in use since the summer of 2005. We continue expanding the project to include more collections and have begun moving some of the source digital assets to General Libraries' servers.

Overview of Current IT Programs and Infrastructure

The College of Fine Arts, one of 17 colleges and schools at The University of Texas at Austin, consists of three academic units – the Department of Art and Art History, the School of Music and the Department of Theatre and Dance – and two non-academic units – the Blanton Museum of Art and the Performing Arts Center. With over 2000 students, 221 faculty and 204 classified and professional staff, it qualifies as one of the small to mid-size colleges on campus.

The College of Fine Arts at a glance

Departments

Department of Art and Art History
School of Music
Department of Theatre and Dance
Jack S. Blanton Museum
Performing Arts Center

Personnel

2037 students (fall, 2006)
221 Tenure-track Faculty
204 Classified and Professional Staff

IT Division Services

Help Desk
Networks and Servers
Technology Classrooms
Computer Labs (Fine Arts Library, TADL)
A/V Support (T&D)
Fine Arts Web

IT Staffing

College – 11 FTE, 13 part-time (includes T&D)
Art – 2 FTE, 13 part-time
Music – 3 FTE, 10 part-time

Programs

Recurrent ITAC funding is used primarily to support the routine operation of the major student computer laboratories in the three academic units. The College reserves a small portion (about 28%) to support the central student computer laboratory and network, and distributes the remainder to the three academic units proportionally, based on their generated semester credit hours.

Infrastructure

The College of Fine Arts has a growing number of computer laboratories, technology classrooms and other special purpose facilities:

Computer Laboratories

- Richard T. and Jan J. Roberts Reading Room (located in the Fine Arts Library)
- Art Lab (ArtL, located in ART)
- Design Lab (DesL, located in ART)
- Music Microcomputer Lab (MML, located in MRH)
- Theatre and Dance Lab (TaDL, located in WIN)
- Specialty Laboratories

Electronic Music Studios (EMS, located in MRH)
Piano Keyboard Labs (2 in number, located in MRH)
Vocal Arts Lab
Music Education Lab (located in MRH)
Transmedia (located in ART)
Digital Photography (located in ART)
Robotic Lighting (located in WIN)

Technology Classrooms

- ART 1.102, 1.110. 1.120, (General Purpose)
- DFA 2.204, 3.218, 4.104
- MRH 2.604, 2.608, 2.610, 2.614, 2.634, 2.636, m3.112, m 3.114, 4.115, 4.126, 4.130
- WIN 2.112, B202, 1.134, 1.148, 2.136

Other Facilities

- Teleconference Suite (MRH 2.636)
- Fine Arts Recording Studio (MRH 2.638)

School of Information

Overview of Current IT Programs and Infrastructure

The School of Information mission aims to advance our understandings of information literally, and informs the School's operations as we seek to explore and create information contexts through all facets of the work of the School. We seek to test out new methods of leveraging information resources, to create new forms of information space that serve our student and faculty needs, and to provide living examples of how information technology can shape practices and adapt to organizational needs. To further these goals, our IT needs are somewhat unique and the school should be viewed as a research and development environment for the university as a whole.

Vision/Mission/Goals of Unit

The School of Information seeks to engage those best and brightest people who thrive on challenges such as exploring and understanding the extraordinary complexity of information and to discover principles and processes that will manage its immense volume and tap its promise for enhancing our lives. The School of Information aims to make a difference in the lives of citizens by shaping information realities that are accessible, useful, usable and sustainable.

The School's mission is to shape information realities for human and social benefit by:

- Discovering new and vital knowledge about information through research;
- Educating the next generation of information researchers, scholars and practitioners;
- Fostering leaders at the top echelons of national and local information organizations and agencies;
- Facilitating information literacy among the UT student community; and
- Providing continuing education and expert advice on information issues through collaborative relationships.

IT Programs

Information Technology Lab

The Information Technology (IT) Lab serves as the primary general service computer lab for the School of Information, and its facilities are made available to students, faculty, and staff. The IT Lab is staffed by School of Information graduate students and provides 32 stations running Windows XP and 18 Apple computers running Mac OS X plus access to a variety of specialized software and hardware items. Some examples of these specialized items are: statistical and multimedia software; network accessible, cataloging-related services such as Cataloger's Desktop, Classification Web, and Web Dewey; multiple flatbed scanners, a multi-page scanner, two digitization/conversion stations, televisions and VCRs; and a projector used for student presentations, short courses and other classes. Furthermore, the IT lab lends equipment to students, including Windows and Mac laptops, digital cameras, digital video cameras, firewire storage drives, digital voice recorders and more. Part of the IT Lab also serves as space for student work, with access to information technology and cataloging related books and teaching tools. The staff provides one-on-one instruction with students, faculty and staff as well as scheduled short courses on different topics throughout the semester. As part of this teaching effort, the members of the lab staff also produce a variety of instructional materials, ranging from basic, pamphlet-style handouts to streaming video tutorials.

Digitization Classroom

Our digitization classroom in the Sanchez Building offers 29 switchable Mac/Windows stations for student use. An IMLS grant has made it possible to supply each of these stations with a variety of audio and video equipment (analog and digital) to support our expanding digitization curriculum. The instructor station, which also provides both Mac and PC platforms, includes a document camera, VCR and DVD player, any of which can be projected in high definition for instructional purposes.

Audio Digitization Classroom

The advanced digitization lab in the Perry-Castañeda Library (PCL) has six high-end computer workstations. Each has a specialized sound card to interface with professional turntables, reel-to-reel decks, cassette decks, and other audio equipment in conjunction with specialized audio digitization software. The PCL lab also has video digitization and editing capabilities, including conversion equipment from VHS, SVHS, 8mm, and Umatic tape formats, as well as 16mm and 8 mm film to digital conversion. A number of

digitization courses meet in this lab, and students enrolled in those courses have access to the lab through a swipe-card lock during regular library hours.

Information eXperience Lab
The Information eXperience lab, located at the Flawn Academic Center (FAC), has hardware and software for use in usability testing. Hardware includes multiple computers for users, a workstation to run the specialized usability software, and high definition video connections between the users being tested and the observers. Other rooms at the FAC provide additional space for the production of student and staff multimedia and tutorial projects.

Kilgarlin Center
The Kilgarlin Center houses six Macs running OSX in two labs, two flatbed scanners, and two printers. Recently an audio digitization cart was created for student and classroom use. Additionally, a teaching microscope is used to effectively demonstrate testing methods and procedures for conservation treatment and analysis to groups of eight or more students in the Conservation Studies program. Peripheral equipment supports the import of magnified images to computers for use in websites and videos. Currently, the peripheral equipment consists of a Mac running OSX and a digital video camera to provide video recording and editing capabilities for the microscope.

IT Infrastructure

As of the fall 2006 semester, the School has 17 full-time faculty members, 15 adjunct instructors and 17 support staff, five of whom are part-time. This group of faculty and staff support both Master's and PhD programs and our newly established undergraduate minor. Beyond the general facilities mentioned above, every faculty and staff member has at least one computer for their exclusive use, and some have more than that. Full-time members of the faculty have the option of choosing the type of computer and operating system they prefer, and we currently support both Mac and PC desktops and laptops.

Personnel
Four full-time and one part-time employee support a wide spectrum of iSchool IT services. This team includes a senior systems analyst (network and server administrator); a manager of computer services (faculty instructional support, and online teaching tools); a computer operations specialist (faculty, staff and lab IT support) and; an information analyst (faculty, staff, and student information literacy and IT lab management). The School also has a part-time Web manager. Currently, resources from ITAC, as well as iSchool IT and Distance Education fees and classified budget lines fund these critical positions.

Facilities
The iSchool is housed in approximately 10,000 square feet of the 4th and 5th floors of the Sánchez building and 6,000 square feet of the Collection Deposits Library. During the past six months teaching and laboratory space has been acquired at PCL. Additionally 13

offices have been made available for assistant and part-time instructors supporting the School's undergraduate courses on the 3rd floor of the Flawn Academic Center (FAC). In these four buildings we have five classrooms, one computer and two conservation labs to serve around 300 graduate students and approximately 700 undergraduate students taking courses through the School. School IT staff members support computing and networking services for faculty and staff, including nearly 100 desktop and laptop computers (Macs and PCs.) All classrooms, offices, and conference space in the iSchool provide high-bandwidth wired network connectivity, as well as wireless capability via UT's public network. The classrooms and Dean's conference room include computers (Apple and PC), projection, VCRs, sound systems, and document cameras.

Servers

A variety of server platforms provide additional capabilities and infrastructure for student, faculty and staff use. Our two main servers, running Red Hat Enterprise Linux, offer standard web and email capabilities, access to technologies such as MySQL, as well as various PHP web-based applications. Three other servers allow us to offer streaming media in multiple formats and deliver content such as video tutorials, video of important events and live webcasts for Web-based classes. A number of other servers (primarily Linux-based) support our basic server and network infrastructure through services such as distributed backup, lab management, network-based intrusion detection, and license provisioning. In order to meet increasing faculty (and doctoral student) needs for server-based research and teaching platforms, we have deployed a Virtual Machine environment that allows us to quickly create and configure such platforms as required. Combined with several physical servers, we currently maintain 10 servers dedicated to such efforts. In all, over twenty different servers support Internet and other services to faculty, staff, and students with individual functions including streaming video, webcasting, web, email, file storage, searching, and digital archiving.

Jackson School of Geosciences

Overview of Current IT Programs and Infrastructure

Goals of the Jackson School

The Jackson School's Department of Geological Sciences, located in the Geology building, serves our own students as well as around 1,500 non-major undergraduates who take our diverse earth science courses as electives each year. Integral to our instructional activities are the 19 technology classrooms and labs in the Geology building. Six are general purpose rooms while the rest are specific to our academic unit (see table at the end of this document). Keeping the equipment up to date and in good working order and providing adequate security for the rooms are top priorities for us.

Geoscience investigations are unique in their broad use of both visual and analytical methods. We use specialized software in many of our courses to teach students specific

skills, to display complex three-dimensional images and demonstrate analytical and interpretation techniques, and to help prepare students for professional careers in which they can expect to use these same software products.

Undergraduate Program Growth
For the past 20 years, the department has had fewer than 10 freshmen each fall. In Fall 2006, we had 140 freshman applicants of which around 100 were admitted. This nearly doubled our undergraduate population. Reasons for this large increase include high energy prices (there is a strong correlation with UT geoscience enrollments); a strong career services center in the department; a new JSG presence on the UT admissions website; and JSG participation in several university-wide recruiting events.

IT Infrastructure and Other Programs Requiring Recurring Funds
Geoscience IT infrastructure and other programs that require recurring funds fall into two categories: support staff salaries and maintenance of equipment. The Department currently has approximately 2.0 FTE of classified staff positions to maintain the servers, network, instructional equipment, desktop computers, student computer labs, and course websites as well as provide end-user support. With around 450 fixed and mobile users (faculty, students, and staff), our ability to provide end-user support is stretched unacceptably thin. Our request for salary for an end-user support person (1.0 FTE) is a top priority for our ITAC proposal this year.

Continued maintenance of our technology classrooms is critical to our ability to serve our growing student population. Life-cycle replacement of equipment, standardization of equipment, and expansion of some rooms are important recurring IT expenses.

IT Infrastructure
We maintain ten servers that host web, data, and shared software and licenses. They are attached to a tape backup system. We have a Cisco 6500 router and eight 48-port switches in the old wing that can handle either T10 or T100 bandwidths. There are a similar number of switches in the new wing. All switches in the old and new wings connect to the router with fiber. We do not have a departmental firewall. Individual desktop computers have security software.

During Spring of 2007, we will install a new backup system purchased with our ’06-07 ITAC allocation. With 10 servers and more than 500GB of data, we found it necessary to employ a two-tier system comprised of a set of dedicated hard drives and a tape array that can handle 2 terabytes of data. Data can be written to the hard drives faster than to tape, so we can complete the first step during off hours. Then the data can be moved from the dedicated hard drives to the tape array during business hours. In the event of a disaster, recovery and restoration of data can be made much more quickly from hard drives than from archive tapes.

Our program-specific technology classrooms and labs are now all protected by Locknetics SmartLocks. All faculty, staff, and students have been issued an iButton instead of keys to these rooms. Because of the different scheduling needs of the general

purpose classrooms, we did not put SmartLocks on those rooms. The locks, door closers, software, and dedicated laptop for the security database were purchased with departmental and other funds.

The Geology building is nearly completely covered by the UTNet wireless network with denser coverage in the larger classrooms. Expansion of wireless coverage was accomplished in Fall 2006 with the help of the College of Natural Sciences.
We have a teaching classroom with 21 desktop PCs networked to a server and a printer. This classroom, one of the first technology classrooms to be built on campus, is in heavy use during the long semesters because students can obtain hands-on experience in creating and running a variety of computer models.

The Department maintains an undergraduate computer lab with 12 computers and two printers. We have a graduate computer lab with 20 computers, a large-format color plotter, and two printers.

All faculty, research staff, administrative staff, and most graduate students have personal computers which are attached to the building's network. Most printers are networked, although classroom printers are reserved for classroom, not administrative or research, use.

