

**SCHOOL OF INFORMATION
IT Vision Plan
2005-2006
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**Prepared For:
Information Technology Advisory Committee**

Submitted by: Andrew P. Dillon, Dean

**Prepared By:
Mary Lynn Rice-Lively, Associate Dean**

Summary of Requests

This year's ITAC funding requests discussed below are indicative of significant shifts in the use of IT in our School's curriculum and in instruction. Despite the continued physical space limitations, new faculty members seek resources to broaden their instructional strategies to support the creation of digital resources that simulate digital library environments. Such environments are crucial for instruction and experimentation to prepare iSchool students for work in libraries, archives, and museums (physical and virtual), as well as for non-traditional careers in information design and architecture.

Project Requests	Amount
Digitization in the round project	\$ 75,000
Infrastructure: One time improvements	23,000
Class project server array	20,000
Teaching microscope system	10,000
Data corpus for information retrieval projects	1,000
Total One-time project request	\$129,000

Overview of Current IT Programs and Infrastructure

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 making 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;
- Providing continuing education and expert advice on information issues through collaborative relationships.

Programs

The School of Information has 20 full-time faculty and 13 full-time and four part-time staff members to support a Masters and PhD program offerings to 307 graduate students (273 Masters and 34 PhD). The school accomplishes its mission through the following specific programs:

- A PhD program for information researchers, scholars and advanced information managers.
- A Master of Science in Information Studies program for top-level information professionals in archival enterprise, information architecture, information policy, information systems design and management, information usability, librarianship, multimedia design, museum work, and preservation of the cultural record.
- General information study coursework for undergraduates and graduates in other fields of study.
- Various specialization certificates in the areas of school library certification and youth information services; reference services; preservation administration; and conservation science.

Personnel

Three full-time staff members support IT services: a senior systems analyst (network and server administrator); a manager of computer services (lab management, faculty instructional support, and online teaching tools); and a computer operations specialist (faculty, staff and lab IT support.) The

School also has a part-time Web manager. Funds from ITAC, iSchool IT, and Distance Education fees and classified budget lines fund these critical positions.

Infrastructure

Facilities

The iSchool is housed in approximately 10,000 square feet of the 4th and 5th floors of the Sanchez building, and 6,000 square feet of the Collection Deposits Library. In these two buildings we have four classrooms, one computer and two conservation labs to serve over 300 graduate students and approximately 700 undergraduate students taking courses through the School. School ITS staff support computing and networking services for faculty and staff with a total of 81 desktop and laptop computers (32 Macs and 49 PCs.)

Students have access to the latest computer and AV technology, premium software, a variety of digital imaging tools and a helpful, friendly support staff comprised of Teaching Assistants selected from iSchool student applicants. The lab and IT Services staff develop and support a cluster of online tutorials (<http://www.ischool.utexas.edu/technology/tutorials/index.html>), face-to-face short courses, and other services to assist students with the acquisition of skills in the use of a variety of application and Internet-based computing tools. Additionally, the IT lab (PCs, Macs, scanners, and video production equipment) maintains a wide selection of equipment to be checked out for student use, including laptops, digital cameras, and digital video cameras. The lab is open to students over 70 hours per week.

All classrooms, offices, and conference space in the School domain are networked to the high-bandwidth UT public network. The classrooms and Dean's conference room has access to computers (Apple and PC), projection, VCR's, sound system, and document cameras. The 5th floor Computer Classroom supports student's hands-on experience with 28 PCs using a wide range of hardware and software as part of regular classroom instruction. Twenty different servers support Internet and other services to faculty, staff, and students with individual functions from DHCP server, streaming video, web-casting, web, email, file storage, searching, and development applications.

Current and proposed funding sources

As noted above, the School has several different funding sources to support the development and use of technology in the school. These include the following.

Funding Type	Budgeted Allocation 2004-2005
IT Fee	\$179,990
IT Vision permanent allocation	76,232
IT Vision one-time project allocation	32,737
DE Fee	60,000
Digitization in the Round Project (IMLS Grant) ¹	145,000
Unallocated special equipment	30,000
Individual faculty grants	7,000
Total	\$530,959

Best Practices

School of Information IT Services has matured over the past 10 years. During the past year the iSchool staff has successfully implemented the following IT best practices:

¹ The Digitization in the Round project aims to recruit and educate library and information professionals in the art and science of creating and managing digital libraries through a unique partnership between the School of Information and the Libraries Digital Library Services Division. The project, funded with \$626,755 by the Institute of Museum and Library Services (IMLS), begins January 2005.

