

**Database Access for Remote Use
[Integration of Electronic Resources]**

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Submitted by

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Report on AMIGOS Fellowship

Integration of Electronic Resources

I visited eleven university campuses to study how electronic resources were being integrated with other services. I was interested in the organizational and human resource issues related to the provision of access to electronic databases on college and university campuses. I deliberately chose institutions known for their innovative approach to user services. The eleven institutions visited included:

1. Arizona State University , Tempe, Arizona
2. Arizona State University -West, Phoenix, Arizona
3. Carnegie Mellon University, Pittsburgh, Pennsylvania
4. DePaul University , Chicago, Illinois
5. Duke University, Durham, North Carolina
6. North Carolina State University, Raleigh, North Carolina
7. Ohio State University , Columbus, Ohio
8. University of Arizona, Tucson, Arizona
9. University of Minnesota -Twin Cities, Minnesota
10. University of North Carolina, Chapel Hill, North Carolina
11. University of Phoenix, Prescott, Arizona

At most of the libraries, I met with the Director or an Assistant or Associate Director. When possible, I visited at least one branch library .In addition, I was able to interview an administrator in the computer center at several of the larger universities. Rather than discuss individual projects at each institution, I will take a topical approach.

Reflecting back on my visit, I quickly saw the similarity in the leadership at these institutions. In general, the libraries had strong leaders who were technologically oriented. Change was often instituted by risk takers in these organizations, who were in influential positions, including directors, assistant directors, heads of systems, or department heads. Also present was a strong spirit of entrepreneurship. These leaders actively sought outside funding for innovative electronic library projects. For example, the Director of Libraries at the University of Minnesota was instrumental in the preparation of a grant application to enable the Committee on Institutional Cooperation (CIC), to provide a seamless interface to members' online catalogs, shared access to many electronic products, and improved resource sharing. The Ohio State Libraries were able to attract outside support to finance the development of a user-friendly front end for a collection of CD-ROM databases. North Carolina State received a substantial grant from the National Agricultural Library to fund an electronic document transmission system.

Partnerships played an important part in the expansion of online access to databases for users. In addition to the CIC, the University of Minnesota was also an active participant a state program which provided databases to college and university libraries. Ohio State received some database access from OhioLINK. DePaul is a member of ILLINET, which provides a sophisticated statewide document delivery system and some database access.

I attended a meeting of the staff involved in the Duke-University of North Carolina-North Carolina State consortium, which was working on the development of a common searching mechanism for the three online catalogs. The next step was to develop improved resource sharing.

The Cornell Engineering librarian was actively collaborating with the Department of Computer Science, where faculty were developing a full-text Internet-accessible collection of technical reports produced by the department.

Innovative projects are easier to initiate at the wealthier schools. For example, an intriguing project in the Special Collections Library at Cornell was started with seed money from the Cornell libraries. Images from art works and particular exhibits were being placed where they were Internet accessible. In addition, full-text information, some authored by the artists, was mounted and fully searchable. The plan was to interest other donors in the project. The ability to start a project and have a prototype ready to show potential donors is a distinct advantage.

Having the support and full cooperation of the computer center makes providing remote access to library electronic resources much easier. At Ohio State, the computer center distributed a computer disk to students to make it easier for them to dial in to access university computers and other campus resources.

Those libraries choosing to either mount databases or to provide remote access to products like FirstSearch were succeeding at reaching more users than those relying on CD-ROM technology. The librarians on the front line in reference units expressed frustration with the technical obstacles making it difficult to put some CD-ROM databases on a local area network so more than one user could have access. The lack of compatibility between CD-ROM local area network software and the search engines for particular CD-ROM databases meant that some very popular databases had to remain on single search stations. This forced the staff to take appointments to enable users to have access to the stand-alone stations. At the time of my visits, efforts to provide remote users access to CD-ROM networks were just beginning.

It was evident during my travels that the libraries which invested in access to commercial products made available by Carl, OCLC, and UMI., etc., were in a better position to respond to changes in user demand and were freer to change the nature of their services. These libraries had not invested heavily in expensive equipment and search software. Even those libraries choosing to buy database tapes and load them locally aren't likely to abandon that strategy because of their heavy investment. In addition, they have a high overhead in staff needed to load tapes. Those libraries with networked CD-ROMs also must invest heavily in staff to maintain and update the network. A common complaint was that the loading of CD-ROM updates was often four to six months behind. In other words, the libraries were paying for current information, but that information was not being made available to users in a timely manner.

Some of the libraries I visited were breaking new ground. Duke has taken a proactive stance in regards to libraries' right to place material on electronic reserve. The reserve system was quite impressive. Cornell was engaged in a text digitizing project, and systems programmers were developing their own search software. Carnegie Mellon was conducting extensive evaluation of a full-text search system developed by a local company. The library staff was interviewing users of the software and then making suggestions for improvement. In the process they were learning a great deal about user search habits. Arizona State and the University of Arizona both had recently begun large unmediated document delivery projects in which users could search remote databases and then order items not owned by the libraries.

The University of Phoenix was fascinating. The Learning Resource Services Center serves students at various campuses in a number of states. In general, the Center is all electronic. Students can contact staff by telephone, fax or mail to request literature searches. The staff conducts over 850 searches per month. The search results are sent to students, who can mark desired articles. The Center staff then uses document suppliers to supply the articles. Students can also dial in to search ProQuest databases on CD-ROM, and then request that the full-text be sent directly to them.

The reaction of the rank and file professional staff was interesting. At those libraries at which the staff had been involved in the planning process for the introduction of an electronic service, there was, as expected, less resistance to the prospect of change and learning something new. When the decisions about acquiring and implementing new products are made solely by administrators and/or systems personnel, without input from those who must teach users how to access the new products, it is difficult to get staff buy-in. They are more likely to protest, and find problems with the product or the way in which it is being

As libraries add more and more electronic products, the challenge becomes how to guide users through the maze of services being offered. The online menus at Cornell, DePaul, Minnesota, and the University of Arizona were particularly user-friendly. Just how many different databases and full-text services public services staff must learn to use becomes evident when one views these long menus listing electronic sources. Considerable staff time was spent at the libraries I visited in updating the printed guides to various databases. Reference librarians mentioned that they were struggling to keep up with the new services.

For the most part, the libraries I visited were well positioned financially to be able to keep pace with technological advances. The libraries were all investing heavily in electronic access. Much of the decision making about what path to take in providing electronic access seemed to be intuitive. There is not much available in the published literature which would assist a library just embarking on a new electronic service. In particular, it would be extremely useful if some organization such as ARL, which just announced the results of a cost study of document delivery, would study and compare cost of CD-ROM technology, remote access to database services such as FirstSearch, and local tape loading of databases. The study would need to include the cost of equipment, databases, search software, and staff time. In addition, the study should develop a standard method of calculating search unit cost, in order for the comparison of data from different libraries to be meaningful.

Visiting other library systems is a great way to update your knowledge of a particular facet of librarianship. I have been able to use much of what I learned during these visits. Librarians believe in sharing information, and I was generously provided access to staff and information at each institution.