

# **Technology Plan for the Watson Library—Natchitoches 2005-2007**

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## **1. Introduction**

This technology planning document emphasizes the need for vast improvements in instructional technology for the Watson Library. Because instructional technology is a keystone, I will also address other utilized technologies including reference, circulation, and systems software and hardware. I have included sections on stacks management, interlibrary loan, media/serials, the Cammie Henry Research Center, building security, and telecommunications. The end result is, I hope, a holistic treatment of the technological challenges of the Watson Library.

The most profound challenge to Watson Library, and by extension the entire NSU system, is to meet minimum technology standards for instructional services and student learning. Distance learning will continue to become more prevalent in state university systems for a variety of demographic, cultural, political and financial factors. Courseware such as Blackboard will become the primary contact mode between faculty and students. Because of technological limitations, and the necessary remediation of many NSU students, online or virtual contact (synchronous communication) will not successfully supplant the face-to-face learning experience.

We are approaching a crossroads where students will prefer online instruction to actual physical presence in a classroom. Once only a supplementary technology, Blackboard is now the primary mode of student learning for programs in many departments, especially Education. Consonant with the increased faculty and student usage of Blackboard, the NSU Libraries have been placed in a very precarious position. If any information technology (IT) problem develops, or any particular shortcoming neglected, the academic library suffers extraordinarily. Unlike other departments on campus, the library is entirely dependent upon the speed and reliability of its Internet connections, and the quality of its client-server systems. Moreover, the academic library must play a leading role in any future university-wide technology planning, as will become clear in the following pages.

As many of us already know, remote access to full-text information is the greatest innovation in library service, and its most distressing challenge. Nationwide, gate counts are down, while database logons have increased dramatically. Only ten years ago reference and instruction were primarily face-to-face (f2f) endeavors, and if a patron needed information, they were required to “come into the library”. Subscription databases and consortia have totally changed the nature of these interactions, which now seem almost quaint. Remote access to full-text is now the standard by which almost all library services are measured. If a library user cannot accurately access the information they are seeking within “two clicks” of a mouse, that information is considered irrelevant, with little regard as to its true value. Unless a novice researcher is particularly motivated, information on paper and microfilm will rarely be consulted.

All technology normalizes human behavior, and information retrieval technology is no exception. The remarkable innovation of remote access to full-text documents, once treated as a novelty, is now commonplace and indispensable. In order to adapt to this challenge, the Watson Library will need the full support of the university administration.

## **2. Reference and Instruction**

Watson's reference area is designed according to the traditional "face to face" model of reference service, which emphasizes access to print and microfilm volumes. While print and microfilm are and will continue to be highly viable formats, the Watson library has yet to integrate contemporary trends of reference and instruction services. I have written several options, ranked in order of least expense.

### **2.1: Library Web Page Enhancement**

The library needs to enhance its web presence, especially as a form of instruction. As the reference librarians of Watson may attest, students have little understanding of how to use the library, or where to locate it on the campus map. An online tutorial, which is fully integrated into Blackboard course content, would be a rudimentary and inexpensive solution to this problem. This tutorial could be designed with Macromedia's Captivate, which is more interactive than PowerPoint, and would only require students to download a free version "Flash" player. The tutorial could be offered as a required assignment supported by any academic course, most probably English 1010. Blackboard contains the required pre-test and post-test software that records student success rate statistics. The tutorial and the accompanying testing would be an excellent long term solution to imparting a minimum amount of library user knowledge to our students. We could then concentrate on more complex student and faculty information needs through our instructional program. Because we will never have sufficient funding or political clout to operate a for-credit information literacy course, this may be the most appropriate course of action. We would also have to make a formal proposal to Human Subjects in order to fully initiate the tutorial and testing.

As part of this enhancement, we could explore the development of online library guides, well beyond those we currently have. I ask that we concentrate on creating "heavy duty" online library guides for students who are enrolled in exclusively distance-programs, such as Education. These library guides would consist of highly detailed lists of journals, reference books, and trusted websites. (*Requirements for 2.1: Site licensing of Authorware 7, Captivate, Dreamweaver; the training of staff, and time to overcome the learning curve.*)

### **2.2-2.3: Live Chat and E-mail (not virtual!) Reference**

The second "inexpensive" innovation is live-chat reference. Though chat software is relatively cheap, the most costly part of this endeavor would be making it accessible to our students and faculty. Many academic libraries have chat programs installed, but they are rarely used if the service is not sufficiently marketed. To ensure success, the chat

service would have to be connected to several professors Blackboard websites. Currently, the administration has placed limits on what can be globally added to faculty course shells; therefore, we will have to pilot a small volunteer program. Faculty members who have scheduled discussion times for their Bb classes could invite the librarian into the chat room for an instruction session. Or, faculty members could instruct their students to chat with a librarian during their “office hours”. This way, additional staffing would not be necessary to operate the chat service, and librarians could participate in chat at their leisure.

