

**2001-2002 Information Technology Vision Plan
Graduate School of Library and Information Science
November 30, 2000**

Submitted by:

Roberta I. Shaffer, Dean

Prepared by:

Jay Forbes, Computer Systems Development Specialist

jforbes@gslis.utexas.edu

Mary Lynn Rice-Lively, Assistant Dean for Information Technology

marylynn@gslis.utexas.edu

Quinn Stewart, Information Analyst

quinn@gslis.utexas.edu

Shane Williams, Systems Administrator

shanew@gslis.utexas.edu

TABLE OF CONTENTS

- I. EXECUTIVE SUMMARY**
- II. COLLEGE VISION, GOALS, AND OBJECTIVES**
- III. FACILITIES, STAFFING, AND OTHER GSLIS INFRASTRUCTURE**
- IV. PROPOSED PROJECTS**
 - a. Academic and Instructional Projects**
 - b. Administrative/Research Areas**
- V. SCHOOL INSTRUCTIONAL TECHNOLOGY FUNDING OVERVIEW AND LIFE CYCLE METHODOLOGY.**
- VI. APPENDICES**
 - a. Total IT Summary Expenditures Report for 1999-2000**

I. EXECUTIVE SUMMARY.

The FY 2001-2002 Plan describes 8 IT projects that support GSLIS' goals and objectives. The first project group aims to improve technology enhanced learning and distance education. The specific projects include Web-based and multimedia enhancements to existing courses (\$56,207); Webcasting upgrade to computer classroom (\$23,492); and development of a Museum Image Collection using an image management system (\$80,000). The second project group includes infrastructure improvements and enhancing the current assets management process: Automated Equipment Inventory Management System (\$2,500); Dual-use Multimedia Lab Upgrade (\$19,176); Wireless Network for Classrooms and Computer Lab (\$5,750); Upgrade to Projection System in Computer Classroom (\$9,000); and Addition of Student-use Photocopier (\$4,320). The IT Vision Fund allocation request for FY 2001-2002 totals \$200,445.

II. GSLIS 2000-2001 VISION PLAN

COLLEGE VISION, GOALS, AND OBJECTIVES

The Graduate School of Library and Information Science (GSLIS), one of the top ten schools in the United States in the field, prides itself in providing a program of studies to prepare students to experience and meet the challenges of the information age.

Our core values set us apart from other disciplines and professional fields and even from some of our sister fields in information studies. While our values remain steadfast, new information technologies have arisen which provide new and marvelous methods for implementing the foregoing values. GSLIS is committed both to the accommodation of such new technologies and to providing an interdisciplinary environment in which creative questioning and the search for new solutions for providing access to information are welcomed.

School Vision, Goals, and Objectives

The work of the University of Texas at Austin Graduate School of Library and Information Science (GSLIS) derives from its vision, "Transforming Information into Knowledge: Changing Lives." GSLIS prepares practitioners and researchers to identify, create, and apply effective strategies for connecting people with information. GSLIS achieves this mission by emphasizing:

1. Information Consumers

Our graduates are equipped to understand and serve information consumers within their diverse environments, both traditional and virtual.

2. Information Content

Our graduates are educated to study and manage the knowledge legacies of all fields - past, present, and future.

3. Information Connections

Our graduates are prepared to increase the effectiveness, speed, and power of information transfer.

III. FACILITIES, STAFFING, AND OTHER GSLIS INFRASTRUCTURE

The Graduate School of Library and Information Science has grown to 17 full-time faculty members, over 20 visiting, part-time or adjunct faculty members, and approximately fifteen FTE staff. The staff is assisted by teaching and research assistants, student associates, and work-study employees. The School's

information technology staff endeavors to provide and maintain appropriate technology to enhance productivity and excellence among all of these parties.

At present, our technology inventory for faculty and staff includes approximately 40 desktop machines. The 1996 Faculty Computing Initiative aided the School in placing Pentium-100 or PowerMac 7200/90 machines on every faculty desktop. However, as these technologies grew dated, GSLIS initiated an ongoing plan for upgrading all faculty desktops to Pentium-III or G4 PowerMac technology. The first round of upgrades was completed during Fiscal Year 1997-1998 included eight Pentium II Dell OptiPlex machines and three G3 PowerMacs. Additional upgrades were completed during 1998-1999 and fall of 1999. Further upgrades are scheduled for early 2001. The older machines removed from faculty offices have been refurbished, upgraded, and returned to service in doctoral and adjunct faculty offices.

