Patent problems likely to increase

Many in the library world were concerned to learn this spring that Openly Informatics, Inc., whose president was a member of the NISO OpenURL standards committee, had earlier applied for a patent on the link resolution technology used by one of its products. The role of patented technologies in open standards and the role of disclosure in the standards development process have come into question.

Until recently, library systems and standards have been relatively unaffected by patent concerns. The library community itself respects intellectual property but values open standards and open access to information.

Products developed within the community are likely to be open source. Even commercial vendors of integrated library systems (ILS) have not historically patented their software or methods. This relatively patent-free environment may be changing due to several trends:

- Library systems vendors are relying more heavily on revenue from innovative, often standalone, extra-cost products. Unlike core ILS modules, these products use novel methods that may be patentable.

In what may set a precedent, Sirsi Corp. has applied for a patent for technology used in the Rooms™ Context Management Solution. Moreover, these products compete with applications developed by more specialized companies that see patents as a way of maintaining their competitive advantage.

For example, the founder of WebFeat has a patent pending for the metasearch (simultaneous searching of multiple sources) technology used in WebFeat Prism™. Other vendors of metasearch products are reportedly concerned.

- Another trend is the increased reliance of library applications on external technologies. As the community moves from library-defined standards and technologies to more universal tools, exposure to patent claims will increase. Although Internet and Web communities have tried hard to keep

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SCHOOL LIBRARY CENTRALIZATION M

Taking advantage of the trend toward centralized automation in school district libraries, Follett Software Co., released an all-Web-based system, Destiny, in June 2003.

Centralization offers many benefits for school libraries, especially where resources are scarce. Although this approach demands a larger upfront investment, it offers long-term efficiency, requires less technical support, and assists resource sharing among the libraries in the school district.

Follett, a division of Follett, Inc., isn't the first out of the gate in the centralized school district library automation race. Several companies that produce multiuser library automation systems have expanded into the school library market over the last two years, including Sagebrush Accent, a version of Sirsi's Unicorn Library Management System (January 2001); Via from Innovative Interfaces, Inc. (November 2002); and SchoolLibrary.Solution from The Library Corp. (February 2001). Each of these multiuser systems was originally written for other types of libraries; Destiny was developed specifically for school libraries.

Only Sagebrush Corp., though, offers any significant competition to Follett in terms of both new sales and number of systems installed in school districts. Follett keeps a tight focus on the K–12 market: 96% of its sales go to school libraries.

Follett has long offered its library automation products for Web access for individual schools, but Destiny was built from the ground up to be implemented as a centralized library automation system for an entire school district.

Libraries can operate Destiny from any computer capable of running a Web browser. Follett avoided ActiveX or Java applets, facilitating its use by even low-end computers—an important consideration for school libraries that often don't have high-performance computers.

Savings abound

Libraries will not need to install client software on their library computers; they can leverage existing Web browsers and Internet connections. Not having to install and maintain software

EETS ITS DESTINY

on the computers in the libraries relieves school district IT personnel or library staff from much library automation support.

Destiny relies on a centralized servers running Microsoft Windows 2000 Server to support many libraries throughout a school district. It uses Microsoft SQL Server 2000 for its underlying database functions.

Districts with 10 or fewer libraries can operate Destiny on a single server that operates both the application and the database. Districts with more than 10 libraries need two servers. The application uses Structured Query Language (SQL) and open database connectivity (ODBC) for database access, allowing libraries to use custom-built or third-party reporting utilities.

For school libraries, the ability to share data with other applications (such as student information systems that log student grades, class enrollment, and attendance) saves time and labor. Follett has created a set of utilities that can automatically transfer records in batch mode with other applications to avoid the need to retype user records.

The Lake Washington School District worked with Follett since late 2002 as a Destiny beta test site. The district's 46 schools, totaling 23,500 students, migrated from its DRA Classic system. Orange County Schools in North Carolina also was a beta test site.

Both school districts report successful migrations from older outdated automation systems to Destiny. Orange County Schools implemented Destiny as part of an effort that included automating a new 1,200-student high school.

Even though Destiny is new, it sports the full complement of features expected in a modern library automation system. Follett offers several add-ons for Destiny that most automated systems added after their inception:

- TitlePeek offers book jacket images, summaries, and reviews.

- WebPath Express allows students to access approved and age-appropriate websites.