Our e-mail reference service could be expanded by aggressively marketing the current email pages to faculty, especially those who teach online classes. The 800 number already addresses a number of user needs, but those are usually connected to simple technical issues. The challenge here is to educate faculty and students as to the true viability of email reference. Though asynchronous, it provides the inquirer with in-depth answers to complex questions, and that it achieves a greater satisfaction rate than phone reference. *(Required: Blackboard compatible chat software installed on all reference staff office computers, marketing materials for email reference, and a mandate from university administration.)*

#### **2.4 Database driven website for E-Journal Lists**

Through EBSCO A-Z, we already have the data necessary to develop a list of journals that are available online through our subscription services. Faculty and many advanced students are interested in accessing journals directly from their offices or home computers. We could develop a database-driven website that provided one-click access to the bibliographic records for journals we subscribe to electronic format. This journal list would link to bibliographic records only, and not to open source URLs. The project would require staff to have facility with SQL, PHP, HTML, and knowledge of how to link to MARC records within the catalog. Though not as expensive as ordering SIRSI’s citation linking software, this website would be a major project in terms of staff time and organization. *(Required: Staff training and time to overcome a high learning curve; or hiring outside help.)*

#### **2.5 Technology improvements for library instruction labs**

The instruction lab needs seventeen new computers, including one for the instructor. For Room 115, we require a new projector of three thousand lumens, a document camera, and a new instructor’s station with computer. The new computers should have at least 256 MB of random access memory, 1.5 Gigahertz processing speed, and 40 MB of hard drive storage space. They should also have flat panel monitors.

Beyond simple hardware necessities, the Watson Library should develop a long-term replacement schedule for all of its computers and peripherals. This schedule would note the technical characteristics of all computing hardware and software in the library, including dates of acquisition. The schedule could also be expanded to include the technical specifications of Watson’s fiber optic wiring, routers, switches, and

communication ports. The primary use of the schedule would be to convince the university administration of our *astounding technology needs*.

I must end this section with the following caveat: the administration must enhance the Internet bandwidth for the university and for the Watson Library in particular. The quality of our library instruction service depends entirely upon the speed and reliability of our Internet connections. (***Required: Working with IT to develop a technology replacement schedule.***)

## **2.6: Aggressive and long term changes in acquisition policies**

Most academic publishers now offer reference books in electronic format (E-books) through Netlibrary. Currently, Netlibrary is our sole source of e-book content and will likely continue to be in the future. Because most reference books are browsed or skimmed for quick facts, offering them in e-book format would enhance their accessibility to both faculty and students who log in through our proxy server. I also think that this acquisition policy should be extended to other types of material, including the *Opposing Viewpoints*, *Taking Sides*, and *Contemporary World Issues* series. Citation manuals, handbooks of research, and collections of standards, guidelines, and statistics should also be investigated for their adaptability into e-book format.

We should also continue to pursue electronic full-text access to journals whenever possible; especially journal subscriptions that include complete backfiles. The best candidates to fulfill this need are JSTOR III, and Project Muse. We may also want to investigate the acquisition of historical newspaper collections from Proquest or other database providers.

The key to making this new policy a success is active and aggressive marketing of our e-content as well as *Reference Universe*, a database which provides index entries for many of our reference books. (***Required: Transferring of acquisition funds into e-books, fast and efficient Internet connections, and ample time to market these resources***)

## **2.7: Elective enhancements to all SIRSI modules and databases**

If the NSU Libraries cannot afford elective enhancements to the catalog, then we must lobby the Louis Users Group for them. I would like to see the following improvements made, but this is certainly up for debate.

SIRSI Rooms 2.0, a content management system, could allow teachers and librarians to compose sites that would share electronic sources with their students. According to company literature, the Rooms module can effectively integrate library resources with student information needs through a set of “discovery tools”. These tools include an “integrated searching bar” that allows the searcher to federate his/her results with various information sources. Each “room” follows a specific theme designed by the electronic services librarian. The themes can vary from the scholarly to the popular, and can be

adjusted to teaching faculty requirements. Further, the content and design of each “room” can be adapted to any future marketing schema that NSU adopts.

OCLC WorldCat could be substantially improved by flagging items that are available within the LOUIS consortium, and introducing an interlibrary loan button. I have seen these functions used at other academic libraries, including Gonzaga University. The introduction of these functions would rely heavily upon initiatives taken by the Louis Consortium. *(Required: Lobbying of Louis Users Group, and budget allocations to assume the on-site costs of these prospective changes.)*

## **2.8 Assisting a university-wide anti-plagiarism campaign**

Faculty has frequently complained about the epidemic of plagiarism on campus. The faculty members of the library focus group have concentrated on the issue of plagiarism to the exclusion of all other information-related issues. NSU is merely part of a nationwide plagiarism trend which is abetted by the easy access to Internet-based sources and pay-for-paper websites.

