



# Smart Libraries<sup>TM</sup>

Formerly Library Systems Newsletter<sup>TM</sup>

50 East Huron Street, Chicago, Illinois 60611-2795, USA



## Smarter Libraries through Technology:

### *Dynamics of Discovery and Catalogs*

Since about 2005, *Smart Libraries Newsletter* has chronicled the development and adoption of what was originally called next-generation catalogs, and later discovery interfaces, and more recently Web-scale discovery services. Since then, many changes have developed in this space. In recent years, the emerging trend is for many libraries to drop third party interface solutions in favor of those provided by the same vendor of their core automation environment. Although that pattern of movement in the discovery arena exists, so do counter examples. I'm frequently asked whether a library should stick with the interface offered through its main automation provider or implement a separate discovery service. The answer

is complicated, with a variety of factors to consider.

The scenario where a library implements a discovery interface separate from its core library automation system comes with a significant layer of overhead to make these two components work well together. In most cases the bibliographic database in the automation system has to be exported, indexed in the discovery platform, and routinely synchronized. Mechanisms are also needed to provide real-time availability status in order to display whether an item is currently available or checked out. It's also necessary to connect the systems for enabling self-service features such as logging into a My Account profile, viewing items currently charged, requesting renewals, placing holds on items, paying fees, and other related tasks. The ILS-DI (Integrated Library System – Discovery Interface) specification proposed by a work group of the Digital Library Federation addresses these interoperability issues.

During the phase where online catalogs were perceived as especially dysfunctional and limited in scope, an opportunity emerged for products capable of providing a more modern user experience, expanding the scope of search, and adding other features not possible through the built-in online catalog module of the integrated library system. Given the vast improvements offered, the overhead involved in integration added to

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the effort, but was perceived as worthwhile. The ILS-DI work aimed to reduce some of that overhead. Beginning in around 2005, products such as AquaBrowser Library, Ex Libris Primo, VuFind, Encore, BiblioCommons, Endeca, and others emerged as discovery interfaces that libraries might deploy instead of, or in addition their online catalogs. This movement could be seen in both academic and public libraries.

Since then, a number of developments have altered the dynamic of discovery interfaces. These include the expansion of native online catalog products, the emergence of Web-scale discovery services, and the growing ties between discovery services and library services platforms offered by the same provider.

In the academic sphere, the emphasis has gone toward Web-scale, or index-based discovery services based on article and chapter-level metadata and full text. Examples of these discovery services include Serials Solutions Summon, EBSCO Discovery Service, Ex Libris Primo Central, and OCLC's WorldCat Local. Each of these index-based discovery services can be used with any of the major integrated library systems, though we also see a growing affinity with library services platforms by the same vendor if it has such an offering. Ex Libris Alma and Primo, WorldCat Local and WorldShare Management Services, Summon and Intota are designed to work well together with built-in integration. Intota has not yet been released, but Serials Solutions has stated Summon will be its ideal public interface, though APIs will be exposed to support others.

There are some notable exceptions to these matched set offerings. EBSCO Discovery Service, for example, follows a strategy of integration with any back-end integrated library system or library services platform. EBSCO works to minimize the overhead involved in integration, partnering with a wide variety of providers of library management products, including SirsiDynix, Innovative Interfaces, OCLC, Quali OLE, and Capita. In this sphere, we see a dynamic between discovery and management with competing trajectories of integrated suites and separable components.

In the public library arena, significant movement shows a preference for the discovery interfaces provided by the vendor of the integrated library system in place. The features of the online catalogs have expanded well into the feature set previously seen only in third-party discovery interfaces. The overhead of integration with third-part products seems no longer justifiable when the capabilities of the public interfaces delivered by the ILS provider approach or exceed that offered through third party products.

As the most prominent indicator of this trend, AquaBrowser, once one of the most popular discovery interfaces in the United States, has seen considerable erosion in its use. The AquaBrowser

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technology was developed by Medialab Solutions, based in Amsterdam, and proved to be a very popular discovery interface in the library arena. Following its successful reception in its home country and surrounding areas, a business arrangement was made with The Library Corporation to market and resell the product in its territories of activity, including the United States, Canada, and Singapore. The Library Corporation saw great success in its marketing efforts for AquaBrowser, not only among its own customers but to libraries running non-TLC ILS products. AquaBrowser even gained adoption by academic libraries in this period, including major institutions such as Harvard University, University of Chicago, as well as many other mid-sized institutions, or consortia.