- Find-a-book helps students locate books associated with reading programs such as Accelerated Reader or Scholastic Reading Counts.—*Marshall Breeding*

MEET THE AUTHORS

Priscilla L. Caplan is assistant director for Digital Library Services at the Florida Center for Library Automation, where she provides automation support to the libraries of the 10 public universities of Florida in the creation and management of digital content. Previously she was assistant director for Library Systems at the University of Chicago and head of the Development Division of the Harvard University Library's Office for Information Systems.

Caplan is particularly interested in technologies and architectures for digital libraries, standards, digital archiving, and metadata. Her book, *Metadata Fundamentals for All Librarians,* was published in 2003 by ALA Editions.

Caplan holds a B.A. in history and literature from Harvard University and a master's in library science from the University of North Carolina at Chapel Hill.
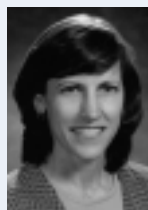
With more than 30 years' experience in the information industry, **Judy Luther** created Informed Strategies LLC to support publishers and vendors in developing and delivering customer-oriented electronic products and services. She developed sales management skills at the Institute for Scientific Information and Faxon and directed the library at Embry Riddle Aeronautical University.

Luther serves on the boards of *The Charleston Advisor* and UKSG *Serials* and wrote *White Paper on Electronic Journal Usage Statistics,* published by the Council on Library and Information Resources (CLIR) in 2000. She is active in the American Library Association (ALA), Society for Scholarly Publishers (SSP), North American Serials Interest Group (NASIG), Special Libraries Association (SLA), and the Charleston Conference.

Luther earned an MBA from Emory University in Atlanta and an MLS from Florida State University in Tallahassee, Fla. Outside her professional activities, she hikes and rafts the canyons of the southwestern United States.

Judy Luther's commentary next appears in the December 2003 issue of *Smart libraries Newsletter.—MW*

Patent *from page 1*

core network technologies royalty - and license-free, these standards are developed by industry consortia, and members of standards committees are drawn from corporations with large arsenals of patents.

- The overall movement toward digital libraries also is significant. Institutions creating and disseminating collections of digital content are especially likely to use proprietary image, audio, and video formats. Rights to these formats frequently change hands as companies are bought and sold, as noted in the Celartem article in this issue.

- Even standard formats can be encumbered, as many ISO/IEC standards are knowingly built on top of patented technologies. MPEG-4 visual compression is subject to so many patent claims that a Denver company, MPEG LA, administers one-stop licensing. Recently a patent on compression technology used in the original JPEG standard was acquired by a small Texas video networking company, which is now seeking royalties after more than a decade of open JPEG use.

These trends indicate patent issues will become increasingly central. Librarians have long understood the importance of copyright issues for libraries and their patrons, and they have overall acquired a sophisticated and balanced understanding of copyright law. The community should make an equal effort to understand the place of patents and their effect on standards, software, and library applications.—*Priscilla L. Caplan*

LizardTech acquired by Celartem

For the many digital library projects that use MrSID and DjVu images, the acquisition of LizardTech, Inc., by Celartem Technology USA in August is both good and bad news.

On the positive side, Celartem has resources to devote to continued development of these products and for robust technical support and marketing—areas where LizardTech, the maker of popular imaging technologies used in digital library projects, has shown recent weakness.

Risks exist, however, when proprietary formats are controlled by a single company. Rights holders can change, license terms can be changed, and licenses to use the formats can even be discontinued.

Through a series of acquisitions and mergers, Celartem, a wholly owned subsidiary of Japan's Celartem Technology, Inc., has been accumulating software applications and patent rights for many image formats. The acquisition of LizardTech brings it three new formats: MrSID, DjVu, and Genuine Fractals.

MrSID, which stands for Multi-resolution Seamless Image Database, is a compression format well suited for digital maps and other large-format materials. DjVu (pronounced déjà vu) is particularly good for mixed text and images and is widely used for digitized manuscripts. Genuine Fractals is a scaling and storage format for enlarging images.

Earlier Celartem had acquired VFZ (Vector Format for Zooming), a scaling and display format on its way to becoming a de facto standard in digital photography. In July the company stunned the market by announcing it was discontinuing support for VFZ in favor of another technology, PixelLive.

The major competitor to Celartem is the German company AlgoVision LuraTech. LuraTech developed the proprietary compression format LuraWave and continues to market this format for specialized needs, but the company's current focus is a suite of products for JPEG2000.