Our Digital Morphology Visualization lab became operational in Spring of 2006. The lab contains seven high-end PC workstations running 64-bit Windows operating systems with a suite of specialized 3D visualization and graphical processing software. In addition to paleontology, there are many other potential Earth Science applications of this facility in geophysics, hydrogeology, and other fields. CNS ITAC funding from '05-06 was used to help build this exciting new instructional lab. Products generated through teaching and research in the lab will be used as lecture components in many of our non-major undergraduate courses.

School of Law

Overview of Current Programs and Infrastructure

Vision/Mission Goals

1. Providing student access to computing resources—Computer Learning Center
2. Maximizing local online resources—Internet Initatives
3. Maintaining and improving computing infrastructure—CIC
4. Providing instructional support—Instructional Technology & Media Services
5. Providing access to information resources—Tarlton Law Library and Computer Learning Center

IT Programs

All Law School IT programs requiring recurring funds for salaries, operations, etc. are described in the section on Infrastructure, below.

Infrastructure

The Associate Dean for Administrative Services oversees all information technology at the Law School. There are two parts to Law School IT: (1) the Technology Department of the Law School and (2) the Computer Learning Center located in the Tarlton Law Library. The Technology Department of the Law School is managed by the Chief Information Officer and Director of IT. The Technology Department is divided into four areas:

1. Internet Initiatives—database services, web services and instructional technology
2. Media Services—audio visual services
3. Instructional Technology—instructional support for faculty
4. Computer Information Center—networking, file-sharing, and desktop services

The Computer Learning Center (CLC), the student computing facility, located in the Law Library, is the center for student access to computing resources. The CLC is managed by the Law Library's Associate Director for Administration and Collection Services.

Student access to computing resources—Computer Learning Center

- The CLC is operated under contract with ITS User Services. The facility is staffed by a full-time manager (Computer Programmer), a 0.25 FTE lab technician, and 3 FTE student proctors. Hours of operation coincide with those of the Law Library.
- The CLC (renovated in 2004) contains 80 workstations for student use, which are on a 4-year life cycle replacement program. One-third of the desktops were purchased in August 2005, the remaining two-thirds replaced in January 2003. All computers now have Pentium 4 processors and 17" flat panel monitors. The desktop operating system is Windows XP Professional and the applications package is Windows Office 2003. In Summer 2007, the CLC workstations will be upgraded to Vista operating system.
- A Dell PowerEdge 2600, purchased in October 2003, stores images for the lab and classroom desktops, the scanning station, and laptops for loan to law students. LabMan is used for station management.
- Print facilities include three PRS printers located in the CLC, a résumé printer, for which students supply their own stationery, and two PRS printers, one located next to the circulation desk and one in a student lounge area in the Law Library, both used for remote printing from laptops. Student print management will be moved from PRS to SharePoint in January 2007. The CLC also provides printing for student organizations and journals through two

Canon copier/printers. HP 9000 printers are supplied and maintained by the vendors for student printing from the Westlaw and Lexis databases.

- 10 Dell Latitude D600 laptops are available for 24-hour loan periods to law students. Five Cisco Aironet wireless cards are also available for student checkout. The Law Library supplies additional laptop accessories, including extended-life laptop batteries and AC adapters, to law students.
- 54 public Ethernet ports are available for student use throughout the law school. Wireless Ethernet coverage is available throughout the Law School.
- The Law School allows students to take in-school exams on personal laptops through the use of Extegrity software. Each student that uses the software pays an annual $35 fee to pay for the site license.
- We participate in the Dell's laptop purchase initiative, by which our students can purchase a laptop computer with a 3-year on-site warranty at substantial discount. Students may drop off their personally owned laptops for service by Dell-authorized technicians at the CLC.
- Currently, all students are eligible to receive one copy of Microsoft Office media to install on their personal computers, and the Law Library distributes complimentary 128MB USB flash drives to incoming students.
- During Summer 2007, the Law Library will replace approximately 60% of its study tables with new tables equipped with electrical outlets for laptop use.

Local online resources—Internet Initiatives

- The Law School employs three FTE systems analysts, one FTE webmaster, and one FTE web designer.

- Major online database systems:
    - Law School events calendar and event planning tool
    - Law Central online suite of administrative services for course management, grades, admissions, gift processing, scholarship and career services
    - Freshlaw Central online notification and information system for incoming students
    - Faculty/staff directory/database used to simplify all information updates and online systems
    - LawMail student communications system for event and announcement notifications through email, web pages and a new digital signage system (2006)
    - Student organization membership system and site maintenance

- Major websites (aside from the law school’s primary site):
    - Law School web design refreshed January 2006
    - Law School sponsored conferences, including on-line registration

- Law Journal websites using content management tools to be added in the near future
- Websites for 6 Centers within the law school

- Ongoing maintenance projects:
  - Making needed upgrades to old web systems: incorporating the new EID security measures, putting pages into the UT Direct format, Code enhancements and database integrity
  - Security evaluation and enhancements for all web interface systems
  - Reducing the need for paper printouts by moving as much online as possible.
  - Providing analyst support for online systems and automated processes in the areas of Student Affairs, Admissions, Alumni, Career Services and Special Programs. This involves handling data transfers to and from main campus, fixing bugs, making additions and enhancements to current systems and providing direct support to student and staff users.

Computing infrastructure—Computer Information Center

- There are 5 FTEs in the CIC: 1 manager, 1 network administrator, 2 techs, and 1 applications specialist supporting approximately 300 Law School faculty and staff users and nearly a thousand students in 12 law journals, 11 legal clinics, and 40 law student organizations

- Network Hardware:
  - Servers:
  - Network – print, file, LANDesk, domain controllers (10 Windows servers)
  - Email: Microsoft Exchange with Outlook client
  - Blackberry
  - Filemaker
  - MIP (accounting)
  - TimeMatters (case management database for clinics)
  - Extegrity (exam software)
  - MeetingMaker (to be decommissioned)
  - TimeMatters (case management system) and SQL Server
  - World Server (web server for TimeMatters)
  - Admit-M (law school admissions system)
  - Backup tape drive
  - Several UPS (backup power supplies)

- Office Hardware
  - ~ 400 Windows desktop computers in building
  - planned 4 year life cycle, but actual replacement time contingent on funding
  - ~100 laptops
  - ~100 home-based desktop computers

- Network Infrastructure:
  - Router replaced in Spring 2004 and implemented Cisco annual maintenance contract
  - 46 100MB switches with 48 ports each (~2000 of 2208 in use)
  - Cat 5 cabling (with some Cat 5e) throughout the building
  - Standard 100MB ports (a few 1GB ports)

Instructional support—Media Services and Educational Technology

- Personnel:
  - The Media Services department has 2 FTE's available to produce video for classes and web. This department also maintains permanently installed equipment in the classrooms and sets up portable AV equipment in classrooms.
  - One Educational Technology Coordinator has primary responsibility to assist faculty with instructional technology, including Blackboard and Powerpoint. The Coordinator is also responsible for organizing and managing large-scale training opportunities as needed.

- Classrooms and other instructional facilities
  - Crestron controls are now available in every classroom. This allows the Media Services department to centrally manage and monitor all classroom multimedia equipment using the Crestron software.
  - 5 large classrooms have full multimedia installations with Crestron control systems, projectors, automatic screens, desktop and tablet computers, DVD and VHS players, wireless mics and speakers. (2.137 & 3.142 Summer 2003; 2.138, 2.139, 2.140 Summer 2005)
  - In the Summer of 2006, six medium-sized classrooms (2.123, 2.124, 3.124, 3.125, 3.126, & 3.127) had the following multimedia equipment installed: Crestron control systems, projectors, automated screens, document cameras, DVD and VHS players, wireless mics and speakers. Beautiful wooden podiums and lecterns were custom-designed and created for law faculty use. Tablet computers will be installed in these podiums shortly.
  - An additional 11 rooms also have Crestron control systems installed. These rooms have ceiling mounted projectors, wall mounted speakers and wall plate A/V connections for computers, video, and SVideo. Five of these rooms are small classrooms (3.114, 3.115, 3.128, 3.129 & 3.306). Four are Learning Courtrooms (3.310, ic3.312, 3.334, & 3.336) and two are meeting rooms, Eidman Jury Room and the Sheffield Room.
  - As technology was added, chalkboards were replaced by whiteboards to protect the equipment and new blinds were added as needed to improve projection.
  - Additional outlets added (2005-06) along the walls of several classrooms for student use.
  - Digital camcorders and DVD burners were installed during Summer 2005 in

the 4 practice courtrooms and DVD players to the 4 viewing rooms adjacent for student mock trials
- Portable projectors, screens, laptops, and other multimedia equipment are available upon request in other classrooms.
- Wired network connections are available for instructors in all classrooms. Students have wireless Ethernet available throughout the entire law school building, including 2 outdoor areas.
- A 26-station classroom in the Computer Learning Center is used for classes that require computer access, such as Accounting for Lawyers and Advanced Legal Research. The classroom is also used to teach students computer-assisted legal research and other computer skills in one-on-one and group training sessions.
- Wired Ethernet access at each of 60 seats in the Jeffers Courtroom, a classroom and courtroom facility
- Video conferencing capabilities are available in three rooms within the law school using a Tandberg codec purchased in 2005. One of the rooms is specifically designed for distance learning and has microphones installed on the desks. The Eidman courtroom and a small distance learning room are also capable of providing video conferencing. A pc-based video conferencing camera is available for individual use, but a larger, portable unit is being considered for use in classrooms. The video conferencing systems are used regularly for everything from student interviews to bringing in guest speakers for conference events.
- In the Eidman and Jeffers courtrooms there are automated screens and robotic cameras. However, the Jeffers cameras and switcher are in need of replacement. Both rooms have wireless and Ethernet drops, but all other technology must be carried in. A portable 3M wall display was added in both Courtrooms for the trial advocacy program.

- Other Available Equipment and Services
  - All of the large/medium-sized classrooms have built-in wireless microphone systems.
  - Multimedia workstation with a high-volume black and white scanner and a high quality color scanner dedicated to the preparation of instructional materials.
  - The law school has over 25 Canon multifunction devices that allow users to print, copy, fax and scan material more efficiently and at a less per page cost. This number includes several new devices added during the summer of 2006 in student journal areas, clinic spaces, and faculty areas.
  - A CD duplicator is available for distribution of materials on CD-ROM where appropriate
  - Instructional Technology Team (collaboration of Internet Initiatives, Media Services and Library) is available to help faculty with multimedia presentations (including video) and curriculum development utilizing technology. After infrastructure upgrade and equipment installed in classrooms, we plan to expand these projects.

- The Adaptive Technology Room within the library contains technology which assists those who are hearing or visually impaired
- Camcorders, televisions, VCR's, a digital still camera, and other audio visual equipment are available for student checkout

Access to information resources—Law Library and CLC

- Subscribe to numerous on-line databases, including LEXIS and Westlaw
- Installed proxy server on Law Library online catalog for off-site access to Web-based database subscriptions.
- Nine public Internet stations are available in library
- Upgraded network infrastructure for student v-lan, including replacement of all network switches and racks and extension of air conditioning ducts to the network closet
- Installed OpenURL link resolver on Law Library online catalog to offer context-sensitive links to external information resources.

College of Liberal Arts

1. OVERVIEW OF CURRENT IT PROGRAMS AND INFRASTRUCTURE

1.1 Vision/Mission/Goals of Unit

The College of Liberal Arts believes instructional technology is a vital, dynamic, and increasingly significant tool for academic study in all subject areas. Home to nearly 1/3 of the student body and steward of key core course materials that have the potential to reach *every single undergraduate* at the university, we have a special responsibility to pursue the most efficient and effective uses of digital communication. In essence, our technology vision is about teaching.

The College strives to develop online curricular materials that enrich the learning process by:

- *Increasing the quantity of material readily available to students;*
- *Engaging students by providing more interesting, compelling, and interactive material and encouraging creative, new ways of response;*
- *Providing multiple content types—such as text, audio, video, and graphics—to increase content knowledge and comprehension through multi-modal experiences;*
- *Increasing access to timely, relevant, and customized scholarly materials.*

The College's long-term technology strategy hinges upon direct support for computer-based, network-delivered course materials. Since it was formed in 1998, Liberal Arts Instructional Technology Services (LAITS) has provided the necessary facilities and infrastructure to support technology-enhanced instruction. The linked strategies of supporting content development and expanding technical capacity have brought continued and new success each year.

For example, ***Francais Interactif***, our award-winning French language instruction site, was developed specifically for use with the multimedia teaching consoles installed in Liberal Arts classrooms. Instead of losing a whole class-day each week to a computer lab session, teachers use online materials daily in class, and students can do their "lab" at home over the Internet.

For 2007-2008, the theme is one of scalability and utilization of last year's significant investment in infrastructure. The most pressing goals are to:

- Capitalize on new multimedia production capabilities for course development;
- Complete the installation of consoles in the remaining 'smart' classrooms;
- Address the upgrade of the oldest computers in students labs.

