Migration management

Despite two decades of advances in library information technology, nothing is more daunting than migrating from one integrated library system (ILS) to another. Even with a growing number of enterprise-level services—that is, services that support either an entire library staff or its patrons—the ILS remains the most firmly rooted and far-reaching system in the library.

The migration will manage the library more than the other way around. A library should consider itself lucky for playing such a major part in the change. Rarely does a library undertake a major system migration without being forced to do so. Cutting off one's right arm is a frightening proposition, even with the promise that a better one will grow in its place.

Moreover, the ILS product itself has reached a plateau. From a management standpoint, the high-end products offer few gained efficiencies in migrating an enterprise-level system. Several factors, however, will force a library to migrate, including:

- Hardware obsolescence forces a major expenditure decision.

- Corporate mergers (or downfalls) relegate the library's ILS to legacy status.

- Lack of vendor support for a legacy system forces the acceptance or declination of a substantially different or more expensive product line.

- Use-it-or-lose-it budget situations force a major purchasing decision.

New ideas reshape digital preservation

Recent conversations about how to preserve digital collections greatly influence how libraries manage their print collections that also are available electronically. Whether a library can safely dispose of its back files once the files have been converted depends on the library's confidence that these volumes will still be accessible.

At the Archiving Forum, sponsored by the National Library of Medicine (NLM) and the American Medical Publishers' Association (AMPA) in March, Cliff Lynch, executive director of the Coalition for Networked Infor-

mation (CNI), laid out the key elements for a preservation strategy. An overview of his comments for organizational and technical issues follows.

Organization and economic issues

In a print world access is a byproduct of the physical collection, but in an electronic environment access and the collection are separate. Learning from what has worked in the print

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Learn more about your ILS vendors

Visit www.techsource.ala.org for bonus information about large- and small-system vendors profiled in the March and April issues of *Smart Libraries Newsletter*. A complete listing of vendor contact information, plus a breakout of products, major applications software enhancements released in 2002, new modules in development, and products in development with other companies is accessible. Also included is a table of large-system vendor sites by area of the world. To view the information, click *Smart Libraries Newsletter* Annual Survey Bonus in the right column of the home page at www.techsource.ala.org.

Migration *from page 1*

With fewer new-name sales in the last several years, it is in the ILS vendors' best interests to make migration as easy and attractive as possible. Any library that has not migrated in the last two or three years is likely to consider a migration in the next two or three. A few tips will help those undertaking the process, as well as those considering it:

Everyone's a player

The RFPs are done. The demos seem like distant history. A decision has been made and most of the library staff is even happy about the choice. Most libraries will form a committee to handle the migration. No rule says this committee has to be the same one that helped choose the system. A new department head may have just arrived from a library using the selected system, or another librarian might have helped manage an earlier migration. A library should choose its implementation team carefully, with buy-in from all departments. The team must represent all possible stakeholders.

Every librarian his module

Migration teams naturally tend to separate into modular components. This separation can be a double-edged sword. On the one hand, the division allows additional staff to participate in subgroups designed to take a narrower focus on particular functionality and data issues. On the other hand, it increases the tendency to think of the new system in the framework of the old one. The new system may force work flow changes that will be harder to implement when old work flows are used to design the new system. For example:

- The new system may allow for more bibliographic description or record downloading at the point of acquisition rather than during cataloging.

- Previously analog systems (course reserves or interlibrary loan) may have automated equivalents in the new system that will allow for new work flow efficiencies.

Know thy data

At the root of a system migration, data is king. Once the purview of library systems departments, ILS migrations have risen to new levels of involvement. More stakeholders are taking on important migration roles. Nevertheless, those staff who know the data best need to play instrumental roles.

Work flow changes, training, user instruction, and other parts of the implementation become the equivalent of sunk costs—they occur no matter what—with an overall effect on the success of the new system, but

Use data to make better decisions

With budget cuts forcing libraries to make decisions about reducing the hours they are open or the materials they acquire, library staff need to be able to make use of the data locked in their integrated library systems (ILS).