In addition to desktop hardware, GSLIS continued to develop software, support, and training strategies for faculty and staff that will leverage our excellent School-wide Internet services and our wealth of interested and knowledgeable teaching assistants. To encourage faculty and staff communications and publishing on the Web IT Services staff has provided group and one-on-one support for these activities.

Work continues on implementing application and/or purpose-specific servers using Linux, Mac and Windows 2000. In the past year, primary network services for students and faculty were migrated to a new Dell Poweredge 4400 running Linux. In addition, the NT server that formerly provided minimal file and print sharing was replaced by an Intel/Linux server.

The School's first Web-based class, LIS312 Online was completed during the Summer of 1999. Five other primarily Web-based classes are being served from dedicated Linux and Windows 2000 servers. The continued development and refurbishing of Tutorial Junction (<http://www.gslis.utexas.edu/technology/tutorials/>) one Win2000 server have extended access to quality, reliable tutorial information for GSLIS students, faculty, and staff.

The GSLIS Information Technology (IT) Lab has 32 Dell Intel/Windows 9x-based machines, 10 Macintosh (including iMacs, G-3's, and two G-4's) machines and two Linux machines available for student use. All machines in the IT Lab are now connected via 100baseT connectivity, and all except the Linux and Media lab machines are running LabMan, the UT-developed lab management program. In addition, a Dell laptop, four Windows 9x and one Macintosh machines are available for classroom demonstration purposes using attached Infocus LitePro projection devices.

In June 2000, GSLIS completed construction on a 29-seat computer classroom. The classroom supports students' hands-on experience using a variety of software applications and is available for reservation by faculty wishing to incorporate hands-on technology components into their classes. The classroom features 29 Dell OptiPlex Intel/Windows 98 computers. Each computer is connected via 100baseT network connections. An instructor/demonstration station, which features an Infocus data projector and an Altec sound system, is also available.

Finally, the IT Lab staff uses a number of other machines for administration of the facilities including: another Linux server which provides license management (via Keyserver), ColdFusion development, and web-based database development (via MySQL and PHP); an Intel/FreeBSD machine used to monitor network activity and detect security breaches; a G3 Mac used to serve an internally developed File Maker-based Help Desk system; and an Intel/Win98 machine acting as both a file and print server for other lab machines. The IT Lab currently has about 60 100baseT network ports on 4 hubs located on the 4th floor of the Sánchez Building. At the present time, all 60 of these ports are connected and lead either to lab machines or, in a few cases, other network hardware (other hubs or routers).

IV. PROPOSED PROJECTS

ACADEMIC AND INSTRUCTIONAL PROJECTS IN PRIORITY ORDER

1. TECHNOLOGY-ENHANCED LEARNING AND DISTANCE EDUCATION.

Abstract and Audience: During AY 1998-2000 GSLIS completed a redesign of its curriculum, even renaming the degree to Master's of Science in Information Studies. The changed focus of the curriculum to the 4 C's (Content, Connections, Consumers, and Context), and the crafting of new courses, have provided faculty with incentive to experiment with developing technology modules or increased use of the Web for course instruction. Students local and at a distance will continue to benefit from these developments.

Included in the courses proposed for development are the following:

Digitized Materials for the Practice Cataloging Collection LIS 384K.3, 384K.8, and 384K.17

Following an investigation of copyright limitations Professor Francis Miksa proposes the digitization of 1,750 older books (i.e., pre 1965) and 120+ serial titles with 350 first line information with about 75 older sound recordings, motion pictures, filmstrips, film loops, kits, realia, 75 maps, and over 100 pages of sheet music. The goal for the collection is to digitize at least the 350 best books, plus the media, with enough images to simulate the presence of the real items. Digitized items will provide cataloging students (LIS 384K.3, 384K.8, and 384K.17) with access to a Virtual Practice Cataloging Collection

