Smarter Libraries through Technology
by Marshall Breeding

Making Sense of Many Options

When it comes to creating a library automation infrastructure in 2010, there are many models in play. Should libraries continue to rely on integrated library systems installed locally in libraries or consortia? Will some shift to relying on a globally distributed infrastructure through OCLC’s Web-scale Management Services? Might some libraries rely on vendor-hosted arrangements through software-as-a-service?

The same kinds of questions arise in the way that libraries deal with the bibliographic records that describe their collections. The longstanding copy cataloging model involves libraries relying on external bibliographic sources for items that have previously been described, bringing copies of records into their local system. Only when no acceptable copy of the record can be identified will a library perform original cataloging, creating a new record from scratch. OCLC member libraries can rely on the massive WorldCat database of bibliographic records to achieve a very high ratio of copy cataloging relative to original cataloging. Outside the OCLC fold, libraries depend on other bibliographic resources such as the catalogs of their national libraries, or a more peer-to-peer model of deriving records, often based on informal terms, from other libraries that happen to have servers supporting the Z39.50 protocol.

In this month’s newsletter, we discuss BookWhere, a software tool that helps many libraries to obtain the records they need to describe their collections.

Today, several different trends are underway with major implications for how the library of the future will deal with metadata. While I don’t claim any specific insight into the nuances of cataloging, it does seem to me that new models of automation will impact cataloging workflows and that new development in the cataloging and metadata arena may require fundamental changes in library automation systems.

The metadata model inherent to OCLC Web-scale Management Services radically simplifies the workflow involved in copy cataloging. Traditional ILS models involve downloading MARC records from external resources and importing them into a local system, often making changes to the records according to local cataloging practices. This approach offers the benefit of customized records for a given library, but at the cost of each library making changes independently of others that use the same record. WMS
eliminates the need for local copies of records, but means that all libraries must accept a given record or enhance it for the benefit of all.

As new generations of library automation software become more oriented toward Web services and other more current technologies, handling bibliographic records in MARC communications format rather than XML becomes more problematic. While it’s possible, and routinely implemented, to translate MARC records into MARCXML, many idiosyncratic characteristics remain. The record structures associated with MARC communications format, such as BER (Basic Encoding Rules) and ASN.1 (Abstract Syntax Notation), which worked well for storing records on magnetic tape and for producing catalog cards, don’t always fit well within technology platforms based on XML structures which are moving increasingly toward semantic Web concepts of linked data.

Resource Description and Access (RDA) proposes to modernize some of the cataloging rules used for creating bibliographic records. Ideally implemented in an XML document structure, these rules have been applied to bibliographic records in MARC formats, with mixed results. While many perceive the advantages in a more updated set of cataloging practices, the immense installed base of bibliographic records mean a very difficult transition. The current generation of integrated library systems, designed around bibliographic records coded according to AACR2 can be adjusted to accept records created under the new RDA conventions, but cannot necessarily take full advantages of the benefits envisioned without a more wholesale conversion.

These are just some very basic examples of the interrelations between the ways that libraries deal with metadata and the technology systems involved in describing and providing access to library collections. New conceptual models are unfolding in both the metadata and in the library management systems arenas. Of course the major players in both sides are well aware of each other’s issues and concerns. Hopefully we’ll eventually end up with technology products that take full advantage of new metadata practices and that metadata practices will continue to evolve in ways that can be best exploited with technology platforms to provide the best value to library users.

WebClarity recently launched a new product called PeopleWhere, which allows libraries to manage all aspects of personnel scheduling. Designed specifically for the requirements of libraries, PeopleWhere provides a Web-based system for managing work schedules and for assigning employees to various service points in a library. According to Allison Standen, co-founder for WebClarity, the company saw an opportunity to create a library-specific personnel scheduling solution. Early versions of the product were available in 2009; following the success of the product by early adopters, WebClarity has met the milestones necessary to launch PeopleWhere and to begin active marketing of the product in Canada, the United States and internationally.