Open formats are less vulnerable, and librarians should consider standards such as PNG and JPEG2000 when choosing formats for compression and display. Although JPEG2000 contains some patented technologies, the baseline version can be implemented on a license-free and royalty-free basis.

Product support for JPEG2000 is improving rapidly. Although plug-ins are still required for major Web browsers and digital imaging applications such as Photo-Shop, several excellent ones exist, and analysts predict native support will begin appearing this year.—*PLC*

Contact: www.lizardtech.com

RFID OPTIONS INCREASE

Since three companies have made announcements related to radio frequency identification (RFID) technologies in the last quarter, RFID will likely continue to gain acceptance in libraries as a technology to identify and help manage and secure their physical materials. Originally developed and deployed in the retail sector, RFID excels at tracking large inventories of material.

VTLS, Inc. has been involved with RFID since July 2000; its initial partnership with Gemplus (now Tagsys) has formed a new division, VTrax, devoted to this genre of products.

Dynix Corp. inked an agreement in August with the Swiss company Bibliotheca to make RFID products available to libraries using its Horizon library automation system. Other library automation companies that have relationships with Bibliotheca include Ex Libris (USA), Inc., GIS Information Systems, Inc., and Bibliomondo, Inc.

The leader for RFID in libraries continues to be Checkpoint Systems, Inc., which claims more than 100 library installations. Another major competitor is 3M, offering a hybrid product that uses RFID for identification and traditional electromagnetic strips for security.

How it works

An RFID system includes the tags placed on each item and the equipment to read them. The paper-thin tags, typically about 2 inches square, include a microchip and an etched antenna. The tags store information about the item—a unique identifying number like a barcode, plus a limited amount of descriptive information. The RFID tags remain off until passed through a radio frequency (RF) field emitted by the equipment programmed to read or write data in the memory of the device.

Unlike barcodes, the tags can be read without being seen or touched—and the reader can be up to a meter away. Most RFID products can read as many as 20 tags per second. These features make RFID ideal for libraries.

Combined with the right hardware, RFID can enable self-checkout systems, automatic sorting, and other potential laborsaving automation functions. RFID tags can displace both the barcode and the electromagnetic theft-detection strips used by most libraries.

The largest obstacle to the widespread deployment of RFID in libraries lies in its high cost and the pervasiveness of barcode labels. Most libraries have already comprehensively identified their collections with barcodes, a labor-intensive and costly process.

The labor costs for planting and linking RFID tags in each item can be prohibitive, especially for libraries with large collections. The opportunity for implementing a new approach such as RFID arises when other circumstances force the library to systematically handle its collection, such as a relocation program or the opening of a new facility.—*MB*

Contact: www.dynix.com
www.vtls.com
www.bibliotheca-rfid.com
www.checkpointsystems.com/content/library

The definitive RFID available Dec. 1

Author Richard W. Boss explores and explains "RFID Technology for Libraries" in the Nov./Dec. 2003 issue of *Library Technology Reports.* To order, contact the ALA Customer Service Center at 800-545-2433 and press 5 for assistance. To order online, visit www.techsource.ala.org. The price is $60 plus $4 shipping and handling.

A tip of the hat to FEDORA

The first public release of Fedora, an open-source digital repository management system that has gained the support of the Digital Library Federation, is available for download and use under the Mozilla Public License.

This early second-generation digital library repository system is attracting great interest within the digital library community for its architecture that features a clean and modular separation of data, interfaces, and mechanisms (executable programs).

Fedora is the acronym for flexible extensible digital object repository architecture

Fedora can manage a million digital objects efficiently. It has three interfaces: a management interface for administering the repository and two access interfaces running over SOAP (Simple Object Access Protocol) and HTTP. It can be implemented under Windows, Solaris, and Linux platforms.

Objects managed by the repository may reside physically inside or outside the repository and can be of any MIME type. Digital objects are stored as XML-encoded files conforming to an extension of METS (Metadata Encoding and Transmission Standard). Digital objects are described with Dublin Core records, which are available for harvesting through the Open Archives Initiative Protocol for Metadata Harvesting (OAI-PMH).

Fedora is designed to be a foundation on which interoperable Web-based digital libraries can be built. It was developed at Cornell University and reinterpreted as an open-source Web-based production system jointly by the University of Virginia and Cornell University with funding from the Andrew W. Mellon Foundation.