1. Refined an open-source helpdesk product that notifies IT staff using text pagers and serves as a database of work requests and knowledge base of IT problem and solutions.
2. Appointed tech-savvy work-study students at minimal cost to the School and maximum benefit to IT staff and to the work-study students. Job duties are assigned and monitored by IT staff and fall in area of "duties as assigned." Normally, the duties include completing repetitious tasks such as loading software, preparing computers for surplus, etc. Our goal is to select exemplary work-study students who take our undergraduate courses, retain them during their undergraduate studies, and hopefully entice them into our graduate program. During this time they receive hands-on technical training and valuable work experience.
3. Refined a computer life-cycle plan that guides new computer purchases for students, faculty, and staff. The process includes a small database of computer models and purchase dates, and plan for when and where to cascade equipment, and when equipment is ready for surplus.

Use of Previous Academic Year Allocation

Programs and Infrastructure

ITAC Funds	Amount
Permanent	\$ 76,232
One-time project allocation	32,737
Carryover from FY 2003-2004	3,357
Carryover to FY 2004-2005*	23,121
TOTAL	\$135,447

*Funds designated for cost sharing. In December 2004 School will receive a \$626,755 3-year grant with IT cost-sharing.

Salaries. (\$40,131)

Server Upgrades, Lab hardware and software. Upgraded computers in lab 5 months earlier than planned due to a flood (broken water main) that damaged computers in a wing of the computer lab. Purchased and installed usual software upgrades. Purchased two new PowerEdge servers, a G5 Dual Server, server racks, and made modifications to convert a file storage room to create a server room.

One-time projects

Classrooms. Upgraded teaching consoles in two of our three classrooms to include a document camera. (One classroom already had one.) Installed improved sound systems in two of classrooms and the conference room.

Digital Video Library. Upgraded software and servers as well as digital still and video cameras. Servers and software have been upgraded, as well as additional digital video cameras purchased to support work on the Texas Legacy Project, UT's History of the Web at UT project, and "Memory, History and Oral Narratives: Mexican American Politics in Texas History," taught by Emilio Zamora), in conjunction with the Public Policy Institute (Department of Government), the Mexican American Library Program (Nettie Lee Benson Latin American Collection) and the Center for Mexican American Studies.

Equipment for student checkout. Purchased iBooks and PC Laptops, digital still and video cameras.

Portable usability lab. Purchased one license for Morae, a software product that provides an all-digital, software-based solution that records and synchronizes user and system data for usability analysis of software, Web sites, etc.

Wireless. Installed wireless access in the Collection Deposits Library where the preservation administration and conservation studies classroom and labs are housed.

Needs and Proposed Use of Funds

Programs and Infrastructure

Network Security. Add to our network security toolbox, Sourcefire, a commercially packaged version of snort designed with customized hardware for network security management (intrusion detection, vulnerability management, etc.) (\$8,000.)

Hardware upgrades for network administration. \$5,000.

Graduate student assistant to manage *The Cochinea: An Online Student Journal & Repository of Conservation, Preservation & Cultural Studies*. Convert the existing e-journal to a dynamic, managed database with particular regard for project metadata and digital preservation. The goal of the e-journal is to promote research and exploration in the relatively small field of conservation, preservation, and cultural studies. Originally created by two conservation students, the project strives to record, manage, and share student research via Open Journal System, electronic repository management software.

Currently, the project contains student papers online in a static format that shares these resources as HTML and PDF files. The project would be managed by a student and guided by instructors for INF 389K, Lifecycle Metadata for Digital Objects and INF 392 H, Digitization for Preservation and Access. See <http://www.ischool.utexas.edu/~cochineal/> (\$10,000)

One-time projects

Student and Class Project Servers and racks. (\$20,000)

Digital Repository Projects. Continuing the work of previous semesters (Digital Video Library) in the spring of 2005 INF 392K, Problems in Permanent Retention of Electronic Records, intends to establish an iSchool institutional repository on version 1.2 of DSpace, beginning with retired or retiring faculty members and a "control" active faculty member. The class will undertake to provide permanent retention over an indefinite time, such that to begin to address intellectual property, formatting, ingest, and access issues. In coming years we will address issues of migration and service levels as well as space and search problems as the records age and are added to.