**PeopleWhere: A New Tool for Managing Library Personnel and Scheduling**

WebClarity developed PeopleWhere to fill a niche that was not well-managed by other scheduling and reservations products designed for general use or for other sectors. Libraries, especially larger ones, face many complications in staffing their service points. It’s common to have both full and part-time employees, as well as volunteers that work in and across different branches or locations.

Some broad areas of functionality include: building an inventory of the assets represented among library personnel, including special skills like foreign languages, subject specializations, and supervisory qualifications; tracking accumulations of leave according to library-defined categories; approval of leave requests, and creation of service point schedules. The PeopleWhere portal includes internal messaging for communication...
BookWhere facilitates copy cataloging through its ability to connect to other libraries’ automation systems as a Z39.50 client to find, select, and retrieve MARC records. Major targets for this product include the Library of Congress, the British Library, other national libraries, and thousands of other libraries with automation systems configured as Z39.50 servers. WebClarity has built and maintains a registry of over 2,800 targets representing a network of libraries offering MARC records through a Z39.50 service available to BookWhere users. All versions of BookWhere include access to this registry of MARC record sources.

BookWhere operates in conjunction with any automation system capable of importing MARC records. Many libraries make use of BookWhere to support their copy cataloging operations; individual researchers and scholars make use of BookWhere to create their personal bibliographies, populating reference management tools such as EndNote, Reference Manager, ProCite, Nota Bene’s Ibidem, and others.

WebClarity offers BookWhere in several different forms. The Windows-based version of the product continues as the most complete and robust option. It includes the capability to perform batch processing of requests in addition to real-time cataloging functions. By submitting a list of ISBNs, libraries can quickly and efficiently obtain cataloging records for batches of materials. BookWhere includes a record assessment feature that analyzes and scores incoming records from multiple sources, identifying those that best meet a library’s criteria for completeness. The base version of BookWhere includes batch processing of up to fifty items; the BookWhere Suite supports unlimited batch processing. BookWhere Suite also includes advanced features such as user-defined macros, MARC record editing, and other features that facilitate the systematic clean-up of a library’s bibliographic database. The academic version of BookWhere targets
personal users, licensed for use on two computers to support the common need for use in both home and office. WebClarity offers BookWhere Online as a completely Web-based product, providing the basic functionality for retrieving MARC records without the need to install software on the local computer. Since the BookWhere client software operates only under Microsoft Windows, or under Windows emulation software on Macintosh computers, the Web-based version extends its use to other platforms. BookWhere Online does not include batch processing features.

A library that cannot afford OCLC membership might use BookWhere in conjunction with its directory of targets as their primary strategy for obtaining MARC records for new materials or even for retrospective conversion projects. According to WebClarity, over a thousand libraries in 40 countries currently pay maintenance support for BookWhere. Many libraries that have purchased BookWhere in previous years continue to use it without paid support; an estimated 6,000 to 8,000 copies of BookWhere remain in active use in libraries throughout the world. Over 600 licenses in Finland representing the majority of academic libraries, for example, use BookWhere through an arrangement with their national library. BookWhere was extended in 2005 to support the FINMARC record syntax used in that country.

WebClarity Corporate Background

WebClarity operates as a wholly owned independent subsidiary of Convergent Library Technologies, acquired from Sea Change Corporation in July 2004. The primary products of WebClarity, in addition to the recently announced PeopleWhere, include the BookWhere family of cataloging utilities.

Convergent Library Technologies was founded in 2003 by Phil Smith, who serves as CEO and President and Allison Standen, who continues to own and operate the company, based in Barrie, Ontario in Canada. The founders are both veterans of the library automation industry. Prior to founding Convergent Library Technologies, Smith had been responsible for the Asia-Pacific division of Geac, which has since become Infor Library Solutions. Convergent’s original business focused on marketing and support of PC booking systems. The company now focuses on products that help libraries increase productiv-
ity and efficiency to streamline aspects of their operations. From PC management, the company extended its reach into technical services through BookWhere, and more recently to administration with the launch of PeopleWhere. In addition to development and support of its own products created through its WebClarity subsidiary, Convergent Library Technologies partners with a variety of other companies to extend the services it offers to its library customers and as distribution channels for its own products into other markets.

