

The University of Texas Libraries
Information Technology Vision Plan
2006-2007

A. Summary of Requests

1. We are requesting continuation funding for two staff members—currently paid with ITAC funds—who support our infrastructure and programs to deliver information to students.

Staff Salaries and Benefits:

Systems Analyst	\$ 52,636
Information Analyst	\$ 46,337
<u>Benefits</u>	<u>\$ 24,261</u>
Total Primary Request	\$123,234

2. We request funding for further extension of infrastructure for wireless networking in the Perry-Castañeda Library (PCL), including wireless routers, transmitters, and wiring, and also additional electrical outlets for students to plug-in their laptops.

Wireless Networking Equipment:

Total Wireless	\$125,000
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Electrical Outlet Installation:

100 outlets, installed @ \$200 each	\$20,000
<u>1 electrical panel</u>	<u>\$20,000</u>
Total Electrical	\$40,000

Total Secondary Request	\$165,000
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<u>Total Requested Amount</u>	<u>\$288,234</u>
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B. 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.

Advance utopia as the universally accepted portal to the University's intellectual content.

2. Current IT Programs and Infrastructure

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 780 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.

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

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 Gutenberg 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 4/5000 slide scanner
- Kodak DCS Pro 14N digital camera

3. Current and Proposed Funding Sources for IT Programs and Infrastructure

Primary sources of funding for library information technology initiatives are the UT Libraries budget, UT System funds (LERR and UT System Digital Library programs), and other funds (UTOPIA funds, grants and contracts, and other miscellaneous funds). The UT Libraries regular budget, the student library fee, and various revolving funds (including library fines, lost book charges, and printer revenue) fund electronic information resources.

Virtually all equipment (desktop, servers, and connectivity) is funded by one-time capital funds that are requested annually. The Libraries are in the process of building a sustainable funding mechanism to provide consistent life cycle funding for information technology infrastructure, at least at the desktop level. There is no sustainable budget for replacement of servers and other high-cost equipment and networking. Following is a summary of local expenditures in support of Libraries IT infrastructure (excluding the millions of dollars the Libraries pays for the electronic information itself).

Budgeted Funding for Digital Initiatives, 2005-2006

Funding Source	Salaries	Fringe	MO&E	TOTAL
UT Libraries Budget	\$1,548,534	\$464,560	\$430,000	\$2,443,094
ITAC Funds	\$88,215	\$28,264	\$0	\$116,479
UT System Funds	\$200,698	\$60,209	\$442,654	\$703,561
UTOPIA Funds	\$770,707	\$231,212	\$155,000	\$1,156,919
Other Funds*	\$253,805	\$31,592	\$1,532,500	\$1,817,897
TOTAL	\$2,861,959	\$815,837	\$2,560,154	\$6,237,950

* Includes \$1,655,000 in one-time funds for an integrated library system.

C. Use of 2005/2006 Academic Year ITAC Allocations

Web Development Program: \$116,479

In 2005-2006, we received continuation funding for staff who were paid with 2004-2005 ITAC funds in order to continue their work in development and implementation of web-based digital library services and content.

The focus of the work of the team up to last year had been on developing support materials for services and resources that are already heavily used by students and faculty. Staff developed two types of products: 1) web-based tutorials involving the capture, production and editing of digital video and audio, as well as text and still images, and 2) software to assist in providing basic services.

Last year we directed it mostly toward the Libraries workstation support unit and toward our digital library production program to assist in providing basic services.

All of the ITAC funds were spent to support information services for students.

D. Needs and Proposed Use of Funds, 2006-2007

Our current needs are directly related to our ability to maintain our infrastructure for delivering information to students. There are two primary needs in this area. The first is a staffing need. As UT Libraries continues to be increasingly involved in the delivery of digital information and web-based services, there is escalating pressure on our budget to grow the base of human resources that are necessary to keep pace. The UT Libraries website (<http://www.lib.utexas.edu/>) will receive well over 1 billion “hits” this year and the demand for equipment in our facilities and access to the web continues to increase.

1. First priority in this budget request is continuing the two positions, currently funded by ITAC, that provide critical support to our electronic information delivery services, and, thereby, educational value to our students. We list this need first because it is so important to retain them.

Systems Analyst. Due to the growing number of hardware and networking devices that we are deploying and the need for continued and increased security for these publicly available systems, there is a growing need for staff to ensure that these systems are secure. It is vital that we maintain a secure computing platform so that we can maximize system availability and minimize downtime. The way we accomplish this is through a combination of computer programming, system configuration, and physical security. We are requesting continued funding that will be used to support a full-time systems analyst who will work in our public desktop support unit. The position will write scripts that aid in the conversion of desktop machines to Active Directory; provide enhancements to our systems management software such as a waitlist application; and assist in troubleshooting various problems related to routine use of this equipment. We must have this person to be able to provide safe, continuous access to information for the entire campus community.

Information Analyst. Due to the growing size and complexity of our website as we continue to add content and host websites for other libraries and departments, there is a growing need for an information architect who can work with our design team and systems staff to produce underlying structures that will facilitate navigation through our web by our students, faculty, and other end-users. We must continue this person, who has already become part of the planning and design processes for several new pieces of content and will play an important role in the deployment of new projects as they are scheduled.

The salaries and benefits costs needed to retain these two employees is \$123, 234

2. Our second priority for ITAC funding is extending wireless networking throughout all libraries. We will begin in the Perry-Castañeda Library (PCL). One of the Libraries overall goals

(see above) is to “develop and maintain a robust digital infrastructure capable of providing multi-channel access to our electronic information at the point of need” for students, and ubiquitous wireless networking enables those planned channels, whether the students use laptops, PDAs, cell phones, or the next generation of wireless information appliances. As described above, several libraries in the system are fully wireless, while others are partially wireless. PCL falls into the partially-wireless category. Since PCL is the most heavily used library building on campus, it would serve most UT students better to extend wireless coverage to the entire building.

The cost to extend wireless networking throughout PCL including wiring, routers, transmitters, repeaters, and other equipment has been estimated by Information Technology Services at \$125,000, without itemization. If the cost should exceed this amount, the Libraries would provide the extra funding needed from its budget.

As important for student information seeking as wireless networking is, students also need electrical outlets to power-up their laptops. The number of students using laptops grows each year, but buildings, such as PCL, were not designed to accommodate such a large quantity of electrical appliances. Installing 100 additional duplex electrical outlets (and an additional electrical panel to handle the load) in PCL will enable students to take maximum advantage of the extended wireless coverage.

The cost for the 100 additional outlets and 1 panel is \$40,000.

The total of all requests is \$288,234.