Multimedia Courses for School Librarians: Developing and Managing Media Collections, School Library Management, and Advanced Multimedia Design

To provide the courses LIS 384.2 Developing and Managing Media Collections, 388K.1 School Library Management, 382.15 Digital Media Production, and Advanced Multimedia Design, GSLIS must expand its resources to use VR, 3-D and multimedia-development tools. Currently, GSLIS has some of these software applications, but must increase licenses to make accessible in the Computer Lab and Computer Classroom using existing key-server functionality. Of importance is the continued creation of project-specific online tutorials on the use of these tools. For example, tutorials would be useful on Flash, Fireworks, and Quicktime VR. With the use of the proposed software and systems, students will have opportunities for hands-on experience to develop "real-world" projects in class. Students will be encouraged to work with different institutes on- or off-campus.

One project budget is presented for all of the above course projects based on the assumption that synergy can be derived from a skilled student staff of technical and design developers to work with faculty on multiple projects. Projects will be coordinated by Quinn Stewart, Information Analyst, who has extensive experience and skills in the design of online course tutorials.

Project Budget

Item Description	Estimated Cost
3 student technical and design assistants at 20 hr/week for one academic year. Estimate includes salary and fringe	\$43,707
1 Intel/Windows computer	\$2,500
Software and licenses, etc.	5,000
Server upgrades to memory, etc.	5,000
Total	\$ 56,207

Webcasting Upgrade to Computer Classroom

Space constraints and scheduling problems continue to limit the distance education efforts of the GSLIS. Our current practice of renting other facilities on campus for our classes delivered to San Antonio, El Paso, and Monterrey Mexico has become increasingly expensive, and technical difficulties continue to hamper these classes. This project will seek to reduce our reliance on the use of interactive video teleconferencing for our distance education efforts, and will instead focus on leveraging staff expertise and existing network infrastructure to webcast our distance education courses to remote users. By adding additional equipment to our Computer Classroom, we can create a classroom environment in which the instructor's audio, video, and computer screen can be webcast for synchronous viewing by our distance students, as well as archived for asynchronous use. Synchronous interaction with remote students will be achieved using chat, instant messaging, email, or voice-over-IP.

Item Description	Estimated Cost
Instructor and room camera system	5000.00
Document Camera	3447.00
Dedicated Webcast server and archival storage with tape backup system	5500.00
Server software	1995.00
Instructor Workstation	3400.00
Wireless Microphone System	350.00
Room Microphones and Mixer	1800.00
Wiring (electrical, AV, network)	2000.00
Total	\$23,492.00

Museum Image Management System

In collaboration with the Perry-Casteñada Library and the Art History Department of the College of Fine Arts GSLIS courses in image management, museum informatics, digital libraries, electronic archives, and archive management, build an image archive using Luna Insight Imaging Software. See the Luna Imaging Systems Web site at <http://www.lunaimaging.com>. The following courses in GSLIS will both use the imaging system, as well as evaluate digital image collections

- Human Factors in Information Seeking and Use
- Image Management
- Digital Libraries
- Museum Informatics
- Information Literacy and User Training
- Information Architecture

Project Budget

Item Description	Estimated Cost
1 student technician	\$15,000
Luna Insight Software	65,000
Total	\$80,000

2. INFRASTRUCTURE IMPROVEMENTS AND ASSETS MANAGEMENT

Automated Equipment Inventory Management System

Over the past several semesters, GSLIS IT Services has amassed an impressive inventory of multimedia equipment and notebook computers, all of which are available for checkout by GSLIS students and staff. These items include digital camcorders, digital still cameras, two Dell laptops and various types of audio/video recording and duplication equipment. Students use this equipment for a variety of purposes including remote computing, multimedia content generation, and onsite information gathering.

The goal of this project is to replace the current, paper-based system for managing the equipment inventory with a web-enabled, database driven system. While functional, the current system does not allow IT Services to adequately track equipment use over time or generate real-time usage reports. The proposed system will consist of barcode reader hardware for efficient data entry and a web-enabled database backend that will track real-time usage statistics. Students will be able to view the equipment inventory and make reservations over the web. Usage data will help IT Services determine student equipment needs and target purchases accordingly. Finally, the proposed system will allow the IT Lab staff to quickly determine when items are overdue and troubleshoot damaged or missing equipment.