An ILS contains data that could be mined and analyzed to provide insights on the use of the libraries throughout a system. Imagine combining this type of data with census data products such as Library Decision from Civic Technologies. The library could know, for example, that the population served by a branch is 50% Hispanic and its collection might be only 10% Spanish-language materials.

Joe Forsee, director at Northwest Georgia Regional Library, arranged for consultant Richard Chapman to extract data from the library's Sirsi system to a separate server for analysis. CGI scripts were developed to enable the data to be extracted remotely and automatically at off-peak hours.

To show how useful this effort has been, two data points were particularly useful in making decisions:

- An 18-month analysis of circulation by the hour at each branch indicates when it can reduce hours with minimal impact.

- Monthly analysis of circulation by item type at each branch indicates the type of material most in demand.

Tools using geographic information systems (GIS), combined with a population's demographic data, enable libraries to employ the kind of sophistication typically used in deciding where to place stores and other service centers in communities. Understanding the needs of users becomes a lot simpler by knowing who they are demographically and how they collectively use available resources.—*JL*

EX LIBRIS LOSES PRESIDENT; VTLS FINDS ONE

In a surprising press release March 10, Ex Libris (USA), Inc. announced that its president, Carl Grant, would be leaving the company to pursue other opportunities. Two days later, VTLS, Inc. named Grant its new president and chief operating officer.

Grant, who spent four years at Ex Libris, has more than 30 years in the library automation industry, including executive level positions at Data Research Associates (DRA), Innovative Interfaces, and Ameritech Library Systems. The move comes as a surprise to industry analysts watching Ex Libris' U.S. sales and industry influence grow steadily as VTLS Inc.'s U.S. sales show sharp declines. In a written statement, Grant said, "I'm moving to VTLS because it means I can go from running a subsidiary of a global company to running the whole global company. In examining VTLS, I found a company with a lot of visionary products and services backed by a great team coupled with a loyal customer base. I want to get the word out about what I've found there and to work with this team to build new products and services that I believe the marketplace wants."

Dr. Vinod Chachra remains at VTLS as chairman and CEO. Oren Beit-Arie, the managing director of Ex Libris' Information Services Division, became acting president of the company effective March 31.—*AKP*

Sirsi releases Singlesearch version 2

In a wave of new portal and federated searching products coming to market, Sirsi announced the availability of version 2 of SingleSearch. Like many of its competing products from other ILS vendors, Single-Search leverages the MuseGlobal software to manage the searching of multiple database targets, including those with proprietary search protocols.

Offered as part of the new Sirsi Rooms information portal, Single-Search also is available as a stand-alone module without any specific ties to a single ILS. This marketing strategy follows the industry trend of developing and marketing new products to libraries that use a wide range of integrated management systems. SingleSearch is available on both Windows and Unix platforms. It includes an optional subscription service for maintaining the proper plug-ins for sending searches to thousands of possible database targets.—*AKP*

Contact: Sirsi Corp.
www.sirsi.com

world, the criteria for digital preservation must include:

- Administration by autonomous and diverse organizations—separate agencies protect a collection from changes in funding, mission, and priorities.

- Distribution in multiple locations—availability in different countries lets the collection survive politics and collective social insanity.

- Competent management—organizations that understand the technology and have the resources should implement an archive.

- Management by organizations motivated to maintain archives—if the archival collection will be used, then the site must maintain a working interface. Who will pay for it?

- Verified usability—ongoing use is the best way to confirm the archive is functional.

In addition, timing on release of the archive needs to be decided. Does the archived material become available when it is out of copyright? Publishers do not want to allow uncontrolled access that competes with their current offering.

Technical issues

Technical issues are relatively minor compared with the organizational issues. But the changing technology and standards create a need for some vigilance in maintenance. Decisions need to be made about:

- What will be archived? Consider the evolving nature of journals that have a life of their own and provide communication among the members of the community.

- What formats will be used? PDF, SGML, and XML each should be used for a multiplicity of formats.

- How will files be transferred? Since FTP is not scalable, other means must be determined to accommodate multiple copies of large files.

- How often should the material be reformatted to accommodate future developments in standards and technology?