Student Experimental/Development Server. Large-scale server capable of computationally intensive applications and supports test/experimentation in a "secure" environment. The following are among the uses for this server: 1) Install high quality open source data mining and information retrieval tools to run experiments on text classification, clustering, and retrieval models. These experiments are computationally expensive both with respect to CPU, disk, and memory. Experiments may need to run over several hours, making lab workstations inappropriate for such. Work in conjunction with INF 384H, Concepts of Information Retrieval. 2) As a component of INF 385S, Digital Libraries: Principles and Development, students will be asked to create experimental, potentially unstable applications. Putting these in some sort of quarantine would be helpful to other system users. Meanwhile, having ample disk would enable the students to work with realistically sized collections of material.

Build Content Corpus. (\$1,000) To support student projects in INF 384H, Concepts of Information Retrieval, and INF 385S, Digital Libraries) two data content collections will be purchased. The first is The AQUAINT corpus. The AQUAINT Corpus, Linguistic Data Consortium (LDC) consists of newswire text data in English, drawn from three sources: the Xinhua News Service (People's Republic of China), the New York Times News Service, and the Associated Press Worldstream News Service. It was prepared by the LDC for the AQUAINT Project, and will be used in official benchmark evaluations conducted by National Institute of Standards and Technology (NIST). The second corpus is US Government Documents.

Each data file contains roughly 375 million words correlating to about 3 GB of data. The text data are separated into directories by source (apw, nyt, xie); within each source, data files are subdivided by year, and within each year, there is one file per date of collection. Each file is named to reflect the source and date, and contains a stream of SGML-tagged text data presenting the series of news stories reported on the given date as a concatenation of DOC elements (i.e. blocks of text bounded by and tags).

Digitization in the Round. (\$75,000). The project goal is to build institutional capacity to educate digital librarians by developing future faculty and library managers, recruiting new librarians with a three-tiered technology-centric digitization curriculum that documents and researches policy and issues related to digital libraries. The iSchool and the UT Libraries Digital Library Services Division (DLSD) will collaborate on building a digitization production and teaching facility. The \$626,755 3-year grant begins December 2004. By Fall 2005 Phase 1 of the project will have been completed. The project group (iSchool ITS and Libraries DLSD) will have designed and constructed inexpensive digitization workstations (24 stations) to

provide basic functionality in audio, video and digital imaging. Using a surgical teaching theatre model, iSchool instructors will use teleconferencing equipment to enable students to see comparisons between the equipment that is being used in their classes with the more specialized equipment that used in the DSLD production digitization facility. Furthermore, lab staff will be able to use video technology to show the process to the students without having to crowd an entire class of students into the digitization center, thus, removing any danger of potential damage occurring to any archival materials that may be in process at any given time. The facility will support instruction using real artifacts and high-end digitization equipment without risk of damage. INF 385R, Survey of Digitization will be taught for the first time in Fall 2005.

Phase 2 of the Digitization in the Round project will build an intermediate classroom facility with six workstations each with complete multimedia setup (paper scanner, multimedia converter with players for audio and video tapes, as well as audio records, and supporting software) will be completed during FY 2005-2006.

Teaching Microscope. (\$10,000) The microscope will be 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 will support the import of magnified images to computers for use in websites and videos. The stereomicroscope has a wide field of view and an extended working length, making it suitable for testing media and taking pigment and fiber samples. The microscope can attach to a high definition monitor that projects the field of view without cutting the image from either of the microscope oculars; this means the person demonstrating the technique does not lose full view of the work he or she is performing. Thus, multiple students will be able to view a single demonstration at the same time. The equipment is especially important because students often work with original materials from collections on campus such as The Center for American History, The Alexander Architectural Archives and The Nettie Lee Benson Latin American Collection. The microscope will effectively allow us to demonstrate in real-time. The unique positioning of conservation students in the School of Information has allowed our students to become adept at the use of information technology. We led the way in the use of websites rather than traditional paper portfolios, and this microscope will allow us to improve the methods we have used in the past. For an example of this work, please see: <http://www.ischool.utexas.edu/~hollyr/portfolio/> <http://www.ischool.utexas.edu/~hollyr/portfolio/spain/archival-bindings/index.html> and <http://www.ischool.utexas.edu/~bheller/conservation.html>. The microscope will be advantageous in other classes as well. In INF 392F, Protection and Care of Records Materials, it will be useful to show the morphological characteristics of insects as we find them when we monitor collections. In INF 392E, Technology and Structure of Records Materials, it will be useful to illustrate identification methods for prints and photographs.