



the university of texas at austin
School of Information

**IT Vision Plan
2009-2010**

**Prepared For:
Information Technology Advisory Committee**

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December 5, 2008

Summary of Requests

Infrastructure Projects	Estimated Cost
IT Staff Salaries	\$50,000
New Building Infrastructure	\$70,000
Student Computer Lab Life Cycle	\$25,000
Total Infrastructure	\$145,000
One-time Projects	
Additional Usability Testing Capacity (1)	\$7,500
Producing Conservation Educational Materials (3)	\$5,000
Multitouch Displays	\$12,000
Total One-time	\$24,500
Innovative Support of Student Learning	
Forensic Workstation (2)	\$6,000
Super Magnification Microscope	\$57,000
X-Ray Fluorescence Analyzer	\$50,000
Total Innovative Support	\$113,000
Total Vision Plan Request	\$282,500

NEEDS AND PROPOSED USE OF FUNDS

Infrastructure

IT Staff Salaries

As the School of Information continues to attract increasingly tech-savvy faculty and students, finding and retaining highly-skilled IT employees continues to be a critical need. Beginning in 2008-2009, we've reduced our use of ITAC funds for salary by moving two employees to other sources of funds. We hope to continue this trend in 2009-2010, but we won't know whether that's possible until final budget decisions have been made at the Regent's level. **(\$50,000)P**

New Building Infrastructure

Based on current construction progress and timelines, the School of Information will be moving into the first and fifth floors of 1616 Guadalupe shortly before the Fall 2009 semester begins.

Various bid packages and budget amounts have yet to be finalized, but there is a possibility that IT infrastructure needs for the new space may not be completely funded from other funds. While we plan to carry over ITAC funds from 2008-2009 to help us handle any surprise costs, we are also requesting additional funding for this purpose. **(\$70,000)HNS**

Student Computer Lab Life Cycle

Based on the iSchool's long-term computer lab equipment life cycle, we expect to replace the Mac desktops in several of our facilities in the 2009-2010 fiscal year. Roughly half the cost of these recurring life cycle upgrades comes from ITAC, with the remainder coming from other funds. **(\$25,000)H**

One-time Projects

Additional Usability Testing Capacity

The School's existing usability resources are seeing increased usage in several iSchool classes. In addition, there's an increasing need to support lengthy analysis of large video datasets by students in advanced usability classes. Both of these factors demonstrate a need for additional hardware and software assets for usability purchases. **(\$7,500)HS**

Producing Conservation Educational Materials

The Kilgarlin Center for the Preservation of the Cultural Record instructs students on the conservation and preservation of cultural materials. There are many procedures in these disciplines that require correct positioning of the tool and your body to carry out properly. Having a set of visual reference aids to help students check this positioning would be very beneficial. This project will use high definition digital video, video microscope footage, and advanced display of indexed and searchable video to produce modular teaching content for use by iSchool students, as well as distance or international education. **(\$5,000)H**

Multitouch Displays

Multitouch displays, unlike traditional touch-screen technology, allow users to interact with a computer display using more than one input. Current examples of multitouch displays include Apple's iPhone (which is limited to two inputs) and Microsoft's Surface product. Because these interfaces represent a significant change in the way people interact with computers, practitioners of such fields as user interface design, usability testing, and information architecture will need to adjust to a variety of first- and second-order effects brought on by this change. Depending on cost and funding, the iSchool may either build or buy two such systems. The building of two multitouch displays would provide individual study or practical opportunities for students, and the resulting systems (built or bought) would be available for use in our interface design and usability courses. **(\$12,000)HS**

Innovative Support of Student Learning

Forensic Workstation

The British Library has established forensic methods as a standard for the recovery of archival files from legacy media without compromising the authenticity of the original digital artifact. Students need to be exposed to such methods if they are to fully understand the tasks of digital archiving and will use the workstation to learn the forensic methods that are suited to these tasks. This workstation's portability also allows students to go where the media are when there is an objection to removing the media from a repository. **(\$6,000)HS**

Super Magnification Microscope

The Keyence digital microscope is a self-contained portable unit, complete with all necessary computer and software. It allows viewing the surface of an object at up to 1000x with images up to 54 million pixels. Polarizing microscopy and a transmitted light function are incorporated, the lens unit can be mounted or hand-held and the digital technology allows compiling slices at various focal planes to create 3D representation of surfaces. This microscope will allow precise observation in testing and treating objects as part of preservation and conservation classes. **(\$57,000)H**

X-Ray Fluorescence Analyzer

A hand-held X-Ray Fluorescence Analyzer allows students to analyze specific metallic components in the treatment of papers and photographs. Among other benefits, such analyzers have helped preservation researchers find trace metals in photographs that indicate the use of toners which were undetectable with previously available equipment. **(\$50,000)H**

Current IT Programs and Infrastructure

Vision/Mission/Goals

The School of Information aims to be the premier research and education program for 21st century information professionals who will apply the theoretical and practical knowledge necessary to preserve the past, manage the present, and design the future.

Our mission is to shape information realities for human and social benefit by:

- Discovering new and vital knowledge about information
- Educating the next generation of leaders in the information professions
- Developing new scholars who will advance knowledge
- Improving society through service and collaboration
- Applying human-centered values to all our work

IT Programs

Information Technology Lab

The Information Technology (IT) Lab serves as the general service computer lab for School of

Information students. Staffed by School of Information graduate students, the IT Lab provides 32 PCs running Windows XP and 18 Apple computers running Mac OS X, as well as access to a variety of specialized software, network resources and hardware items (both for in-lab use and check out). Due to limited physical space at the School of Information, the IT Lab also serves as the primary space for student work, with access to information technology, reference works and other teaching tools. The staff provides one-on-one instruction for students, faculty and staff as well as short courses on many topics throughout the semester. As part of this teaching effort, the lab staff also produce a variety of instructional materials, ranging from pamphlet-style handouts to streaming video tutorials.

