Initiative Review Report  
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Initiative #19: Develop a library information infrastructure that meets internal and external needs.

Committee Members:  
Barbara Dean (Chair) – Systems  
Elizabeth McKee – Reference  
Kristine Shrauger – InterLibrary Loan  
Jane Foster – Audio-Visual  
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1. Briefly describe the background, present setting/structure which applies to the initiative.

There is no formal multi-year technology plan currently in place for the University Libraries. Technology purchases for the Library are based on a recommendation by the Systems Department in response to new programs or access needs identified by Systems or other library departments. They are approved by the Head of Technical Services and the Associate Dean.

With respect to campus, by law, the University is required to submit to the Arkansas Department of Information Services a biennial information technology plan. It identifies base levels of support and identifies additional funding needed for enhanced services. This was done last in July 2000. For this report, University Libraries submitted a description of IT goals and objectives, compliance information regarding information and network security. Two enterprise projects related to libraries and IT were also proposed: electronic database resources for higher education distance learning, and an INN-Reach project for UA System libraries.

While the campus does not have a formal multi-year plan, the Computing Service Division provides overall direction for network developments, upgrades to mainframe services for the campus and basic recommendations for the campus software computing environment. It also installs and maintains network hardware that it purchases with library funds. Campus committees, such as, the Computing Activities Council, also provide a forum for discussions and recommendations to University administration.

Background: University Libraries began to use OCLC in 1977 for current and retrospective cataloging through a proprietary, dedicated telecommunications network. In 1979, the reference department also began to perform electronic database searches through Telnet and Tymnet connections to such databases as MedLine, ERIC, Standard and Poor's, and ABI Inform, using service providers such as STN, BRS, and Dialog. The first microcomputers appeared in University Libraries in the mid-1980's and were supported by two self-taught staff members. By early 1990, there were 45 computers in the library. Campus Computing Services supported the Lee Data network and equipment, which was replaced by a Proteon-80 fiber optic backbone in late 1989-90.

In spring 1992, the Library purchased the Innovative Interfaces software for an integrated online library system and installed the first phase of 10Base2 (10mps) network cabling in the technical services areas. University Libraries was the first installation of the III software to use the new technology of local area networking instead of the older technology of dedicated, hard-wired cables and terminals.
A systems librarian was hired for the implementation who worked with the existing department members. The acquisitions, serials, and cataloging modules were installed in spring 1992. Circulation, the online catalog, and other modules went “live” in summer 1993, following an intensive and extensive smart barcode project that resulted in complete records for a very high percentage of cataloged main collection materials.

By April 1993, there were 103 microcomputers in the Library. By the end of 1993, with networking complete throughout the library, there were 152 microcomputers and 9 hard-wired terminals. The initial public machines were low-end “vanilla” computers with dot matrix printers or hardwired terminals. In some cases, the Library was receiving computers that were being discarded by other campus departments. Additional wiring was installed in the branches and Mullins library.

By 1996, the Library was beginning to order larger batches of new computers. Existing machines were redeployed for staff or used to augment the number of public computers. In subsequent years, the Library ordered between 20-40 computers generally increasing the number of computers available to staff and public. The systems staff identified users who needed better machines based on job duties and some input from Department Heads. The Library used the Computing Services workstation team recommendations for a standard software configuration. Systems staff became more involved in configuring network cards and other computer peripherals. Newer computers came with DOS 6.22 and Windows 3.11 (Windows for Workgroups) for a networked working environment. All older machines were DOS 5.0, some had Windows 3.1 also installed. In 1997 our first Gateway server (Personify) was purchased for the Library. The systems staff was increased to four persons in 1997 under the Walton Grant.

By 1998, the Library was purchasing 35-50 machines per year. The Library purchased a server for sharing common networkable applications. Individual desktop computers were available to all staff as identified by Department. We finally achieved a single operating system for staff and most public computers with the upgrade to Windows NT Workstation (although there continue to be a few DOS computers for public access in unattended areas of the Library and a few hardwired terminals). A grant from the Walton Family Trust enabled the library to make more electronic indexes and electronic materials available to the public, and to upgrade public machines. In 1999, the Library purchased a second server for web applications. By this time, computers were purchased so that whole departments were upgraded at once rather than individuals. During this period, system positions were upgraded to Computer Support Specialists. Building wiring was a mix of Category 5 (100 mps) and Category 2 (10 mps). The supporting electronics were generally shared media hubs which limited the effective bandwidth to the desktop to 10 mps. In 2000, the last of the old wiring was replaced with Category 5 wiring, and the wiring closets were connected with a fiber network backbone. Actual bandwidth is dependent on the network electronics, so when the Library purchased some ATM switches we were able to begin providing 100 mps bandwidth to the desktop for most staff and public access. However, some shared media hubs are still in use in areas of the library and will need to be replaced as part of our continuing progress.