Migration *from page 2*

not necessarily on the migration itself. The actual data migration process will be intimately involved with the minutia of data export, mapping, insertion, manipulation, re-insertion, and so on.

Libraries may be tempted to move quickly through the data-mapping process to save time for actual data loading, training, and testing, especially if a test load is planned. Vendors, too, tend to promise fixes to all problems that arise from a test load. Nevertheless, careful evaluation of data mapping issues and replication of desired policies will save time in the long run. Creating a special team of data experts will not only relieve the larger group of interested parties but will ensure proper delivery of data from one system to the other.

Vendors at the wheel

In the vendors' ideal world, the libraries' involvement in the migration process would end shortly after the data mapping is complete, and last until right before the system goes live. Keep in mind that the vendor is managing many other migrations. A single project manager or implementation consultant is likely managing three to 10 other system migrations. This amount of work makes meeting timelines difficult.

Although the library staff should remain open-minded about mid-fiscal year or mid-semester live dates, it does not need to acquiesce to an undesirable timeline, especially if the library is not in a hurry. If the timeline provided by the vendor seems too good to be true, it probably is.

Moreover, the library needs to remain flexible. The migration process has many unknowns, and time is one of them. Several factors affect migration and data loading times, so the library will be adjusting the schedule accordingly. Vendors still have most of the experience, and within reason their estimates can be trusted.

Finally, if the library is lucky enough to be migrating from a legacy system to a new system from the same vendor, never overlook the possibility of refreshing data extracts. More often than not, vendors will have to play the hand they are dealt for loading data; losses will occur and hard work will be lost. But as sophisticated systems are designed to address (or at least store) more and more extensible data, libraries should endeavor to keep all they can, if the data can be used. At the least, libraries should request data dumps, even if they have no way adding the data to the new system except by hand at a later date.

No idle time

Although only a few people (or one) are tied up with various data mapping issues, hardware configurations, and vendor conference calls, the rest of the library may be tempted to sit back and wait. Nevertheless,

METASEARCH ENGINES— PLUG & PLAY SOFTWARE?

Confused by the numerous databases licensed by the library, users want the simplicity of a Google-type search—a single box where they type keywords—that provides a results list that links to full text and presumably the answers to their questions.

Metasearch or federated search engines are designed to execute the search in the native language of the database using a standard such as Z39.50 and return the results to the user. This process saves the user the time spent in repeating the same search across multiple databases.

Multiple options are available to libraries today. Dynix uses WebFeat. MuseGlobal provides a service incorporated in Innovative Interfaces, Endeavor, and Sirsi. Ex Libris, Fretwell-Downing, and Auto-Graphics have developed their own metasearch capabilities.

Since this technology is evolving, libraries considering a metasearch engine should evaluate several options including licensing directly from MuseGlobal or WebFeat. Libraries need to understand the full range of capabilities and develop their own criteria such as the level of customization of the interface, defining the variety of search protocols, and merging and sorting search results to ensure optimum results for their users.—*JL*

Publisher's note: The November/December 2002 issue of Library Technology Reports, *"How to Plan and Implement a Library Portal", examines the single-search interface technology available in various vendors' library portal systems.*

www.techsource.ala.org

New ideas *from page 3*

Publisher views

Elsevier Science believes it has a responsibility to preserve its authors' work, says Karen Hunter, Elsevier's senior vice president. It has begun working with the Royal Library of the Netherlands to archive Elsevier's entire collection. Elsevier is looking for 12 customers worldwide that meet the publisher's criteria to serve as an archive. The customer is one that subscribes to all of Elsevier's journal literature and that meets all of its criteria.

Likewise, PubMedCentral is exploring archive possibilities with sites in France, China, Japan, and the United Kingdom for its publications.

One of many society publishers seeking solutions, the American Mathematical Society (AMS) sees JSTOR as one part of its strategy for archiving its content in usable form. AMS believes that redundant systems, such as having both print and electronic files, are essential. The key is to have a multiplicity of solutions with a variety of methods, locations, and organizations that have different motives and expertise storing journals.