The Library Corporation's discovery strategy changed dramatically when ProQuest purchased the AquaBrowser Library technology from Medialab Solutions in 2007 through its R.R. Bowker subsidiary; in 2008 responsibility for AquaBrowser was transferred within ProQuest to Serials Solutions. From the time of the sale of AquaBrowser to ProQuest, The Library Corporation focused on the development of its own LS2 PAC as the discovery interface that it would market to its customers. Since then, almost all libraries that had previously implemented AquaBrowser with TLC's Library.Solution or Carl.X ILS products have shifted to LS2 PAC. The company has made significant investments in interface technologies, including opening a development office in New York City that focuses on user experience for both its patron-facing and staff products.

The installed base of AquaBrowser has also eroded as libraries have selected Polaris as their core integrated library system. All libraries that used AquaBrowser with their previous ILS have shifted to the native PowerPAC catalog interface as they implemented Polaris.

Interest in AquaBrowser has not declined altogether. In its original home country of the Netherlands, Stichting Bibliotheek.nl renewed its contract for AquaBrowser through Serials Solutions in December of 2012. But overall, it also seems that development of AquaBrowser has not been a priority in recent years. AquaBrowser continues to be mentioned as a current product on the Serials Solutions' website, but there are no recent announcements regarding developments or enhancements.

An exception to the convergence of discovery and management systems in the public library sphere can be seen in BiblioCommons. This socially-oriented discovery service operates with most of the major ILS products. BiblioCommons focuses entirely on discovery and portal technologies and does not offer its own library management products. Major libraries implementing BiblioCommons in the United States include the New York Public Library, Boston Public Library, Seattle Public Library, Salt Lake City Public Library, the CLEVNET Library Consortium, Austin Public Library, and others.

In the open source sphere, VuFind and Blacklight continue to hold their own as discovery interfaces and are used with a variety of back-end management products. Some academic libraries have moved from VuFind to index-based discovery services, such as Brown University (VuFind to Summon), Purdue University (VuFind to Primo as part of Alma imple-

mentation), Southern Illinois University (VuFind to EBSCO Discovery Service). VuFind is also used as a discovery interface integrated with a commercial discovery index, such as Villanova University's incorporation of Summon with its VuFind interface. Some of the libraries on track to implement the open source Quali OLE library services platform will rely on Blacklight or VuFind.

While in broad terms, we see a trend toward consolidation between discovery and management platforms from the same provider, libraries continue to acquire discovery products from other vendors or implement those available as open source software. In the coming years, dynamics to watch will be whether discovery services and library services platforms coalesce; and if they do, whether the discovery service in place will drive decisions regarding the selection of library services platforms or if the library services platform will lead to replacement of existing discovery services.

## Technology to Empower Library Control of E-book Lending

E-book lending continues to dominate as one of the most urgent issues for public libraries. Business, legal, and technical issues all shape which e-book titles public libraries can acquire for their lending collections, the possible terms of a loan, and the interfaces through which patrons gain access to materials borrowed.

### Business and legal limitations

On the legal and business front, publishers take varying positions on whether they will make their titles available for library lending and what restrictions might apply. Library-oriented e-book services, such as OverDrive, 3M Library Services, and Baker & Taylor, have ongoing negotiations with publishers to license as many titles as possible with the most attractive lending term. Libraries, in turn, subscribe to one or more of these e-book providers to assemble a collection of e-books that they can offer to their patrons. While these commercial services offer a large volume of material, many titles are not available, some may be subject to lending restrictions, and access to the content may persist only as long as the library continues to subscribe. Many libraries demand permanent ownership of e-books and access to titles not necessarily available through the aggregated e-book services.

### Technical issues

On the technical front, the initial e-book lending arrangement generally involved providing a link from the library's website to the e-book provider's service, where patrons could use their local library credentials to borrow titles. In this approach, the e-book provider controls the patron experience in addition to what titles are available to the library to license. In the early phase of library e-book lending, borrowing an e-book was a complicated multi-step process, especially for a first-time borrower since manual steps were needed to establish an account on the e-lending platform. In the last year, significant work has been done, primarily through partnerships between e-book lending providers and discovery or online catalog developers, to improve the user experience for e-book lending. Rather than linking patrons out to an external e-lending service, work is underway to bring that functionality into the library's online catalog or discovery interface. APIs (Application Programming Interfaces) enable this functionality, providing the behind-the-scenes technical communications needed to conduct e-book lending transactions through the library's catalog instead of, or in addition to, the native interface of the e-book service. *Smart Libraries Newsletter* has reported on a number of these partnerships that bring e-book lending functionality into library catalogs and discovery interfaces. While

these integration efforts greatly improve the patron experience in borrowing e-books, they do not address the business and legal issues, such as e-book ownership and availability.