These priorities are demonstrated through the significant level of past, present, and proposed financial investment (*Appendix A*) and staffing structure (*Appendix B*). LAITS's team of professional programmers, web developers, and media specialists collaborate with faculty to produce high-quality, web-based, multimedia course materials delivered to students in classrooms, computer labs, and at home.

1.2. IT Programs

Course Development

LAITS encourages and sustains Instructional Technology through five essential programs:

- Faculty Course Development Projects
- Departmental Course Material Program
- Student Technology Assistants
- Faculty Instructional Technology Workshops
- Multimedia Production Services

Faculty Course Development Projects

Faculty Course Development Projects are the single greatest source of instructional innovation in the College. These grants provide a wide range of funding and services custom-designed to help faculty members enhance their teaching with technology. Selected through a peer-reviewed internal grant process, grant recipients range from the technically savvy to the technically naïve. Faculty are provided with the skills and resources they need to develop course materials, either on their own or in collaboration with professional developers. Faculty Course Development funds support student assistants, computers, software, and specialized equipment. Summer salary for faculty is also available to ensure that course development can proceed without interfering with instruction.

Faculty Course Development grants are allocated through a yearly grant competition. A call for proposals in early spring solicits faculty members for projects of exceptional value to students *(see Appendix C for the 2006-2007 call for proposals)*. Department Chairs are required to provide a statement of departmental teaching goals and instructional technology vision and to rank the proposals from their department. *(See Appendix D for a full list of grants from 2002-2006.)* Each proposal is reviewed by a committee of Liberal Arts students, faculty, and staff. Faculty committee members are chosen from those demonstrating a dedication to instruction and to technology-oriented course development. *(Appendix E contains a list of committee members).*

The committee goes beyond simply funding proposals. Authors of promising plans are encouraged to go beyond their initial project ideas with support from LAITS' professional staff. ***Cantar de mio Cid*** *<http://www.laits.utexas.edu/cid/>* was such a project. The author had a strong idea, but experienced faculty committee members and LAITS staff could see even greater possibilities. The result: an award-winning site used by El Cid fans and scholars around the world. At the other extreme, poorly developed proposals are not always completely rejected. The committee often makes suggestions on how to improve projects and encourages applicants to seek training or advice from LAITS before resubmitting for a future funding cycle.

Additional oversight of Faculty Course Development Projects comes through a reporting process managed by the LAITS staff and the grant review committee. Grant recipients submit annual reports with financial accounting, an explanation of the progress they have made, and an assessment of results. A public review forum—*LAITS Third Fridays*—requires faculty grant recipients to present on projects under development for comment and discussion by faculty and staff from around the University.

From proposal to finished project, LAITS and the grant review committee make every effort to start innovative course-related projects on the right track and keep them there. Results have been impressive with the following Liberal Arts winners at recent Division of Instructional Innovation and Assessment IITAP awards:

2003 Silver Award for Teaching with Technology
Danteworlds: Inferno *<http://danteworlds.laits.utexas.edu/>*

Guy P. Raffa, French and Italian; Suloni Robertson and Gary Dickerson, LAITS

2004 Gold Award for Teaching with Technology
Français Interactif, *<http://www.laits.utexas.edu/fi/>*
Karen Kelton, Dr. Carl Blyth, and Dr. Nancy Guilloteau, French and Italian; Eric Eubank, LAITS

2004 Bronze Award for Teaching with Technology
Interactive Laboratory Modules: Methodological Approaches to the Study of Primate Anatomy and Locomotion
Dr. Liza Shapiro and Dr. David Raichlen, Anthropology

2006 Silver Award for Resource Development
Paradise Lost, Book Nine: Prototype of a Multimedia Audiotext within a Book-based Interface Design *<http://www.laits.utexas.edu/miltonpl/>*
Dr. John Rumrich, English

2006 Special Recognitions Award for Teaching with Technology
Texas Politics, *<http://texaspolitics.laits.utexas.edu>/*
Dr. James Henson with Daniel Benner, Cristina Escutia, Eric Eubank, Tim Fackler, Daniel Garza, Michael Heidenreich, Johhn Morris, and Suloni Robertson

Over $3.8 million has been awarded to 144 Faculty Course Development Projects since 2002. See selected projects online at *<http://www.laits.utexas.edu/its/courses.html>.*

Departmental Course Materials Program
The Departmental Course Material Program focuses resources on large service courses taught by multiple instructors and taken by students across the university. Courses are selected to ensure the biggest bang-for-the-buck—the greatest impact for the resources invested. Typical projects provide students access to online textbooks, videos, audio recordings, study aids, quizzes, or other materials.

Our French language site, ***Francais Interactif*** *<http://www.laits.utexas.edu/fi/>,* is an exemplary example of a Departmental Course Development Program. Each semester, approximately 1,000 UT students enrolled in introductory French language courses use ***Francais Interactif***. The site contains all of the material for the first two semesters of French language instruction, including a complete online textbook (***Tex's French Grammar***) that frees students from the burden of purchasing expensive textbooks. The text has also been widely adopted outside of UT and is currently reaching nearly 1 million 'hits' per day. The National Endowment for the Humanities *<http://edsitement.neh.gov/>* recently judged ***Francais Interactif*** among "The Best of the Humanities on the Web."

Released in the Fall 2005 semester, ***Texas Politics*** *<http://texaspolitics.laits.utexas.edu/>* is an online textbook serving students enrolled in the UT version of the Texas Government course required of all public university students in Texas. ***Texas Politics***

reaches 5,000 students each year at UT Austin alone. Rich in digital video and other graphical materials, this complete Texas Government engages students' interest in a course designed to improve civic engagement. Early test results are encouraging with 75 - 80% of 2,000 students judging it to be more effective than traditional textbooks. It is an example of one of the added benefits of online publishing—it is available at no charge. Up to 5,000 students each year at UT Austin and hundreds of thousands of others throughout the state may be relieved from purchasing a $60 textbook—making ***Texas Politics*** a dramatically effective instructional project.

Liberal Arts is committed to providing the product of these large-scale projects freely to the public at large. Content for the Departmental Course Material Program is produced entirely by College faculty, students, and staff, and copyrights are cleared for perpetual and unlimited use by The University of Texas at Austin. Thousands of users visit these sites each day, reinforcing our image as a flagship university of international stature and a public institution providing valued services to the people of Texas.

Student Technology Assistants

Over the past two years, LAITS has greatly expanded course development by employing Student Technology Assistants (STAs) as part-time development staff. The program matches skilled students with the needs of faculty projects. STAs work under the direct supervision of LAITS staff and are employed on a wide range of Course Development Projects and the Departmental Course Development Program—increasing our development capacity and leveraging our investment in classroom technology and course development facilities. The STA program recognizes the growing technical skill levels and technological professionalism of our undergraduate students. STAs gain the invaluable experience of collaborating with faculty—a new and distinctive setting for learning—while faculty are able to focus more on teaching and the creation of scholarly content.

Faculty Instructional Technology Workshop

Through its Faculty Instructional Technology Workshop, LAITS offers critical instructional technology training designed to give faculty the skills needed to create pedagogically sound multimedia course materials. Workshop sessions are designed to increase the impact of our prior investments in technology. Participants learn the basic elements of project management and web design, engage in discussions about technology-enhanced pedagogy with experienced faculty members, and receive hands-on training in the use of hardware and software. Use of multimedia equipment in our technology classrooms is a particular focus.

Participants are recruited to maximize the impact of the workshop. Most are selected through the Faculty Course Development Project proposal process. The grant review committee directs recipients to the workshops to receive training prior to beginning projects, or recommends the workshop to unsuccessful applicants who need to learn more about using technology before applying for future grants. Selected faculty receive a stipend to attend this two-week summer workshop. Other participants are invited individually by College and LAITS staff.

Multimedia Production Services
With the advent of new audio, video, and imaging facilities, LAITS has only just begun to exploit its capacity for efficient and effective digital multimedia production for a variety of instructional purposes. Instructors often require specific, limited services to enable them to deliver material to students in the most effective and engaging ways possible. For instructors in such situations, LAITS offers a range of web and multimedia development services. These services include:

- Web development and consulting
- Graphic design
- Image scanning
- On-location audio and video recording
- Audio studio services
- Video studio services

Classroom Technology Support

Liberal Arts Classrooms Project
Course technology depends on classroom technology. Faculty members only invest the extra effort to develop multimedia materials if they are certain of teaching in a properly equipped classroom. Conversely, the ubiquitous presence of multimedia equipment in classrooms is a powerful incentive for faculty to teach in new and engaging ways.

LAITS is entering the seventh year of a commitment to install standardized technology consoles and projection systems in all College classrooms. *(See Appendix F for a picture of the Modular Design for Classroom Modules.)* We have now completed 119 classrooms, including all of our classrooms with 50 or more seats, and nearly all of our smaller rooms.

Campus-wide Classroom Services
Parallel efforts—often with Liberal Arts assistance—have been underway in every college. The technology classroom program has become a model for successful, large scale, multi-unit collaboration.

LAITS continues to assist other Colleges and units with classroom equipment purchasing, assembly, installation, and support services. Assistance is provided at no cost when possible, and we have built many dozens of consoles for Natural Sciences, Engineering, Social Work, Pharmacy, Education, and others without charging for labor. When time has permitted, we have also completed full room installations for Education, Social Work, Pharmacy, Human Resources, the Center for Instructional Technology, and others with no labor charge. At other times, a minimal fee has been charged.

Classroom Management
A staff of six full-time and 20 to 30 part-time student staff provide all design, upgrade, maintenance, and support services for classrooms in Liberal Arts, Pharmacy, and Social Work. Student employees provide the lion's share of classroom support. Students test classroom equipment, operate a help desk, respond to trouble calls in classrooms, and develop web-based support materials. Through weekly meetings, students work together to set policy and plan how best to communicate with faculty. Some more experienced students assist with classroom upgrades while others are assigned management tasks that free professional staff to focus on upgrades and maintenance. Cost for student assistants is bourn partly by Liberal Arts and partly by the federal Work-Study Program.

Computer Lab Operations

LAITS and the College's academic departments operate 64 instructional computer labs and classrooms—many of which are small facilities dedicated to the support of specific subject areas—as well as an additional 35 labs dedicated to student research. These facilities are spread across more than 30 buildings on both the main and Pickle Research campuses.

Many technologically enhanced courses require specialized computer labs or classrooms. Examples of specialized labs include:

- The Computer Writing and Research Lab *<http://www.cwrl.utexas.edu/>,* used by thousands of Rhetoric and Writing students each semester;
- The GIS instructional classrooms operated by Geography;
- The Texas Archeological Research Lab;
- The Physical Anthropology lab with its advanced 3D scanning and viewing equipment;
- The Economics and Liberal Arts "thin client" classrooms for statistics instruction; and
- The many language instructional labs operated by Spanish and Portuguese, French and Italian, LAITS, and others.

The College is responsible for funding nearly all computer equipment for instructional labs. Equipment for the research labs comes from many sources, including some College funds.

Historically, local departmental staff have managed most instructional computer labs—often with ITAC or Liberal Arts salary support. Growing security concerns and the development of more efficient management methods have forced the College to rethink this arrangement. As a result, LAITS increasingly assists departments with lab management, as trend we expect to accelerate.

Server Operations

Liberal Arts encourages the use of central campus servers. Departments, however, often require specialized servers to support their instructional mission. *(See Appendix G for a list of Liberal Arts server facilities and systems.)* Servers are often initially set up in departments for the development of new projects. When these projects mature and go into production, LAITS encourages consolidation into its managed facility in Mezes Hall. A three-member team of LAITS system administrators manages the server facility in Mezes Hall and provides support services for servers administered by departmental staff.

Network Operations

Campus networks are used for the delivery of course materials, communication between students and faculty, administration of courses and programs, and nearly every other instructional function. To keep up with the demands of new uses and new technologies, networks are in constant need of upgrade. The College of Liberal Arts has complete financial and management responsibility for the networks in 18 University buildings and for substantial parts of the networks in 8 other buildings. *(See Appendix H for detailed information on Liberal Arts networks.)* College managers work with ITS to plan upgrades in accordance with campus standards, while LAITS staff do most of the day-to-day management, patching and equipment installation.

Liberal Arts relies upon the central ITS security office, the ISO, for network security practices and procedures. LAITS acts as a conduit between the ISO and the departments, providing information to desktop support personnel assisting them with identifying insecure hosts, and remediating compromised departmental computers. Liberal Arts strives to institute security ‘best practices’ in all server installations.

1.3. Infrastructure

The College of Liberal Arts and its 50 plus departments, centers, and programs maintain some degree of technology infrastructure in over 30 campus buildings. What follows is an inventory of basic facilities and equipment maintained and supported by the College of Liberal Arts.

The "Six-Pack"

The buildings along the South Mall have long been the ceremonial center of the University. They now also constitute a special technology facility consisting of over 50 technology classrooms, ten 25 to 55-seat computer labs, audio and video studios, technology meeting and conference rooms, and the LAITS development and support center. These facilities are an ideal location for technology conferences, as well as university showcases such as ExploreUT.