Item Description	Estimated Cost
Barcode reader hardware (scanner and requisite computer interface cards)	\$700
Web-enabled database software (to be run on existing hardware)	\$600
Development Staff	\$1,200
Total	\$2,500

Dual-use Multimedia Lab Upgrade

Ongoing space constraints continue to force the GSLIS to seek innovative ways to utilize existing space. Our current Multimedia Lab has been reduced to 112 from 1232 square feet, and cannot be used for instructional purposes. This project seeks to build a hands-on Macintosh computer lab within our current IT Lab Annex by expanding our current successful implementation of Macintosh G4 Cube computers and KVM switches. This technique allows students to switch instantly between the Mac and PC platforms, sharing the same keyboard, monitor, and mouse. This enables our multimedia courses to be offered on either computing platform in a hands-on instructional setting.

Item Description	Estimated Cost
13 Macintosh G4 Cube computers	\$17,537
13 KVM switches	\$1,247
6 5-port workgroup hubs	\$392
Total	\$19,176

Wireless Network for Classrooms and Computer Lab

The availability and increased reliability and security of wireless technologies provides new opportunities to address the tangle of wires and cables that afflicts the GSLIS classroom demo cart setups. Additionally, IT Services staff want to experiment with providing GSLIS laptops users wireless access in class and in the computer lab.

Item Description	Estimated Cost
Base stations for computer lab and classrooms	\$5,000
NIC Cards 5 @\$150/each	\$750
Total	\$5,750

Upgrade to Projection System in Computer Classroom

The increased demand for use of the computer classroom calls for improved projection capabilities. The classroom currently seats 28 students using either the seminar table or around the walls using computers. Due to the architectural challenges of the room, projection capabilities can be improved by the construction of a retractable screen and a ceiling mounted projection device.

Item Description	Estimated Cost
Projection device	\$8,000
Retractable Screen	\$1,000
Total	\$9,000

Student-Use Photocopier

At present there is no GSLIS public photocopier. Students must walk to the College of Education Computer Lab or to the Library to pay for photocopies. The addition of a publically accessible copier would provide improved service to GSLIS students, as well as ultimately support supplies and maintenance. This project proposes the rental of a photocopier with a service contract for toner and maintenance.

Item Description	Estimated Cost
Photocopier with maintenance agreement \$360/mo.	\$4,320
Total	\$4,320

Administrative/Research Areas

A number of new research initiatives with technological implications are being developed for this and the coming academic year.

“E-learning and E-living at UT-Austin,” Dr. Oliver Chen, Assistant Professor. The project will employ three methodologies: cognitive-walkthrough, transaction logs and focus groups to collect data about the user’s information seeking and processing; the transaction log method analyzes the users’ actual use of the current services, and the focus group method identifies the expectations and experience of electronic services by different user groups. The results of this research are expected to contribute to the quality, utility and functionality of UT-Direct and to provide valuable suggestions for future improvement. (Proposed budget \$19,000.)

“Educating School Librarians for Virtual School Districts,” Dr. Oliver Chen, Assistant Professor. The project plans to sponsor a summer institute on Educating School Librarians for the Virtual School District. The institute is designed to increase the number of school librarians with specialized knowledge of technological issues relating to school library and media services in the digital age. The participants contribute their unique knowledge from their practical day-to-day experience and link their knowledge to an initiative of Texas virtual school districts. Outcomes will include: informed school librarians who can apply and disseminate their new knowledge; published proceedings of key topic papers; a clearinghouse Web site on technological issues; possible published workbook of forms and checklists; and at least one

article submitted to a professional journal. The Institute will serve as a model for educating school librarians and promoting an initiative of Texas virtual school districts. (Proposed budget \$60,000)

“E-Records Management System for GSLIS,” Dr. Patricia Galloway, Assistant Professor. This project began as a class research project for LIS 385T.6 Electronic Records Management. Students in the class build a electronic records taxonomy based on interviews with administrative and select support staff in the Dean’s office. Recommendations will be made to the staff for standardization of record names, organization hierarchy, and file back-up. The next step will be to implement on a trial basis, an electronic records management system using an industry approved e-Records online system. (Proposed budget \$50,000.)