Turnitin.com features a revolutionary and proven algorithmic technology that successfully ferrets out plagiarized material by comparing it to billions of web pages, journals, reference books, and questioned student papers. Turnitin.com can be fully integrated into existing Blackboard course shells. Faculty members only have to submit an electronic copy of their student papers by uploading them to the Turnitin.com servers. Results are instantaneous and are produced in easily visualized “originality reports”. These reports rank the originality of student papers on a percentile scale.

Concomitant with the adoption of this technology, the library should work with a group of concerned faculty in drafting anti-plagiarism policy. The libraries could advise key university stakeholders such as Electronic and Continuing Education, the Office of Academic Affairs, and the Office of Student Affairs. Such policy would require the full cooperation of the faculty senate, department heads, and the university administration. Therefore, if we are to proceed with this initiative, we must use great caution, diplomacy, and circumspection. *(Required: Gathering of faculty support and considerable political maneuvering; sharing the cost for a site license for Turnitin.com \$10,830.00)*

## **2.9: Recruitment and permanent retention of an Electronic Services Librarian**

This is the most costly option of all, but also the most necessary if the NSU Libraries are to meet future technological challenges. Electronic services are becoming more complex, and are having a greater impact on budget, operations, and the mission of educational institutions. The NSU libraries are experiencing all of the challenges of libraries at much larger universities, including distance services, technical demands of consortia, ADA compliance, proxy server maintenance, and negotiating site licenses for electronic products. This is a workload that cannot long be handled or even tolerated by librarians whose job descriptions and professional emphases are in other areas. This workload will only increase as information management technology becomes more complex with each

passing year, ultimately resulting in the long-term obsolescence of the NSU Libraries. *(Required: A budget mandate from the university administration totaling \$35,000 in perpetuity, and time to recruit a talented and experienced ES librarian.)*

### **3.0 Circulation and Stacks Management**

Fortunately, the technology needs of circulation have been mostly met. They do need two new scanning devices, and two item de-magnetizers. John Coutee would like to have his handheld scanner to assist in completing the book inventory. *(Required: Circulation scanners, two item de-magnetizers, Hand-held scanner for the Stacks Manager, \$200)*

### **4.0 Interlibrary Loan and Document Delivery**

The mission of this department is to extend its technological benefits to all users, particularly distance and off-campus learners. The ILL department currently has excellent equipment according to service standards. NSU's considerable investment in distance education will directly increase ILL&DD's customer base. And as our most technology-dependent department, ILL&DD must acquire state of the art equipment to meet future challenges. In addition, the training needs of the interlibrary loan staff must be calculated as part of the long-term cost of this or any technology plan.

As for hardware, a Microfilm ScanPro has been acquired and will be implemented to expedite transfer of microform materials. Software upgrades for ARIEL v.3.4 and v.4.0 will be completed in conjunction with the LOUIS consortium. *(Required: Budget allocations for assuming any on-site costs of LOUIS consortium ILL software.)*

### **5.0 Media/Serials**

One of the most essential items is a large capacity printer networked to the unified workstations via Pharos Uniprint 6.1 or comparable print management software. Secondly, the department requires an electric typewriter for patron usage. (It may be possible to salvage a typewriter from another academic unit on campus.) For the long term, Media/Serials needs a special lens for their microform readers in order to access the documents formatted in ultrafiche. And, as Linda Cox reports, they need to invest heavily in DVD formatted media.

As in other departments, there are continuing equipment requirements. These include three electronic reader/printer/scanning devices, which cost \$14,000 total. These devices could also be plugged into a desktop computer and scanning station that is programmed with Adobe Acrobat 7.0 Standard. This set-up would allow students to save several scanned copies of microfilm documents to a CD or DVD. Students could email the documents to their student accounts.

Watson librarians must determine what information overlap might exist between paper and microform sources and those already available in electronic full-text. Many content providers, including Proquest, are expanding their immense historical newspaper

archives. If we remain apprised of these innovations, we may be able to find creative ways of stretching our serials budget. ***(Required: Large capacity printer: 1\$\$\$ , unified workstations programmed with Pharos Uniprint 6.1 \$\$\$, Adobe Standard 7.0 software \$\$, IBM Selectric III \$500, 90X lens for LAC Ultrafiche reader/printer \$600)***

## **6.0 Archives, including Digital Document Management**

The technological requirements for the Henry Research Center are as immense as they are necessary. NSU has already utilized current technology tools such as XML, and photo-image archiving to develop first-class websites that contain digitized and searchable finding aids. Furthermore, the Louis Consortium has recently announced a digital image initiative that will have considerable implications for our research center faculty and their patrons. Swift changes in current technology standards must occur if the research center is to offer its usual hallmark of service.