Course Development Facilities

In March 2006 the completion of the South Mall Renovation Project added the final pieces to the new suite of LAITS course development facilities in Mezes Hall. This outstanding facility is and will be the central home of Liberal Arts course development efforts for decades to come. The suite consists of the following facilities:

- The Development Studio for web and multimedia development
- The Recording Studio for audio recording and post production
- The Video Studio for studio based video production
- Development Lab (new) for walk-in assistance for faculty
- ITS Media Store for production and distribution of course materials on CD and DVD

Smart Technology Classrooms

Liberal Arts is in the final stages of its classroom technology upgrade project. At the end of this year, we will have completed 151 classrooms in over 20 buildings to date, bringing us to 86.7% of our total goal. The key to the success of our project has been the design and mass-production of standard systems—especially our Classroom Technology Consoles—for our three distinct types of classrooms: auditoriums, presentation classrooms, and seminar rooms.

In addition to our classrooms, Liberal Arts maintains two classroom support facilities which house support staff that impacts a significant number of students.

- **LAITS Help Desk in Flawn Academic Center.** From this central location a team of students and one full-time supervisor answer trouble reports by phone and email and dispatch student technicians to assist users.

- **Classroom Shop and Assembly Facility in Mezes Hall.** Three full time staff with student assistants handle all system design, construction of technology consoles, and receiving and warehousing of all newly purchased equipment.

Computer Labs

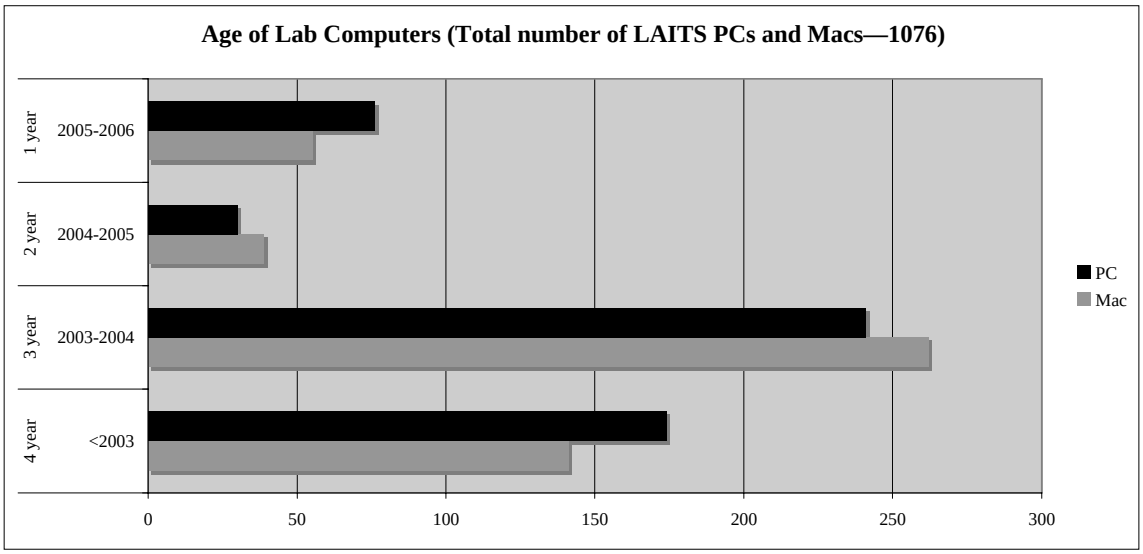
Table 1 provides details on the type and size of Liberal Arts Computer labs.

Table 1: Instructional Computer Labs by Type and Number of Seats

Lab Type	Under 20 Seats	20 to 30 Seats	Over 30 Seats	***Total***
Classroom	7	16	3	26
Walk-In	35	2	1	38
Total	**42**	**18**	**4**	**64**

Liberal Arts instructional labs have approximately equal numbers of Macs and PCs with a disturbingly large proportion (35%) being four or more years old. Note that about half of both PCs and Macs were purchased two years ago when the new South Mall labs were equipped and when CWRL and other labs purchased replacements for aging computers.

Chart 1: Age of Lab Computers



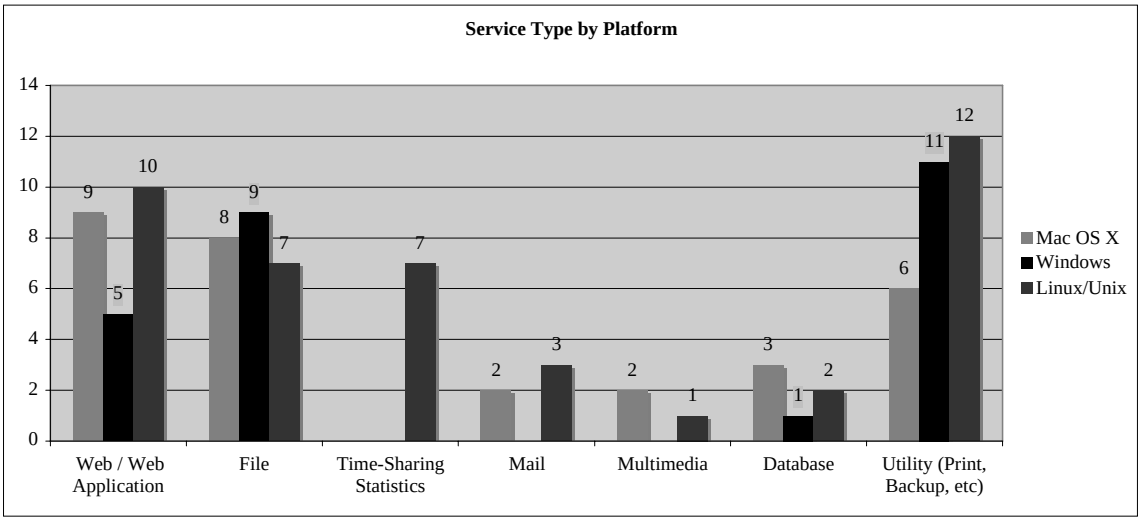
In addition to the Macs and PCs, Liberal Arts maintains approximately 75 thin client stations in the LACIL and the Economics Department computer classrooms.

Server Facilities

Liberal Arts departments currently operate 94 servers with about equal numbers of Mac and Linux/Unix systems, and somewhat fewer Windows systems.

Chart 2 details the usage of these servers by primary Service Type and Platform.

Chart 2: Server Service Type by Platform



See Appendix G for a full inventory of Liberal Arts server types, functions, and facilities.

Wireless and Physical Networks

See Appendix H, Tables 1, 2, and 3, for details of Liberal Arts Network infrastructure.

Security of Facilities and Equipment

Liberal Arts has actively participated in the conversion of several buildings to the Building Access Control System (BACS), including the South Mall Renovation Project. As a rule, all computer labs and technology classrooms are secured with Fiber Optic Loop Article Protection systems.

College of Natural Sciences

The College of Natural Sciences is expansive. On the main campus, we occupy thirteen buildings and have a presence in seven more. Our facilities include McDonald Observatory, Lady Bird Johnson Wildflower Center, Texas Memorial Museum, Brackenridge Field Lab, and the Marine Sciences Institute. All of our facilities enrich the educational experience of our students.

Technology Classrooms

The College of Natural Sciences has 54 general purpose classrooms, all with standardized teaching technology. Additionally, departments have more than 33 classrooms and seminar rooms, most of which are equipped with standardized technology. Web resources: inventory of general purpose classrooms and inventory of departmental classrooms.

Computer Labs

The College of Natural Sciences has 31 computer labs with about 750 computers. Of these, four labs (WEL 2.302, RLM 7.306, ESB 101, and ESB 103) having a total of 177 computers are open to every UT student, regardless of major and current coursework. Web resources: inventory of computer labs and information about printing in labs.

Science Labs

Students experience what they learn in the classroom in the college's more than 75 teaching labs, many of which include information technology. Computers are used to control scientific equipment, gather and analyze experimental data, and create and print lab reports. Web resource: inventory of science labs.

Wired and Wireless Network

The College of Natural Sciences has the largest 802.11g (54Mbps) wireless network on campus, covering virtually 100% of its dozen buildings on main campus. More than 20 telecom closets filled with networking electronics provide 10/100 and gigE wired networking to classrooms, laboratories, and offices. Web resource: network overview.

Specialized Facilities

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 department run their own servers, providing web space, file storage, and e-mail to students.

Collaboration

The College of Natural Sciences is fortunate to have Dr. Kurt Bartelmehs on its staff. Dr. Bartelmehs designed and built the university's first standardized technology classroom (GEO 100) in 1998. In addition to building all the technology classrooms in Natural Sciences, Dr. Bartelmehs had donated his time to build technology classrooms in the School of Nursing, the College of Education, the Harry Ransom Center, Information Technology Services, UT Physical Plant, and the UT Elementary School.

This year the College of Natural Sciences has partnered with the College of Engineering and the School of Business to acquire a site license for the popular Mathematica software. Students will be able to download and install the software on their own computers at no cost.

The College of Natural Sciences has worked with the Division of Instructional Innovation and Assessment (DIIA) in selecting a standardized student response system. Natural Sciences will equip every general purpose classroom with this system.

The College of Natural Sciences regularly contributes to the hardware and software needs of the ITS Network Operations Center, which benefits our entire campus.

Although the Jackson School of Geosciences is now separate from the College of Natural Sciences, we continue to collaborate on information technology. Natural Sciences maintains the Jackson School's classrooms and provides help desk services to faculty teaching in those rooms.

Serving the Entire University

Student fee money spent by the College of Natural Sciences benefits not only science and math majors, but students and faculty from across the university. Faculty from outside our college teach in our general purpose classrooms, using the teaching technology and taking advantage of our help desk. Student organizations regularly use our auditoriums in the evenings and on weekend. Virtually every undergraduate will visit our science labs and computer labs when they take the math and science courses required for their degree. We even operate special laboratories for students from other colleges, such as physics labs for engineering majors and a chemistry lab for nursing students. Our student study areas, wireless network, and joint-use computer labs are resources for every student on campus.

Synergy of Multiple Funding Sources

The College of Natural Sciences combines revenue from multiple student fees (including the ITAC fee, the CNS IT fee, and the CNS Equipment Fee) to accomplish projects that would have once been impossible. For every dollar of ITAC funding received, the college invests more than $1.50 of its own IT fees.

ITAC provides the A/V technology in classrooms that are renovated using other fees. ITAC provides the computers that control scientific instruments in renovated teaching labs. ITAC provides the high-speed wireless networking in newly created student study area. Web resources: renovation of Welch Hall auditoriums, renovation of introductory Biology labs in Painter, creation of student study areas.

College of Pharmacy

Overview of Current Programs and Infrastructure

Vision/Mission/Goals of Unit

The UT College of Pharmacy Learning Resource Center is responsible for practically all academic information technology support within the College. Its mission statement, reproduced here from the College's website, is a simple one:

Mission

The mission of the Learning Resource Center of the College of Pharmacy is three-fold:

- to support and maintain a reliable and modern instructional technology infrastructure;
- to offer dependable, outstanding service to faculty, students and staff in specific, identified priority areas; and
- to provide professional training and consulting on using technology for productivity and education.

Services

The LRC makes its mission operational by supporting:

- live two-way and multi-point interactive video conferencing
- analog and digital delivery of recorded Pharmacy classes
- computer and audio/visual support for classes
- a student computer laboratory
- an instructional materials development facility
- a student media library
- a computer laboratory classroom
- the College website
- training and consulting in a variety of technical areas
- faculty and staff desktop and laptop computers

Infrastructure

The College of Pharmacy operates a full-time computer lab, a computer classroom (available until 3:00 as a General Purpose Classroom), and an audiovisual library that houses computers used for streaming video and general use as well as VCRs and DVD players:

Room	**OS**	**No. of Stations**
PHR 3.116	Win XP	32
PHR 2.116	Win XP	23
PHR 3.114	Mac OS X	8

Pharmacy computer lab 3.116 was remodeled during late summer 2006, increasing its capacity by about a third. This project is described in more detail later in this document.

The standard complement of software in both labs includes the Microsoft Office suite, web browsers (including specialized plug-ins for media types requested by faculty), A.D.A.M. software for studying anatomy, and a few other helpful utilities such as QuickTime. LabMan is used to manage the labs.

Keyserved software was expanded to include the entire Adobe Creative Suite CS. In addition to Photoshop and Acrobat, the suite included Illustrator, InDesign, and a few other useful utilities. This represents a significant enhancement to the keyserved offerings.

Finally, in an effort to increase value that ITAC returns to graduate students, funds were used to purchase ten JMP software licenses for Pharmacy statistical instruction. The SPSS campus license is being negotiated at the time of this writing; any improvement in both the price of the license and the ease in administering it would be greatly appreciated.

Technology Auditoriums and Classrooms

The College of Pharmacy had one of the first Technology Classrooms on the UT Austin Campus, PHR 3.106. In 1997, when it was significantly remodeled to bring it to its current configuration, it represented the state of the art in distance education and computer-based teaching facilities on campus. However, as with all such spaces, it must be aggressively maintained at a significant annual cost.