## The Douglas County model for e-book ownership and delivery

Another area of development in the e-book arena involves giving libraries the ability to locally manage e-books to supplement the offerings available from the commercial e-book services. The Douglas County Libraries have been an early proponent of this approach and have invested in developing technical infrastructure to acquire and securely manage e-books and make them available for loan to their patrons. This infrastructure would include a local installation of an application to store e-books with digital rights management capabilities such as Adobe Content Server, as well as interfaces to ingest acquired content and to enable patron lending. With this infrastructure in place, libraries can acquire e-books from sources beyond the offerings of the commercial e-book service providers and under more favorable terms. Ideally these terms would include permanent ownership of e-book titles rather than licenses of limited duration. This model also allows libraries to easily acquire self-published e-books or even to become publishers for authors.

The Douglas County Libraries in Colorado crafted an infrastructure to implement this model based on a combination of commercial components and open source software. Commercial components include Adobe Content Server for content storage and digital rights management of e-books and the libraries' SirsiDynix Horizon ILS. Another component of the environment manages book cover images that enhance record displays. The open source VuFind formed the basis of the patron interface, which was extended through local development to present functionality needed to support both print and e-book discovery and lending. Extensions to the VuFind software were created to interact with the local e-content servers and commercial e-book services in addition to its existing ILS interoperability. Other presentation tools were created, such as virtual "powerwalls," which provide an interactive visual display to promote featured materials. This technical infrastructure allows the library to acquire its own e-book content in addition to that from aggregated e-book services, to simplify the e-book lending process, and to present a unified interface for its digital and physical holdings with the corresponding fulfillment actions.

## Other library implementations

Other libraries have replicated this model, with some variation

in the technical components. The Marmot Library Network, a consortium of academic and public libraries in Colorado, have implemented an environment based on the Douglas County Libraries model using their shared Millennium ILS. Marmot collaborates with DCL in the VuFind software development. The Califa Library Group and the Contra Costa County Libraries have developed an e-book environment, branded as Enki Library (<http://enkilibrary.org/>), based on the DCL model, but further extended for simultaneous support of multiple integrated library systems required for a consortial implementation.

## Bibliotheca's aborted e-book venture

There has also been interest in commercial implementations of the DCL e-book model. At the ALA Annual Conference 2012 Bibliotheca, a global supplier of RFID products for libraries, announced that it intended to enter the e-book arena with products and services based on the DCL model. This move was reminiscent of its key rival in self-service and RFID products, 3M Library Systems, which had launched the 3M Cloud Library and has since grown to become a major competitor of OverDrive in the e-book arena. The company hired two key personnel from Douglas County Libraries, Monique Sendze and Jordana Vincent, to lead its new e-book efforts (see July 2012 *Smart Libraries Newsletter* for more details). Bibliotheca's foray into the e-book was short lived. Sendze has since returned to her former position at the Douglas County Libraries and Vincent took a position with the Arapaho County Library system also in Colorado. There was no trace of the e-book program at Bibliotheca booth at this year's ALA Annual Conference.

## OdiloTID offers commercial e-book environment consistent with DCL model

A company from the international arena has developed an e-book lending platform that provides a comprehensive commercial implementation quite consistent with the Douglas County Libraries model. OdiloTID, based in Cartagena, Spain, was established in 2011 specifically to develop and market technologies in support of library e-book lending. Building on a 30-year heritage of involvement in providing automation services to libraries through its antecedent organization, OdiloTID has developed a new platform called OdiloTK. Based on cloud technologies delivered through software as a service, Odilo TK gives libraries the ability to manage local e-book collections, to work with external e-book lending providers, and to present a patron interface that handles both print and e-book lending. Libraries can use the ILS provided by OdiloTID or it will

integrate with their existing systems. The company focuses on delivering its products using cloud technologies as software as a service.

OdiloTK has been adopted by multiple libraries in Spain, and the company is actively involved in expanding its reach in Latin America, the Middle East, and in the United States. The Douglas County Libraries have been working informally with OdiloTID for the last two years, evaluating its capabilities versus its locally developed infrastructure. Jamie LaRue, director of Douglas County Libraries, reports that while no contract has yet been executed, there is a common vision: “Douglas County Libraries and Odilo represents a partnership between innovators. We hope to link up our first wave experience with the North American e-book market to OdiloTID’s multinational experience. The goal is code that puts libraries back in the driver seat.”

## OdiloTK technology and architecture

OdiloTID has developed a comprehensive environment that includes components for e-book selection and procurement, e-content management, a comprehensive patron interface, and traditional ILS option. In addition to e-books, OdiloTK can also provide access to other forms of multimedia content, including streaming video and audiobooks.