Software purchases were originally driven largely by departmental requests. For many years, there was little consistency in staff applications. Important library files were in multiple programs, multiple versions and multiple formats. The following is a list of software applications used by the library: Volkswriter, Dbase II, WordPerfect versions 3-8, ProCite, PCFile, Lotus Symphony, QuattroPro, Presentations, Pegasus Mail, Eudora, InMagic, DB Textworks, MS Office Suite 95-2000 (Word, Excel, Powerpoint, Access, Outlook), Netscape, Internet Explorer. There has been no regular program to migrate these files as the software has been upgraded. Training in the use of software applications has been either self-taught, taught by Systems staff, or by outside trainers when possible.
**Present Setting:** Presently, there are 228 deployed computers for public and staff use and 10 hardwired terminals. We are currently replacing the last staff Pentium computers under 400 Mhz, and have converted most staff to the Windows 2000 Professional. A training unit has been created for basic computer use. Requests for computer logins and mail accounts are processed through the Systems Department, and they keep a library-wide listserv up to date. When new machines are ordered, the systems staff configures a mid-range computer from the choices available on state contract (Dell, Gateway, Compaq, Apple). The configuration is reviewed with the department heads. After this round of replacements, all staff machines will be at or above the level of a 450 Mhz Pentium II w/ 10 GB hard drive, sound card, 17” monitor. The oldest staff machines are three years old. A wireless network is now live with three nodes: one behind the circulation desk, in the Periodicals Room and the Walton Reading Room. A program to circulate wireless laptops has been initiated in conjunction with Computing Services and funded by Student Technology Fees.

The standard desktop software configuration includes:

OS = Windows 2000 Professional  
Office applications:  
   Corel Office Suite 8  
   Microsoft Office 2000  
   Eudora 3.03 or better (highest deployed is 5.03)  
Browsers:  
   Netscape Navigator 4.7 or better (highest deployed is 4.78)  
   Internet Explorer 5.0 (highest deployed is 5.5)  
Miscellaneous:  
   Terra Term telnet client  
   War-FTP  
   WS-FTP  
   WinZIP  
   Quicktime  
   Real Player (may be replaced with Win Amp)  
   Norton Anti-Virus Corporate Edition  
Additional software in limited use:  
   Adobe Acrobat 5.0 (10 licenses)  
   Macromedia Dreamweaver 2 (1 license – 5 on order)  
   LARS Binding software  
   Prospero  
   Snag-It  
   Anzio Lite (25 licenses)  
   Anzio Win (2 licenses)  
   ArcView 8.0 (2 licenses)  
   OCLC Passport for Windows (unlimited)  
   OCLC ILL MicroEnhancer (unlimited)  
   Procite 3.4 (2 licenses)  
   Hour-Track 97  
   InMagic/DBTextworks (1 license)  
   Meeting Maker  
   Clio 2.0  
   SPSS  
   Adobe Photoshop 6.0 (2 licenses)  
   Macromedia Freehand (1 license)
2. Develop an inclusive list of issues that must be addressed/considered for this initiative.

The following list reflects the myriad aspects of technology planning. It will be the work of this committee to create a technology structure that reflects the needs of the whole library.

- Digitization – to support distance education, digital library, preservation
- Disaster planning – addressing backup and storage of critical information
- Identify critical functions and develop contingency plans
- ILL program – software and support
- Archiving of electronic materials
- Evaluate current software licenses to update versions or increase use access
- Preservation of materials
- Wireless computers
- Migration of data from one format to another
- Support and equipment for new initiatives (e.g., GIS program)
- Printing management
- Maintain access to older formats, if necessary
- Economic and financial factors
- Consortial agreements for ILL
- Training rooms and teaching environment
- E-Books
- Electronic Reserves
- Distance Education
- Remote Access
- Circulation
- E-Resources
  - Sound Clips
  - Movie Clips
- Upgrades to computer hardware and software, and network electronics
- A.V.
- New technologies
- List all equipment, primary & secondary location, terms of warranty.
- Recommendation for short-term emergency needs.
- Identify options for rental/borrowing of campus equipment. Who can borrow?
- Investigate service contracts, Elizabeth Cunningham. Is there a campus option? Business community?
- Consider minor repairs, locally.
- Estimate the "life of" vs. cost of equip vs. cost of contract vs. warranty.
- Plan must be reviewed annually.
- Wiring diagram, including old wiring.
- Systems departmental organization. Clerical support?
- Explore network connections in the library for patron personal computers.

3. Briefly describe how the Initiative fits into the long-term goals and/or fulfills the mission of the University Libraries.
Information technology has become the backbone of everything we do as a Library to serve the public. This initiative directly supports access to all library materials for all patrons: local campus, distance education, and the public – both local and remote. The local computers and expertise of the staff support the information needs of the campus. The web site and servers that store and provide access to our various databases provide access to information for our non-local patrons and the public at-large. Maintenance of current equipment and expertise ensures that the University Libraries will continue to be in a position to cooperate with other academic and public libraries and to expand statewide access to our collections and resources. The provision of electronic resources has become a major service to library clientele, which is expected to continue to grow rapidly in the future.

4. Indicate other of the initiatives that should be considered in connection to, coordinated with, or that may overlap the Initiative.

Other initiatives that affect this directive are:

#1/#2 – Evaluate effectiveness of existing library programs and analyze needs of users, and develop the services and technical infrastructure to ensure that needs are being met. The recommendations of this group must be incorporated into our technology plan and staff competencies.

#14/15 - Document major operational policies and procedures and place them on the Web. Create departmental Web pages. Initiative #19 needs to address the software to create these pages as well as the hardware needs to store and serve the information to the Library staff and public.

#16/#18 – Create a staff development and in-house training program for library faculty and staff; support scholarly efforts of the library faculty. Evaluating staff needs in the various departments and training them for their new duties will be directly affected by the status of the computer equipment available.

#17 – Create a flexible and understandable budget process, including analyses, projections, distribution and reports. Recommendations from the technology planning group will need to be incorporated into the budgeting process.