Until Fall of 2006, this room, which seats 136 and accommodates core courses, communicated with the UT System's Network Operations Center via high-quality, analog fiber transceivers. This method worked very adequately, and this capability is being maintained. However, due to the migration of the NOC's communication protocol from h.320 (dedicated fractional T1 lines) to h.323 (Ethernet), it became preferable for each room to have its own codec. To this end, a PolyCom VSX-8000 was purchased and installed in the video control room. The PolyCom will be designated as 3.106's primary communications link to the NOC and beyond, but any source available at the control room's routing system can be transmitted via this new codec. The enhanced flexibility will be benefit all programs.

A second room, PHR 4.114, is a fully functional videoconferencing and computer-instruction space. Last year, we requested funds to purchase new cameras and architecturally update the space. This project was completed and is described elsewhere in this document.

A third room, PHR 2.208, is one of the inventory of videoconferencing spaces. This completes the College's complement of video facilities: One auditorium-style large room, one auditorium-style medium room, and a compact boardroom-style facility.

Other rooms have received and will continue to receive audiovisual upgrades in an effort to increase utilization while decreasing demands on staff time. The College placed campus-standard Technology Classroom Consoles in three PHR-located General Purpose Classrooms and has installed projectors and ancillary equipment, described below as PHR standard, in nearly all other instructional spaces.

Note that an additional classroom, 2.214, was added to the inventory of classrooms in Fall 2005. This room has an installed projector and dual-platform computer.

Classroom Inventory

Room Number	Capacity	Equipment effective Fall '04	Installed Gen'l Purpose
2.108	127	NS standard	Yes
2.110	133	NS standard	Yes
2.114	60	NS standard	Yes
2.116	45	PHR standard	~75%
2.208	20	PHR standard*	No
2.214	20	Data projector, dual-platform computer	No
3.106	136	Full tech. classroom, not NS standard*	No
3.108	30	PHR standard (teaching lab)	No
3.110	30	PHR standard (multipurpose lab/classrm)	No
3.114A	10	PHR standard	No
3.114B	10	PHR standard	No
3.114C	6	Plasma screen only	No
3.114D	10	PHR standard	No
4.114	52	PHR standard*	No

*equipped for videoconference

Networking and Associated Electronics

As discussed above, wireless Ethernet of the 802.11b standard was originally provided throughout the old and new Pharmacy buildings. This system was upgraded to 802.11g standard during 2005.

Total number of Ethernet ports maintained by the College --------- 950
Number of static and dynamic IP addresses ---------- 542
Number of 100baseT switched ports---------- 867

The number of ports will be expanded during 2006 as the 3.116 computer lab's seating capacity is expanded. This project is described in greater detail below.

Departmental Servers

The College operates four servers for primarily administrative uses:

- Mac Mini, OS X
  FileMaker Pro Server
- Mac Mini, OS X
  FileMaker Pro Unlimited - Instant Publishing.
- Mac Mini, OS X

FileMaker Pro Unlimited - Dedicated Publishing,
- Mac Mini, OS X
  Sassafras Keyserver, Now-Up-To-Date

In addition, two video servers and a large RAID array are used to publish streaming video to our audiovisual library and feed the video caches installed in our San Antonio and El Paso sites:

- Mac Xserve, OS X Server
  QuickTime/MPEG4 Streaming Server, Apache Web server
- Mac Xserve, OS X Server
  Netinfo/WINS Server, Retrospect backup server using Xserve RAID

Finally, three servers are used for file storage and student lab management:

- Mac Xserve, OS X Server
  LRC Fileserver, AFP/ FTP fileserver
- Dell PowerEdge 2400, Windows 2000 Server
  Labman and Application server
- Dell PowerEdge 2650, Windows 2003 Server
  Ghost, RevrDist, and file server

Portable Projectors and Notebook Computers

Although the College's has installed instructional technology in every dedicated classroom, we still maintain a complement of portable equipment for checkout by faculty and students for use in classroom spaces elsewhere not yet equipped with installed equipment.

We continue to provide laptops to students, faculty, and guests giving presentations. The provision of wireless Ethernet in the Pharmacy buildings has resulted in greater flexibility and is a boon for presenters using the internet, a growing trend. Recently, ITS Networking made it possible for departments to purchase or request at no charge additional PNA (public network) bandwidth for projects. The College has applied for and received an allocation for our work-study students who routinely log in under their EID for guest lecturers' use. Our student workers' need to log in and use the PNA should not, and does not, have an adverse effect on their student bandwidth quotas.

Current and Proposed Funding Sources

The LRC's funding has traditionally been chiefly derived from two student fee income streams. One is the College's Instructional Technology Fee. Although this fee has been combined with the flat-fee tuition, the level of support has not changed. Nearly 100% of the income from this fee is used to fund LRC personnel.

The second main source of income is ITAC funds. At present, ITAC funds virtually all non-human expenditures for IT: computers, video equipment for the College's distance education programs and local use, classroom audiovisual equipment, and so on.

The LRC also receives funding from the Dean's Office for some administrative salaries.

LBJ School of Public Affairs

Overview of current IT programs and infrastructure

Vision/Mission/Goals of Unit

The Lyndon B. Johnson School of Public Affairs is a graduate component of The University of Texas at Austin. The School's mission is to prepare graduate students for leadership positions in government and the private and nonprofit sectors, organize research to promote effective public policy and management, provide continuing education for public service professionals, and foster community involvement through discussion and debate on issues of public concern. As of the fall semester 2006, we have a total enrollment of 360 students.

During Academic Year 2006/2007 our Master's curriculum was refocused to reflect a growing emphasis on globalization and international aspects of public policy. Our students have the option of choosing to align their coursework with one of seven areas of specialization; International Affairs, Natural Resources and the Environment, Nonprofit and Philanthropic Studies, Public Management and Leadership, Social and Economic Policy, Technology, Innovation and Information Policy, and Urban and State Affairs .

In late July of 2006, we took the first step toward the development of new learning spaces by relocating our computer lab to space within the Wasserman Public Affairs Library. This move has allowed our students expanded access to the hard-copy collection and provided convenient access to electronic information. It is our hope that future developments will include providing personnel specialized in database and analysis tools to support student research.

One of the two pilot projects mentioned in last year's report has been realized with the installation of two GIS workstations complete with full access to the ESRI software suite. We anticipate a continuing focus in the coming year on collaboration between the School's Information Technology Services and the Wasserman Public Affairs Library to transform the learning and information environment to complement and enhance our students' experience.

Over the last year we've acquired and digitized video of speakers who have visited the School and developed a location on our Web site to serve as a repository for this material in order to make it more widely available. We are also charter members of a consortium of Public Affairs Schools and policy organizations called the University Channel, housed at Princeton, which expands our outreach and participation in the public dialogue.

Infrastructure (*overview of IT system – facilities, CPUs, servers, networking, security, IT-equipped classrooms, etc.*)

The LBJ School of Public Affairs occupies offices in two buildings. Our computers are 100% networked on Ethernet hubs or switches; 85% are limited to 10 Mbps, and 15% have access to switched 10/100 circuits. All classrooms (9 total, 2 small, 6 medium, 1 large) have Ethernet ports on a vlan which forces them to be authenticated through the public port authentication system. Additionally, we have eight wireless access points, 3 on the first floor, 3 on the second floor and 2 on the third floor giving coverage for all student occupied areas. Additionally we have two satellite units located on the third floor at the Lake Austin Center building on Lake Austin Drive; The Governor's Center for Management Development and the Ray Marshall Center for the Study of Human Resources.

The network infrastructure, specifically our building's point of presence, for Sid Richardson Hall (SRH) was upgraded. The LBJ School's share for the first phase of the upgrade was $7,353. and was shared between ITAC funds and Special Equipment (E & G) funds. SRH now has dual GigE backbone connections to the NOC and GigE uplinks to the gateway switches. Our old 10 Mbps circuits now need to be upgraded to take advantage of the building upgrade.

We maintain five departmental servers: a Windows 2003 Server hosting the LabMan server and primary Symantec security console, a Windows 2003 server used as a file server and secondary Symantec security console, a Windows 2003 server hosting SMS and SQL in support of updates and patch management, a Mac OS X computer hosting PHP and Mac OS X computer hosting MySQL supporting database driven components of our Web site.

Student Lab Facilities and Technology Classrooms	
Master's student lab	46 computers, 38 PCs (Windows XP), 2 PC's are dedicated to GIS software, 8 Macs (OS X), managed by LabMan software (running on a dedicated server)
PhD student lab	6 computers, all PCs (Windows XP), managed by LabMan software
Multi-media computer carts	2 carts, each with 1 PC and 1 Mac sharing keyboard, mouse and monitor
Technology classrooms (standard technology console)	3 (one 60-seat, two 24-seat), each with 1 PC and 1 Mac sharing keyboard, mouse and monitor in a console or cabinet

Technology classrooms (LCD projector and touchscreen contol)	4 (each seats 26), each with ceiling mounted LCD projector, speakers and Crestron touchscreen control
Video conferencing technology classroom	1 (35 seat), with 1 PC and 1 Mac sharing keyboard, mouse and monitor in a console; this room is a passive site on UT's video conferencing network

LBJ ITS staff supports all faculty, student lab/technology classroom and staff computers at the LBJ School.

LBJ ITS supported CPU breakdown	
Student Lab Facilities, Technology Classrooms, checkout	76
Faculty (including research)	90
Administrative staff	130
Total	296

School of Nursing

OVERVIEW OF CURRENT IT PROGRAMS AND INFRASTRUCTURE

Vision/Mission/Goals of the School of Nursing are attached and may also be found at http://www.nur.utexas.edu/it-ni/stratplan.pdf. Briefly, our vision, mission, and goals include strategies that encourage and facilitate the inclusion of instructional technology and nursing informatics concepts in the curricula and in our profession and educational tasks. Further, we aim to promote the competent use of technology by faculty and students, preparing faculty, staff and students to teach and practice nursing in an increasingly technology-based healthcare system. To accomplish this, we must provide sufficient computing power and resources to enable teaching and learning activities that foster the innovative use of technology and assist faculty and students in viewing

technology as a powerful tool that promotes quality nursing practice, teaching, and research.

Programs

Instructional Environment

Classrooms:

All classroom instruction takes place in the Nursing Building. The school has 5 large fixed-seating tiered classrooms, 6 large flexible-seating classrooms, and 10 conference/seminar rooms.

One of the tiered classrooms (1.106) is used for teleconferences in the undergraduate and graduate programs, for collaborative research projects, and serve as a satellite campus for UT School of Public Health, (UTSPH). During the past semester, the UTSPH upgraded a portion of the teleconferencing equipment incorporating our existing equipment.

Learning Center:

The LC consists of 5 areas/services: a nursing/health audiovisual library, a computer facility, learning enhancement services, a clinical simulation laboratory, and an AV/web production facility. All components of the Learning Center use or teach about technology in various ways. For example, an important role of staff in the library is to teach students to search online databases for needed references.

The computer facility has 34 PCs computers, creating a network with 100 MB Ethernet access, basic application software such as Microsoft Office, FileMaker Pro, Dreamweaver, Firefox, and many nursing and health-related instructional programs. All computers, managed by LabManager software, provide access to the University printing service. Thirteen of the computers are located in a small classroom, where computer-related classes are taught. The 21 computers outside the classroom plus the classroom workstations (when not being used for a class) are available to students 67 hours a week.

The Learning Center also furnishes 2 Macintosh and 15 PC laptops for student and faculty checkout.

Although wireless access has been installed in six primary student areas, one is able to access the network throughout building.

The Simulation Lab features three clinical simulation classrooms with computerized hospital information systems (HIS) used in local facilities. Each classroom is equipped with Meditec® hospital information system (HIS) used in the South Austin St David's Partnership network: St. David's Medical Center, North Austin Medical Center and the South Austin Hospital. The VA HIS, the system used by the Central Texas Veterans Health Care Systems and

the Cerner System, being installed by the Seton Healthcare Network, will be added to the rooms as they become available. Plans are underway to renovate a classroom to serve as a fourth clinical simulation classroom. As we are able, we are adding computerized mannequins that enable us to increase the fidelity of simulations.

Research Computer Lab

The Cain Center Computer Lab has 9 workstations (7 Pentium IVs and two Apple G4) with software needed by faculty and graduate students learning about and conducting original research. Software such as SPSS, SAS, N5, nQuery, EQS, and N6 are examples of applications available in this facility.

Faculty and Instructional tools

Faculty are using the following tools with varying levels of sophistication:

- Podcasts
- e-mail
- Presentation software—PowerPoint
- WebSpace
- e-Reserve
- BlackBoard including discussion boards and other communication devices
- Classroom Response System

Faculty use computerized testing software, QuestionMark® for low-stake quizzes.

Two faculty members are using technology to implement a teaching schedule (modified distance learning situation) that incorporates online teaching methods and teleconferencing with remote international sites.

Clinics (Children's Wellness Center, Community Women's Wellness Center, and the Family Wellness Center)

The School of Nursing manages three clinics, one for children in the Del Valle Independent School District, one that provides breast cancer screening for uninsured women in Austin and one that provides access to healthcare for underserved families. These facilities provide important sources of clinical practice for students and opportunities to use technology associated with the delivery of care and the management of patient data.