Digitization Classroom

Our digitization classroom in the Sánchez 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 resolution for instructional purposes.

Advanced Digitization Lab

The advanced digitization lab in the Perry-Castañeda Library (PCL) has six high-end Windows XP 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 8mm film to digital conversion.

Kilgarlin Center

The Kilgarlin Center for Preservation of the Cultural Record, housed in the Collections Deposit Library (CDL), is the nation's leading program in archives and preservation. The Center has two teaching labs dedicated to treatment of books, paper, and other delicate artifacts, each equipped with a Mac OSX station, a flatbed scanner and a printer. In addition to standard IT equipment, the Center provides students access to specialized equipment supporting more advanced conservation and preservation techniques such as fiber analysis via polarizing microscopy or digitization of vinyl recordings assisted by microscopic analysis of the record's surface.

IT Infrastructure

Facilities

The iSchool is housed in approximately 10,000 square feet of the fourth and fifth floors of the Sánchez building and 6,000 square feet of the Collection Deposits Library, as well as limited space in PCL and FAC. In these four buildings we have five classrooms, one computer lab and two conservation labs that serve nearly 300 graduate students and approximately 700 undergraduate students. iSchool IT staff 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 have high-bandwidth wired network connectivity, as well as wireless capability. The classrooms and dean's conference room include computers (Apple and PC), projectors, VCRs, sound systems, and document cameras.

Personnel

Four full-time and one part-time employees support a wide spectrum of iSchool IT services. This team includes the coordinator for IT / senior system administrator (network and server administrator); an instructional technology specialist (classroom and online course support, digitization); a computer operations specialist (faculty, staff and lab IT support); a system administrator (server administration and user support); and 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.

Servers

The iSchool now supports numerous physical and virtual servers, primarily running versions of the Linux operating systems. Our two primary servers provide email, virus and spam filtering, both static and dynamic web publishing, MySQL database access, and numerous other applications of general use by students, faculty and staff. Other servers, many of which are now virtualized, provide more specific functions to the School, such as streaming media in various formats, LabMan lab management software, license provisioning, network-based intrusion detection and digital archivy.

Networking and Security

The Sánchez building, where the majority of the iSchool is housed, has a gigabit connection to UTnet via the College of Education. While not all of our computers are new enough to operate at such speeds, roughly 95% of the networking equipment within our local network at Sánchez and the Flawn Academic Center supports gigabit speeds as well, with the rest providing 10/100 megabit connections. Network connections at the Collection Deposits Library are supported by iSchool-owned network equipment that provides 10/100 megabit connectivity. All spaces are also covered by UT's wireless networking. In addition to software firewalls on all individual computers in the department, the School of Information continues to use bridging or "transparent" network firewalls to protect most workstations and servers from potentially dangerous network traffic. Finally, we employ several network-based intrusion detection systems that allow us to identify and analyze potential threats that make it past our firewalls and other defensive systems.

Current and Proposed Funding Sources

The School of Information gains IT funding primarily from two sources: the percentage of Flat Fee money that replaced our previous IT Fee and money from the ITAC funding process. These primary sources are supplemented by partial funding from other accounts, such as the School's Distance Education Fee (from web-based courses), state funds for portions of classified salary and special equipment. The School of Information was granted a tuition increase in 2008-2009, part of which is dedicated to increasing IT funding.

Best Practices

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

- Set up open source server / service monitoring software that allows for near real-time notification of outages, availability statistics, and other performance tracking
- Rebudgeted IT employee wages so that a greater percentage of salary comes from non-ITAC accounts
- Implemented VMWare Fusion on desktop Macs to provide dual-platform (Mac and Windows) workstations in our lab and computer classroom settings

USE OF PREVIOUS ACADEMIC YEAR ALLOCATIONS (2007-2008)

Infrastructure Projects Proposed

Infrastructure Projects	Estimated Cost
Supplemental IT Salary Increases	\$50,000
Expansion of Consolidated Storage Systems	\$50,000
FAC and PCL Classroom Upgrades	\$28,000
Student Computer Lab Lifecycle	\$20,250
Software upgrades	\$12,500
Total Proposed Infrastructure	\$160,750

Actual Infrastructure Allocation

The School of Information's actual infrastructure allocation from ITAC for fiscal year 2007-2008 was \$71,996. Roughly \$53,000 of these infrastructure funds were dedicated to IT Staff salaries. While this figure represents a significant portion of our annual infrastructure funding, we believe that our IT staff allows the School to maintain a high quality of service and drives innovative uses of technology. Of the remaining infrastructure funds, just over \$14,000 was used to purchase new iMacs and Mac Pros for our student computer lab and about \$1,150 went toward digitization equipment for our student digitization lab.

Proposed One-time Projects

One-time Projects	Estimated Cost
Mobile computer classroom	\$38,300
GRAs for D-Space and iXLab	\$33,000
Upgrades of classroom presentation technology	\$1,000
Closer look at paper project	\$4,272
Total Proposed One-time Projects	\$76,572

Actual One-time Allocation

The School of Information received \$27,827 from ITAC for one-time projects in fiscal year 2007-2008. The iSchool used approximately \$26,000 to cover half the cost of a new SAN (storage area network) unit that provides storage space for ongoing and future student multimedia work (the other half of the funding was provided from an IMLS grant). Using funds carried over from the previous fiscal year, we also completed the "closer look at paper" project (\$3,000) as well purchasing upgrades to classroom presentation technology (\$300).