While OdiloTID exposes a fully functional set of APIs to provide flexibility to libraries in the way they use the platform, it is not released as open source software. All the APIs are implemented as RESTful Web services over HTTPS using JSON for data exchange. Some of the APIs exposed for OdiloTK include:

- Authentication (Login / Logout)
- Update (synchronize a bibliographic record)
- Get\_Record (retrieve a bibliographic record)
- Search (submit a query to the catalog)
- Get\_Loanables (list items potentially available)
- Get\_Available (list items currently available for loan)
- Get\_SocialData (retrieve patron record data)
- Get\_Historical\_Loans (list items previously charged)
- Get\_Active\_Loans (list items currently charged to patron)
- New\_Loan (check out an e-book to the patron)
- Return\_Loan (release an item on loan)
- New\_Reserve (place a new hold on an item)
- Get\_Reserves (list the current items on hold)
- Remove\_Reserve (remove a hold previously placed on an item)

*OdiloTID emphasizes that it provides technology to manage and enable access and is not a content provider and sees advantages in the separation of these roles.*

OdiloTID emphasizes that it provides technology to manage and enable access and is not a content provider and sees advantages in the separation of these roles. Its business model does not include receiving any portion of what libraries might pay to publishers or authors for content.

OdiloTID has created a variety of components related to e-book lending and library management, as follows.

**OdiloTK** provides the infrastructure for the management and access of e-books, including those locally managed or acquired from external providers. OdiloTK is based on multiple components to provide a comprehensive environment for libraries to manage and provide access to their print and digital collections. OdiloTK makes use of Adobe Content Server technology, which also finds use in other major e-book platforms, such as those from OverDrive, 3M Library Services, and is what libraries such as DCL have implemented. Through a set of APIs, OdiloTK is also able to interoperate with other e-book platforms from other providers, such as OverDrive or 3M. For the functionality related to print materials, OdiloTK can include the company’s own OdiloTT, or can be integrated with an existing ILS that the library may have in place.

**OdiloPlace** serves as a digital purchasing component of the e-book environment, enabling libraries to select and purchase content available from the catalog of titles made available by OdiloTID and to develop their own local catalog of content that they acquire through direct negotiations with publishers or authors.

**Nubereader** is e-book reading software that operates as an HTML5 application that will run on any device with a web browser, including desktop or laptop computers, tablets, or smartphones. This browser-based e-book reader enables patrons to borrow e-books without the need to download and install an app.

**OdiloTT** is a comprehensive suite of components that provides traditional ILS functionality delivered through software as a service without the need for local servers. Its capabilities include cataloging, circulation, reports, statistics and an online catalog with Web 2.0 capabilities such as user supplied comments and tags. This new generation product, launched in May 2013, replaces earlier integrated library systems that the company has supported, including OdiloGB and Biblio 3000. OdiloTT is designed to fully integrate with its other components to

give libraries the ability to manage the print and digital content that comprise their collections through a single platform.

### Established internationally, new US entrant

Some of the libraries currently using OdiloTK include:

- the Cervantes Institute, a network of 45 libraries distributed throughout the world
- Dibam, the national public library system of around 450 public libraries in Chile
- Valencia University
- The Ministry of the Economy in Spain
- The Congress of the government of Spain

While the OdiloTID is relatively well established in Spain and Latin America, it has not yet signed any customers in the United States. Its products seem consistent with the DCL model of e-book service, which may strengthen its appeal. Through its ongoing collaboration with the Douglas County Libraries, OdiloTID is focusing its development efforts on enhancing OdiloTK to ensure full compliance with the principles of the ReadersFirst initiative ([readersfirst.org](http://readersfirst.org)) and to fulfill the requirements of DCL and other library organizations that seek to follow its e-book lending model.

### OdiloTID company background

Though founded relatively recently, OdiloTID builds on more than 30 years of experience of providing technology and ser-

vices to libraries through an antecedent organization. OdiloTID was founded in November 2011 as a spin-off company of 3000 Informatica, a company founded in 1981 with involvement in a wide range of IT products and services for public and private sector organizations, including products for libraries. Prior to the creation of OdiloTID, 3000 Informatica was a player in the ILS market in Spain and other Spanish-speaking countries. Following the separation, OdiloTID operates entirely independently and under separate ownership.

OdiloTID also offers products for archives which have different automation needs than libraries. **OdiloA3W** provides automation functionality for archives through a fully Web-based interface. Libraries have flexibility in the configuration of its data models. Data can be imported through the OAI-PMH or Web services. The company also offers a document management product called **OdiloGD**, and **OdiloDD** a digital repository and preservation platform.