IT Staff and Student Network Management

The IT staff of the School of Nursing consists of one System Analyst for the entire School and 1.5 (60 hours) FTE Teaching Assistants. The LAN Administrator is paid from the School's classified staff wages account. The TAs are paid from the Student Information Technology Fee account (SIT Account).

Management of the student network is subcontracted (6 hours a week) to ITS. This contract is funded by the SIT account. In addition, a 20-hour student worker, who assists LC staff with new-user education, is funded by the SIT account. A 40-hour web master is partially funded by the SIT account.

Infrastructure:

Network -- 100MB Ethernet throughout building—offices and classrooms

Wireless – available in all student areas.

Workstations

- Students, financed by ITAC: 2.4 GHz PCs, 512MB RAM
- Faculty, financed by FCI, CLC, SON MO&E, Dean's discretionary account and cascades from student workstations: Tenure and tenure-track faculty equipment average 1 GHz or better and 700 MHz Mac. Clinical faculty machines average G3s or better.
- Staff, financed by SON MO&E, Dean's discretionary account and cascades from student workstations: average 400 MHz Apples.

APPENDIX

The University of Texas at Austin School of Nursing
NURSING INFORMATICS AND INFORMATION TECHNOLOGY STRATEGIC PLAN 2007-2009
reviewed 11/2006

Vision Statement

The vision for information technology (IT) in the School of Nursing is that all students, faculty, and staff learn, teach, and conduct School and professional business independently and efficiently with out regard to time or place. Specifically:

Students, faculty and staff are competent, comfortable users of information technology;

Appropriate technological and educational support are available to all students, faculty, and staff;

SON administration, students, faculty and staff appreciate, understand, and use nursing informatics concepts and information technology in all aspects of nursing practice, education, and research;

Faculty and staff are leaders in the innovative use of nursing informatics (NI) and formation technology (IT) in nursing practice, education, and research; and

The University community understands the role of nursing informatics and information technology in nursing and health care.

Mission:

Enable students, faculty, and staff to exploit technology for communication, collaboration, and information management.

School of Social Work

Overview of Current IT Programs and Infrastructure

Vision Mission and Goals

We are committed to our students. We will continue utilizing our ITAC funds to provide them with the best possible technology and support for education and training. Social work is a multi-faceted cross discipline profession. Our students need both specialized knowledge and a broad perspective on all issues affecting the human condition. The study of social work requires vast information about people, society, and service. Our mission, "*Through excellence in professional education, research, and service, The University of Texas at Austin School of Social Work provides national leadership to promote social and economic justice, alleviate critical social problems, and enhance human well-being.*" and core value "*We believe that, in order to enhance the social work knowledge base, the attainment of our mission requires critical thinking, professional development, and meaningful scholarship. As we improve our ability to transmit this knowledge to students and others effectively, we are better able to alleviate suffering and to promote social justice in the communities we serve."* direct us to move beyond the classroom. We need information technology not only to improve the educational experience for our students in the classroom, we need resources for development and delivery into the community in which they will be working. A large portion of our student's educational experience is in field work. We seek to maintain open channels of communication between those students, their placement agencies, and our classrooms. Our vision is to support faculty and students, making it easy for them to access and use appropriate resources both in and outside the classroom and to provide outreach to the community through our students, facility, and our digital resources.

Small schools face formidable challenges in attaining and maintaining technology resources and support staff necessary to operate at a level consistent with other departments. We can easily exhaust our annual allocation simply providing equipment, software, and maintenance support. We are forced to proceed incrementally into the future, often holding funds from one year in reserve to fully fund improvements in the next. This severely impedes our ability for innovation as we compete with other schools of social work and produce the graduates, research, and products that represent us as a flagship institution. The FCI, CLC, Microsoft agreement and departmental volume pricing have made significant contributions to offset our operating expenses. We look to The University to continue to fund and provide resources such as DIIA and ITS low/no cost software purchasing, network and security support, and help desk training and support.

IT Programs

ITAC funds currently support five areas.

Network Infrastructure
Our network infrastructure for wired and wireless connectivity is still fairly new. In consultation with ITS, we maintain our network maintenance, upgrade, and replacement costs from our formula allocation and carry-over reserves.

Instructional Classrooms
We have six IT classrooms with LAITS consoles and four seminar/conference rooms with stand alone LAITS projection and sound systems that share a mobile media console. Six of the classrooms are maintained with an annual service contract with LAITS. In consultation with LAITS, we perform maintenance, upgrade, and replacement costs on all the rooms from our formula allocation and carry-over reserves.

Computer Classroom
We have a 30 workstation computer classroom with a LAITS console. We maintain a three year 1/3 replacement schedule for workstations and annual budget for software.

Learning Resource Center
We have a 22 workstation resource lab and AV studio. We recycle replacement workstations from the computer classroom as needed and maintain an annual budget for software. We also provide laptops and AV equipment for checkout use to faculty and students from ITAC funds.

Staffing
The School has two full-time professional technical staff responsible for all network administration, Web resources, training, and technical support. In addition, students receive some support from TA's working in the LRC. ITAC partially funds one of the full-time professional technical staff positions. The School recognizes the need for more support staff, but our formula allocation is not sufficient to support recurrent funding for permanent staff.

Infrastructure

Our building has complete wired/wireless coverage. The network architecture was upgraded to 10/100 Mbps and we have a fiber link to the NOC. However, some of our internal wiring is CAT 3 and will need to be replaced in the future. We have installed wireless throughout the whole building. We continue to provide network access for Central Duplicating and connections for the University Child Care Center, both located in our building. The School has several dedicated servers. Internally they provide cross-platform file sharing, networked printer access, manage the IT classroom, and provide utility, diagnostic and installation software. Externally they provide Internet services, especially database applications with drop-box information request, on-line surveys, and search and retrieval of school archives and administrative forms.

Our classroom infrastructure is almost complete. We have seven classrooms with LAITS consoles. One is a 30 workstation computer classroom. Four additional seminar/conference rooms are equipped with basic sound and video projection systems and share a mobile cart with document camera, VHS/DVD player, laptop connections,

and touch screen management. The School does not currently have a videoconferencing system, but will need to implement a fixed system in conjunction with our future dual degree program plans. The School also has a large capacity auditorium that is used for classes, presentations, conferences, and theater productions. The Utopia Theater is used by many other departments on campus in addition to the School of Social Work. It does not have any presentation technology and would require a complete physical renovation before it can be employed as a dual use IT and theatre production auditorium.

The LRC computer laboratory is managed as an open facility, not limited to social work students. The lab is used by students, TA's, AI's, GRA's, and faculty. The computer lab is filled to capacity with 22 workstations,. The LRC has tape editing equipment an AV workstation, a color scanner, digital camera, and CD/DVD burner in a AV studio, as well as equipment to loan on request. The LRC has a vast collection of video tapes and recordings that need to be digitally preserved and cataloged.

- **CENTRAL UNITS**

Accessibility Institute

Overview of Current IT Programs and Infrastructure

Vision/Mission/Goals of Unit

The Accessibility Institute integrates technology, accessibility, and learning for everyone through research, education, advocacy, consulting, training, and service. The Accessibility Institute promotes all aspects of Web accessibility by providing free training and consulting to the UT community, by conducting cutting edge research, and by proactively incorporating accessibility into all educational research and development activities.

Goal:

To ensure that UT Austin is the world leader in providing online instructional resources that are accessible to all students, including students with disabilities.

Methods:

- Perform regular assessments of online instructional resources against national and international standards for Web accessibility
- Provide accessibility training to faculty, students, and staff developing online instructional materials
- Carry out user testing to measure impact of accessibility barriers on students with and without disabilities
- Assist developers in integrating accessibility into project planning and design
- Develop online resources to support creation and successful use of accessible course materials

- Raise awareness through annual events such as the AIR University competition (2000-present)
- Develop unique, cutting-edge academic courses to recruit new participants into the field

IT Programs (programs requiring recurring funds for salaries, operations, etc.)

- Usability lab (user testing that includes participants with and without disabilities)
- Compliance checking (evaluation of online resources against national and international standards for Web accessibility)
- Accessibility training (face to face and online)
- Student Accessibility Team (conducts accessibility evaluations of instructional Web sites and participates in training Web developers; develops tutorials for using important instructional applications with the JAWS screen reader
- Academic course development(assesses programmatic needs, designs and develops inclusive learning activities, interviews prospective students, records, captions, and/or describes guest presentations for Web publication, analyzes results, etc.)

Infrastructure

Usability lab:

- Desktop PC (Windows XP)
- PC laptop
- Mac laptop
- Video cameras
- Scan converter
- Mixer board
- Session monitoring
- Video recorder
- Morae remote usability testing software
- JAWS and Window-Eyes screen readers (for use by people who are blind)
- ZoomText screen magnifier (for low vision)

Academic courses: Building the future of accessibility

Our long-range goal is to develop a set of academic courses about accessibility, including both undergraduate and graduate courses. This will be the first program of its kind in the United States. Undergraduate courses will be offered through the Division of Rhetoric and Writing. Each course will stand alone, and the cluster of courses will be sufficient to constitute either an undergraduate minor for students in a variety of fields, or a concentration within the Rhetoric Division's new undergraduate major. Graduate courses will be taught under the rubric of the English Department's Computers and English Studies Ph.D. concentration, and will be cross-listed with other schools and colleges

(such as the School of Information, the LBJ School of Public Affairs, the School of Social Work, and others as appropriate). All will meet in the Computer Writing and Research Lab's networked classrooms to support hands-on activities and foster collaboration.

The need

To date, accessibility work has focused primarily on gathering techniques, sharing best practices, and codifying standards. Techniques, practices, and standards have been disseminated almost entirely through either Web-based information or short, instructor-led technical training classes aimed at professional Web developers. Examples of the former include the Accessibility Institute's How'-tos and Demos and Guidelines and Policies pages. Examples of the latter include instructor-led, hands-on training for UT Austin staff and faculty offered through the Accessibility Institute and ITS; other organizations offering such training include the Austin-based nonprofit organization Knowbility (a frequent collaborator with the Accessibility Institute) and Utah State University's WebAIM.

There have been comparatively few academic courses on accessibility. Exceptions include Professor Gregg Vanderheiden's courses in Engineering and Biomedical Engineering at the University of Wisconsin-Madison, which focus primarily on the development and testing of assistive technologies; Professor Jon Gunderson's Rehabilitation Engineering courses at the University of Illinois at Urbana-Champaign, which have focused variously on Cascading Style Sheets and evaluation tools; Professor Elizabeth Lawley's 2003 course on Web design at the Rochester Institute of Technology, which hosts the National Technical Institute for the Deaf; and a combined graduate/undergraduate course taught from 1998-2004 by John Slatin here at UT Austin. Professor Clay Spinuzzi's courses on usability, offered through the Rhetoric Division, have also incorporated accessibility concerns. The proposed set of courses is to our knowledge the first such program in the United States.

Accessibility is an increasingly complex area, distributed across many disciplines. Technical training for working professionals and one-off academic courses will no longer allow adequate coverage, and continued progress will benefit from more systematic education in addition to technical training. Our plan to create a set of academic courses, therefore, amounts to the beginnings of an "intellectual infrastructure" for continued research and development in the field, and for opening new employment opportunities for students, including especially students with disabilities. We see this becoming an interdisciplinary/multidisciplinary program, drawing on faculty participants from disciplines in addition to Rhetoric and Writing, including (but not limited to) Information, Cognitive Science, Psychology, Computer Sciences, Electrical and Computer Engineering, Design, Media Studies,Special Education, and others. We also see it as involving expertise from industry (e.g., the IBM Accessibility Center based in Austin, AT&T Labs) as well as members of the disability community in Austin.

The Accessibility Institute will actively seek input from students with disabilities as well as industry and academic experts in developing each course.

Please see the section on “One-Time projects” for detailed information about the course we propose to develop in 2007-08.

One-time Projects

New academic course: Introduction to Accessibility

In 2007-08, we will concentrate on creating a new Introduction to Accessibility course, to be offered through the Division of Rhetoric and Writing and cross-listed with Science, Technology, and Society. The course will be designed to satisfy the new Flag requirements for Writing and Multicultural Perspectives and Diversity, as described in “Supplementary Recommendations from TFCR, http://www.utexas.edu/faculty/council/2005-2006/reports/tfcrsupp.html). This will allow us to introduce students to an exciting new field at an early stage in their academic careers, thereby building an audience for more advanced courses .