V. School Instructional Technology Funding Overview and Life Cycle Methodology

Academic

Faculty, students, and staff must have access to appropriate technology to perform their jobs, teach and prepare for classes, and conduct research. For GSLIS the level of access and skills have greatly improved. These changes are evidenced in increased use of IT in instruction, broader use of electronic communication media for instruction and day-to-day operations of the School, and increased experimental work among faculty and students with interactive, multimedia, Web-based delivery of instruction, information, and training. Several institutional changes have made significant contributions to these improvements: 1) the implementation of the University IT fee and subsequent annual allocations to the School from ITAC provided an essential infusion of new funding to upgrade the School’s network infrastructure, Internet services, and computing and multimedia labs; 2) the innovative Faculty Computing Initiative (1996) provided new (and at that time) state of the art desktop computing for faculty previously underutilizing desktop computing and network resources; 3) completion of the Ethernet wiring project for GSLIS classrooms and faculty and staff offices both in the Sánchez Building and the Collection Deposits Library space increased convenient and fast access to network resources; 4) increased GSLIS Instructional Technology Fees (still one of the lowest IT fees levied by individual Schools and Colleges) have provided a funding base to begin to respond to the transient demands for new software, more computer memory, printer and multimedia upgrades. All of the above have contributed to a respectable computing and networking infrastructure for the School.

Administrative

The only allocation that continues to be alarmingly stagnant (\$30,000/year) is the funding for Unallocated Special Equipment. This allocation of State funds is earmarked for the replacement of administrative and support staff equipment, furniture, etc. Despite failure during FY 1999-2000 of a copy machine and fax machine, both of these items were replaced. Replacement of office Macs was done through the cascading of older iMacs from the Computer Lab when computers there were upgraded. Additional computer equipment upgrades were made to administrative staff and by cascading previously used equipment, upgrading RAM, and providing support staff newer equipment. All faculty and staff can now run the latest OS that are standards in the School (Win98 and Mac OS 9.)

Research

Two strategies are in place to fund demands for special IT equipment and personnel. Faculty, staff, and students are encouraged to incorporate funding for equipment in external and internal research proposals. Additionally, the Technology Planning Committee adopted a policy during FY 1997-1998 for faculty, students, and staff to request funds from existing IT funds for information technology and personnel.

Policy for Equipment Upgrades

Upgrades to existing information technology in the GSLIS have been accomplished through a frugal use of refurbishing or enhancing existing resources informed by a blend of conventional wisdom and empirical data. These decisions are discussed and planned by the IT Services staff and recommendations are presented for approval by members of the Technology Planning Committee. Decisions to upgrade equipment are dictated by the following: 1) existing recurrent problems with hardware and impediments to running essential applications, as well as demonstrated level of complexity and expertise in use of computing resources to perform one's job; 2) demonstrated uses of new IT in instruction and distribution of instructional material; 3) replacement of equipment that is not compliant with Year 2000 standards of the State of Texas.

School Infrastructure Summary

A full description of the School's computing and network infrastructure is provided in an earlier section. As a result of the new multimedia classroom, the School has increased the number of classrooms from two to three classrooms (with an approximate seating capacity respectively – 40, 25, and 30) and one seminar room that also serves as the Dean's Conference Room (seats approximately 25). All classrooms and seminar room have access to the network via a 100baseT connections. Category 5 wiring provides access for the server, the IT Lab and multimedia classroom and select multimedia development machines. We have four mobile multimedia carts with one Macintosh and three Pentium II Windows 95 machines and Infocus LitePro projectors available for in class instruction.

VII. APPENDIX

Appendix A

Total IT Summary Expenditures Report for 1999-2000

	Instruc. Tech Fee	IT Vision Fund	Unallocated Special Equipment	Distance Education	Grants and Contracts	TOTAL IT ACCOUNTS
Beg. Balance	\$14,727	\$ 1,854	\$14,882	\$ 1,785	0	\$ 33,248
Income	\$96,777	\$104,800	\$30,000	\$11,432	\$8,841	\$251,850
Expend	\$104,238	\$105,790	\$39,209	\$ 2,963	\$8,841	\$261,041