These solutions are developing from the market up rather than the organization down and will likely provide the quickest and most reliable path to assurance that large quantities of valued content in scholarly publishing will be available for future generations.—*Judy Luther*

Library of Congress leads initiative

The government has authorized the expenditure of $25 million (of nearly $99.8 million appropriated) by the Library of Congress for the National Digital Information Infrastructure Preservation Program (NDIIPP). The program's goal is to develop a network of partners in the government agencies, libraries, universities, and the private sector working in defined roles to collectively address preservation issues, especially for materials that are born digital.

The National Strategic Advisory Board for NDIIPP has defined preservation architecture to include:

- Interfaces—patron access
- Collections—defined by institutions and agencies
- Gateways—authentication and security
- Repositories—storage of content

One question raised is the extent to which the current 70-year period for copyright is standing in the path of preservation. Libraries and vendors must obtain the author's permission—a time-consuming and expensive process—before they can convert extensive print book collections to electronic form.

Rather than attempt to direct a solution to the preservation problem by itself, the NDIIPP's effort is significant because it is involving leading individuals and organizations to engage collaboratively to address the many related issues.—*JL*

Contact: Library of Congress
www.digitalpreservation.gov/ndiipp

SIRSI brings BARNES & NOBLE into the library

In a January press release that raised eyebrows and sparked controversy, Sirsi Corp. announced a partnership with Barnes & Noble.com that will allow library patrons to purchase books through the library catalog interface. As an incentive to support the service, libraries implementing the link to Barnes & Noble receive a percentage of the sale, with the payment being mediated by Sirsi. Knee-jerk reaction among many librarians boils down to fear of bringing the book-selling business inside the library. College and university library concerns include bypassing the student bookstore (which could even be a

Barnes & Noble). For state-supported libraries, linking to vendors might require a state contract. Nevertheless, the partnership is ground-breaking in recognizing that library use and bookstore use by patrons are hardly mutually exclusive relationships.—*AKP*

Contact: Sirsi Corp.
www.sirsi.com
Barnes & Noble, Inc.
www.barnesandnoble.com

much work needs to be done for which systems specialists can usually offer only little assistance.

The modular subgroups must develop scripted work flows with which to test the new system and the success of the data mapping. For instance, validating a successful circulation map requires a simple barcode listing of item types, patrons, and circulation locations. After the data is migrated, different permutations of all three will adequately test the success of item and patron migration, as well as the adequacy of established circulation rules.

Training is another area where many people can play a role. The basic vendor model now favors a train-the-trainer approach. Unless the library is tiny, most of the staff will not be directly trained on every function. Larger libraries will especially want to establish their own in-house training on the system so everyone will be prepared for the live date.

Timing is crucial. Do the vendor-provided training early enough to establish local training, but not so early that personnel forget the specialized training they receive before a system is available to establish more hands-on practice.

Biting and chewing

Some people look at the migration process as an opportunity to change the library world. Although some work flows and processes will have to change, libraries should employ reason before making sweeping changes. If the new system allows systematic changes (such as global search and replace), then the migration process might not be needed to fix every little problem. Sometimes keeping operations similar to the pre-migration is laudable enough.

Moreover, major changes implemented by changing data (such as collapsing item types or creating new patron categories) should solve known problems, not vaguely anticipated ones. Implementing too many policy changes with the new system can add too many worries at once.

Finally, the library should empower one person with the responsibility and authority to make sure the entire process is being conducted efficiently. This role might even entail a special assignment, since reporting lines might muddy the authority issues. Some libraries choose to empower a consultant for such a role. This empowerment also is essential for working with the vendor. Although not an easy role, it is a critical one that ensures the library and vendor know who is ultimately responsible for all aspects of the migration.

These general tips should help start a migration. Remember that the migration process is iterative, sometimes combative, often mutually supportive, and always a substantial change for any library.—*Andrew K. Pace*

Ebsco, Ex Libris extend acquisitions interoperability

Loading serials invoices is one feature of an integrated library system (ILS) that saves library staffs a tremendous amount of time. Ebsco's new system is just adding this capability.