Topics

As noted above, this is the first in a series of courses. “Introduction to Accessibility” will address the following topics:

- Conceptions and definitions of disability and accessibility: “medical” and “environmental” models of disability and their implications for accessibility.
- Accessibility and disability in law and policy: US and internal legislation concerning rights of the disabled, accessibility requirements for government and/or commercial sites, policies in education
- Assistive technology: Students will learn to use selected assistive technologies:tools that enable individuals with disabilities to access and use information technology and online content (screen readers, screen magnifiers, word prediction tools, graphical organizers, OCR, alternative input devices, captioning, speech recognition, specialized browsers, etc.). We will take advantage of the tutorials created by the Student Accessibility Team wherever possible.
- Accessibility standards: what the standards do (and do not) require, plus how standards are developed. Both the international standard published by the World Wide Web Consortium in 1999 and the US federal standard that took effect in 2001 are undergoing major updates. The processes for both are public; they are also very different. Students will have the opportunity to follow the evolution of specific provisions.
- Evaluating accessibility: students will apply accessibility standards to specific Web content, using different methods and tools. This includes comparing results of automated testing and user testing.
- Social impact: students will investigate how accessibility barriers affect people with disabilities in major life-areas such as work, education, health care, and recreation.

The course will feature guest presentations by industry and academic experts, especially those who have disabilities. Presentations will be recorded (with permission from the

presenter); selected recordings will be transcribed and archived for later review by students; where feasible, recordings and transcripts will be made publicly available via podcast or as Digital Talking Books (DTB; see below).

Audience

Students in the following groups may find the course(s) especially interesting:

- Students with disabilities
- Rhetoric and Writing majors
- Psychology majors
- Students in Computer Sciences and Computer and Electrical Engineering
- Students in Media Studies
- Students in Design
- Students in Government
- Students in Education
- Business students
- Etc.

Deliverables

- A course Web site that exemplifies best practices in accessible Web design and conformance to the latest international standards
- A detailed instructor's guide to support instructors new to the course, including Assistant Instructors
- Learning activities and assignments that follow the principles of Universal Design for Learning
- Collection(s) of print and online readings; print materials will also be available as Digital Talking Books, a NISO-standard format that allows simultaneous visual and auditory presentation of electronic books. The DTB format is used by Recording for the Blind & Dyslexic (www.rfbd.org), and in 2008 the Library of Congress' National Library Service for the Blind and Physically Handicapped will begin publishing DTBs .
- Additional resources for students and instructors

Learning activities

Learning activities include the following, and others to be developed:

- Encountering Barriers, in which students try to accomplish routine Web tasks using assistive technology;
- the Mouseless Week, in which students conduct all computer-related activities using only the keyboard;
- evaluating specific content against accessibility standards. Students will also visit the Accessibility Institute's usability lab, first observing user testing and then participating in design of tasks and scenarios.

- Other activities including collaborative production of text alternatives for images and other non-text content, including closed captions for video and transcripts of audio-only files

Timeline

Fall 2007

- Set up planning site for the project (e.g., a WIKI)
- Develop interview questions for students with disabilities and experts in the field. This will (a) provide important guidance in addressing the interests and needs of students with disabilities, whom we are especially interested in attracting to these courses; and (b) raise awareness of the program throughout the field, thereby increasing prospects for attracting external funding as well as recruiting new students to the University. Note that this could become an annual national survey.
- Work with Services for Students with Disabilities to recruit interviewees while protecting student confidentiality
- Submit to IRB for human subjects review.
- Conduct interviews; analyze results.
- Set up accessible content/learning management system such as ATutor (University of Toronto) or Sakai (Sakai Consortium, including UT Austin, Stanford, Michigan, Indiana, others)
- Set up the basic course Web site
- Identify and prepare examples for presentation in class; include detailed notes for instructors
- Develop learning activities, including instructions for students and detailed notes for instructors; post to course site
- Identify and collect readings for course packet
- Scan print sources and convert to Digital Talking Book format; obtain permissions where necessary; make available through Library e-reserves system
- Construct schedule of readings and assignments; post to course site

Prepare informational materials about the course and send to academic advisers as well as Services for Students with Disabilities (for direct distribution to their clients); post to "Classes" page on the Accessibility Institute site

Spring 2008

- Teach course
- Conduct in-progress evaluations to gather feedback from students
- Conduct end of semester evaluations
- Conduct follow-up interviews with selected students

Summer 2008

- Review course materials and results in light of student and peer evaluations and interview findings
- Update materials as needed
- Write up results for publication
- Recruit and train instructor(s) for next iteration
- Identify areas of attention for next course in the cluster

Infrastructure

The products below support the production of Digital Talking Books using either recorded or synthetic speech, or even a mix of the two. The end result may be exported as standalone audio to CD-ROM or MP3 players, and may also be used on a computer with synchronized text and audio. (This combination is especially important for students with reading disabilities such as dyslexia, and also benefits students whose native language is not English.) We list these products as "Infrastructure" because we anticipate using them for many projects, including future academic courses, tutorials, accessibility reports, etc.

Product	Description	Ordering information	Cost
APH Studio Recorder	Software-based digital recorder designed especially for recording and editing spoken-word audio for use in Digital Talking Books. Designed by American Printing House for the Blind for use by people who are blind; also accessible to sighted users.	D-03600- See00See http://www.aph.org/tech/sr_info.htm	$200.00
Dolphin Publisher	Software for creating Digital Talking	See http:// http://www.yourdolphin.com/productdetail.asp?id=12#main	~$1,200 (education price)

	Books: synchronizes text with recorded or synthetic audio narration, so the resulting document can be read visually or aurally; visual display of text is synchronized with audio. Documents can be navigated by word, line, sentence, paragraph, section, chapter, etc. Fonts can be enlarged or diminished. Audio can be sped up or slowed without degradation of speech quality.		

Total for Infrastructure: $1,200

Division of Instructional and Innovation Assessment

Overview of Current IT Programs and Infrastructure

DIIA's mission is to integrate pedagogy, instructional technology, and assessment to promote effective and innovative instructional and evaluation practices in support of the University's core purpose and values. All ongoing, new proposed ongoing, and one-time capital expense projects align with DIIA's mission. DIIA is the only core

unit that supports all colleges and schools with the services, programs, and projects that are implemented. Each one moves the University forward in the areas of teaching and learning, assessment, and the effective use of instructional technology.

DIIA Infrastructure and Services Supported by ITAC Funds

DIIA relies largely on the ITF allocation to fund our instructional activities, support the multimedia lab, and fund a large portion of our additional recurring expenses. For 2004–2005, DIIA and its Center for Instructional Technologies received ITAC funding of $715,621, which represents $405,671 for ongoing operations and $309,950 for one-time projects. For 2005–2006, DIIA and its Center for Instructional Technologies received ITAC funding of $650,429, which represents $360,426 for ongoing operations and $290,00 for one-time projects. For 2006–2007, DIIA received ITAC funding of $597,436, which represents $369,947 for ongoing operations and $227,489 for one-time projects. ITAC helps to fund the following programs and services:

~FAST Tex—Administer and monitor faculty IT projects and employ 40-50 students annually. 28 projects currently in progress impacting more than 6,000 students.

IITAP—Conduct the 10th annual instructional technology incentive program for UT faculty involving call for entries, administration, management of review and judging panels, and an event at which entrants are showcased and winners announced.

Multimedia lab– Provide the only high-end production facility open to all UT faculty and students for class projects; the lab is open 64 hours per week, staffed by a manager, technicians, and part-time proctors.

Digital Media Services– Prepare students to be 21st Century professionals by assisting faculty in incorporating digital media in their courses and by providing students with training, consulting and
access to high-quality digital media equipment, software and facilities.

Courseware—Provide training, second-tier expert consulting, and administration for Blackboard and other Web courseware tools.

Technical evaluation—Conduct exploration and development on new and emerging technologies.

Database production and maintenance—Build and maintain systems such as, World Lecture Hall, EUREKA!, e-Portfolio, and other in-house databases and systems to support students.

Resource development—Create Web site resources, tutorials, lab guides, journal submissions, and conference presentations.

Training—Conduct workshops, on-site and lab-based training sessions for faculty, graduate student instructors, undergraduates, and for classes based on requests from instructors.

Ongoing Course Assessment system—Allow faculty to solicit anonymous, secure student feedback online throughout the semester.

eGradebook—Allow faculty to maintain course assignments, related grades, and calculate final grades for their students in a secure online environment.

CIS/eCIS—Allow students to give feedback to faculty about their courses and teaching at the end of each semester.
Infrastructure—Provide network, servers, hardware, software, computers and lab equipment that support these programs and services.

These services 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.

Infrastructure and Services Supported by Local/Special Funds

DIIA receives student fee money and state-appropriated funds for developing policy for technology-enhanced learning and its other operations: credit-by-exam testing, petitioning, management of student credit-by-exam tests, test administration, computer testing labs, classroom scanning, administration of the course instructor survey, and online services that integrate student information.

DIIA does not receive other local money or special funding for operations that:

- Provide students and faculty reliable instructional technology services
- Make possible direct access to online and multimedia learning and teaching technologies
- Support and complement departments and colleges in their endeavors to promote innovation in instruction
- Partner with colleges in the research and development of instructional technologies
- Collaborate with other campus entities in implementing technology grants

Collaborative proposals not included in the DIIA ITAC Vision plan include:

DIIA/LAITS/LIBRARIES DASE INTGRATION PROJECT

Graduate Studies

Overview of Current IT Programs and Infrastructure

Vision/Mission/Goals of Unit
The Graduate School operates under the direction of the Vice Provost and Graduate Dean and is charged with providing the services and support needed to not only sustain the

Graduate School, but also to ensure its progress and increase its value to the University community. Pride is taken in providing valuable academic-related services, not found in individual departments, to more than 10,000+ graduate students. The office awards more than 700 doctoral degrees and more than 2,500 master's degrees each year. The office's fellowship program makes annual awards totaling approximately 5 million dollars.

The Graduate School provides a wide range of services to the University community, including graduate students, members of graduate studies committees, graduate advisers, and graduate coordinators. The office is organized by the following areas of responsibility:

Graduate Recruitment and Outreach
Graduate and International Admissions
Student Services
Fellowships
Professional Development and Community Engagement
Graduate Assembly and Legislation
Portfolios
Technology and Web Administration
Faculty Development
Awards
Administrative Services

Infrastructure

The Graduate School has 30 Apple computers and 2 Dell PCs. The office has one file server that is secured with firewall and antivirus software and backed up nightly by Student Information Services, which provides LAN support to our department. We have one in house Systems Administrator responsible for setting up computers, upgrading the software and virus protections, and providing technical support to users. Software and operating systems are kept up-to-date.

The Graduate School supports one position in the Student Information Services Unit, under the direction of Angela Svoboda, to assist with information technology needs and maintain automated systems. SIS is currently helping to develop a Graduate Student recruiting toolkit to assist the Graduate School and other departments with collaborative recruiting efforts.

Harry Ransom Center

Overview of Current IT Programs and Infrastructure

Vision/Mission/Goals of Unit

The mission of the Technology and Digital Services Unit of the Harry Ransom Center is to provide skillful and effective technical support for all of the Center's programs and services, including:

- Acquisition of cultural materials for the purposes of scholarship and education
- Preservation of and access to creations of cultural heritage through cataloging, conservation and collection management
- Support of research through public services, symposia, publications and fellowships
- Provision of education and enrichment for students, scholars and the public through classroom support, exhibitions, public performances and lectures.

Ransom Center Support of Classroom Instruction and Scholarship

The Ransom Center supports classroom instruction and access to resources for UT scholars through its research materials and services. The Center plays an integral role in educating UT students, primarily in the colleges of Liberal Arts and Fine Arts, by providing access to primary source materials and support resources for these fields. While the Center supports research by UT students and scholars from all academic divisions, it is particularly engaged in support of academic programs in English, French and Italian, American Studies, Plan II, Liberal Arts Honors, Photojournalism, Radio-Television-Film, Theater and Dance, Music, and the School of Information. The Center also provides one-year internships that are available to UT students from all fields of study.

Information Technology is fundamental to the Ransom Center's services to UT students and scholars. Access to research and instructional resources is provided through the Center's web site, UT Library Online, UTopia, in-house databases, and audio and/or video copies. Unique research materials available only on site are made accessible to UT scholars on a 24/7 basis through digitization. Unique materials that are completely inaccessible for classroom and research use due to fragility or value (such as the Gutenberg Bible) are made accessible through digitization. Ransom Center IT staff provides technical support for UT classes held in Ransom Center classrooms (see list of classroom use, attached).

IT Programs

<u>Technical support</u>

Functions performed by technology staff in support of 130 staff & 246 pieces of technology equipment include:

- Troubleshoot hardware, software, and networking issues
- Install, and maintain hardware and software
- Train staff in use of hardware and software
- Enable and support wired and wireless network

<u>Web site</u>

Functions performed by web staff include:

- Maintain web site
- Format content for the web site
- Edit existing web content
- Design and compile kiosk content
- Write software to enable web-based databases

Databases

Functions performed by database staff include:

- Support current databases
- Transfer databases from old software to new software
- Create new information systems
- Work with staff with all database issues

Audio/visual event & classroom support

Functions performed by Technology Services staff include:

- Videotaping activities, including production of dvd/vhs products of the taping event
- Technology support in the theater (lights, sound, computers, display)
- Provide equipment & support for classes, presentations, events

Digitization

Functions performed by digitization staff:

- Digitization and processing of books, manuscripts, photographs, art, slides, posters, 3D items in the collection
- Video transfer to digital media
- Audio transfer to digital media

Administration

Functions performed:

- Manage & coordinate technology functions throughout the organization; write reports; maintain statistics
- Analyze & determine hardware, software, networking & media needs
- Order, install and maintain hardware & software & supervise staff in same
- Maintain computer accounts (administrative computing, remote access, email, system)
- Maintain web pages & supervise staff in same (upload, format & correct files; run statistics and diagnostics)
- Communicate with other UT departments on technology issues (ITS, UT Network Information Center, University Libraries)

- Serve on campus technology committees
- Interact with patrons, vendors & external service bureaus
- Train, supervise, & manage Web Master, Information Analysts, Librarian, Media Specialist, work study students, graduate students; train staff and HRC guests in use of computers, networking, systems and accounts
- Continually upgrade knowledge and maintain awareness of developments and trends in technology

I**nfrastructure**

Computers:

186 desktop/laptop, 89 MAC OS and 97 WIN OS
2 storage systems, 1 MAC and 1 WIN

Other:

60 devices, including networked printers, scanning devices, projectors, TVs, VCRs, DVD players.