### **6.1: Updating of image lab equipment**

In order to succeed at archiving the photographic record of the Cane River area, the CHRC needs more data storage space. The current server is becoming obsolete, and is used by other library departments. As Sonny Carter reports, TIFF formatted photographs occupy vast amounts of hard drive space and require enormous bandwidth to move. And though this can be partially remedied by purchasing a new SNAP server, the CHRC must also move its photo-images to the less demanding JPG 2000 format. Through these measures the CHRC will be prepared for future initiatives. ***(Required: One Snap-Appliance backup server with approximately 500 Gigabytes of storage space: \$1500.00. New Microtek XL scanner: 1\$\$\$ . One large format scanner: \$\$\$\$, or comparable output mode, such as a flash drive.)***

### **6.2: Updating of circulation/reading room equipment**

Like many archives, the CHRC requires basic security equipment. A detection gate, identical to the one now used in serials would be ideal. A book magnetizer would also deter probable theft, and provide CHRC staff a better idea of what types of materials were being introduced into or removed from the reading room.

For patron use, the research center needs a software upgrade for its microfilm reader/scanner. The microfilm machine should also be loaded with Adobe Standard 7.0 in order to assist patrons in the downloading and printing of documents with high quality resolution. The CHRC also needs another computer for patron browsing.

Many patrons require full-color copying for research center documents. Scholars are especially interested in watermarks, colors of ink and paper, handwriting, and other document-specific characteristics. For most scholars, simple black and white photocopies are simply insufficient. Black and white copies relate only information, and even then not very well if the paper is yellowed, the ink has faded, or the handwriting is difficult to read. ***(Required: Adobe software upgrade on microfilm reader/scanner \$\$, one***

*browsing computer: \$1000, one detection gate \$\$\$\$ , one book de-magnetizer \$\$\$, and one color printer \$1000)*

## **7.0 Building Security**

The Watson Library contains rare books, expensive hardware, and irreplaceable people. As of this report, there is not a comprehensive security plan. Except for the CHRC, the Watson Library is literally “blind” to burglaries, pilfering, and probable violent assaults. A professional security company should be consulted and its findings implemented with all deliberate speed. Existing security equipment should be tested for its operability, and be replaced if considered obsolete.

A set of surveillance cameras should be installed in the lobby of Watson and the computer lab. The cameras should be site-redundant and connected to a dedicated server with a data-backup extending back at least one week. A television screen should be mounted in a very conspicuous area to alert possible perpetrators, and provide our patrons and employees with a sense of increased confidence. Of course, if we are to introduce cameras into our work environment, we should also develop strong policies against employee surveillance.

It goes beyond the scope of this report to recommend additional measures. But the university administration should keep in mind the threat of litigation if NSU were to be found negligent in implementing basic security procedures. ***(Required: Installation of any surveillance gear already available, a staff committee to write an appropriate technology policy)***

### **7.1: Disaster Planning**

Beyond calling campus police for assistance, the Watson Library does not have a disaster plan. We should develop a detailed and feasible disaster plan, which emphasizes the salvage of computing hardware, peripherals, books, documents, and rare items. The plan should take into account all possible “disasters” of natural or human origin, and provide a solutions set in an easy-to-follow flow chart format.

A committee of volunteers should be assembled by May 2005, and a final draft of the disaster plan should be submitted for administrative approval no later than August 2005. It is my understanding that the Louisiana Regents prefer that our disaster plan be modeled on the University of Indiana’s. But we can certainly do additional benchmarking when the time comes. ***(Required: A staff committee to write a disaster plan.)***

## **8.0 Telecommunications**

The most pressing technology need may be voice/fax jacks. It may be hard to believe, but ALL voice/fax jacks in Watson are currently being used. If our workforce is expanded, reorganized or moved, there must be a commensurate amount of voice/fax jacks already installed to suit our communication needs. In contrast, Watson has an ample supply of IP

jacks on every floor. *(Persuading the university administration to contract out this need to Bellsouth.)*

## **8.1 Wireless**

The major reason for introducing wireless networking in an academic building is to meet existing or nascent student computing requirements. Contrary to the opinion of the university administration, wireless networking is not a top priority, given the fact that so very few NSU students have the financial means to buy personal laptops or PDAs.

If wireless were installed, Watson would have to first re-evaluate its approach to student computing and especially building security. If we had a wireless network, and wanted our students to use it, we would have to “bridge the gap” by allowing laptop computers to circulate. This would require a heavy investment in surveillance equipment and RFID tagging to insure against theft. *(Persuading university administration to allocate library monies in more productive ventures.)*