OdiloTID is based in Cartagena, in the province of Murcia in Spain, with another office in Madrid. Offices in Miami, Florida and Mexico City market and support its products in the Americas. The company is active in Chile and Mexico, and is pursuing other international markets including the United States and the Middle East. OdiloTID primarily focuses on library-oriented e-book technologies.

Executive leadership of the company includes Lourdes Gutiérrez, its Executive Director, and Rodrigo Rodriguez, its President for America and Middle East. The company is privately owned.

For more information on OdiloTID see: [www.odilotid.com](http://www.odilotid.com).

## EBSCO Becomes a Kualo Commercial Affiliate

**E**BSCO Information Services, consistent with its ongoing strategy of partnerships with developers of library management systems, has become a Kualo Commercial Affiliate with the intent to provide services in support of the Kualo OLE community source library management system.

To become a commercial affiliate, a company must join the Kualo Foundation, which involves payment of annual dues. Though all the software associated with the Kualo Foundation is made available as open source, its governance encourages commercial participation, but provides structure and guidance on how companies can be involved with its projects.

Kualo OLE, which expects its initial release to be completed by the end of 2013, addresses only internal library

management functionality and will not include a patron interface. Rather, organizations implementing Kualo OLE will rely on any of the many commercial or open source discovery products available. EBSCO will provide services in support of the integration required to enable EBSCO Discovery Service to function as one of the patron interface options for Kualo OLE. Further, for libraries that plan to use the open source VuFind or Blacklight discovery interfaces with Kualo OLE, integration is already in place to extend discovery through the EDS index.

No libraries have been named as taking advantage of this service, but it does add to the discovery options for current or future adopters of Kualo OLE.

## Follett Unifies its School Library Business

Follett Corporation announced its plans to further consolidate its businesses involved in products and services for the K-12 school library arena. Currently, several separate companies, each acting as wholly owned subsidiaries of Follett Corporation, offer a distinct set of products.

These companies include:

- Follett Software Company, which offers the Destiny family of school and district library and textbook management products and the Aspen learning management system
- Follett Library Resources, which offers print and electronic materials to schools through its Titlewave platform
- Follett Educational Resources, which is involved in buying and selling textbooks
- Follett International, which markets the company's products and services outside North America

Beginning in November 2011, these companies began to operate under common oversight, forming the Follett School and Library Group. All four of these business will be combined into a single company, named Follett School Solutions, to take effect by Fall 2013. These companies will operate under a single executive management team, will have a unified presence at conferences, and will be represented to its customers through a unified sales force.

Tom Schenck will lead the new organization as its President and Chief Operating Officer. Schenck's portfolio has continually expanded in recent years. In 1998 Schenck was named as President of Follett Software Company, promoted from his previous role as its Executive Director of Development. In November 2011 he was given responsibility for the newly-formed Follett School and Library Group.

Follett Higher Education Group, whose key activities include operating college bookstores, will continue to operate as a separate organization.

## Library Technology News

### Swets launches Open Access APC management service

As the open access publishing model expands at an increasing rate, new challenges naturally arise for libraries, publishers, funders and researchers. Libraries in particular have to develop, implement and manage new workflows and procedures throughout their institutions that are time consuming and resource-heavy. One of the major administrative burdens revolves around Article Processing Charges (APC's), which are paid to publishers for (Gold) Open Access papers. Swets has introduced a new APC management service in order to address this need directly.

Swets aims to reduce the burden on libraries by managing the complex APC invoicing and payment processes on their behalf.

Customers interested in Swets' APC Management service should visit our website, at [www.swets.com/open-access](http://www.swets.com/open-access) or contact us to discuss their requirements at <http://info.swets.com/OA2-join-requestform-eng>.

### Vital Source launches E-Textbook Building Block for Blackboard Learn Platform

LAS VEGAS, NV –Vital Source Technologies, Inc., Ingram Content Group's leading e-textbook solution announced the general availability of a comprehensive e-textbook Building Block that integrates its VitalSource Bookshelf platform with Blackboard Learn, Blackboard's flagship learning management system (LMS).

The VitalSource Building Block for Blackboard Learn is an integrated e-textbook solution, providing single sign-on integration between the two systems. It is the first Blackboard integration for e-textbooks configured to work directly with Blackboard Mobile Learn for iPhone, iPad, Android and Kindle Fire devices.

Instructors can search, sample and adopt VitalSource Bookshelf platform e-textbooks and make them available directly for students within their Blackboard Learn course environment. Instructors can construct courses, deep link to rich media and interactive learning activities, and annotate and direct students to exact sections of an e-textbook and required readings. Through analytic tools, faculty can view individual and aggregate class engagement data.



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