The University of Minnesota library staff tested loading an Ebsco invoice into Ex Libris' Aleph500 system. They were pleased with the results. Ex Libris also has tested invoicing with Swets Blackwell with Alelph500 and expects a similar test with Harrasowitz, a subscription agent. Ex Libris will soon test invoices for books with YBP, a book vendor now owned by Baker & Taylor.

EDI X12 (U.S.-based) and EDIFACT (European) standards have replaced the original custom interfaces and are used to structure data on orders, invoices, and claims to communicate information easily across systems. Although little has been done with the ordering functions, loading invoices and sending claims data are well-established between serials agents and system vendors. This capability saves both the library and the vendor considerable staff time and reduces the time needed for processing invoices and claims.

Ebsco has developed an interface for exchanging claims data with many vendors, including Dynix for Horizon, Innovative Interfaces, MSUS Pals, Sirsi for Unicorn, and Endeavor for Voyager, so a library can send claims electronically to its subscription agent instead of mailing print claims. Ebsco uses EDI X12, EDIFACT, and custom interface capabilities for invoice loads with Innovative Interfaces, Endeavor for Voyager, Dynix, DRA, and MSUS Pals. It is in beta with Sirsi at Pennsylvania State University.—*JL*

NEWS & UPDATES

Microsoft's RMS protects sensitive files

The introduction of Digital Rights Management (DRM) in scholarly publishing several years ago appeared to flop, so seeing Microsoft introduce software that combines and extends the technologies used with music, e-books, and videos is surprising.

Apparently times have changed, and institutions have an increased need to protect critical business information. With these capabilities readily available on the server, academic institutions and government agencies can enforce control of sensitive documents.

Microsoft's Rights Management Services (RMS) provides a Window's platform-based approach to persistent policy rights for Web content and sensitive documents that accompany the content as it travels to other systems. With the click of a button, users can stipulate rules that apply to e-mail clients, word processors, and portals. For example, companies can create templates to be widely used that easily restrict access or classify a document as confidential. RMS also allows users to control forwarding, copying, and printing of specific documents as well as create time-based expiration rules.

Using XrML (Extensible Rights Markup Language), an emerging standard for the expression of rights on digital content, RMS can interoperate with Web services.—*JL*

White Paper: Microsoft Rights Management Solutions for the Enterprise: Persistent Policy Expression and Enforcement of Digital Information

Contact: Microsoft
www.microsoft.com/windows
server2003/docs/RMS.doc

But libraries don't want protection

Libraries should start calling Digital Rights Management (DRM) what it really is—rights restriction management. Arguably, the flop in DRM for scholarly publishing occurred from a lack of desire to restrict access to scholarly content on the part of authors. More likely, though, markup languages and rights expression languages were not mature enough to address the issues at hand. So far, the incentive to restrict access has come more from publishers and aggregators, and less from authors themselves.

Meanwhile, corporate interests such as Microsoft and ContentGuard have been lobbying standards organizations to make de facto standards from rights expression languages such as XrML. This emerging so-called standard makes little to no effort to express use cases for fair use, first sale, or even basic rights to copy, print, or share digital materials.

Moreover, copyright law grants rights from many sources—the author, the user, the government—and DRM systems are usually limited to author rights alone. This example is not to say that such rights are obviated by DRM. What's missing from DRM is the notion that readers have rights they should be able to assert.

Even libraries cannot always fight the demands of the bottom line. Make no mistake that the bottom line for publishers is protecting revenue streams, not enforcing control of sensitive documents. Microsoft and Content-Guard already hold broad patents in the DRM arena. Librarians are already addressing the implications of licensing agreements that trump copyright, fair use, and first sale. If the library community is not careful, though, the technology will do it instead.

Position papers are beginning to emerge: see "Implementing Copyright Limitations in Rights Expression Languages," Mulligan and Burstein, DRM2002, http://crypto.stanford.edu/DRM2002/mulligan_burstein_acm_drm_2002.doc.—*AKP*

May 2003
Digital preservation strategies

Smart Libraries Newsletter
An innovative overview of library automation

Smart Libraries Newsletter delivers hard data and innovative insights
about the world of library technology, every month.