Network:

200 data nodes
7 wireless routers

Information Technology Services

Overview of Current IT Programs and Infrastructure

Information Technology Services (ITS) provides mission-critical information technology infrastructure and services to University of Texas at Austin students, faculty, and staff. A significant part of the ITS mission is to support the University's academic programs by providing a ubiquitous and robust information-technology-based environment, technological capabilities, and able staff who can assist students, faculty, and staff in their learning, teaching, research, and outreach activities. The following services highlight how ITS delivers technology to the campus.

A. Programs & Infrastructure

All of the following ITS services require ongoing hardware, software and personnel costs in order to deliver the services. Additionally, since our scope of responsibility is for the entire campus, all of our services lay the infrastructure for other colleges and departments to build more specific college/department centric programs; therefore all of our ongoing operations are considered programs providing infrastructure.

1. FAC Student Computer Facilities Operations

Flawn Academic Center (FAC) student computer operations include facilities and staff on the first, second, and third floors. The third floor facility provides multi-media computers and printers, the Student Microcomputer Facility is on the second floor, and the first floor provides a computer classroom, computers, printers, and individual and group study spaces. A total of over 250 computers are provided through these services. ITS replaces the equipment for the SMF every three years, most recently in Fall 2004, and maintains current releases of the software installed. During FY 04-05 and in collaboration with University Libraries, the Writing Center, DIIA, and the Information School, Information Technology Services assisted in the renovation of the first floor of the Flawn Academic Center by purchasing new computers for general student use and has taken over management and maintenance of all computers previously maintained by the University Libraries. In addition, ITS User Services has assumed responsibility for the management and operation of the new Information Desk located in the first floor lobby. The Information Desk is staffed with 18 part-time students working 19 hours per week (9 FTE). ITS has partnered with the Office of the Registrar in making 80 laptops available for checkout by students at the FAC Information Desk. The ID Center is now located at the FAC Information Desk.

2. Help Desk and Training Services

The mission of the ITS Help Desk (approximately 30 students and 13 full-time employees) is to answer questions and help solve problems for all computer users in the University community. The Help Desk also works closely with the ITS Training group to offer courses to students on topics of interest and to help design and deliver a Freshman orientation program that communicates with more than 7,000 students at the beginning of each year.

3. BevoWare and Student Software Suite

The Student Software Bundle provides licensing and support for a variety of popular software products for installation on student-owned computers. By providing a comprehensive set of products for the entire student body, ITS is able to improve information and network security as well as student collaboration while taking advantage of substantial large-volume economies. The Bundle includes a full suite of Microsoft desktop products – Windows desktop OS upgrades, Office Suite, Front Page, Visual Studio development environments, and Virtual PC for Macintosh – the licensing for which transfers permanently to students upon graduation. In calendar 2004 alone, more than 100,000 Microsoft CDs were purchased through the Campus Computer Store. In addition, Macintosh OS upgrades and products in the BevoWare security bundle are licensed for student use on a personally owned computer. With the exception of Mac OS, the entire set of covered products is also available for use by students in campus labs. The BevoWare security bundle for Windows and Macintosh computers includes Symantec anti-virus and firewall products, EMS Free Surfer (to block pop-up windows), Spybot Search & Destroy and Spyware Blaster (prevent and remove unauthorized “spyware” and cookies), Eudora e-mail client, Mozilla 1.7.3 and Firefox Web browser, Trillian IM

(multi-network chat client), Adobe Acrobat Reader, Apple Quicktime, Macromedia Flash Player, RealPlayer, Microsoft Windows Media Player, and eleven utility programs.

4. mail.utexas.edu (UMBS mail service)

The University provides an e-mail service, mail.utexas.edu, providing 100 MB of storage space per mailbox. Mailbox size was increased from 10MB in January 2005 and the current average mailbox size has grown from 5Mb to 11MB. UMBS services approximately 70,000 mailboxes. This count includes students who are not currently registered, as ITS provides a 6-month transition period. Enterprise wide anti-spam filtering tools were placed into production in 2004. An estimated 94% of in-bound messages are identified as SPAM and filtered out before they could arrive in students' inboxes. mail.utexas.edu also includes Webmail which permits easy web browser-based e-mail access.

5.Webspace

Webspace allocations have doubled from 75 MB and now provides 150 MB of secure, easy to use centralized disk storage and web publishing for each student to support personal Web pages, collaborative projects, and backup for personal devices (especially mobile and wireless devices). There are over 60,000 users of this service. This count includes faculty and students who are not currently registered, as UT provides a 6-month transition period. The average daily volume of data transferred exceeds 60 GB. Between 75% and 90% of Webspace requests originate from off-campus addresses. The average HOME directory size is 17MB.

6. Blackboard Course Management System

Blackboard is a course management system to help faculty make better use of electronic materials in their classes. Blackboard is very easy to use and allows instructors to create and manage course Web sites without having to know HTML. Faculty and students use Blackboard to communicate and collaborate through real-time chats, threaded discussions, class e-mail, and online file exchanges. From a pilot project in Fall 2000, Blackboard has grown into a mission critical system. Details on the extensive use of Blackboard by the UT community are available at: http://www.utexas.edu/academic/blackboard/about/usage.html.

ITS continues to collaborate with the Division of Instructional Innovation and Assessment (DIIA) to acquire and develop Building Blocks software modules that extend the functionality of Blackboard. These extensions allow Blackboard to be customized for integration into University business processes.

An active evaluation of the Blackboard Content System is underway. This system allows students and faculty to manage and share files. Librarians are able to create electronic reserves and manage copyright issues for instructors. Instructors are able to update

materials once for multiple classes instead of updating each class one at-a-time. Electronic portfolios are also part of the system.

7. ITS / ITAC Survey

In order to gauge campus use of and satisfaction with its services ITS conducts an annual campus survey (see http://www.utexas.edu/its/surveys). Questions cover respondents' usage of, and satisfaction with, ITS services such as AEMS, Webspace, Bevoware, and the Campus Computer Store. Additional questions probe use of desktops, laptops, handheld devices, cell phones, and other technologies. Thanks to a partnership with the ITAC, this year's survey placed a particular emphasis on Blackboard.

Each year, surveys are sent to a randomly selected sample of 800 undergraduate students, 400 graduate students, 400 staff, and 400 faculty at the University of Texas at Austin. These strata were chosen to provide an accurate estimate of the total UT population. From 2002 to 2005, response rates varied from 50% - 59%.

Libraries

Overview of Current IT Programs, Budget, and Infrastructure

The programs provided by the Libraries in support of students and faculty are best characterized as information services. The Libraries provides a broad array of electronic information services that directly support student learning. All of these services require ongoing resources from many different funding sources, as shown below.

1. University of Texas Libraries Vision, Mission, and Goals

Vision

We will provide a community of learners with unfettered access to a universe of information, helping to enrich their lives and transform their worlds.

Mission

We advance the academic mission of the university and enrich the intellectual life of the people of Texas by fostering information discovery, facilitating teaching and research, nurturing creativity, partnering in the development and dissemination of new knowledge, and contributing to the intellectual growth and fulfillment of the individual.

Goals

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.

Select and implement an integrated library system that is compatible with other campus systems.

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.

2. Current IT Programs

Commercial Web-based Resources

Our licensed electronic information includes approximately 230 online databases and 30,000 electronic journals. We subscribe to these resources remotely and our students access them over the web on the computers in our libraries and on their own computers through wired and wireless networks. Users off-campus use our proxy servers so that they can access these information resources in their apartments and homes—in truth, wherever they can connect to the web with their laptops—just as if they were in a library.

In addition, we serve, host, or link to many other electronic resources including electronic books, electronic theses and dissertations, and several others. Indeed, one of our goals is to purchase information in electronic format in preference to paper and other traditional formats. It is necessary to have usable web pages, servers, networks, and other pieces of infrastructure so that students can best avail themselves of these resources. Spending millions of dollars on electronic resources but not providing adequate infrastructure to the UT community to use those resources would be a vast waste of resources. ITAC funds help support this effort for students.

Desktop Computer Hardware/Software

The Libraries provides over 1,000 devices in support of student research and instruction through its thirteen branches including Electronic Information Centers in the Perry-

Castañeda Library and the science libraries. Through these computers and networks the Libraries provides access to its owned and licensed electronic resources as well as to the open web so students can review their finances at UT, register for classes, handle other administrative chores, or just check email, read the news, or surf the web.

Laptop Checkout

With a valid UT ID students may check out laptops from Perry-Castañeda Library and the Fine Arts Library.

Ethernet Connections

Ethernet laptop connections are available in the Perry-Castañeda Library and the Engineering Library.

Wireless Access

UTNet wireless access is available to students, faculty, and staff throughout the Chemistry Library, Classics Library, Engineering Library, Fine Arts Library, Flawn Academic Center, Physics Mathematics Astronomy Library, Public Affairs Library and the Tarlton Law Library; and in selected areas of the Architecture and Planning Library, Collections Deposit Library, Fine Arts Library, Geology Library, Life Science Library, Perry-Castañeda Library, and the Harry Ransom Center.

Ask a Librarian

Online help is provided through the Libraries website and provides a virtual help desk for students doing research. “Ask a Librarian” not only provides a way for students to connect with librarians through email, chat, or telephone, but also offers an FAQ and a way to make an appointment with a subject specialist for more advanced, face-to-face research assistance.

Electronic Reserves

Our electronic reserves program provides students with materials faculty members place on reserve for their classes. Again, providing reserves electronically enables students to use the materials when and where they wish without having to wait in line, without having to check them out, and without having to return them in two hours or face fines. And, unlike traditional reserves, multiple students can use one resource simultaneously. The program handles rights management issues, interacts with Blackboard, and enables faculty to basically make their course packets available online over the web with its attendant benefits for students.

Training and Instruction

The Libraries provides 149 computers in seven training rooms for hands-on instruction in the use of online resources. Classes taught are most often offered in conjunction with students’ assignments in their academic classes. Online tutorials are available as well so

that students can take advantage of instruction sessions at the time and place of need. And UT Libraries works with faculty and TAs to integrate learning modules and information resources (including electronic reserves) into Blackboard portals for classes, securely password protected for members of the class.

3. Infrastructure

The human and technology resources required to support the digital library have grown with the increase in the use of electronic, web-based resources and services by our students and faculty. We have found that while there is still demand for our printed materials there is an ever-increasing demand for information that can be delivered to the student or faculty member anytime, anywhere.

The technology platform outlined below is redundant and failsafe and can recover from hardware failure without downtime or reduced availability of systems. Following is an outline of the resources required to deliver digital library services:

Production Web Servers
-16 Sun Microsystems CPUs running Solaris w/ 64 GB of memory
-Apache web server
-EZ Proxy server (for remote access to licensed resources; EID required)
-Helix streaming media server (for audio and video delivered over the web)
-Sun One application server

- SFX open url server
- Metalib federated search server

Production Library Management Servers
- 16 Sun CPUs running Solaris w/ 64 GB of memory
- 2 TB of online storage

Production Database Servers
-4 Sun Microsystems CPUs running Solaris w/ 8 GB memory -12 Windows servers for application hosting -MySQL DB server -Z39.50 DB server -LDAP Directory Server

Production Search Servers
-2 Sun Microsystems CPUs running
Solaris -Verity K2 Enterprise
Server search engine

Network Attached Storage
-20 Terabytes of online storage; backed up, secure, highly available

Tape Backup/Archiving Library
-Backup system located in main campus data center -This system enables us to move very large files to tape for long-term archival preservation -Tapes are tested and the content migrated to new tape at regular intervals -Independent of proprietary software

Development Servers
These servers are the staging area for work that is copied into production -6 Sun Microsystems CPUs running Solaris w/ 3 GB memory -Apache web server -Helix streaming media server -Sun One application server

Digitization Center
We produce digital image/text/audio/video from original files. We scan rare and fragile materials (such as the Gutenburg Bible).

-I2S Digibook bound-book scanner
-Epson 1640XL large format flatbed scanner
-Xerox Digipath duplexing document scanner
-Contex Chroma TX wide format scanner
-Nikon coolscan 4/5/9000 slide/transparencies scanner
-Kodak DCS Pro 14N digital camera