**BookWhere Origins**

BookWhere traces its roots to SeaChange Corporation, founded in 1986 by Richard Earle, who created the product as a Windows-based Z39.50 based cataloging utility. Sea Change initially created BookWhere in the mid-1990’s. Although BookWhere stood as the flagship product for Sea Change for many years, the company became involved in other business activities involving broader Internet technologies. As the company found success in the broader IT sector, it sought to divest its library-specific products that addressed a smaller market.

Sea Change organized the portion of its operations involved with its BookWhere family of products into a separate division named WebClarity in 2003. In July 2004, Sea Change sold its WebClarity division, including the BookWhere product line and the personnel involved in its development, to Convergent Library Technologies, a relatively new Canadian company involved with the sales and support of library products as a distributor. According to Standen, Convergent Library Technologies, founded only a year earlier, saw the acquisition of WebClarity as an opportunity to gain the technology personnel for its library-focused business. Prior to the acquisition of WebClarity, Convergent Library Technologies had been involved primarily in distribution and marketing activities for other library products.

Sea Change currently operates two subsidiaries, Interwork Technologies, Inc. and iRoam Mobile Solutions. Earle continues to serve as CEO.

BookWhere has proven itself as a successful product that enables many libraries to perform copy cataloging tasks inexpensively. PeopleWhere extends the reach of WebClarity into the administrative functions of the library, providing tools to better manage personnel and scheduling. As PeopleWhere concludes its product development and beta test cycle, it enters the market anticipating that libraries will appreciate personnel management software specifically designed for their workflows and requirements.

—Marshall Breeding

**SirsiDynix Portfolio: a new digital asset management platform**

In a major extension to its product line, SirsiDynix has launched the SirsiDynix Portfolio digital asset management system. This product aims to provide libraries with a platform to manage and provide access to collections of digital content.

SirsiDynix Portfolio allows libraries to provide access to collections of materials beyond those normally managed by their integrated library system, such as images, videos, manuscripts and other materials. The product enables libraries to create digital collections of historic newspapers or photographs, or scholarly content in an institutional repository. With its emphasis on end-user discovery, Portfolio provides unified access to both traditional materials managed in the ILS and these additional collections.

Portfolio supports a variety of methods for dealing with metadata, including direct record creation, ingestion of metadata in bulk from external sources, and the export of metadata. For libraries intending to use Portfolio as their primary digital collection management environment, the product supports the creation of metadata, following the Dublin Core model, providing Web-based record editing tools in conjunction with an underlying PostgreSQL relational database. For libraries that have managed their digital collections on other platforms or want to import materials from external sources, Portfolio supports the bulk import of metadata and objects.

Portfolio supports a wide range of formats, allowing a library to manage or provide access to any materials of interest beyond its traditional collection. It includes a built-in optical character recognition engine, enabling libraries to scan and digitize materials for inclusion in their digital collections.

For libraries with requirements to restrict access to all or parts of their collection to authorized users, Portfolio includes access control mechanisms that selectively allow access to specific authenticated users.
A recognition engine, providing full-text indexing for scanned documents. Portfolio provides tools for organizing materials into hierarchies, implementing controlled vocabularies, and other tasks involved in the management of digital collections.

For libraries with requirements to restrict access to all or parts of their collection to authorized users, Portfolio includes access control mechanisms that selectively allow access to specific authenticated users. For those libraries involved with sensitive materials, especially those in corporate and government settings, which have licensed SirsiDynix Symphony Accountability Module, Portfolio can interface with its authorization profiles to control access consistent with institutional requirements.

SirsiDynix designed Portfolio to serve as a unified discovery tool for all aspects of a library's local collections. The product can be configured to ingest records from their local ILS in addition to their digital collections. SirsiDynix Enterprise is intended for libraries concerned primarily with access to materials in their ILS; SirsiDynix Portfolio addresses those with local digital collections and can integrate with traditional materials to create a unified end-user discovery environment.

