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Migration: A Natural Growth Process for Libraries (Part One of Two)

By GEORGIA BRISCOE, University of Colorado

System migration in a library means changing systems. It is the evolutionary process that bridges one system to the next.[1] Indeed, migration is a fact of life in the world of library automation.[2] It is an ongoing process, one which can bring renewal and growth. This article outlines the history of library automation and migration efforts, and describes the problems and benefits experienced in such efforts. In addition, the article explains the procedures to be followed for a successful migration.

Background

Libraries are in their fourth decade of automation. First-generation systems of the 1960s were primitive local systems which responded to the growth of computer technology and the development of standards for data. MARC (Machine Readable Cataloging) began in 1963 at the Library of Congress. OCLC was incorporated in 1967, as the Ohio College Library Center.

The 1970s brought three major technological developments which stimulated library automation. According to Pat Wallace, these are: (1) growth of storage capability, (2) expansion of telecommunications capability, and (3) development of the microcomputer industry.[3] The first commercial vendors of library automation were able to form because of these advancements. CL Systems Inc. (now CLSI) began in 1971 as a turnkey system. Two other bibliographic utilities were also started: Washington Library Network and Research Libraries Group. In addition, consortia of libraries such as the Colorado Alliance of Research Libraries (CARL) and the Illinois-based Library Computer Systems began developing their own systems. By the end of the 1970s, most of today's major players in the library automation world had their feet wet.

Exponential growth occurred in computational, storage and telecommunications capacity in the 1980s, causing most libraries to climb onto the automation bandwagon. Users became more sophisticated as telecommunications technology improved. Systems also became more integrated internally as well as between libraries.

Today, expectations for library systems are at an all-time high. Librarians as well as patrons demand fast, accurate, complete, and user-friendly information from wherever

they are. To meet these expectations, libraries frequently are required to migrate to a newer or different automation system. The displacement of dumb terminals with microcomputers which hold the promise of the "scholar workstation" has also caught the attention of the library community and spurred expectations. As organizations acquire networks, they often require advanced software and hardware to go with the network, which can require a migration.

Why Migrate?

Migrating a library automation system can be stressful and costly. Why do librarians put themselves through the effort? Desire for a better system—or dissatisfaction with the current system—spurred by rising expectations is the key. According to a study by Hallmark and Garcia,[4] two-thirds of the 33 libraries sampled migrated because they needed increased functionality.

Functionality of automation systems covers a broad range. One of the major areas of functionality is integration. An integrated system offers all the modules a library needs. In addition to uniting all records for major modules such as cataloging, serials, acquisitions and circulation, an integrated system combines more specialized modules such as materials booking, reserve, remote database searching, statistics and e-mail. A further refinement of an integrated system with lots of modules is the requirement that the same bibliographic information be present for each module. Library staff do not want to perform maintenance on the same basic data more than once. For instance, a change necessary in the imprint of a title would be done once to be automatically reflected in all other information for the same title, such as order, serial check-in and circulation records.

A system that is not totally reliable is not functional. Integrity of the database is mandatory. Librarians must be able to trust that the information entered into the system will stay the same and not change or disappear. In addition, the bibliographic data must be the same on each piece of equipment used to access it. Indexing capabilities must be excellent in a fully automated library. For a system to have these most basic features, a sophisticated authority control system is required. Reliability and integrity must permeate the entire integrated system. For instance, circulation data must be accurate to the minute, and control of fines must be accurate to the penny.

Often librarians need a stronger search engine to meet their functionality needs. Stop words (sometimes known as monster words) are no longer acceptable. Just because a word occurs frequently in a database doesn't mean it isn't important to search. The ability to do boolean searches on almost all indexes is a function of the search engine as well.

Yet another aspect of functionality is connectivity. Sophisticated users want to do the same search across many different databases, whether they be different library catalogs, periodical indexes or major reference works such as encyclopedias. Extreme connectivity is present in searches on LEXIS or WESTLAW. No wonder the same expectations are made of library automation systems. Links around the world are now possible when systems can be accessed over the Internet. This connectivity requires strict adherence to standards established by ANSI-NISO.[5] Libraries often migrate to a system with higher standards.