Version 1.0 was the first release open for general use and has been followed by two bug-fix releases in August and September. Prerelease versions were implemented by a deployment team including Indiana University, King's College London, Oxford University, Tufts University, New York University, Northwestern University, and the Library of Congress. Current users are invited to become deployment partners.—*PLC*

Contact: fedora_interest@virginia.edu
www.fedora.info

E-book sales up, Questia downsizes

Retail sales of e-books in the first half of 2003 are up 30% over the same period last year, according to a report of the Open eBook Forum (OeBF). The first quarterly eBook and eDocument Publishing and Retail Statistics is based on data contributed by 34 publishers and retailers. Released on Sept. 16, the report also reveals that unit sales of e-books sold by publishers are up 60%, e-book titles published are up 45%, and sales revenue is up 30% for retailers and 29% for publishers.

OeBF's executive director Nick Bogarty says libraries and school systems are huge growth categories. OeBF intends to collect and release statistics quarterly. The full report is available only to OeBF members and companies who contributed to the statistics, but a summary is on the OeBF website.

Corroborating this growing interest in e-books, OCLC's netLibrary collection topped 60,000 books in September.

Not all e-book news is positive, however. Only a week before the release of the OeBF report, Barnes & Noble.com closed its online e-book store, citing weak sales. New sales have been discontinued and existing customers have a limited time to download their purchases.

Questia, which did not contribute to the OeBF survey, is reportedly struggling. According to a story in the Chronicle of Higher Education, Questia has "dramatically shrunk" its workforce, halted its marketing campaign, and closed two of its three offices. In July, the site received only 517,000 visitors, down from the 2 million visits per month claimed earlier. Questia, which calls itself the "world's largest online library," markets primarily to individual college and high school students who purchase monthly subscriptions.—*PLC*

Contact: www.openebook.org

Keeping score with the **ARL libraries**

Tracking the library automation systems selected and abandoned by libraries that belong to the Association of Research Libraries (ARL) reveals a who's who of top-tier vendors.

ARL libraries place extremely high demands on their automation systems. They have large collections (1.5 million to 14.9 million volumes), high volumes of circulation transactions, complex circulation policies, high standards for bibliographic cataloging and authority control, and sophisticated requirements for acquisitions.

In early October 2003, the University of British Columbia selected Endeavor's Voyager to replace its current DRA Classic system. The last ARL library to select Voyager was Columbia University in August 2002. This selection marks a total of 34 ARL libraries that have gone with Voyager, now tied with Innovative Interface's Millennium as the most chosen system among this group of libraries.

Other ARL libraries to turn over in 2003 include: University of Manitoba, which selected Sirsi Unicorn to replace its DRA Classic system; Sirsi Unicorn was put into production at North Carolina State University, replacing a DRA Classic system; University of Tennessee at Knoxville selected Voyager to replace its Dynix Horizon system; and Duke University will replace its DRA Classic system with Aleph 500. As of October 2003, five ARL libraries have announced system migrations, compared with sixteen in 2002.

ARL libraries have converged on a small set of library automation systems. Since 1998 none of these libraries has selected a system other than Aleph 500, Voyager, Unicorn, Millennium, or Horizon. If the trend continues, all but one or two ARL libraries will be running one of these systems within the next two years.

Only eight ARL libraries remain with legacy systems, and as many as five announcements of change are expected within the next few months. Notis, once used by as many as 53 of the ARL libraries, will soon be extinct among these libraries.—*MB*

(Source: *Library Technology Guides,* www.librarytechnology.org)

TABLE 1. SYSTEMS ABANDONED BETWEEN 2000 AND 2003

System	Count
Notis	21
DRA	11
Carl	2
Locally Developed	3
Innopac	2
Unicorn	1
VTLS	1
Horizon	1
Advance	1
TOTAL	43

TABLE 2. SYSTEMS SELECTED BETWEEN 2000 AND 2003

System	Count
Aleph 500	17
Millennium	2
Voyager	16
Unicorn	7
Horizon	1
TOTAL	43

TABLE 3. TOTAL SYSTEMS SELECTED AS OF OCTOBER 2003

System	Count
Geac Advance	1
Aleph 500	20
Amicus	1
DRA Classic	2
Horizon	8
Locally Developed	2
Millennium	34
MultiLIS	1
Notis	1
Unicorn	18
Voyager	34
VTLS	1
TOTAL	123

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November 2003
A fedora, RFID, patented technology, and Destiny

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