Portfolio also includes the ability to make collections available to external services and systems through a built-in OAI-PMH responder. This capability helps libraries improve the discoverability of their content by facilitating their harvesting and indexing by other related services that may be internal to its own organization or external. A library might, for example, want its local digital collections, harvested through OAI to be represented in a state-wide portal for cultural heritage materials.

SirsiDynix created Portfolio on the same technology platform as its SirsiDynix Enterprise faceted discovery interface. Both of these products rely on the GlobalBrain search engine from BrainWare, Inc. BrainWare and SirsiDynix both operate as portfolio companies of Vista Equity Partners, a large private equity firm. GlobalBrain is an enterprise search technology that provides an advanced set of retrieval features, emphasizing the ability to perform fuzzy matches based on associative concepts as much as precise keyword matches.

SirsiDynix has worked with BrainWare since 2007 as the basis for SirsiDynix Enterprise, its offering in the discovery services genre, allowing libraries to provide a modern, relevancy-based faceted interface. SirsiDynix Enterprise operates with either of the company's integrated library Systems, Symphony and Horizon.

SirsiDynix Portfolio will be the forward migration path for libraries that have previously purchased Hyperion Digital Media Archive system, launched in 1997, based on the same components as Unicorn, the company's strategic integrated library system at that time. Hyperion has not been actively developed in recent years; SirsiDynix Portfolio offers similar functionality based on a more modern technology platform. Many of the requested enhancements from libraries using Hyperion have been implemented in Portfolio.

A project that showcases the features of SirsiDynix Portfolio can be seen in “Wyoming Places,” an interactive map that provides historic background, images, and digitized newspaper articles for over 2,000 locations in the state of Wyoming. Wyoming Places was originally created on the PBwiki platform, and is being redeveloped as an interactive map based on the SirsiDynix Portfolio platform and the Microsoft Bing mapping API. This new version of Wyoming Places was created through collaboration between the State Library of Wyoming and SirsiDynix to highlight extraordinary content available and demonstrate the capabilities of the technology. Wyoming Places draws on both the API's of the Microsoft Bing mapping features and SirsiDynix Portfolio to produce the interactive maps, which layer historic and cultural content and geographical coordinates managed in Portfolio into an interactive map displayed through Bing. The project takes advantage of Portfolio's built-in OCR capabilities as scanned newspaper images are imported to make this material available for full-text discovery. Wyoming Places is especially well-suited to large-panel touch-based systems such as Microsoft Surface. The Wyoming State Library serves as a beta test site for SirsiDynix Portfolio; this new interactive version of Wyoming Places is expected to launch for public access in later Fall 2010.

—Marshall Breeding
Last month, *Smart Libraries Newsletter* discussed automation projects that have achieved or aspire to achieve a state-wide scope. We discussed implementations based on both open source and proprietary library automation platforms. The PINES consortium in Georgia, based on the Evergreen ILS, has gained considerable attention as one of the most ambitious consortial implementations based on open source software.

The PINES consortium generally includes the libraries in the smaller communities and less populated counties in Georgia. Though it includes 143 out of 160 counties, it covers around half of the population of the state. The population centers such as Atlanta-Fulton County, Cobb County rely on proprietary systems.

In October 2010 the Northwest Georgia Regional Library, including three facilities in Gordon and Murray Counties joined PINES, moving to the shared Evergreen system from a SirsiDynix Unicorn System in place since 1998. This recent addition boosts PINES to a total of around 283 libraries.

In a move that runs counter to the expansion of PINES toward state-wide scope, the Chattahoochee Valley Library Regional Library System has selected the Polaris ILS to replace their current SirsiDynix Horizon system.

These two recent ILS selections reinforce the trends for PINES to encompass an ever wider portion of Georgia, but with notable exceptions of libraries that serve denser areas of population.

—Marshall Breeding