Since law libraries run on serials to such a great extent (because of their need to be ever up to date), a special mention of the serials module must be made. A law library requires the most functional and high performance serial control possible. Legal serials are frequently irregular; therefore, the more flexible the system, the better. Many law libraries migrate their system in the quest for this ultimate serials control.

A second reason libraries may need to migrate is because they have outgrown their hardware platform. Perhaps the system is just too slow: Patrons will not wait several minutes for a search, and staff want to switch modules instantaneously. Some older systems crash regularly, or the amount of downtime has become intolerable. (This could all be caused by increased activity or growth within the library—which can ultimately be viewed positively.) Another reason to migrate is that the hardware platform is no longer being sold or serviced. New hardware has become so much smaller, more reliable, hardy, robust and efficient that even if major problems are not occurring with an existing system, the increased peace of mind afforded by a new system may be worth the price of a migration.

Vendor relations provides a third major reason to migrate. Hallmark and Garcia found that 45 percent of their sample listed "Lack of Confidence in Former Vendor," 42 percent listed "Lack of Support and Service," and 36 percent listed "Unresolved System Problems." This grab bag leaves hard feelings and usually means a migration to a different vendor. Of course, a migration is forced if an existing vendor goes out of business.

Finally, migrating to an improved system may be stimulated by a dramatic or gradual increase or decrease in funding. Some libraries may not be able to afford their existing vendor any longer and need to find a cheaper provider. Conversely, a library which has just become a happy beneficiary might want to use the funds—and the beneficiary's name—for an upscale automation system.

Notes

1. William Jacob, "System Migration: Bettering Tomorrow Today," in *Proceedings of the Sixth National Conference on Integrated Online Library Systems,* New York, May 8–9, 1991 (Medford, N.J.: Learned Information Inc., 1991), at 66.

2. Julie Hallmark & C. Rebecca Garcia, "System Migration: Experiences from the Field," *Information Technology and Libraries,* Dec. 1992, at 345.

3. Patricia M. Wallace, "Library Systems Migration: An Introduction," in *Library Systems Migration: Changing Automated Systems in Libraries and Information Centers* 4 (Westport, CT: Meckler, 1991).

4. Hallmark & Garcia, *supra* note 2, at 346.

5. ANSI-NISO is the American National Standards Institute of the National Information Standards Organization, also known as Committee Z39.

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Records Management (Part One of Two)

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Combining departments and functions is common practice in a "do more with less" organization environment. Libraries and records management units are favorite targets for organizational restructuring and merger. Sometimes the organization does not have a records department, or the records function has been limited to file room supervision. When a librarian is instructed to "do" the records management functions, the magnitude of the task should not be underestimated. Each of these professions makes a unique contribution to the organizational information management continuum. Because of professional similarities, the combined units can be effective with correct blends of expertise and the support of upper management. The manager responsible for the merged entity must understand the similarities and differences of the professions to administer both functions.

Librarianship and records management work with information to "get the right information to the right person at the right time." Traditionally, the librarian focus is perceived as locating, organizing and administering information from external sources. In this traditional model, the library is seen as a repository for published resources, books, periodicals, databases, microforms, etc. In reality, a library is a source for information whatever the origin, publication status or physical location. Librarians pioneered the reference interview, also known as the information needs assessment. They have been working with logical classification schedules, subject headings and access control systems for over one hundred years. Published information predominated in library collections because it was the only available format. As new physical formats are available, they are routinely incorporated into collections just as they are incorporated into records. Basic professional library tools to provide the right information to the right person at the right time consist of books, journals, the information on the Internet, fugitive materials assembled using the structure of a collection development policy and the people in the library.

Traditionally, the records management focus is perceived as organizing, administering, storing, making accessible and disposing of internal documents as part of a records center or central file room. The reality is that there are several distinct tasks involved in records management; the records manager works with records in all formats from inception to destruction as they are created or received in the organization. A records management program provides structure to organize the information and records required to carry out daily business—forms, notes, correspondence, tapes, disks, reports, databases, summaries, mail, files and archives. One textbook defines Records Management as "the application of systematic and scientific control to all of the recorded information that an organization needs to do business."[1]

Compare this statement to library mission statements. The similarities are obvious. Access, timeliness, organization and quality are common concepts. Providing access to timely information is a basic component of both professions. The textbook cited above identifies major objectives of an organized records management program.